

Ms. Karen Cahill
New York State Department of Environmental Conservation
615 Erie Boulevard
Syracuse, NY 13204

Re: October 2022 Annual Sampling Event – Report
Krutulis Property
NYSDEC Site Code – 727009
Kirkville, New York
File: 1090258/1940103083

Dear Ms. Cahill:

Date May 3, 2022

This report presents the groundwater elevation and sampling results for the Krutulis Property annual groundwater sampling event conducted on October 18, 2022.

The work was performed in accordance with the NYSDEC-approved Groundwater Monitoring Program (GWMP) for the site. The event took place during October 2022, per the GWMP. The GWMP currently extends through October 2022, and a request to extend this program for five years (2023 to 2027) will be submitted.

Ramboll
333 West Washington Street
Syracuse, NY 13202
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After the sampling event was completed, the groundwater samples were transported using chain-of-custody protocol to Life Science Laboratories, Inc. in East Syracuse, New York. The samples were analyzed for volatile organic compounds (VOCs) using USEPA Method 8260.

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The groundwater elevation data obtained during the monitoring event is presented on **Table 1**, and a groundwater contour map has been prepared and included as **Figure 1**. The inferred groundwater flow direction is consistent with historic groundwater elevations.

The analytical results from the October 18, 2022 annual sampling event are presented in **Table 2**, and historical groundwater analytical data for the monitoring wells (MWs) are displayed in **Table 3**. Detected VOCs are also presented on **Figure 2**. A copy of the laboratory analytical report is also included in **Attachment 1**. The following was observed based on a review of **Table 2**.

- VOCs were not detected in monitoring wells MW-1, MW-2, MW-4, MW-5, or MW-6S.
- In MW-3S, benzene, 1,1-dichloroethene (1,1-DCE), cis-1,2-dichloroethene (cis-1,2-DCE), trans-1,2-DCE, trichloroethene (TCE), and vinyl chloride (VC) were detected at concentrations of 1.84 ppb, 1.58 ppb, 1,390 ppb, 69.7 ppb, 12.5 ppb, and 617 ppb, respectively. The results indicate that the TCE

continues to biodegrade naturally into its degradation products of 1,2-DCE and VC. The detected concentrations are consistent with historical results.

- In MW-3D, cis-1,2-DCE, trans-1,2-DCE, TCE, and VC were detected at concentrations of 176 ppb, 43.9 ppb, 5.92 ppb, and 9.77 ppb, respectively, which are consistent with historical results.
- In MW-6D, cis-1,2-DCE, and VC were detected at concentrations of 8.30 ppb, and 10.5 ppb, respectively, which are consistent with historical results.

Historical graphs of the VOCs¹ detected in monitoring wells MW-3S, MW-3D, and MW-6D are presented in **Attachment 2**.

If you have any questions, please feel free to contact Mr. Richard Mator of Bristol-Myers Squibb Company at 609-252-4273 or Scott Mosher at 585-944-7614.

Yours sincerely



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PROJECT MANAGER 2

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Attachments: Table 1 – Monitoring Wells – Water Level Measurements
Table 2 – Groundwater Analytical Data – October 2022 Annual Sampling Event (VOCs)
Table 3 – Historical Groundwater Analytical Data (VOCs)
Figure 1 – Groundwater Flow Map
Figure 2 – Detected VOCs in Groundwater
Attachment 1 – Historic Graphs for MW-3S, MW-3D, and MW-6D
Attachment 2 – Laboratory Analytical Report

cc: G. Priscott – NYSDEC (electronic copy [ec])
H. Hood – New York State Department of Health (ec)
R. Mator – Bristol-Myers Squibb Company (ec)
W. Pufko – Bristol-Myers Squibb Company (ec)
T. Garcia – Bristol-Myers Squibb Company (ec)
Richard and Pamela Mellor – Site owners (w/Attachments)
J. Becker – Town of Sullivan (w/Attachments)
C. Calkins – Ramboll (ec)

¹ Historical graphs present concentrations of 1,2-DCE, TCE, and VC for wells MW-3S and MW-3D, and 1,2-DCE and TCE for well MW-6D

TABLES

TABLE 1
Krutulis Property
Kirkville, New York Site
Monitoring Wells - Water Level Measurements

Monitoring Well	Top of Casing Elevation (ft amsl)	Total Depth (ft btoc)	Groundwater Elevations (ft amsl)				
			5/25/93	6/1/93	6/27/97	9/16/97	12/18/97
MW-1	298.45	19.18	294.45	295.19	292.90	289.71	293.23
MW-2	302.46	19.11	294.36	294.02	292.11	288.64	291.07
MW-3S	290.51	19.16	289.72	289.75	288.91	287.48	289.28
MW-4	290.58	19.31	288.71	288.82	288.45	287.60	288.91
MW-5	290.29	18.68	288.40	288.47	288.40	287.76	288.80
Monitoring Well	Top of Casing Elevation (ft amsl)	Total Depth (ft btoc)	Groundwater Elevations (ft amsl)				
			03/18/98	09/23/98	03/26/99	09/24/99	12/21/99
MW-1	298.45	19.18	296.12	290.47	296.21	288.99	292.81
MW-2	302.46	19.11	295.63	289.07	294.96	287.42	290.68
MW-3S	290.51	19.16	290.35	288.22	290.51	287.53	289.06
MW-4	290.58	19.31	289.48	288.17	289.89	287.73	288.56
MW-5	290.29	18.68	289.36	288.24	289.73	288.02	288.41
Monitoring Well	Top of Casing Elevation (ft amsl)	Total Depth (ft btoc)	Groundwater Elevations (ft amsl)				
			03/15/00	09/13/00	03/29/01	09/25/01	03/14/02
MW-1	298.45	19.18	295.77	293.60	296.24	291.51	295.73
MW-2	302.46	19.11	294.22	291.05	295.72	289.15	294.06
MW-3S	290.51	19.16	290.01	288.99	290.24	289.29	289.96
MW-4	290.58	19.31	289.27	288.95	289.49	289.02	289.33
MW-5	290.29	18.68	288.98	288.18	289.12	288.98	289.08
Monitoring Well	Top of Casing Elevation (ft amsl)	Total Depth (ft btoc)	Groundwater Elevations (ft amsl)				
			09/10/02	05/16/03	09/22/03	05/04/04	09/30/04
MW-1	298.45	19.18	289.93	295.90	290.96	296.14	294.53
MW-2	302.46	19.11	289.00	295.34	290.06	295.75	293.26
MW-3S	290.51	19.16	288.01	290.08	288.69	290.51	290.11
MW-4	290.58	19.31	288.08	289.45	288.60	289.98	289.37
MW-5	290.29	18.68	288.31	289.15	288.74	289.75	289.29
Monitoring Well	Top of Casing Elevation (ft amsl)	Total Depth (ft btoc)	Groundwater Elevations (ft amsl)				
			3/28/05	9/29/05	4/19/06	10/2/06	5/17/07
MW-1	298.45	19.18	296.45	290.69	295.73	294.09	294.90
MW-2	302.46	19.11	295.43	289.43	295.11	291.91	294.96
MW-3S	290.51	19.16	290.51	289.02	290.41	290.01	290.01
MW-4	290.58	19.31	290.08	289.09	289.90	289.78	289.58
MW-5	290.29	18.68	289.80	289.19	289.61	288.33	289.54
Monitoring Well	Top of Casing Elevation (ft amsl)	Total Depth (ft btoc)	Groundwater Elevations (ft amsl)				
			9/7/07	4/30/08	10/16/08	4/30/09	10/6/09
MW-1	298.45	19.18	290.15	295.94	292.15	294.99	294.00
MW-2	302.46	19.11	289.34	295.60	289.99	295.04	292.06
MW-3S	290.51	19.16	288.51	290.51	289.60	290.61	290.31
MW-3D	294.97	31.76	NM	291.36	288.72	291.34	290.19
MW-4	290.58	19.31	288.78	290.18	289.56	290.58	289.98
MW-5	290.29	18.68	287.64	289.79	288.23	291.10	290.09
MW-6S	299.15	22.95	NM	293.69	289.97	293.15	291.14
MW-6D	299.27	35.95	NM	293.02	289.70	292.85	291.17
Monitoring Well	Top of Casing Elevation (ft amsl)	Total Depth (ft btoc)	Groundwater Elevations (ft amsl)				
			4/29/10	10/14/10	5/12/11	10/26/11	4/9/12
MW-1	298.45	19.18	295.04	295.35	295.60	295.82	294.54
MW-2	302.46	19.11	294.36	293.76	296.36	293.26	293.86
MW-3S	290.51	19.16	289.81	290.51	290.51	290.51	289.83
MW-3D	294.97	31.76	290.39	290.99	291.25	291.03	290.67
MW-4	290.58	19.31	289.59	289.73	289.70	290.16	289.58
MW-5	290.29	18.68	289.49	289.89	289.39	290.02	289.52
MW-6S	299.15	22.95	292.44	291.90	293.60	291.93	292.36
MW-6D	299.27	35.95	292.01	292.12	292.89	292.02	291.81

TABLE 1
Krutulis Property
Kirkville, New York Site
Monitoring Wells - Water Level Measurements

Monitoring Well	Top of Casing Elevation (ft amsl)	Total Depth (ft btoc)	11/20/12	Groundwater Elevations (ft amsl)				
				4/25/13	10/24/13	4/23/14	10/28/14	
	MW-1	298.45	19.18	291.89	295.98	294.50	296.16	295.05
	MW-2	302.46	19.11	290.26	295.56	292.10	292.89	292.26
	MW-3S	290.51	19.16	289.70	290.51	290.11	290.51	290.07
	MW-3D	294.97	31.76	289.66	291.29	290.35	291.03	290.47
	MW-4	290.58	19.31	289.57	289.73	289.58	289.78	289.61
	MW-5	290.29	18.68	289.58	289.59	289.44	289.52	288.66
	MW-6S	299.15	22.95	290.14	293.34	291.17	293.92	291.37
MW-6D	299.27	35.95	290.23	292.80	291.16	292.97	291.32	
Monitoring Well	Top of Casing Elevation (ft amsl)	Total Depth (ft btoc)	4/28/15	Groundwater Elevations (ft amsl)				
				10/22/15	4/21/16	10/19/16	4/25/17	
	MW-1	298.45	19.18	295.87	294.86	295.64	290.02	296.13
	MW-2	302.46	19.11	295.63	292.21	295.28	288.58	290.88
	MW-3S	290.51	19.16	290.43	289.80	290.30	288.63	290.51
	MW-3D	294.97	31.76	291.14	290.44	291.07	288.63	291.23
	MW-4	290.58	19.31	289.60	289.51	289.59	288.79	289.99
	MW-5	290.29	18.68	289.31	289.44	289.84	288.81	289.81
	MW-6S	299.15	22.95	293.59	291.31	293.13	288.50	294.15
MW-6D	299.27	35.95	292.71	290.12	292.53	287.18	293.19	
Monitoring Well	Top of Casing Elevation (ft amsl)	Total Depth (ft btoc)	10/18/17	Groundwater Elevations (ft amsl)				
				5/2/18	10/23/18	4/17/19	10/30/19	
	MW-1	298.45	19.18	291.71	296.09	292.43	295.78	295.19
	MW-2	302.46	19.11	290.02	295.32	290.34	294.26	294.39
	MW-3S	290.51	19.16	288.99	290.51	289.05	290.51	290.51
	MW-3D	294.97	31.76	289.37	291.17	289.26	289.52	290.96
	MW-4	290.58	19.31	289.16	289.76	289.16	289.65	290.23
	MW-5	290.29	18.68	288.19	289.60	288.29	288.75	289.37
	MW-6S	299.15	22.95	289.59	292.64	289.73	293.37	292.76
MW-6D	299.27	35.95	289.57	292.73	289.80	292.42	292.49	
Monitoring Well	Top of Casing Elevation (ft amsl)	Total Depth (ft btoc)	10/14/20	Groundwater Elevations (ft amsl)				
				12/8/21	10/18/22			
	MW-1	298.45	19.18	290.89	296.05	290.59		
	MW-2	302.46	19.11	289.43	294.69	289.65		
	MW-3S	290.51	19.16	288.85	290.31	288.81		
	MW-3D	294.97	31.76	288.95	290.57	289.41		
	MW-4	290.58	19.31	289.00	289.83	289.29		
	MW-5	290.29	18.68	288.45	289.69	288.44		
	MW-6S	299.15	22.95	289.00	292.96	289.69		
MW-6D	299.27	35.95	289.13	293.14	289.95			
Notes:								
ft amsl - feet above mean sea level								
ft btoc - feet below top of casing								
NM - Not measured as not installed at this time								

TABLE 2
Krutulis Property
Kirkville, New York Site
Groundwater Analytical Data - October 2022 Annual Sampling Event
Volatile Organic Compounds

PARAMETERS	NYSDEC Groundwater Quality Standards and Guidance Values	MW-1	MW-2	MW-3S	MW-3D	MW-4	MW-5	MW-6S	MW-6D
Benzene	1	<0.5	<1.0	1.84	<0.5	<1.0	<1.0	<1.0	<1.0
Chloroform	7	<0.5	<1.0	<1.0	<0.5	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethene	5	<0.5	<1.0	1.58	<0.5	<1.0	<1.0	<1.0	<1.0
1,2-Dichloroethene (total)	5	<0.5	<1.0	1,459.7	219.9	<1.0	<1.0	<1.0	8.3
<i>cis-1,2-Dichloroethene</i>	5	<0.5	<1.0	1,390	176	<1.0	<1.0	<1.0	8.3
<i>trans-1,2-Dichloroethene</i>	5	<0.5	<1.0	69.7	43.9	<1.0	<1.0	<1.0	<1.0
Tetrachloroethene	5	<0.5	<1.0	<1.0	<0.5	<1.0	<1.0	<1.0	<1.0
Toluene	5	<0.5	<1.0	<1.0	<0.5	<1.0	<1.0	<1.0	<1.0
Trichloroethene	5	<0.5	<1.0	12.5	5.92	<1.0	<1.0	<1.0	<1.0
Vinyl chloride	2	<1.0	<2.0	617	9.77	<2.0	<2.0	<2.0	10.5
Xylene (total)	5	<1.0	<2.0	<2.0	<1.0	<2.0	<2.0	<2.0	<2.0
Methyl isobutyl ketone	NA	<5.0	<10.0	<10.0	<5.0	<10.0	<10.0	<10.0	<10.0
Acetone	50	<10.0	<20.0	<20.0	<10.0	<20.0	<20.0	<20.0	<20.0

Notes:

- 1) All values are in mg/L. Detected values shown in **bold** text.
- 2) J - Estimated value; E - Value exceeds the instrument calibration range.
- 3) < - Not detected above the corresponding laboratory Practical Quantitation Limit.
- 4) NA - Not Applicable.

TABLE 3
Krutulis Property
Kirkville, New York Site
Historical Groundwater Analytical Data
Volatile Organic Compounds

MW-3D													
PARAMETERS	NYSDEC Groundwater Quality Standards and Guidance Values	10/18/07	04/30/08	10/16/08	04/30/09	10/06/09	04/29/10	10/14/10	05/12/11	10/26/11	04/19/12	11/20/12	04/25/13
Benzene	1	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroform	7	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	5	<100	1	1	1	<0.5	1	0.75	0.74	1.03	0.74	0.76	0.56
1,2-Dichloroethene (total)	5	<100	255	370	184	286	173	178.3	211.9	221	222.3	284.6	186.4
Tetrachloroethene	5	<100	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	5	<100	3	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene	5	1,030	728	318	193	126	110	77.3	78.2	58.8	52.2	38.8	46.1
Vinyl chloride	2	<200	<1	<1	<1	4	1	3.16	1.81	4.62	4.56	10.7	2.83
Xylene (total)	5	<200	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl isobutyl ketone	NA	NA	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Acetone	50	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10

MW-3D													
PARAMETERS	NYSDEC Groundwater Quality Standards and Guidance Values	10/24/13	04/23/14	10/28/14	04/28/15	10/22/15	04/21/16	10/19/16	04/25/17	10/18/17	05/02/18	10/23/18	04/17/19
Benzene	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroform	7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	5	0.74	0.67	0.83	0.51	0.61	0.51	0.86	<0.5	<0.5	0.56	<0.5	<0.5
1,2-Dichloroethene (total)	5	344.6	189.7	264.9	129.7	194.8	163	299.3	139.6	224.8	192.5	261	240.5
Tetrachloroethene	5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene	5	77.6	58.6	31.4	46.6	22.5	43.4	50.1	35.8	26.1	37.6	50.1	45.9
Vinyl chloride	2	8.39	2.42	12.4	<1	7.26	4.15	16.1	3.40	9.94	5.92	11.2	5.33
Xylene (total)	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl isobutyl ketone	NA	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Acetone	50	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10

MW-3D					
PARAMETERS	NYSDEC Groundwater Quality Standards and Guidance Values	10/30/19	10/14/20	12/08/21	10/18/22
Benzene	1	<0.5	<0.5	<0.5	<0.5
Chloroform	7	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	5	0.53	<0.5	<0.5	<0.5
1,2-Dichloroethene (total)	5	193.7	141.2	198.4	219.9
cis-1,2-Dichloroethene	5	157	115	152	176
trans-1,2-Dichloroethene	5	36.7	26.2	46.4	43.9
Tetrachloroethene	5	<0.5	<0.5	<0.5	<0.5
Toluene	5	<0.5	<0.5	<0.5	<0.5
Trichloroethene	5	19.8	6.94	26.2	5.92
Vinyl chloride	2	5.23	10.9	4.38	9.77
Xylene (total)	5	<1	<1.0	<1.0	<1.0
Methyl isobutyl ketone	NA	<5	<5.0	<5.0	<5.0
Acetone	50	<10	<10.0	<10.0	<10.0

TABLE 3
Krutulis Property
Kirkville, New York Site
Historical Groundwater Analytical Data
Volatile Organic Compounds

MW-6S													
PARAMETERS	NYSDEC Groundwater Quality Standards and Guidance Values	10/24/13	04/23/14	10/28/14	04/28/15	10/22/15	04/21/16	10/19/16	04/25/17	10/18/17	05/02/18	10/23/18	04/17/19
Benzene	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroform	7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloroethene (total)	5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene	5	1.12	<0.5	<0.5	<0.5	0.58	0.87	1.59	<0.5	0.64	<0.5	<0.5	<0.5
Vinyl chloride	2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylene (total)	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl isobutyl ketone	NA	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Acetone	50	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10

MW-6S													
PARAMETERS	NYSDEC Groundwater Quality Standards and Guidance Values	10/30/19	10/14/20	12/08/21	10/18/22								
Benzene	1	<0.5	<0.5	<0.5	<1								
Chloroform	7	<0.5	<0.5	<0.5	<1								
1,1-Dichloroethene	5	<0.5	<0.5	<0.5	<1								
1,2-Dichloroethene (total)	5	0.55	<0.5	0.56	<1								
<i>cis</i> -1,2-Dichloroethene	5	0.55	<0.5	0.56	<1								
<i>trans</i> -1,2-Dichloroethene	5	<0.5	<0.5	<0.5	<1								
Tetrachloroethene	5	<0.5	<0.5	<0.5	<1								
Toluene	5	<0.5	<0.5	<0.5	<1								
Trichloroethene	5	0.57	0.75	0.57	<1								
Vinyl chloride	2	<1	<1	<1.0	<2								
Xylene (total)	5	<1	<1	<1.0	<2								
Methyl isobutyl ketone	NA	<5	<5	<5.0	<10								
Acetone	50	<10	<10	<10.0	<20								

TABLE 3
Krutulis Property
Kirkville, New York Site
Historical Groundwater Analytical Data
Volatile Organic Compounds

MW-6D													
PARAMETERS	NYSDEC Groundwater Quality Standards and Guidance Values	10/18/07	04/30/08	10/16/08	4/30/09	10/06/09	04/29/10	10/14/10	05/12/11	10/26/11	04/19/12	11/20/12	04/25/13
Benzene	1	<25	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroform	7	<25	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	5	<25	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloroethene (total)	5	<25	10	6	2	8	8	23.01	6.73	54.66	33.21	35.75	31.26
Tetrachloroethene	5	<25	1	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	5	1,470	59	6	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene	5	1,940	253	175	82	77	71	42.1	13.5	14.0	11.9	5.83	6.61
Vinyl chloride	2	<50	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylene (total)	5	<50	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl isobutyl ketone	NA	NA	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Acetone	50	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10

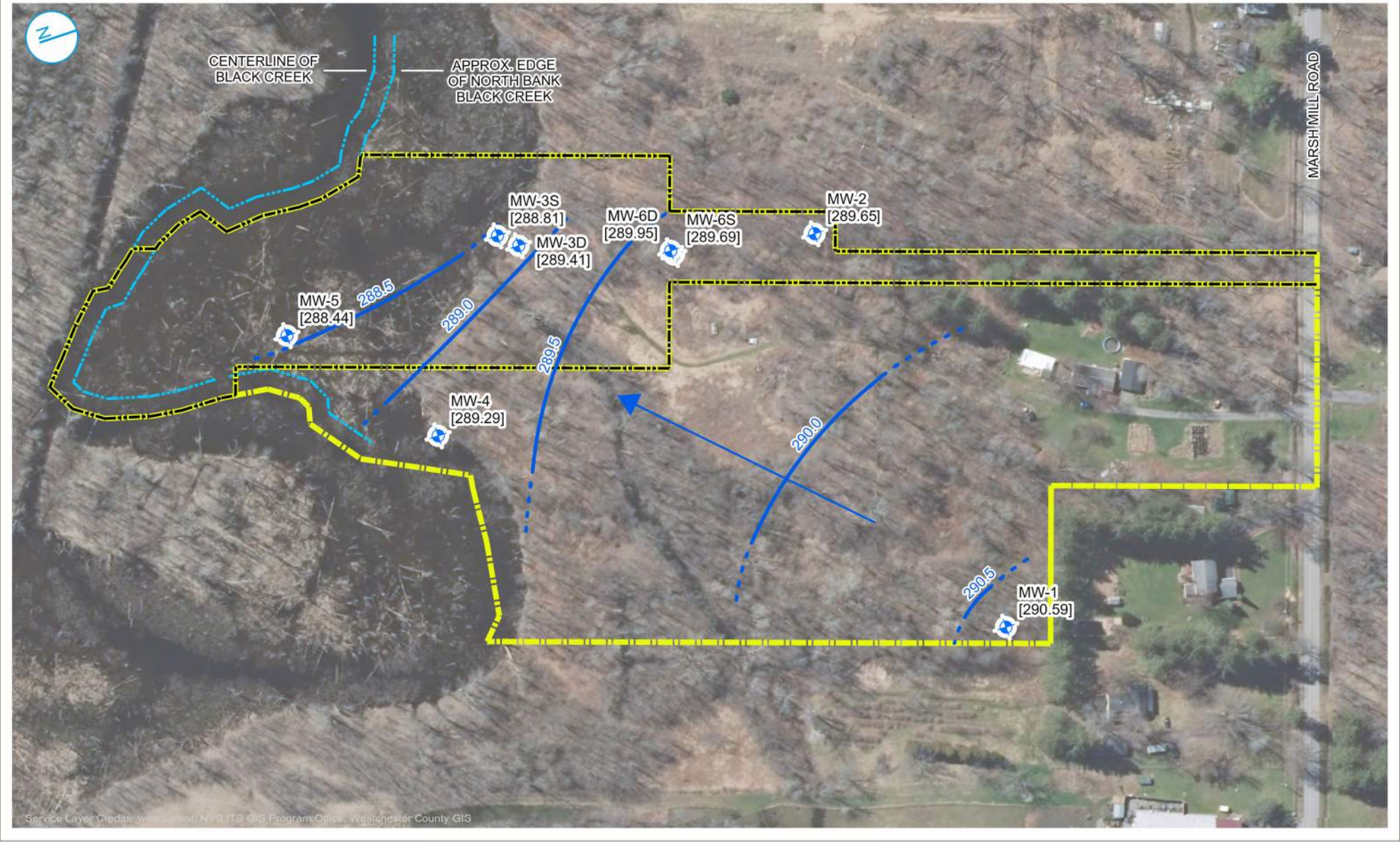
MW-6D													
PARAMETERS	NYSDEC Groundwater Quality Standards and Guidance Values	10/24/13	04/23/14	10/28/14	04/28/15	10/22/15	04/21/16	10/19/16	04/25/17	10/18/17	05/02/18	10/23/18	04/17/19
Benzene	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroform	7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloroethene (total)	5	29.06	38.55	27.35	33.28	25.05	28.77	7.82	26.95	26.2	21.63	18.71	25.03
Tetrachloroethene	5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene	5	4.72	5.62	3.43	2.96	1.52	2.64	0.67	1.43	1.25	0.98	0.54	1.56
Vinyl chloride	2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	3.12	<1
Xylene (total)	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl isobutyl ketone	NA	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Acetone	50	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10

MW-6D					
PARAMETERS	NYSDEC Groundwater Quality Standards and Guidance Values	10/30/19	10/14/20	12/08/21	10/18/22
Benzene	1	<0.5	<0.5	<0.5	<1
Chloroform	7	<0.5	<0.5	<0.5	<1
1,1-Dichloroethene	5	<0.5	<0.5	<0.5	<1
1,2-Dichloroethene (total)	5	17.07	11.0	23.9	8.3
<i>cis</i> -1,2-Dichloroethene	5	16.2	11.0	20.5	8.3
<i>trans</i> -1,2-Dichloroethene	5	0.87	<0.5	3.4	<1
Tetrachloroethene	5	<0.5	<0.5	<0.5	<1
Toluene	5	<0.5	<0.5	<0.5	<1
Trichloroethene	5	1.08	0.56	0.74	<1
Vinyl chloride	2	4.46	3.77	3.01	10.5
Xylene (total)	5	<1	<1	<1.0	<2
Methyl isobutyl ketone	NA	<5	<5	<5.0	<10
Acetone	50	<10	<10	<10.0	<20

Notes:

- 1) All values are in mg/L. Detected values shown in **bold** text.
- 2) J or E - Estimated Value.
- 3) < - Not detected above the corresponding laboratory Practical Quantitation Limit.
- 4) NA - Not Applicable.
- 5) The routine detection limit for acetone by Gas Chromatography (GC) is 100 mg/L. Samples that contain elevated concentrations of other parameters require a dilution of the sample to enable the instrument to analyze those parameters within the linear range. Therefore, the detection limits for the non-detected parameters must be raised by a correction factor equivalent to the dilution factor.
- 6) The 3/15/00 and 9/13/00 samples for MW-3 were re-analyzed to achieve lower detection limits. As a result, a J value of 150 mg/L for 1,1-Dichloroethylene was determined for the 3/15/00 sample.
- 7) The two 9/30/04 samples for MW-3 were analyzed at diluted concentrations resulting in higher detection levels than as presented for previous sampling events.
- 8) On 10/18/07 during site investigation activities, groundwater samples were collected from monitoring wells MW-3S, MW-3D, MW-6S, and MW-6D.
- 9) Effective 2020, the semi-annual monitoring program transitioned to annual monitoring
- 10) For the 12/08/21, *cis*-1,2-Dichloroethene for MW-3S = 4490 ug/L E and the *trans*-1,2-Dichloroethene = 33.9 ug/L

FIGURES



- LEGEND**
- SURVEY PROPERTY BOUNDARY (RYBINSKI, 1997)
 - - - KRUTULIS PROPERTY (NYSDEC REGISTRY SITE #727009)
 - ⊕ MONITORING WELL
 - GROUNDWATER CONTOUR (DASHED WHERE INFERRED)

Note: Elevation values are in feet above mean sea level



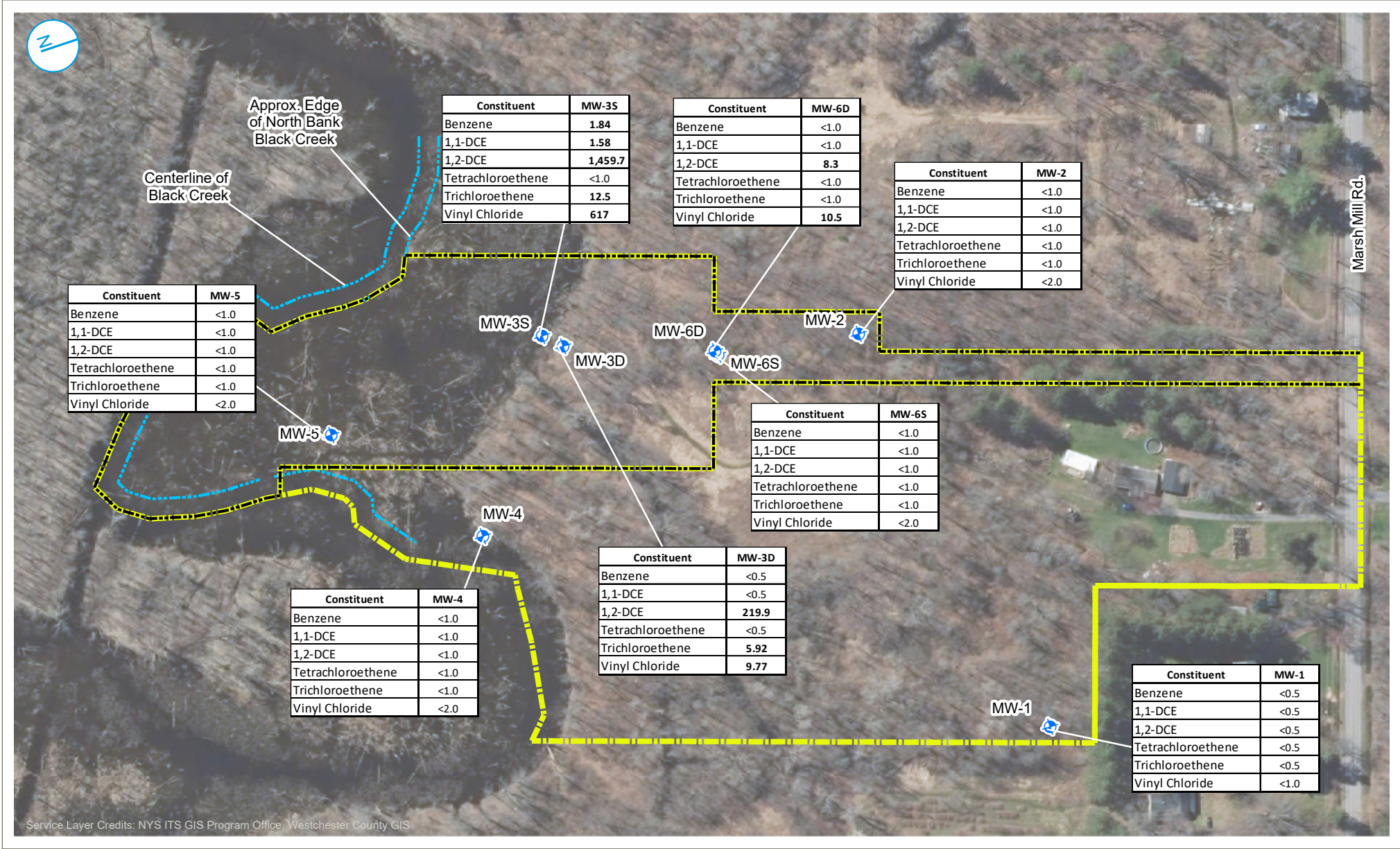
GROUNDWATER FLOW MAP
OCTOBER 19, 2022

Krutulis Property
848 Marsh Mill Road
Kirkville, New York

FIGURE 01

RAMBOLL US CORPORATION
A RAMBOLL COMPANY





LEGEND

- SURVEY PROPERTY BOUNDARY (RYBINSKI, 1997)
- KRUTULIS PROPERTY (NYSDEC REGISTRY SITE #727009)
- ◆ MONITORING WELL

DETECTED VOCs IN GROUNDWATER
OCTOBER 18, 2022

Krutulis Property
848 Marsh Mill Road
Kirkville, New York

0 85 170 Feet

FIGURE 02

RAMBOLL US CORPORATION
A RAMBOLL COMPANY

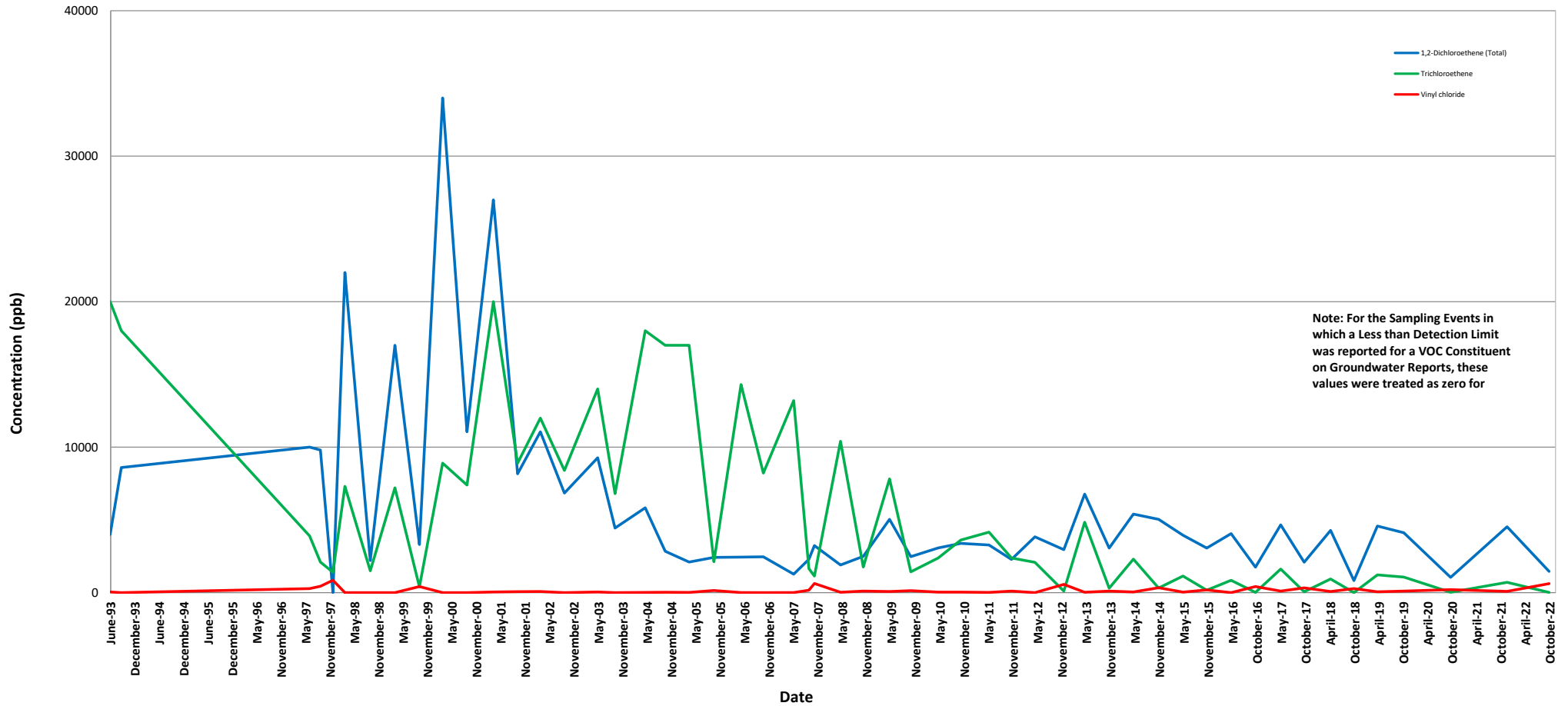
RAMBOLL

ATTACHMENTS

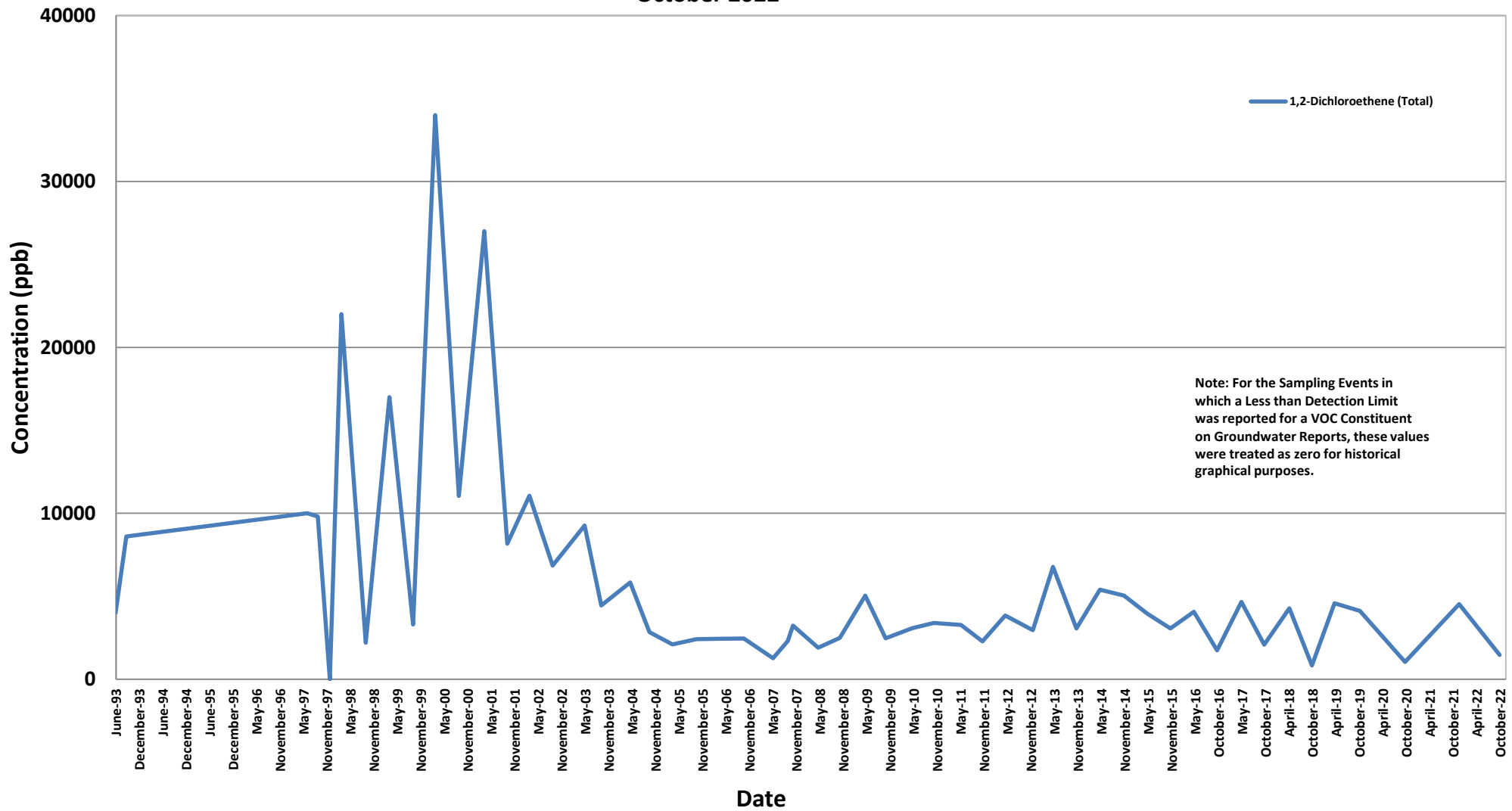
ATTACHMENT 1
HISTORIC GRAPHS FOR MW-3S, MW-3D, AND MW-6D

MW-3S HISTORIC GRAPHS

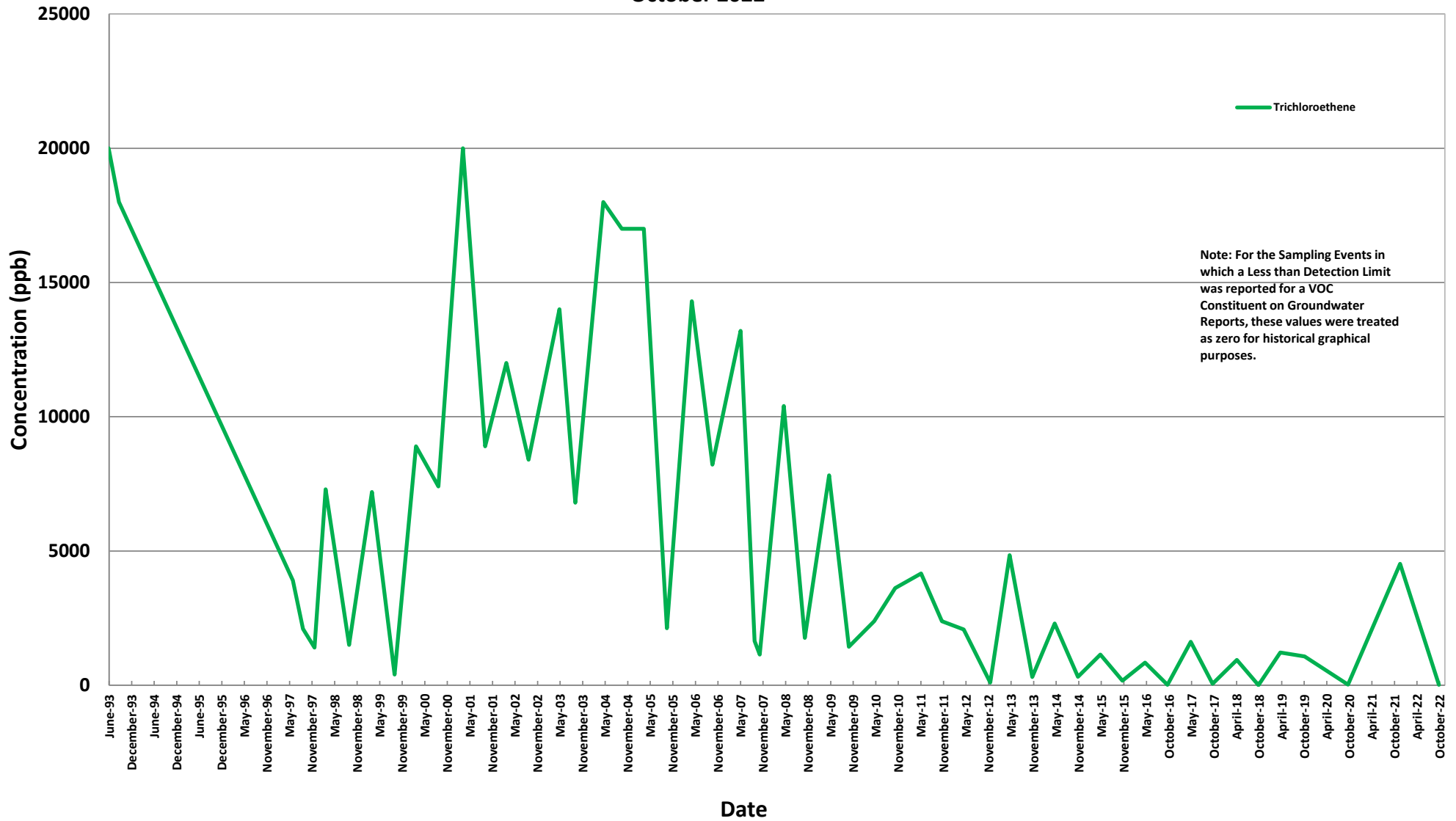
Krutulis Site
Monitoring Well - MW-3S
VOC Historical Data
October 2022



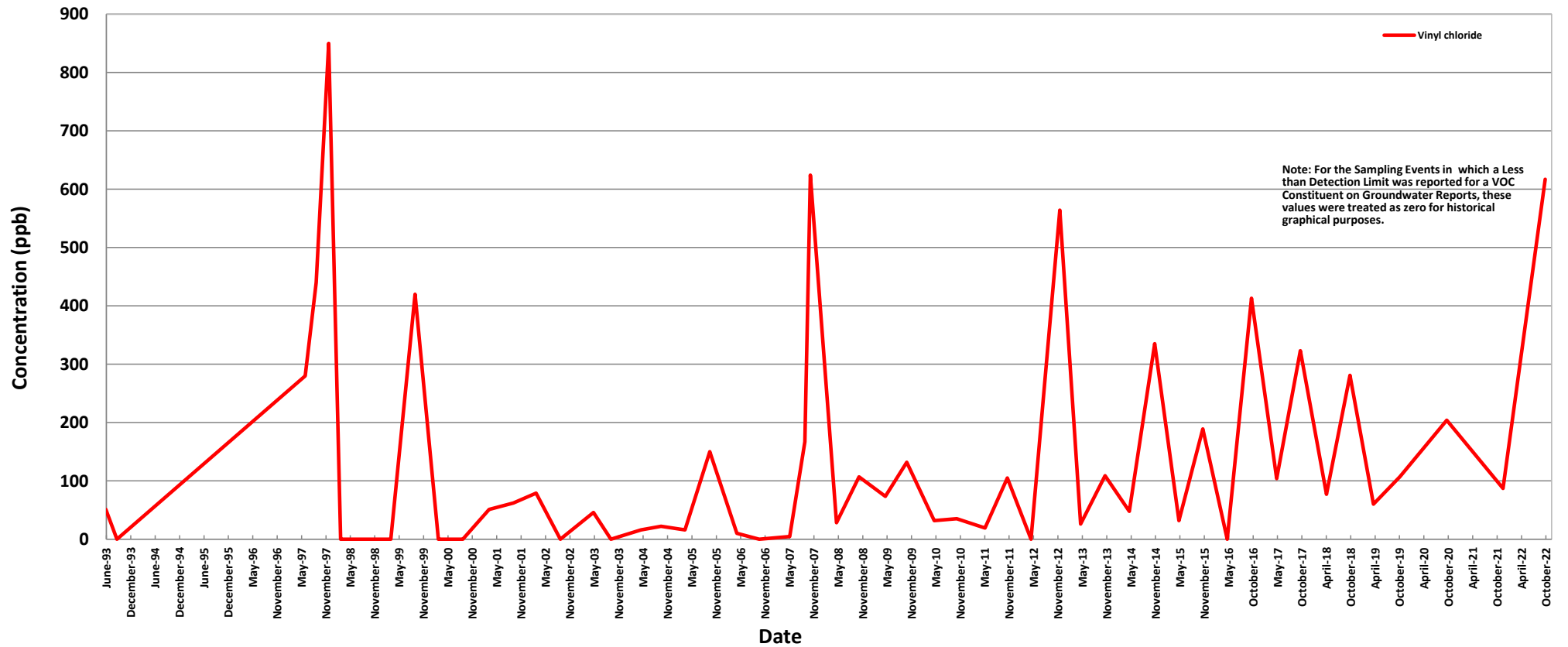
Krutulis Site
Monitoring Well - MW-3S
1,2-Dichloroethene (Total) Historical Data
October 2022



Krutulis Site
Monitoring Well - MW-3S
Trichloroethene Historical Data
October 2022

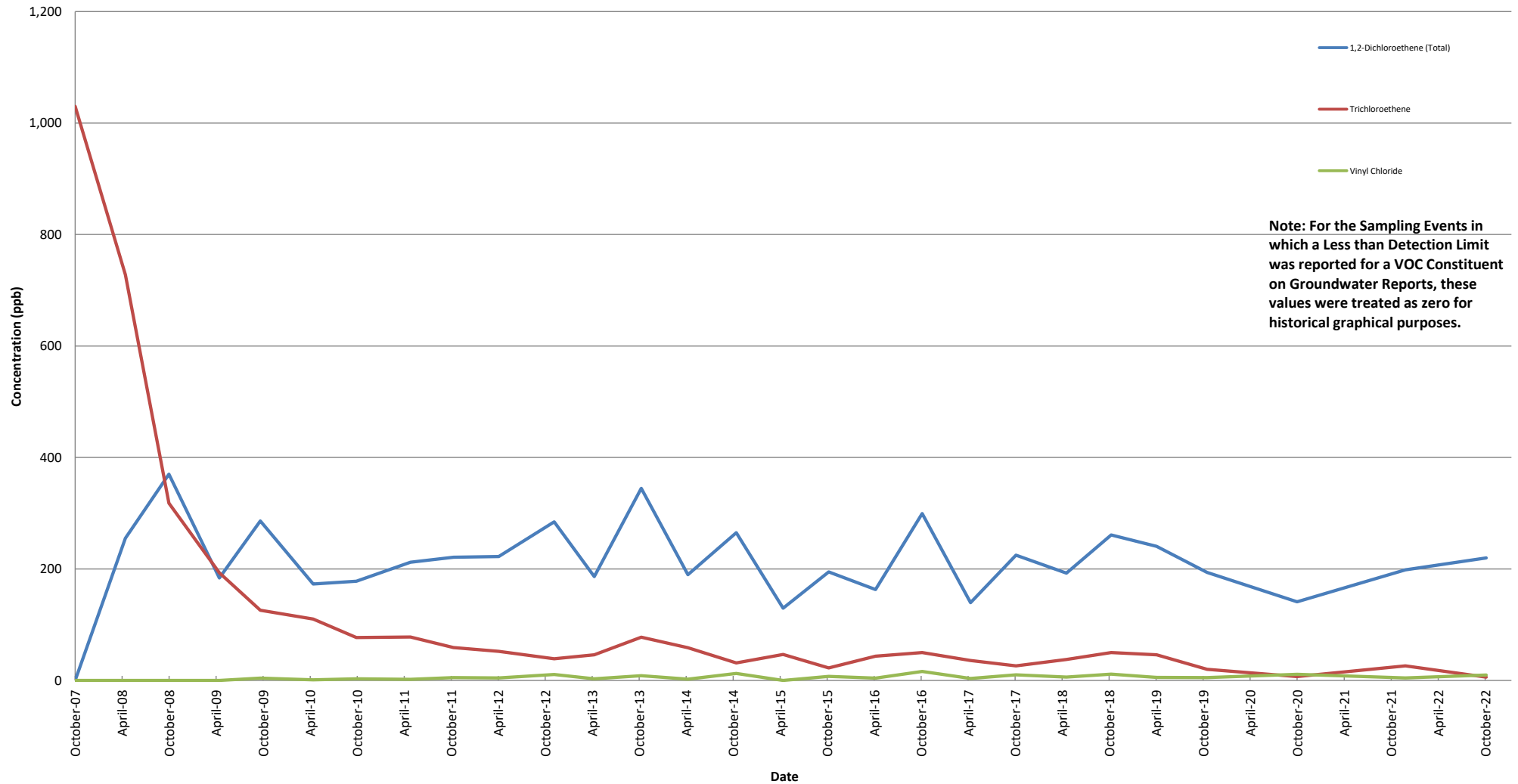


Krutulis Site
Monitoring Well - MW-3S
Vinyl Chloride Historical Data
October 2022

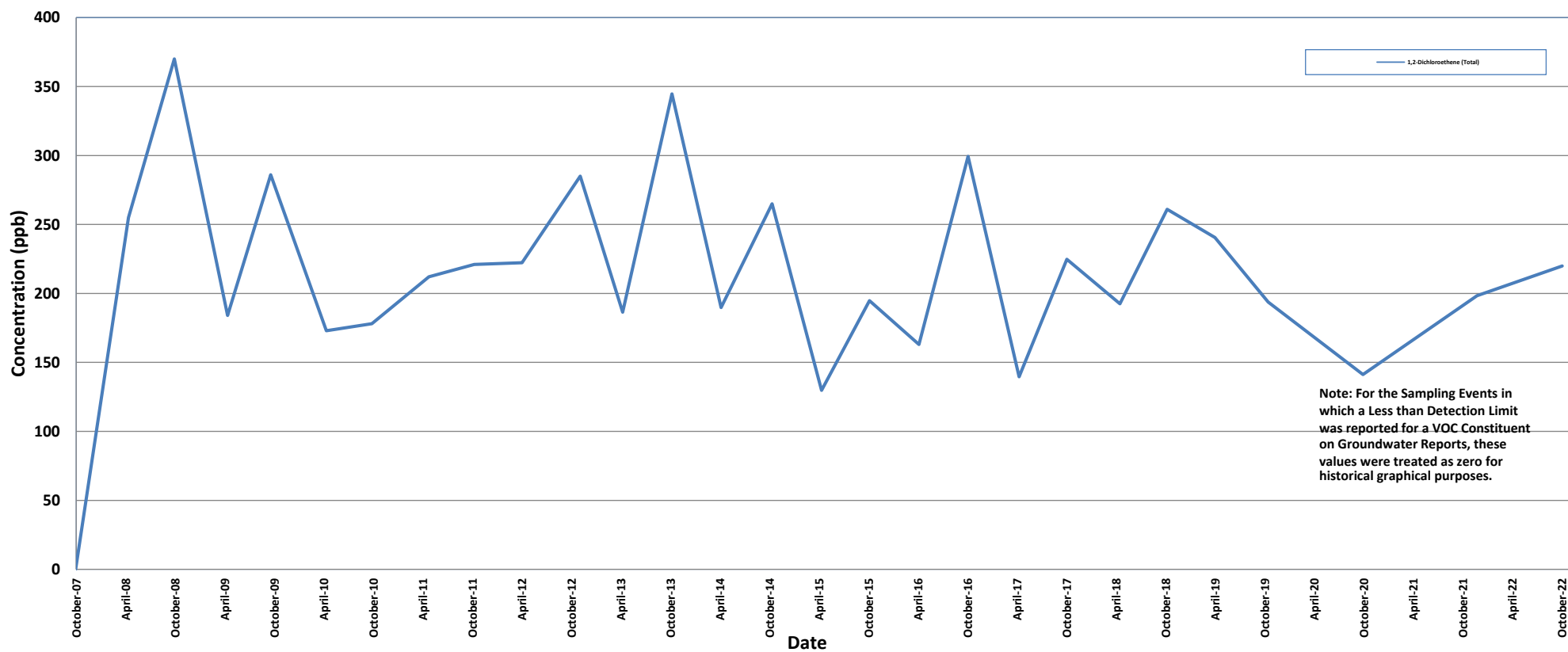


MW-3D HISTORIC GRAPHS

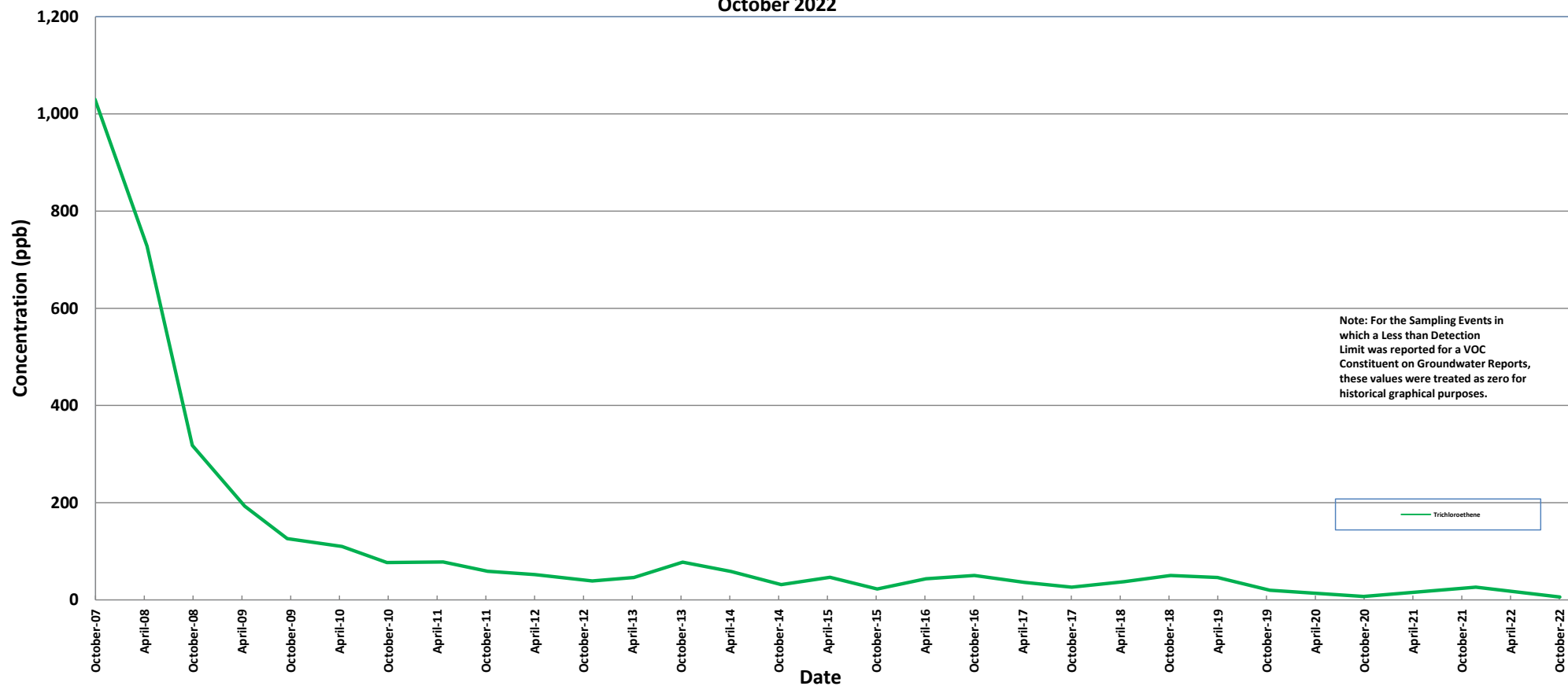
BMS-Krutulis Site
Monitoring Well - MW-3D
VOC Historical Results
October 2022



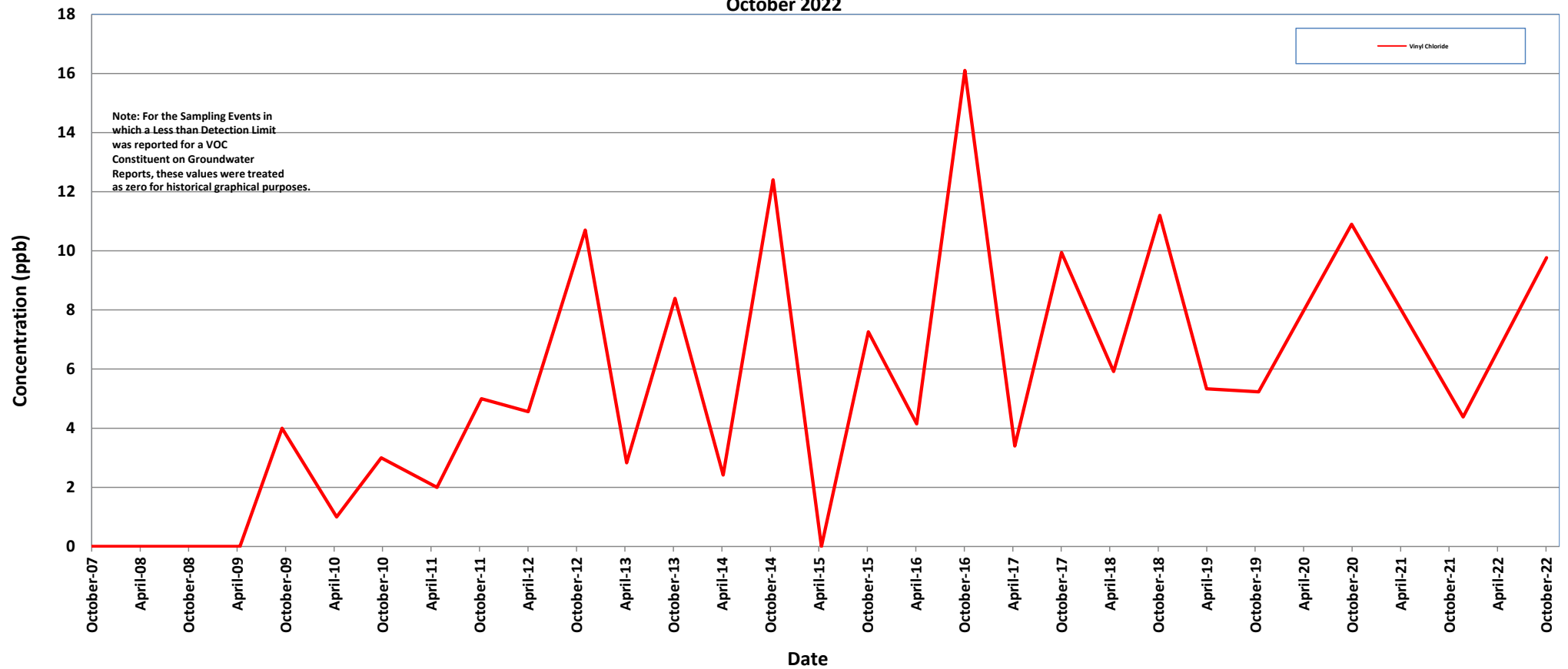
BMS-Krutulis Site
Monitoring Well - MW-3D
1,2-Dichloroethene (Total) Historical Results
October 2022



**BMS-Krutulis Site
Monitoring Well - MW-3D
Trichloroethene Historical Results
October 2022**

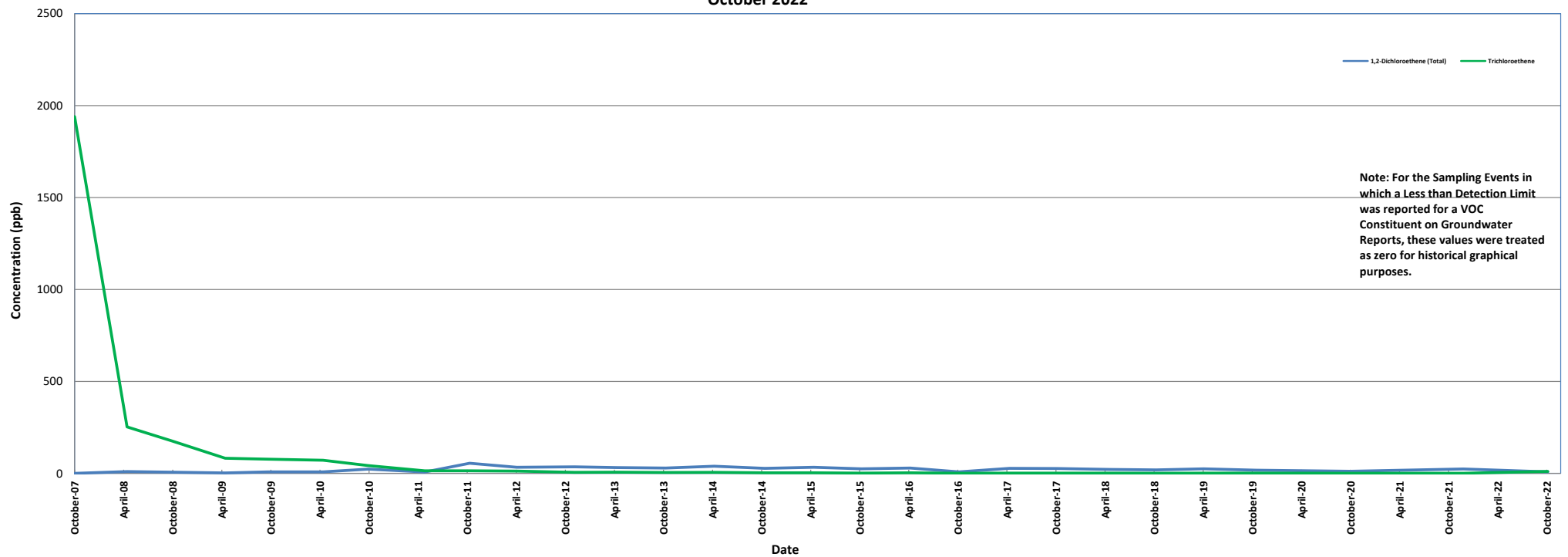


**BMS-Krutulis Site
Monitoring Well - MW-3D
Vinyl Chloride Historical Results
October 2022**

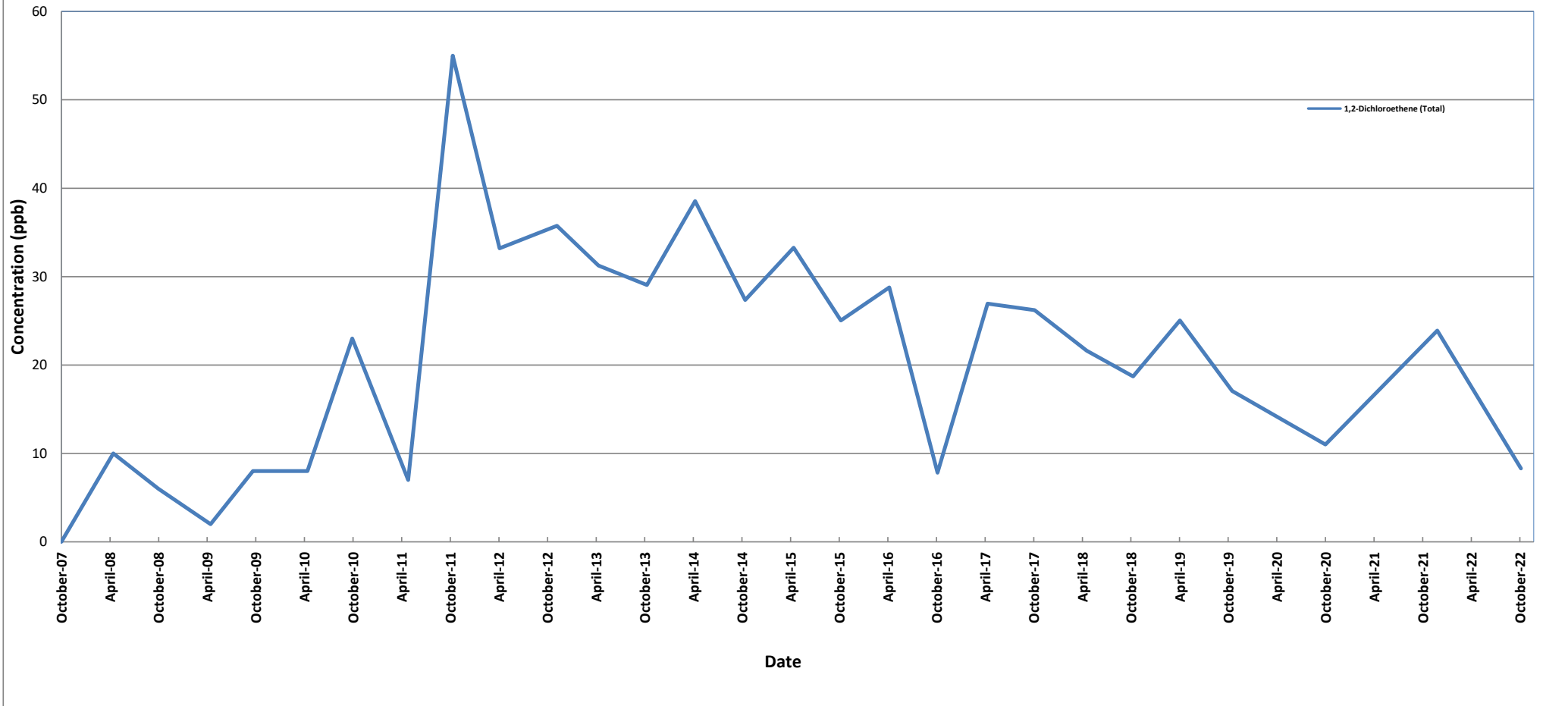


MW-6D HISTORIC GRAPHS

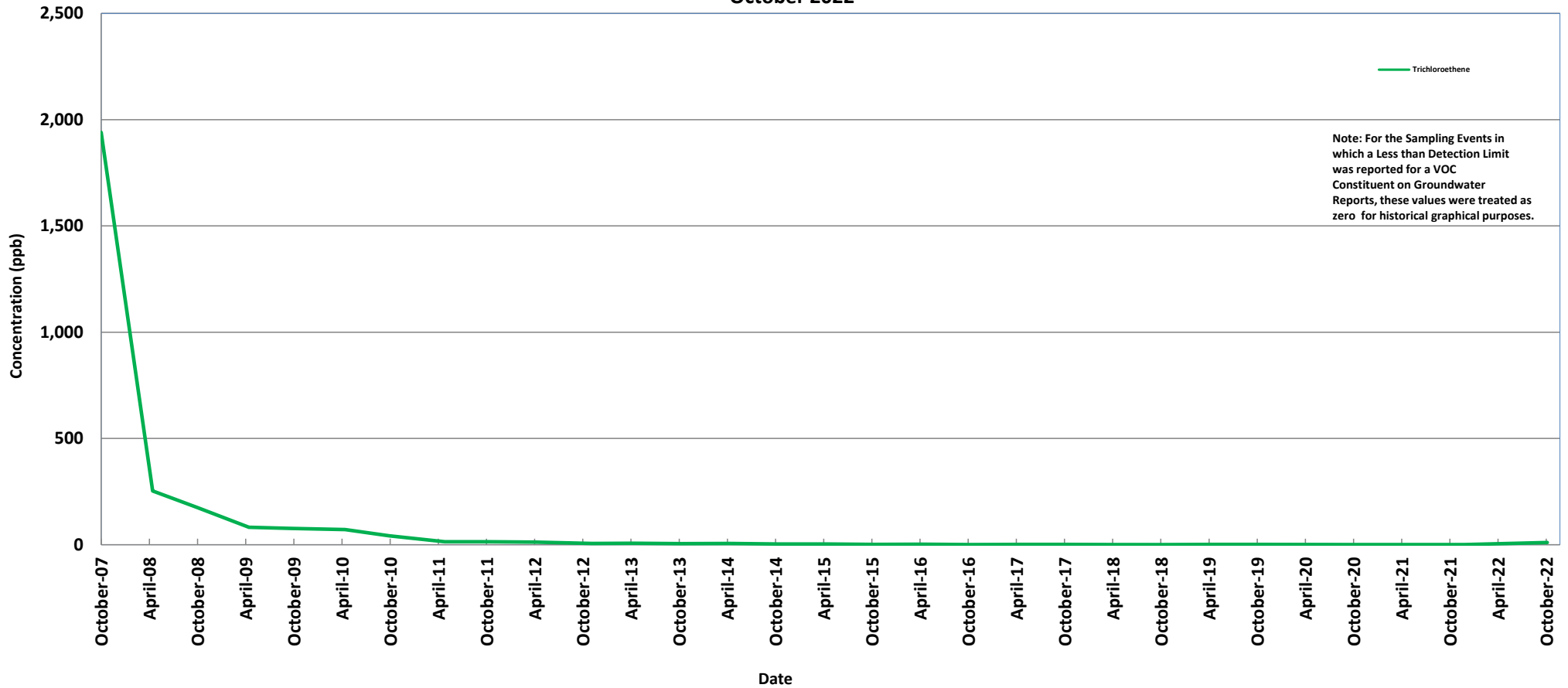
BMS-Krutulis Site
Monitoring Well - MW-6D
VOC Historical Results
October 2022



BMS-Krutulis Site
Monitoring Well - MW-6D
1,2-Dichloroethene (Total) Historical Results
October 2022



BMS-Krutulis Site
Monitoring Well - MW-6D
Trichloroethene Historical Results
October 2022



ATTACHMENT 2
LABORATORY ANALYTICAL REPORT



Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057

(315) 445-1900

Thursday, November 03, 2022

Chuck Sharpe
Ramboll
333 W. Washington St.
PO Box 4873
Syracuse, NY 13221

TEL: 315-956-6100

Project: BMS- KRUTULIS

RE: Analytical Results

Order No.: 2217127

Dear Chuck Sharpe:

Life Science Laboratories, Inc. received 9 sample(s) on 10/18/2022 for the analyses presented in the following report. Sample results relate only to the samples as received by the laboratory.

Very truly yours,
Life Science Laboratories, Inc.

A handwritten signature in black ink, appearing to read "David J Prichard", is written over a horizontal line.

David J Prichard
Project Manager



Life Science Laboratories, Inc.

5854 Butternut Drive

East Syracuse, NY 13057

(315) 445-1900

Analytical Results

StateCertNo: 10248

CLIENT: Ramboll
Project: BMS- Krutulis

W Order: 2217127

Matrix: GROUNDWATER

Inst. ID: MSN_76

ColumnID: Rtx-VMS

Revision: 11/03/22 12:03

Col Type:

Sample Size: NA

%Moisture:

TestCode 8260W_KET

Lab ID: 2217127-001A

Client Sample ID: MW-1-101822

Collection Date: 10/18/22 11:46

Date Received: 10/18/22 13:40

PrepDate:

BatchNo: R35794

FileID: 0-SAMP-N9966

Analyte	Result	Qual	PQL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS				SW8260C/5030C		
1,1-Dichloroethene	ND		0.50	µg/L	1	10/19/22 20:50
4-Methyl-2-pentanone	ND		5.00	µg/L	1	10/19/22 20:50
Acetone	ND		10.0	µg/L	1	10/19/22 20:50
Benzene	ND		0.50	µg/L	1	10/19/22 20:50
Chloroform	ND		0.50	µg/L	1	10/19/22 20:50
cis-1,2-Dichloroethene	ND		0.50	µg/L	1	10/19/22 20:50
Tetrachloroethene	ND		0.50	µg/L	1	10/19/22 20:50
Toluene	ND		0.50	µg/L	1	10/19/22 20:50
trans-1,2-Dichloroethene	ND		0.50	µg/L	1	10/19/22 20:50
Trichloroethene	ND		0.50	µg/L	1	10/19/22 20:50
Vinyl chloride	ND		1.00	µg/L	1	10/19/22 20:50
Xylenes (total)	ND		1.00	µg/L	1	10/19/22 20:50
Surr: 1,2-Dichloroethane-d4	113		75-130	%REC	1	10/19/22 20:50
Surr: 4-Bromofluorobenzene	118		75-125	%REC	1	10/19/22 20:50
Surr: Toluene-d8	111		75-125	%REC	1	10/19/22 20:50

Qualifiers:

* Value may exceed the Acceptable Level
E Value exceeds the instrument calibration range
J Analyte detected below the PQL
P Prim./Conf. column %D or RPD exceeds limit

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Practical Quantitation Limit (PQL)
S Spike Recovery outside accepted recovery limits



Life Science Laboratories, Inc.

5854 Butternut Drive

East Syracuse, NY 13057

(315) 445-1900

Analytical Results

StateCertNo: 10248

CLIENT: Ramboll
Project: BMS- Krutulis
W Order: 2217127
Matrix: GROUNDWATER

Lab ID: 2217127-002A
Client Sample ID: MW-2-101822

Collection Date: 10/18/22 10:05
Date Received: 10/18/22 13:40

Inst. ID: MSN_76
ColumnID: Rtx-VMS
Revision: 11/03/22 12:03
Sample Size: NA
%Moisture:
TestCode 8260W_KET

PrepDate:
BatchNo: R35794
FileID: 0-SAMP-N9967

Col Type:

Analyte	Result	Qual	PQL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS				SW8260C/5030C		
1,1-Dichloroethene	ND		1.00	µg/L	2	10/19/22 21:23
4-Methyl-2-pentanone	ND		10.0	µg/L	2	10/19/22 21:23
Acetone	ND		20.0	µg/L	2	10/19/22 21:23
Benzene	ND		1.00	µg/L	2	10/19/22 21:23
Chloroform	ND		1.00	µg/L	2	10/19/22 21:23
cis-1,2-Dichloroethene	ND		1.00	µg/L	2	10/19/22 21:23
Tetrachloroethene	ND		1.00	µg/L	2	10/19/22 21:23
Toluene	ND		1.00	µg/L	2	10/19/22 21:23
trans-1,2-Dichloroethene	ND		1.00	µg/L	2	10/19/22 21:23
Trichloroethene	ND		1.00	µg/L	2	10/19/22 21:23
Vinyl chloride	ND		2.00	µg/L	2	10/19/22 21:23
Xylenes (total)	ND		2.00	µg/L	2	10/19/22 21:23
Surr: 1,2-Dichloroethane-d4	116		75-130	%REC	2	10/19/22 21:23
Surr: 4-Bromofluorobenzene	119		75-125	%REC	2	10/19/22 21:23
Surr: Toluene-d8	112		75-125	%REC	2	10/19/22 21:23

Qualifiers:	*	Value may exceed the Acceptable Level	B	Analyte detected in the associated Method Blank
	E	Value exceeds the instrument calibration range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
	P	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits



Life Science Laboratories, Inc.

5854 Butternut Drive

East Syracuse, NY 13057

(315) 445-1900

Analytical Results

StateCertNo: 10248

CLIENT: Ramboll
Project: BMS- Krutulis
W Order: 2217127
Matrix: GROUNDWATER

Lab ID: 2217127-003A
Client Sample ID: MW-3S-101822

Collection Date: 10/18/22 9:44
Date Received: 10/18/22 13:40

Inst. ID: MSN_76
ColumnID: Rtx-VMS
Revision: 11/03/22 12:03
Sample Size: NA
%Moisture:
TestCode 8260W_KET

PrepDate:
BatchNo: R35794
FileID: 0-SAMP-N9968

Col Type:

Analyte	Result	Qual	PQL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS				SW8260C/5030C		
1,1-Dichloroethene	1.58		1.00	µg/L	2	10/19/22 21:57
4-Methyl-2-pentanone	ND		10.0	µg/L	2	10/19/22 21:57
Acetone	ND		20.0	µg/L	2	10/19/22 21:57
Benzene	1.84		1.00	µg/L	2	10/19/22 21:57
Chloroform	ND		1.00	µg/L	2	10/19/22 21:57
cis-1,2-Dichloroethene	1450 E		1.00	µg/L	2	10/19/22 21:57
Tetrachloroethene	ND		1.00	µg/L	2	10/19/22 21:57
Toluene	ND		1.00	µg/L	2	10/19/22 21:57
trans-1,2-Dichloroethene	69.7		1.00	µg/L	2	10/19/22 21:57
Trichloroethene	12.5		1.00	µg/L	2	10/19/22 21:57
Vinyl chloride	502 E		2.00	µg/L	2	10/19/22 21:57
Xylenes (total)	ND		2.00	µg/L	2	10/19/22 21:57
Surr: 1,2-Dichloroethane-d4	114		75-130	%REC	2	10/19/22 21:57
Surr: 4-Bromofluorobenzene	119		75-125	%REC	2	10/19/22 21:57
Surr: Toluene-d8	114		75-125	%REC	2	10/19/22 21:57

Qualifiers:	*	Value may exceed the Acceptable Level	B	Analyte detected in the associated Method Blank
	E	Value exceeds the instrument calibration range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
	P	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits



Life Science Laboratories, Inc.

5854 Butternut Drive

East Syracuse, NY 13057

(315) 445-1900

Analytical Results

StateCertNo: 10248

CLIENT: Ramboll
Project: BMS- Krutulis

W Order: 2217127

Matrix: GROUNDWATER

Inst. ID: MSN_76

ColumnID: Rtx-VMS

Revision: 11/03/22 12:03

Col Type:

Sample Size: NA

%Moisture:

TestCode 8260W_KET

Lab ID: 2217127-003B

Client Sample ID: MW-3S-101822 DL

Collection Date: 10/18/22 9:44

Date Received: 10/18/22 13:40

PrepDate:

BatchNo: R35794

FileID: 0-SAMP-N9993

Analyte	Result	Qual	PQL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS				SW8260C/5030C		
1,1-Dichloroethene	ND		10.0	µg/L	20	10/20/22 12:01
4-Methyl-2-pentanone	ND		100	µg/L	20	10/20/22 12:01
Acetone	ND		200	µg/L	20	10/20/22 12:01
Benzene	ND		10.0	µg/L	20	10/20/22 12:01
Chloroform	ND		10.0	µg/L	20	10/20/22 12:01
cis-1,2-Dichloroethene	1390		10.0	µg/L	20	10/20/22 12:01
Tetrachloroethene	ND		10.0	µg/L	20	10/20/22 12:01
Toluene	ND		10.0	µg/L	20	10/20/22 12:01
trans-1,2-Dichloroethene	74.4		10.0	µg/L	20	10/20/22 12:01
Trichloroethene	13.0		10.0	µg/L	20	10/20/22 12:01
Vinyl chloride	617		20.0	µg/L	20	10/20/22 12:01
Xylenes (total)	ND		20.0	µg/L	20	10/20/22 12:01
Surr: 1,2-Dichloroethane-d4	115		75-130	%REC	20	10/20/22 12:01
Surr: 4-Bromofluorobenzene	110		75-125	%REC	20	10/20/22 12:01
Surr: Toluene-d8	112		75-125	%REC	20	10/20/22 12:01

Qualifiers:	*	Value may exceed the Acceptable Level	B	Analyte detected in the associated Method Blank
	E	Value exceeds the instrument calibration range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
	P	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits



Life Science Laboratories, Inc.

5854 Butternut Drive

East Syracuse, NY 13057

(315) 445-1900

Analytical Results

StateCertNo: 10248

CLIENT: Ramboll
Project: BMS- Krutulis
W Order: 2217127
Matrix: GROUNDWATER

Lab ID: 2217127-004A
Client Sample ID: MW-3D-101822

Collection Date: 10/18/22 9:48
Date Received: 10/18/22 13:40

Inst. ID: MSN_76
ColumnID: Rtx-VMS
Revision: 11/03/22 12:03
Sample Size: NA
%Moisture:
TestCode 8260W_KET

PrepDate:
BatchNo: R35794
FileID: 0-SAMP-N9969

Col Type:

Analyte	Result	Qual	PQL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS				SW8260C/5030C		
1,1-Dichloroethene	ND	0.50		µg/L	1	10/19/22 22:31
4-Methyl-2-pentanone	ND	5.00		µg/L	1	10/19/22 22:31
Acetone	ND	10.0		µg/L	1	10/19/22 22:31
Benzene	ND	0.50		µg/L	1	10/19/22 22:31
Chloroform	ND	0.50		µg/L	1	10/19/22 22:31
cis-1,2-Dichloroethene	221 E	0.50		µg/L	1	10/19/22 22:31
Tetrachloroethene	ND	0.50		µg/L	1	10/19/22 22:31
Toluene	ND	0.50		µg/L	1	10/19/22 22:31
trans-1,2-Dichloroethene	43.9	0.50		µg/L	1	10/19/22 22:31
Trichloroethene	5.92	0.50		µg/L	1	10/19/22 22:31
Vinyl chloride	9.77	1.00		µg/L	1	10/19/22 22:31
Xylenes (total)	ND	1.00		µg/L	1	10/19/22 22:31
Surr: 1,2-Dichloroethane-d4	113	75-130		%REC	1	10/19/22 22:31
Surr: 4-Bromofluorobenzene	116	75-125		%REC	1	10/19/22 22:31
Surr: Toluene-d8	112	75-125		%REC	1	10/19/22 22:31

Qualifiers:	*	Value may exceed the Acceptable Level	B	Analyte detected in the associated Method Blank
	E	Value exceeds the instrument calibration range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
	P	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits



Life Science Laboratories, Inc.

5854 Butternut Drive

East Syracuse, NY 13057

(315) 445-1900

Analytical Results

StateCertNo: 10248

CLIENT: Ramboll
Project: BMS- Krutulis

W Order: 2217127

Matrix: GROUNDWATER

Inst. ID: MSN_76

ColumnID: Rtx-VMS

Revision: 11/03/22 12:03

Col Type:

Sample Size: NA

%Moisture:

TestCode 8260W_KET

Lab ID: 2217127-004B

Client Sample ID: MW-3D-120821 DL

Collection Date: 10/18/22 9:48

Date Received: 10/18/22 13:40

PrepDate:

BatchNo: R35794

FileID: 0-SAMP-N9994

Analyte	Result	Qual	PQL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS				SW8260C/5030C		
1,1-Dichloroethene	ND		2.50	µg/L	5	10/20/22 12:34
4-Methyl-2-pentanone	ND		25.0	µg/L	5	10/20/22 12:34
Acetone	ND		50.0	µg/L	5	10/20/22 12:34
Benzene	ND		2.50	µg/L	5	10/20/22 12:34
Chloroform	ND		2.50	µg/L	5	10/20/22 12:34
cis-1,2-Dichloroethene	176		2.50	µg/L	5	10/20/22 12:34
Tetrachloroethene	ND		2.50	µg/L	5	10/20/22 12:34
Toluene	ND		2.50	µg/L	5	10/20/22 12:34
trans-1,2-Dichloroethene	35.0		2.50	µg/L	5	10/20/22 12:34
Trichloroethene	5.55		2.50	µg/L	5	10/20/22 12:34
Vinyl chloride	8.80		5.00	µg/L	5	10/20/22 12:34
Xylenes (total)	ND		5.00	µg/L	5	10/20/22 12:34
Surr: 1,2-Dichloroethane-d4	112		75-130	%REC	5	10/20/22 12:34
Surr: 4-Bromofluorobenzene	115		75-125	%REC	5	10/20/22 12:34
Surr: Toluene-d8	113		75-125	%REC	5	10/20/22 12:34

Qualifiers:

* Value may exceed the Acceptable Level
E Value exceeds the instrument calibration range
J Analyte detected below the PQL
P Prim./Conf. column %D or RPD exceeds limit

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Practical Quantitation Limit (PQL)
S Spike Recovery outside accepted recovery limits



Life Science Laboratories, Inc.

5854 Butternut Drive

East Syracuse, NY 13057

(315) 445-1900

Analytical Results

StateCertNo: 10248

CLIENT: Ramboll
Project: BMS- Krutulis
W Order: 2217127
Matrix: GROUNDWATER

Lab ID: 2217127-005A
Client Sample ID: MW-4-101822

Collection Date: 10/18/22 8:25
Date Received: 10/18/22 13:40

Inst. ID: MSN_76
ColumnID: Rtx-VMS
Revision: 11/03/22 12:03
Sample Size: NA
%Moisture:
TestCode 8260W_KET

PrepDate:
BatchNo: R35794
FileID: 0-SAMP-N9970

Col Type:

Analyte	Result	Qual	PQL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS				SW8260C/5030C		
1,1-Dichloroethene	ND		1.00	µg/L	2	10/19/22 23:04
4-Methyl-2-pentanone	ND		10.0	µg/L	2	10/19/22 23:04
Acetone	ND		20.0	µg/L	2	10/19/22 23:04
Benzene	ND		1.00	µg/L	2	10/19/22 23:04
Chloroform	ND		1.00	µg/L	2	10/19/22 23:04
cis-1,2-Dichloroethene	ND		1.00	µg/L	2	10/19/22 23:04
Tetrachloroethene	ND		1.00	µg/L	2	10/19/22 23:04
Toluene	ND		1.00	µg/L	2	10/19/22 23:04
trans-1,2-Dichloroethene	ND		1.00	µg/L	2	10/19/22 23:04
Trichloroethene	ND		1.00	µg/L	2	10/19/22 23:04
Vinyl chloride	ND		2.00	µg/L	2	10/19/22 23:04
Xylenes (total)	ND		2.00	µg/L	2	10/19/22 23:04
Surr: 1,2-Dichloroethane-d4	114		75-130	%REC	2	10/19/22 23:04
Surr: 4-Bromofluorobenzene	124		75-125	%REC	2	10/19/22 23:04
Surr: Toluene-d8	114		75-125	%REC	2	10/19/22 23:04

Qualifiers:

* Value may exceed the Acceptable Level
E Value exceeds the instrument calibration range
J Analyte detected below the PQL
P Prim./Conf. column %D or RPD exceeds limit

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Practical Quantitation Limit (PQL)
S Spike Recovery outside accepted recovery limits



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East Syracuse, NY 13057

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Analytical Results

StateCertNo: 10248

CLIENT: Ramboll
Project: BMS- Krutulis
W Order: 2217127
Matrix: GROUNDWATER

Lab ID: 2217127-006A
Client Sample ID: MW-5-101822

Collection Date: 10/18/22 9:05
Date Received: 10/18/22 13:40

Inst. ID: MSN_76
ColumnID: Rtx-VMS
Revision: 11/03/22 12:03
Sample Size: NA
%Moisture:
TestCode 8260W_KET

PrepDate:
BatchNo: R35794
FileID: 0-SAMP-N9971

Col Type:

Analyte	Result	Qual	PQL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS				SW8260C/5030C		
1,1-Dichloroethene	ND		1.00	µg/L	2	10/19/22 23:37
4-Methyl-2-pentanone	ND		10.0	µg/L	2	10/19/22 23:37
Acetone	ND		20.0	µg/L	2	10/19/22 23:37
Benzene	ND		1.00	µg/L	2	10/19/22 23:37
Chloroform	ND		1.00	µg/L	2	10/19/22 23:37
cis-1,2-Dichloroethene	ND		1.00	µg/L	2	10/19/22 23:37
Tetrachloroethene	ND		1.00	µg/L	2	10/19/22 23:37
Toluene	ND		1.00	µg/L	2	10/19/22 23:37
trans-1,2-Dichloroethene	ND		1.00	µg/L	2	10/19/22 23:37
Trichloroethene	ND		1.00	µg/L	2	10/19/22 23:37
Vinyl chloride	ND		2.00	µg/L	2	10/19/22 23:37
Xylenes (total)	ND		2.00	µg/L	2	10/19/22 23:37
Surr: 1,2-Dichloroethane-d4	116		75-130	%REC	2	10/19/22 23:37
Surr: 4-Bromofluorobenzene	115		75-125	%REC	2	10/19/22 23:37
Surr: Toluene-d8	110		75-125	%REC	2	10/19/22 23:37

Qualifiers:

* Value may exceed the Acceptable Level
E Value exceeds the instrument calibration range
J Analyte detected below the PQL
P Prim./Conf. column %D or RPD exceeds limit

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Practical Quantitation Limit (PQL)
S Spike Recovery outside accepted recovery limits



Life Science Laboratories, Inc.

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East Syracuse, NY 13057

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Analytical Results

StateCertNo: 10248

CLIENT: Ramboll
Project: BMS- Krutulis
W Order: 2217127
Matrix: GROUNDWATER

Lab ID: 2217127-007A
Client Sample ID: MW-6S-101822

Collection Date: 10/18/22 10:45
Date Received: 10/18/22 13:40

Inst. ID: MSN_76
ColumnID: Rtx-VMS
Revision: 11/03/22 12:03
Sample Size: NA
%Moisture:
TestCode 8260W_KET

PrepDate:
BatchNo: R35794
FileID: 0-SAMP-N9972

Col Type:

Analyte	Result	Qual	PQL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS				SW8260C/5030C		
1,1-Dichloroethene	ND		1.00	µg/L	2	10/20/22 0:11
4-Methyl-2-pentanone	ND		10.0	µg/L	2	10/20/22 0:11
Acetone	ND		20.0	µg/L	2	10/20/22 0:11
Benzene	ND		1.00	µg/L	2	10/20/22 0:11
Chloroform	ND		1.00	µg/L	2	10/20/22 0:11
cis-1,2-Dichloroethene	ND		1.00	µg/L	2	10/20/22 0:11
Tetrachloroethene	ND		1.00	µg/L	2	10/20/22 0:11
Toluene	ND		1.00	µg/L	2	10/20/22 0:11
trans-1,2-Dichloroethene	ND		1.00	µg/L	2	10/20/22 0:11
Trichloroethene	ND		1.00	µg/L	2	10/20/22 0:11
Vinyl chloride	ND		2.00	µg/L	2	10/20/22 0:11
Xylenes (total)	ND		2.00	µg/L	2	10/20/22 0:11
Surr: 1,2-Dichloroethane-d4	113		75-130	%REC	2	10/20/22 0:11
Surr: 4-Bromofluorobenzene	132 S		75-125	%REC	2	10/20/22 0:11
Surr: Toluene-d8	85		75-125	%REC	2	10/20/22 0:11

Qualifiers:	*	Value may exceed the Acceptable Level	B	Analyte detected in the associated Method Blank
	E	Value exceeds the instrument calibration range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
	P	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits



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Analytical Results

StateCertNo: 10248

CLIENT: Ramboll
 Project: BMS- Krutulis
 W Order: 2217127
 Matrix: GROUNDWATER

Lab ID: 2217127-008A
 Client Sample ID: MW-6D-101822

Collection Date: 10/18/22 10:46
 Date Received: 10/18/22 13:40

Inst. ID: MSN_76
 ColumnID: Rtx-VMS
 Revision: 11/03/22 12:03
 Sample Size: NA
 %Moisture:
 TestCode 8260W_KET

PrepDate:
 BatchNo: R35794
 FileID: 0-SAMP-N9973

Col Type:

Analyte	Result	Qual	PQL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS				SW8260C/5030C		
1,1-Dichloroethene	ND		1.00	µg/L	2	10/20/22 0:46
4-Methyl-2-pentanone	ND		10.0	µg/L	2	10/20/22 0:46
Acetone	ND		20.0	µg/L	2	10/20/22 0:46
Benzene	ND		1.00	µg/L	2	10/20/22 0:46
Chloroform	ND		1.00	µg/L	2	10/20/22 0:46
cis-1,2-Dichloroethene	8.30		1.00	µg/L	2	10/20/22 0:46
Tetrachloroethene	ND		1.00	µg/L	2	10/20/22 0:46
Toluene	ND		1.00	µg/L	2	10/20/22 0:46
trans-1,2-Dichloroethene	ND		1.00	µg/L	2	10/20/22 0:46
Trichloroethene	ND		1.00	µg/L	2	10/20/22 0:46
Vinyl chloride	10.5		2.00	µg/L	2	10/20/22 0:46
Xylenes (total)	ND		2.00	µg/L	2	10/20/22 0:46
Surr: 1,2-Dichloroethane-d4	115		75-130	%REC	2	10/20/22 0:46
Surr: 4-Bromofluorobenzene	127 S		75-125	%REC	2	10/20/22 0:46
Surr: Toluene-d8	108		75-125	%REC	2	10/20/22 0:46

Qualifiers:	* Value may exceed the Acceptable Level	B Analyte detected in the associated Method Blank
	E Value exceeds the instrument calibration range	H Holding times for preparation or analysis exceeded
	J Analyte detected below the PQL	ND Not Detected at the Practical Quantitation Limit (PQL)
	P Prim./Conf. column %D or RPD exceeds limit	S Spike Recovery outside accepted recovery limits



Life Science Laboratories, Inc.

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East Syracuse, NY 13057

(315) 445-1900

Analytical Results

StateCertNo: 10248

CLIENT: Ramboll
Project: BMS- Krutulis
W Order: 2217127
Matrix: GROUNDWATER

Lab ID: 2217127-009A
Client Sample ID: Trip Blank-101822

Collection Date: 10/18/22 0:00
Date Received: 10/18/22 13:40

Inst. ID: MSN_76
ColumnID: Rtx-VMS
Revision: 11/03/22 12:03
Sample Size: NA
%Moisture:
TestCode 8260W_KET

PrepDate:
BatchNo: R35794
FileID: 0-SAMP-N9974

Col Type:

Analyte	Result	Qual	PQL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS				SW8260C/5030C		
1,1-Dichloroethene	ND	0.50		µg/L	1	10/20/22 1:19
4-Methyl-2-pentanone	ND	5.00		µg/L	1	10/20/22 1:19
Acetone	ND	10.0		µg/L	1	10/20/22 1:19
Benzene	ND	0.50		µg/L	1	10/20/22 1:19
Chloroform	ND	0.50		µg/L	1	10/20/22 1:19
cis-1,2-Dichloroethene	ND	0.50		µg/L	1	10/20/22 1:19
Tetrachloroethene	ND	0.50		µg/L	1	10/20/22 1:19
Toluene	ND	0.50		µg/L	1	10/20/22 1:19
trans-1,2-Dichloroethene	ND	0.50		µg/L	1	10/20/22 1:19
Trichloroethene	ND	0.50		µg/L	1	10/20/22 1:19
Vinyl chloride	ND	1.00		µg/L	1	10/20/22 1:19
Xylenes (total)	ND	1.00		µg/L	1	10/20/22 1:19
Surr: 1,2-Dichloroethane-d4	113	75-130		%REC	1	10/20/22 1:19
Surr: 4-Bromofluorobenzene	120	75-125		%REC	1	10/20/22 1:19
Surr: Toluene-d8	110	75-125		%REC	1	10/20/22 1:19

Qualifiers:	* Value may exceed the Acceptable Level	B Analyte detected in the associated Method Blank
	E Value exceeds the instrument calibration range	H Holding times for preparation or analysis exceeded
	J Analyte detected below the PQL	ND Not Detected at the Practical Quantitation Limit (PQL)
	P Prim./Conf. column %D or RPD exceeds limit	S Spike Recovery outside accepted recovery limits



**Life Science Laboratory
5854 Butternut Drive
East Syracuse, NY 13057**

Life Science Laboratories, Inc.

Chain of Custody Record

2217127

East Syracuse, NY 13057

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Contact Person:

Charles Sharpe
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~~chuck.sharpe@~~
ramboll.com

LSL Project #:

Client's Site I.D.:

5-7-50

OBGEng

Due Date:

2147

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