Environmental Operations, Inc.
CLEARING THE WAY

February 27, 2018

Mr. Bruce Morrison
Project Manager
U.S. Environmental Protection Agency, Region 7
11201 Renner Boulevard
Lenexa, KS 66219

RE: Monitoring Well Closure Request
Solutia – John F. Queeny Plant
St. Louis, Missouri
EPA ID No. MOD 004 954 111

RCRA
575284

Dear Mr. Morrison:

Environmental Operations, Inc. (EOI), on behalf of SWH Investments II, is submitting this request regarding closure/management of specific monitoring wells, pursuant to our conversation on February 21, 2018. The request was initiated to facilitate the anticipated development of the property that Opus Development (Opus) is planning to acquire that encompasses part of the former FF Building Area. The wells are identified in the following section, with a brief history of their location, purpose, and detections. Supporting documentation is attached for your review. Some wells may be installed post construction in the fill/silty clay unit for site post-closure monitoring, and will be determined at a later time. Note that any historical wells or piezometers found to be present in this area not noted below and not part of the monitoring network established initially in 2010 will also be properly closed, as they have served no purpose.

Below is a discussion of the respective wells and our proposed actions.

List of Wells

MW-3 – This well is in the fill/silty clay unit. This well is not on the monitoring schedule, and was last sampled in May 2015. During the period of regular monitoring from 2011 through 2015, most of the analytical results were non-detect. Tetrachloroethene (PCE) and trichloroethene (TCE) are inconsistently present at concentrations below or slightly above maximum contaminant levels (MCLs). Daughter products are occasionally present below MCLs, and indicate degradation continues.

RECEIVED
FEB 28 2018
AWMD/RCAP

LPZ -2 – This well is in the fill/silty clay unit. This well is presently sampled on a semi-annual basis. The primary constituent present in this well is toluene. The presence of PCE, TCE, and other chlorinated compounds are erratically detected above and below MCLs.

LPZ -4 – This well is in the fill/silty clay unit. This well is not on the monitoring schedule, and was last sampled in May 2015. The primary constituent present in this well was toluene. The presence of PCE, TCE, and other chlorinated compounds are often detected above MCLs. The presence of the daughter products indicated ongoing degradation of the parent compounds.

LPZ -5 – This well is in the fill/silty clay unit. This well is presently sampled on a semi-annual basis. The primary constituent present in this well is toluene. The presence of PCE, TCE, and other chlorinated compounds are often detected above MCLs, though high detection limits driven by toluene have limited quantifying these compounds. The presence of the daughter products indicated ongoing degradation of the parent compounds.

OBW-1 - This bedrock well is not on the monitoring schedule, and was last sampled in May 2015. Data indicated reductions in concentrations of the constituents of concern, and the presence of the daughter products indicated ongoing degradation of parent products. This well was originally retained in the monitoring network for informational purposes, as the bedrock unit is not considered an exposure source.

OBW-2 - This bedrock well is sampled annually, and was last sampled in September 2017. Data indicate the presence of the daughter products, showing ongoing degradation of parent products, detected consistently at varying concentrations at this location. This well was originally retained in the monitoring network for informational purposes, as the bedrock unit is not considered an exposure source.

REC-1 - This well is in the sand unit and at one time used for groundwater recovery. It was last sampled in May 2015. Data indicated the presence of PCE, TCE, and the daughter products, showing ongoing degradation of parent products, and significant reduction in the concentrations. There have been sampling events with no detections. This well was originally retained in the monitoring network for informational purposes, as the sand unit is not considered an exposure source.

REC-4 - This well is in the sand unit and at one time used for groundwater recovery. It was last sampled in September 2016. Data indicated the presence of PCE, TCE, and the daughter products, showing ongoing degradation of parent products. This well was originally retained in the monitoring network for informational purposes, as the sand unit is not considered an exposure source.

See Figure 1and 2 for well locations, Table 1 for well construction details, and data tables for groundwater monitoring of the respective wells. Well abandonment will conform to the Missouri Well Construction rules and documentation will be submitted to the Missouri Department of Natural Resources.

If there are questions or concerns related to this letter, please contact me at (314) 480-4694, or via email at larryr@environmentalops.com. We look forward to receipt of approval to implement this task.

Respectfully submitted,
ENVIRONMENTAL OPERATIONS, INC.

Lawrence C. Rosen

Lawrence C. Rosen, R.G.
Senior Project Manager

Attachment: Figure 1and 2 – Well Locations
Table 1 – Well Construction Details
Well Sampling Data Tables

Copy: Mr. Mike House/Solutia
Ms. Christine Kump-Mitchell/MDNR
Mr. Rich Nussbaum/ MDNR

Project #2950R

Environmental Operations, Inc.

Fill/Silty Clay Unit Wells
Former Solutia Queeny Plant
Saint Louis, Missouri

Figure 1

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Project #2950R

Environmental Operations, Inc.

Sand and Bedrock Unit Wells
Former Solutia Queeny Plant
Saint Louis, Missouri

Figure 2

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TABLE 1
Monitoring Well and Piezometer Network Completion & Summary Water Levels

Monitoring Well Identification	Top of Casing Elevation (ft MSL)	Total Well Depth (ft btoc)	Bottom of Well Elevation (ft MSL)	Screened Interval (ft btoc)	Screened Interval Elevation (ft MSL)
Fill/Silty Clay Wells					
GM-1	425.16	13.37	411.79	(8.50-13.50)	(417.02-412.02)
GM-2	425.06	12.33	412.73	(6.75-11.75)	(418.83-413.83)
FBCSA-MW-5	417.49	19.46	398.03	(9.46-19.46)	(388.03-398.03)
HW-2	423.25	29.00	394.25	(14.00-29.00)	(409.25-394.25)
LPZ-2	422.95	22.09	400.86	(7.52-22.52)	(415.94-400.94)
LPZ-4	423.62	22.00	401.62	(7.62-22.62)	(416.62-401.62)
LPZ-5	423.64	21.78	401.86	(11.78-21.78)	(391.86-401.86)
MW-2B	430.16	29.28	400.88	(17.16-27.16)	(413.64-403.64)
MW-3	424.85	30.47	394.38	(22.65-32.65)	(402.84-392.84)
MW-4	427.33	18.32	409.01	(9.51-19.51)	(417.88-407.88)
MW-5R	420.91	15.27	405.64	(6.14-16.14)	(419.88-409.88)
MW-7B(30A)	422.17	32.21	389.96	(23.00-33.00)	(399.17-389.17)
MW-9	425.84	41.53	384.31	(33.92-44.42)	(391.14-380.64)
MW-11A	425.86	74.30	351.56	(70.17-80.17)	(356.04-346.04)
MW-13	425.31	51.84	373.47	(9.99-49.99)	(415.94-375.94)
MW-15	426.05	17.97	408.08	(12.97-17.97)	(403.08-408.08)
MW-17	420.39	50.27	370.12	(12.25-52.25)	(408.14-368.14)
MW-19	423.53	15.34	408.19	(10.50-15.50)	(413.58-408.58)
MW-23	423.87	24.40	399.47	(15.25-25.25)	(409.74-399.740
MW-24A	420.22	28.24	391.98	(18.45-28.45)	(402.35-392.35)
MW-25A	419.30	29.90	389.40	(20.76-30.76)	(399.14-389.14)
MW-28A	422.11	12.26	409.85	(7.6-12.6)	(415.04-410.04)
MW-30A	418.90	17.13	401.77	(8.16-18.16)	(410.74-400.74)
MW-32A	420.88	27.94	392.94	(10.96-27.96)	(382.92-402.92)
MW-33A	418.40	28.70	389.70	(13.72-28.72)	(384.68-399.68)
MW-36A	420.15	22.69	397.46	(12.69-22.69)	(387.46-397.46)
MW-38A	422.86	17.71	405.15	(7.71-17.71)	(395.69-405.69)
MW-39A	425.98	20.09	405.89	(10.11-20.11)	(405.87-415.87)
MW-40A	425.33	19.30	406.03	(9.30-19.30)	(406.03-416.03)
REC-1	423.87	44.05	379.82	(20.00-40.00)	(401.58-380.58)
VW-1	418.50	16.04	402.46	(6.00-16.00)	(413.12-403.12)
VW-2	418.89	13.18	405.71	(6.00-16.00)	(413.17-403.17)
Sand Wells					
HW-1	422.56	47.69	374.87	(32.00-47.00)	(391.13-376.13)
MW-2A	430.06	50.10	379.96	(40.10-50.10)	(389.96-379.96)
MW-7A(30B)	422.18	NG	NG	(42.00-52.00)	(380.18-370.18)
MW-24B	420.21	44.54	375.67	(35.4-45.4)	(385.44-375.44)
MW-25B	419.35	47.37	371.98	(37.55-47.55)	(382.44-372.44)
MW-28B	422.05	42.10	379.95	(37.49-42.49)	(385.24-380.24)
MW-30B	418.89	66.71	352.18	(66.15-76.15)	(352.74-342.74)
MW-31B	419.03	52.29	367.29	(42.05-52.05)	(377.53-367.48)
MW-32B	421.16	67.14	355.35	(57.30-67.30)	(365.19-355.19)
MW-33B	418.68	66.78	353.18	(57.59-67.59)	(362.37-352.37)
MW-34B	417.70	79.45	338.64	(69.76-79.76)	(348.33-338.33)
MW-36B	420.61	56.70	363.91	(26.70-56.70)	(393.91-363.91)
MW-38B	423.03	59.18	363.85	(49.18-59.18)	(373.85-363.85)
MW-39B	426.56	37.09	359.15	(27.11-37.11)	(389.45-399.45)
REC-4	423.80	67.41	356.39	(44.00-64.00)	(378.33-358.33)
VW-2B	416.06	76.80	339.26	(67.30-77.30)	(352.25-342.25)
Bedrock Wells					
OBW-1	426.26	75.29	350.97	(70.54-80.54)	(356.44-346.44)
OBW-2	425.82	99.34	326.48	(88.77-98.77)	(337.64-327.64)
OBW-3	424.71	100.63	324.08	(85.58-100.58)	(339.74-324.74)

Notes:
1.) MSL=Mean Sea Level
2.) btoc= below top of casing
3.) The total depth of the wells was measured on June 16, 2000.

Closed
Proposed for closure

LPZ-2
Former FF Building Area

Constituent	CAS	MCL*	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result
			6/27/2000	4/29/2004	8/25/2004	1/13/2005	3/3/2005	9/2/2011	12/20/2011	4/3/2012	6/28/2012	9/26/2012	2/7/2013	4/11/2013	10/30/2013	5/11/2015	9/20/2016	3/21/2017
1,1,1-Trichloroethane	71-55-6	200	-	-	-	-	-	<1000	dry	<1000	<1.0	<1.0	<1.0	<20.0	dry	<10.0	<5.0	<10.0
1,2-Dichloroethane	107-06-2	5	-	-	-	-	-	<1000	dry	<1000	<10.0	<10.0	<10.0	<20.0	dry	<10.0	<5.0	<10.0
Acetone	67-64-1	12000	-	-	-	-	-	<10000	dry	<10000	<1.0	19.3	25.2	<200	dry	105	<5.0	<50.0
Benzene	71-43-2	5	-	14	-	-	-	<1000	dry	<1000	5.4	7.2	16.8	<20.0	dry	<10.0	3.7	3.7
Carbon disulfide	75-15-0	720	-	-	-	-	-	<5000	dry	<5000	<5.0	<5.0	<5.0	<100	dry	<50.0	na	na
Chlorobenzene	108-90-7	100	-	14	-	-	37	<1000	dry	1920	7.8	7.7	19.9	<20.0	dry	125	8.1	10.8
Chloroform	67-66-3	80	-	-	-	-	-	<1000	dry	<1000	<1.0	<1.0	<1.0	<20.0	dry	<10.0	<5.0	<10.0
cis-1,2-Dichloroethene	156-59-2	70	820	100	-	170	110	190000	dry	68400	<1.0	<1.0	116	90.4	dry	31.3	<5.0	<10.0
Ethylbenzene	100-41-4	700	-	-	-	-	-	<1000	dry	<1000	<1.0	<1.0	2.2	<20.0	dry	<10.0	<5.0	<10.0
Iodomethane	74-88-4	No RSL	-	-	-	-	-	<10000	dry	<10000	<10.0	<10.0	<10.0	<200	dry	<100	na	na
Methylene chloride	75-09-2	5	1500	-	-	-	-	1210	dry	<1000	<1.0	<1.0	<1.0	<20.0	dry	<10.0	<5.0	<10.0
Tetrachloroethene	127-18-4	5	-	-	-	-	-	<1000	dry	5670	<1.0	<1.0	<1.0	<20.0	dry	662	<5.0	<10.0
Toluene	108-88-3	100	70000	48000	3800	-	4600	190000	dry	4750	99.2	101	4130	4750	dry	671	344	1040
trans-1,2-Dichloroethene	156-60-5	100	-	6	-	-	-	<1000	dry	<1000	<1.0	<1.0	4.8	<20.0	dry	<10.0	<5.0	<10.0
Trichloroethene	79-01-6	5	-	5.1	-	-	-	<1000	dry	<1000	<1.0	<1.0	3.6	<20.0	dry	17.8	<5.0	<10.0
Vinyl chloride	75-01-4	2	460	60	-	140	110	1500	dry	3700	<1.0	3	45.1	40.1	dry	<10.0	3.2	<10.0
Xylene (Total)	1330-20-7	10000	-	10	-	-		<3000	dry	<3000	3.1	3.1	5.4	<60	dry	<30.0	<5.0	<20.0

*Results and MCL reported in ug/L. If no MCL, Tap Water RSL is used

Results highlighted in gray exceed MCL, excluding events with detection limits above the MCL

"<" indicates result below the reported detection limit

"-" indicates no data

LPZ-4
Former FF Building Area

Constituent	CAS	MCL*	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result
			8/1/2000	9/2/2011	12/12/2011	4/12/2012	6/28/2012	9/26/2012	2/7/2013	7/16/2013	4/28/2014	5/21/2015
1,1,1-Trichloroethane	71-55-6	200	-	dry	<100	<100	<1000	<50	<50	<200	<200	<100
1,2-Dichloroethane	107-06-2	5	-	dry	<100	<100	<1000	<50	<50	<200	<200	<100
Acetone	67-64-1	12000	-	dry	<1000	<1000	<10000	<500	<500	<2000	<2000	<1000
Benzene	71-43-2	5	770	dry	<100	<100	<1000	<50	<50	<200	<200	114
Carbon disulfide	75-15-0	720	-	dry	<500	<500	<5000	<250	<250	<1000	<1000	<500
Chlorobenzene	108-90-7	100	2300	dry	<100	<100	<1000	511	922	3270	1820	1740
Chloroform	67-66-3	80	-	dry	138	<100	<1000	<50	<50	<200	<200	<100
cis-1,2-Dichloroethene	156-59-2	70	4100	dry	<100	106	25600	1690	1190	4660	1650	2380
Ethylbenzene	100-41-4	700	-	dry	<100	<100	<1000	<50	<50	<200	<200	<100
Iodomethane	74-88-4	No RSL	-	dry	<1000	<1000	<10000	<500	<500	<5000	<5000	<1000
Methylene chloride	75-09-2	5	-	dry	<100	<100	<1000	<50	<50	<200	<200	<100
Tetrachloroethene	127-18-4	5	3800	dry	<100	229	<1000	278	2070	4640	5090	3790
Toluene	108-88-3	100	-	dry	3630	134000	123000	37900	65200	26400	223000	251000
trans-1,2-Dichloroethene	156-60-5	100	-	dry	<100	<100	<1000	<50	<50	<200	<200	<100
Trichloroethene	79-01-6	5	3100	dry	<100	295	<1000	202	282	1100	1200	918
Vinyl chloride	75-01-4	2	-	dry	<100	<100	<1000	372	87.2	227	232	436
Xylene (Total)	1330-20-7	10000	-	dry	<300	<300	<3000	<150	<150	<600	<600	<300

*Results and MCL reported in ug/L. If no MCL, Tap Water RSL is used

Results highlighted in gray exceed MCL, excluding events with detection limits above the MCL

"<" indicates result below the reported detection limit

"-" indicates no data

LPZ-5
Former FF Building Area

Constituent	CAS	MCL*	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result
			7/14/2000	4/29/2004	8/25/2004	1/13/2005	3/3/2005	9/6/2011	12/20/2011	4/3/2012	6/28/2012	9/26/2012	2/7/2013	4/11/2013	7/15/2013	10/30/2013	4/28/2014	4/28/2014	7/7/2014	5/11/2015	9/20/2016	3/21/2017
1,1,1-Trichloroethane	71-55-6	200	-	-	-	-	-	<1000	<200	<200	<2000	<5	<25	<500	<100	<100	<100	<100	<100	<50.0	<200	<1000
1,2-Dichloroethane	107-06-2	5	-	-	-	-	-	<1000	<200	<200	<2000	<5	<25	<500	<100	<100	<100	<100	<100	<50.0	<200	<1000
Acetone	67-64-1	12000	-	-	-	-	-	<10000	<2000	<2000	<20000	<50	<250	<5000	<1000	<1000	<1000	<1000	<1000	<500	<200	<5000
Benzene	71-43-2	5	300	1400	-	-	-	<1000	<200	<200	<2000	<5	<25	<500	<100	<100	<100	<100	<100	<50.0	<200	<1000
Carbon disulfide	75-15-0	720	-	-	-	-	-	<5000	<1000	<1000	<1000	<25	<125	<2500	<500	<500	<500	<500	<500	<250	na	na
Chlorobenzene	108-90-7	100	15000	8200	8300	7900	9100	<1000	<200	910	<2000	15	30.2	<500	<100	<100	132	155	322	350	390	<1000
Chloroform	67-66-3	80	-	-	-	-	-	1000	<200	<200	<2000	<5	<25	<500	<100	<100	<100	<100	<100	<50.0	<200	<1000
cis-1,2-Dichloroethene	156-59-2	70	750	3500	-	-	-	12000	4500	5280	7850	113	4780	7670	2090	4360	1850	1750	6990	3840	2700	3300
Ethylbenzene	100-41-4	700	-	85	-	-	-	<1000	<200	<200	<2000	<5	<25	<500	<100	<100	<100	<100	<100	<50.0	<200	<1000
Iodomethane	74-88-4	No RSL	-	-	-	-	-	<10000	<2000	<2000	<20000	<50	<250	<5000	<1000	<1000	<1000	<1000	<1000	<500	na	na
Methylene chloride	75-09-2	5	-	-	-	-	-	2040	<200	<200	<2000	<5	<25	<500	<100	<100	<100	<100	<100	<50.0	<200	<1000
Tetrachloroethene	127-18-4	5	-	17	-	-	-	<1000	<200	5670	<2000	<5	<25	<500	<100	<100	130	101	189	162	<200	<1000
Toluene	108-88-3	100	170000	140000	68000	65000	57000	157000	81400	83700	97300	3000	185000	142000	117000	92500	73600	76400	141000	190000	180000	194000
trans-1,2-Dichloroethene	156-60-5	100	-	48	-	-	-	<1000	<200	<200	<2000	<5	37.2	<500	<100	<100	<100	<100	201	<50.0	<200	<1000
Trichloroethene	79-01-6	5	-	160	-	-	-	<1000	323	307	<2000	6.3	1010	<500	<100	692	461	413	552	<50.0	<200	<1000
Vinyl chloride	75-01-4	2	840	1500	-	-	-	<1000	684	711	<2000	11.6	571	650	445	423	106	101	458	463	244	<1000
Xylene (Total)	1330-20-7	10000	-	130	-	-	-	<3000	<600	<600	<6000	<15	<75	<1500	<300	<300	<300	<300	<300	<150	<400	<2000

*Results and MCL reported in ug/L. If no MCL, Tap Water RSL is used

Results highlighted in gray exceed MCL, excluding events with detection limits above the MCL

"<" indicates result below the reported detection limit

"-" indicates no data

MW-3
Former FF Building Area

Constituent	CAS	MCL*	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result
			6/20/2000	4/30/2004	8/25/2004	8/25/2004	1/13/2005	3/2/2005	9/1/2011	12/21/2011	4/12/2012	4/12/2012	6/27/2012	6/27/2012	9/26/2012	10/29/2013	5/7/2015
1,1,1-Trichloroethane	71-55-6	200	-	-	-	-	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichloroethane	107-06-2	5	-	-	-	-	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Acetone	67-64-1	12000	-	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Benzene	71-43-2	5	0.62	-	-	-	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Carbon disulfide	75-15-0	720	-	-	-	-	-	-	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Chlorobenzene	108-90-7	100	85	39	28	26	57	27	5.9	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloroform	67-66-3	80	-	-	-	-	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene	156-59-2	70	400	1100	680	680	1200	710	1.9	7.5	8.2	8.6	9.7	10.5	25.6	10.0	41.6
Ethylbenzene	100-41-4	700	-	-	-	-	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Iodomethane	74-88-4	No RSL	-	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Methylene chloride	75-09-2	5	-	-	-	-	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Tetrachloroethene	127-18-4	5	310	630	690	680	-	530	<1.0	6.5	5.0	4.4	4.8	6.3	7.7	<1.0	28.4
Toluene	108-88-3	100	-	-	-	-	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.5
trans-1,2-Dichloroethene	156-60-5	100	-	-	-	-	19	10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene	79-01-6	5	160	280	220	220	380	200	<1.0	2.5	1.3	1.7	3.0	3.7	4.1	1.3	15.0
Vinyl chloride	75-01-4	2	14	-	-	-	23	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Xylene (Total)	1330-20-7	10000	-	-	-	-	-	-	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0

*Results and MCL reported in ug/L. If no MCL, Tap Water RSL is used

Results highlighted in gray exceed MCL, excluding events with detection limits above the MCL

"<" indicates result below the reported detection limit

"-" indicates no data

OBW-1
Former FF Building Area

Constituent	CAS	MCL*	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result
			6/7/2000	9/6/2011	12/20/2011	4/11/2012	6/28/2012	9/25/2012	2/6/2013	4/11/2013	7/15/2013	10/30/2013	2/17/2014	4/28/2014	7/7/2014	5/11/2015
1,1,1-Trichloroethane	71-55-6	200	-	<1000	<1000	<1000	<1000	<500	<25	<200	<20	<20	<1	<50	<20.0	<1000
1,2-Dichloroethane	107-06-2	5	-	<1000	<1000	<1000	<5000	<500	<25	<200	<20	<20	<1	<50	<20.0	<1000
Acetone	67-64-1	12000	-	<10000	<10000	<10000	<50000	<5000	<250	<2000	<200	<200	84.4	<500	<200	<10000
Benzene	71-43-2	5	-	<1000	<1000	<1000	<5000	<500	<25	<200	<20	<20	<1	<50	29.9	<1000
Carbon disulfide	75-15-0	720	-	<5000	<5000	<5000	<25000	<2500	<125	<1000	<100	<100	<1	<250	<100	<5000
Chlorobenzene	108-90-7	100	4400	4550	4070	10700	8540	2630	1740	3450	1410	1050	1030	1650	3840	3940
Chloroform	67-66-3	80	-	<1000	<1000	<1000	<5000	<500	<25	<200	<20	<20	<1	<50	<20.0	<1000
cis-1,2-Dichloroethene	156-59-2	70	2500	5760	6530	5770	87500	125000	908	320000	75.1	75.1	4.2	139	412000	260000
Ethylbenzene	100-41-4	700	-	<1000	<1000	<1000	<5000	<500	<25	<200	<20	<20	<1	<50	<20.0	<1000
Iodomethane	74-88-4	No RSL	-	<10000	<10000	<10000	<50000	<5000	<250	<2000	<200	<200	<1	<500	<200	<10000
Methylene chloride	75-09-2	5	-	2410	<1000	<1000	<5000	<500	<25	<200	22.8	<20	<1	<50	30.3	<1000
Tetrachloroethene	127-18-4	5	92000	60500	59100	258000	155000	19700	80.3	221	<20	<20	<1	<50	5900	30800
Toluene	108-88-3	100	190	2150	<1000	<1000	<5000	<500	47.9	<200	45.5	40.9	28.5	66.8	155	<1000
trans-1,2-Dichloroethene	156-60-5	100	-	<1000	<1000	<1000	<5000	<500	<25	3580	70.7	64.7	36.6	187	7810	<1000
Trichloroethene	79-01-6	5	1500	3570	4510	6710	<5000	38400	507	684	<20	<20	3.6	<50	756	2990
Vinyl chloride	75-01-4	2	140	<1000	<1000	<1000	<5000	962	24000	24300	19100	16900	1950	50000	80200	146000
Xylene (Total)	1330-20-7	10000	-	<3000	<3000	<3000	<15000	<1500	<75	<600	<60	<60	<3	<150	<60	<3000

*Results and MCL reported in ug/L. If no MCL, Tap Water RSL is used

Results highlighted in gray exceed MCL, excluding events with detection limits above the MCL

"<" indicates result below the reported detection limit

"-" indicates no data

OBW-2
Former FF Building Area

Constituent	CAS	MCL*	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result
			7/7/2000	8/31/2011	8/31/2011	12/20/2011	4/11/2012	6/28/2012	6/28/2012	9/26/2012	4/11/2013	7/15/2013	10/30/2013	10/30/2013	2/17/2014	4/28/2014	4/28/2014	7/7/2014	5/11/2015	9/20/2016
1,1,1-Trichloroethane	71-55-6	200	-	<1.0	<1.0	<1.0	<200	<200	<200	<200	<100	<50	<50	<50	<25	<50	<50	<50	<500	<500
1,2-Dichloroethane	107-06-2	5	-	<1.0	<1.0	<1.0	<200	<200	<200	<200	<100	<50	<50	<50	<25	<50	<50	<50	<500	<500
Acetone	67-64-1	12000	-	<10.0	<10.0	<10.0	<2000	<2000	<2000	<2000	<1000	<500	<500	<500	<250	<500	<500	<500	<5000	<2500
Benzene	71-43-2	5	67	<1.0	<1.0	<1.0	<200	<200	<200	<200	<100	54.4	<50	<50	<25	<50	<50	97.3	<2500	<500
Carbon disulfide	75-15-0	720	-	<5.0	<5.0	<5.0	<1000	<1000	<1000	<1000	<500	<250	<250	<250	<25	<250	<250	<250	<500	na
Chlorobenzene	108-90-7	100	15000	<1.0	<1.0	<1.0	611	1000	1020	39000	6110	1010	2430	2160	81.1	555	535	23500	30900	40000
Chloroform	67-66-3	80	-	<1.0	<1.0	<1.0	<200	<200	<200	<200	<100	<50	<50	<50	<25	<50	<50	<50	<500	<500
cis-1,2-Dichloroethene	156-59-2	70	3700	<1.0	<1.0	<1.0	17700	32600	33700	45400	67000	51400	71000	61800	50200	64400	63400	21500	19100	27400
Ethylbenzene	100-41-4	700	-	<1.0	<1.0	<1.0	<200	<200	<200	<200	<100	<50	<50	<50	<25	<50	<50	<50	<500	<500
Iodomethane	74-88-4	No RSL	-	<10.0	<10.0	<10.0	<2000	<2000	<2000	<2000	<1000	<500	<500	<500	<250	<500	<500	<500	<5000	na
Methylene chloride	75-09-2	5	-	<1.0	<1.0	<1.0	<200	<200	<200	<200	<100	<50	<50	<50	<25	<50	<50	<50	<500	<500
Tetrachloroethene	127-18-4	5	120000	<1.0	<1.0	<1.0	7310	<200	<200	180000	2690	352	229	<50	248	266	238	56600	110000	134000
Toluene	108-88-3	100	1400	<1.0	<1.0	<1.0	223	<200	<200	3920	<100	<50	<50	73	<25	54.6	54.6	1450	2920	3500
trans-1,2-Dichloroethene	156-60-5	100	-	<1.0	<1.0	<1.0	<200	<200	<200	<200	113	1290	290	298	111	1520	944	1890	298	<500
Trichloroethene	79-01-6	5	4100	<1.0	<1.0	<1.0	7780	929	959	7960	14900	347	228	136	156	164	172	13800	7240	9160
Vinyl chloride	75-01-4	2	45	<1.0	<1.0	<1.0	<200	<200	<200	<200	<100	110	881	805	129	171	152	56.7	<500	2320
Xylene (Total)	1330-20-7	10000	-	<3.0	<3.0	<3.0	<600	<600	<600	<600	<300	<150	<150	<150	<75	<150	<150	<150	<1500	<1000

*Results and MCL reported in ug/L. If no MCL, Tap Water RSL is used
Results highlighted in gray exceed MCL, excluding events with detection limits above the MCL
"<" indicates result below the reported detection limit
"-" indicates no data

REC-1
Former FF Building Area

Constituent	CAS	MCL*	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result
			7/11/2000	4/30/2004	4/30/2004	8/24/2004	1/13/2005	3/2/2005	9/23/2011	12/20/2011	4/12/2012	6/28/2012	6/28/2012	9/26/2012	2/7/2013	4/9/2013	7/17/2013	7/17/2013	2/18/2014	4/28/2014	7/7/2014	5/14/2015
1,1,1-Trichloroethane	71-55-6	200	-	-	-	-	-	-	<1.0	<50	<5.0	<500	<500	<100	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0
1,2-Dichloroethane	107-06-2	5	-	-	-	-	-	-	<1.0	<50	<5.0	<500	<500	<100	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0
Acetone	67-64-1	12000	-	-	-	-	-	-	<10.0	<500	65.9	<5000	<5000	<1000	<10	<10	<10.0	<10.0	<10.0	<10.0	<10.0	<100
Benzene	71-43-2	5	-	-	-	-	-	-	<1.0	<50	<5.0	<500	<500	<100	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0
Carbon disulfide	75-15-0	720	-	-	-	-	-	-	<5.0	<250	<25.0	<2500	<2500	<500	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<50.0
Chlorobenzene	108-90-7	100	16000	140	130	210	19	-	13.1	156	6.1	6680	10600	4170	13	6.1	<1.0	<1.0	3.2	1.6	28.1	30.4
Chloroform	67-66-3	80	-	-	-	-	-	-	<1.0	<50	<5.0	<500	<500	<100	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0
cis-1,2-Dichloroethene	156-59-2	70	1300	130	120	32	4	-	186	539	207	157000	155000	181000	179	74.4	<1.0	<1.0	24.7	17.2	144	145
Ethylbenzene	100-41-4	700	-	85	-	-	-	-	<1.0	<200	<5.0	<500	<500	<100	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0
Iodomethane	74-88-4	No RSL	-	-	-	-	-	-	<10.0	<500	<50.0	<5000	<5000	<1000	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<100
Methylene chloride	75-09-2	5	980	-	-	-	-	-	<1.0	<50	<5.0	<500	<500	<100	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	13.0
Tetrachloroethene	127-18-4	5	57000	2400	2600	4300	280	6400	2770	3940	16.7	<500	<500	984	102	17.8	<1.0	<1.0	<1.0	<1.0	128	53.2
Toluene	108-88-3	100	-	-	-	-	3.0	-	<1.0	<50	5.9	<500	<500	<100	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0
trans-1,2-Dichloroethene	156-60-5	100	-	-	-	-	-	-	<1.0	<50	<5.0	<500	<500	<100	1.1	1.1	<1.0	<1.0	<1.0	<1.0	9.4	<10.0
Trichloroethene	79-01-6	5	1000	220	220	100	22	140	329	310	<5.0	<500	<500	370	76.6	41.2	<1.0	<1.0	<1.0	<1.0	10.8	<10.0
Vinyl chloride	75-01-4	2	-	-	-	-	-	-	8.9	<50	<5.0	2200	3120	15100	40.1	23.6	<1.0	<1.0	14.9	4.1	36.9	59.2
Xylene (Total)	1330-20-7	10000	-	-	-	-	-	-	<3.0	<150	<15.0	<1500	<1500	<300	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<30.0

*Results and MCL reported in ug/L. If no MCL, Tap Water RSL is used

Results highlighted in gray exceed MCL, excluding events with detection limits above the MCL

"<" indicates result below the reported detection limit

"-" indicates no data

REC-4
Former FF Building Area

Constituent	CAS	MCL*	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result	Sample Date & Result
			6/28/2000	4/30/2004	8/24/2004	1/13/2005	1/13/2005	3/2/2005	3/2/2005	9/26/2011	12/20/2011	4/12/2012	4/12/2012	6/28/2012	9/26/2012	4/9/2013	10/30/2013	10/30/2013	4/28/2014	5/14/2015	5/14/2015	9/27/2016
1,1,1-Trichloroethane	71-55-6	200	-	-	-	-	-	-	-	<1000	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	<2.0	<2.0	<1.0	<50.0	<50.0	<50.0
1,2-Dichloroethane	107-06-2	5	-	-	-	-	-	-	-	<1000	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	<2.0	<2.0	<1.0	<50.0	<50.0	<50.0
Acetone	67-64-1	12000	-	-	-	-	-	-	-	<10000	<10.0	<10.0	<10.0	<10.0	<10.0	<100.0	<20.0	<20.0	<10.0	<500	<500	<250
Benzene	71-43-2	5	-	-	-	-	-	-	-	<1000	<1.0	<1.0	<1.0	<1.0	9.2	<10.0	2.5	2.5	<1.0	<50.0	<50.0	<50.0
Carbon disulfide	75-15-0	720	-	-	-	-	-	-	-	<5000	<5.0	<5.0	<5.0	<5.0	<5.0	<50.0	<10.0	<10.0	<5.0	<250	<250	na
Chlorobenzene	108-90-7	100	200	520	560	760	620	550	560	<1000	<1.0	10.2	11.1	<1.0	1060	645	1410	1350	<1.0	1020	1150	7160
Chloroform	67-66-3	80	-	-	-	-	-	-	-	1030	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	<2.0	<2.0	<1.0	<50.0	<50.0	<50.0
cis-1,2-Dichloroethene	156-59-2	70	260	1100	1100	1800	1600	1700	1700	1960	4.8	403	406	26.4	20800	1080	2430	2050	28.0	2060	2510	378000
Ethylbenzene	100-41-4	700	-	85	-	-	-	-	-	<1000	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	<2.0	<2.0	<1.0	<50.0	<50.0	<50.0
Iodomethane	74-88-4	No RSL	-	-	-	-	-	-	-	<10000	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<20.0	<20.0	<10.0	<500	<500	na
Methylene chloride	75-09-2	5	-	-	-	-	-	-	-	3400	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	<2.0	<2.0	<1.0	<50.0	58.0	<50.0
Tetrachloroethene	127-18-4	5	940	2200	5800	2600	2000	2700	2700	2640	7.6	670	722	22	829	22	4460	4440	14.8	2770	3450	17000
Toluene	108-88-3	100	-	-	-	-	3.0	-	-	<1000	<1.0	2.3	<1.0	<1.0	9.0	<10.0	<2.0	<2.0	9.0	<50.0	<50.0	119
trans-1,2-Dichloroethene	156-60-5	100	-	-	-	-	-	-	-	<1000	<1.0	6.1	6.0	6.0	282.0	39.9	70.6	47.3	1.1	70.0	85.5	8230
Trichloroethene	79-01-6	5	1100	4000	4800	6600	5100	5800	5600	4040	310	344	363	30.2	26500	3140	4100	3400	45.6	3680	4580	11700
Vinyl chloride	75-01-4	2	26	-	-	-	-	-	-	<1000	<1.0	1.5	1.6	<1.0	139J	31.2	29.3	28.5	<1.0	53.0	73.5	73700
Xylene (Total)	1330-20-7	10000	-	-	-	-	-	-	-	<3000	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<6.0	<6.0	<3.0	<150	<150	<100

*Results and MCL reported in ug/L. If no MCL, Tap Water RSL is used

Results highlighted in gray exceed MCL, excluding events with detection limits above the MCL

"<" indicates result below the reported detection limit

"-" indicates no data

J flag indicates detected at a concentration below reporting limit