

September 28, 2023

Project: 696070

Alberta Environment and Protected Areas
Contaminated Sites and Remediation Program
Twin Atria Building
#111, 4999 – 98 Avenue
Edmonton, Alberta T6B 2X3

ATTENTION: Steven Fiddler, B.Sc., Contaminated Sites Coordinator

**REFERENCE: Response to AEPA Request for Information on Environmental Status
(AEPA Letter Dated April 5, 2023 and Email Dated July 10, 2023)
Former Barons Turbo Bulk Station (Shell Location Code: C42520)
235 Main Street, Barons, Alberta; Lots 21 to 27, Block 6, Plan 2605X
AEPA File No. 00082402**

On behalf of Shell Canada Products (Shell), SNC-Lavalin Inc. (SNC-Lavalin) is providing a response to Alberta Environment and Protected Areas (AEPA)'s request for information, dated April 5, 2023 and associated AEPA email correspondence dated July 10, 2023, with respect to the environmental status of the former Turbo bulk station located at 235 Main Street in Barons, Alberta (the "Site").

The location of the Site within the Village of Barons (the "Village") is presented on the attached [Site Location](#) drawing. The adjacent land uses and current Site configuration are presented on the attached [Site and Surrounding Land Use](#) and [Site Plan](#) drawings, respectively.

As per AEPA's email correspondence dated July 10, 2023, SNC-Lavalin will provide AEPA with copies of the following reports:

- *Environmental Site Assessment, Former Barons Turbo Bulk Station, 235 Main Street, Barons, Alberta*, dated July 24, 1998, prepared by Seacor Environmental Engineering Inc.; and
- *Remedial Action Plan, Former Barons Turbo Bulk Station, 235 Main Street, Barons, Alberta*, dated February 1999, prepared by Seacor Environmental Engineering Inc.

SNC-Lavalin has also re-cast the historical soil and groundwater analytical data against the current 2022 AEPA guidelines. Upon reviewing the historical reports and correspondence with AEPA, it is clear that a formal exclusion of the domestic use aquifer (DUA) was never completed, but based on the stratigraphy encountered at the Site and from reviewing water well/test hole logs in the vicinity of the Village, it may be possible. It is, however, noted that the Village supplies its residences with potable water through a piped distribution system that is sourced from the Town of Nobleford. The Town of Nobleford provides potable water via a piped system that is sourced from the Lethbridge Northern Irrigation District (LNID) Canal south of the Town of Nobleford; the water is subsequently treated at a the Nobleford filtration plant then distributed to its residents and to the Village of Barons.



The historical soil analytical data re-cast to the current 2022 AEPA guidelines are presented on the attached [Soil Analytical Results \(FAL Excluded\)](#) and [Soil Analytical Results \(DUA & FAL Excluded\)](#) drawings; whereas, the attached [Groundwater Analytical Results \(FAL Excluded\)](#) and [Groundwater Analytical Results \(DUA & FAL Excluded\)](#) drawings present the re-casted historical groundwater analytical data to the current 2022 AEPA guidelines. Please note that additional soil and groundwater data collected by 'others' (i.e., not Shell) associated with a source located on the adjacent property west of the Site has also been added and re-cast on these drawings.

Based on the re-casting of the historical data, Shell and SNC-Lavalin will be working with the Village to formally exclude the DUA pathway via AEPA's *Guide to Excluding the Domestic Use Aquifer (DUA) based on Municipal Bylaws* (dated August 8, 2022), as obtaining the DUA exclusion from the Village affects the delineation footprint with respect to the identified historical soil impacts associated with the Site. As such, it would be remiss if Shell and SNC-Lavalin did not pursue working with the Village to obtaining DUA exclusion prior to developing a Remedial Action Plan (RAP) and/or Risk Management Plan (RMP) to address any potential environmental concerns with respect to any residual petroleum hydrocarbon (PHC) contamination at the Site and/or the adjacent Village roadways and right-of-way associated with the former operations at the Site.

Of note, the inclusion or exclusion of the DUA pathway does not change the historical groundwater results at the Site, which still remains less than applicable 2022 AEPA guidelines both prior to and following the 1997 and 1999 remedial activities completed at the Site, which is another reason for Shell and SNC-Lavalin to pursue obtaining DUA exclusion from the Village.

As requested, a completed Record of Site Condition (RSC) has also been generated based on the historical data re-cast for the Site to the current 2022 AEPA guidelines with the inclusion of the DUA pathway and is to be included along with this submission to AEPA.

We trust the above responses adequately address AEPA's questions.

Closure

Copying of this letter is not permitted without the express permission of Shell and SNC-Lavalin. We trust the foregoing is sufficient for your current requirements. Should you have any questions or require additional information at this time, please contact the undersigned.

Nigel Creightney, B.A., A.Sc.T.
Senior Project Manager

Environment Practice
Engineering Services Canada

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Drawings

- Site Location
 - Site and Surrounding Land Use
 - Site Plan
 - Soil Analytical Results (FAL Excluded)
 - Groundwater Analytical Results (FAL Excluded)
 - Soil Analytical Results (DUA and FAL Excluded)
 - Groundwater Analytical Results (DUA and FAL Excluded)
- 



SNC • LAVALIN

SITE LOCATION

DATE: 2023 06 15	DRAWN BY: CDM	CHECKED: NC	CLIENT NAME: SHELL CANADA PRODUCTS, LC: C42520	PROJECT LOCATION: 235 MAIN STREET, BARONS, ALBERTA	SCALE: 1:4000	SERIES NUMBER: 696070-001
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VIEW FROM MAIN STREET

LEGEND

- SITE PROPERTY LINE
- LOT LINE

NOTES

- 1. ORIGINAL DRAWING IN COLOUR.
- 2. LOCATION OF FACILITIES AND UTILITIES SHOWN ARE APPROXIMATE ONLY AND SHOULD BE CONFIRMED PRIOR TO INVESTIGATIVE WORK. NOT ALL FACILITIES OR UTILITIES MAY BE SHOWN.

REFERENCE DRAWINGS

—	—	—
DWG. NO.	DATE	DESCRIPTION

REVISIONS

0	—	—	—	—
REV.	DATE	DESCRIPTION	BY	CHK



CLIENT NAME: SHELL CANADA PRODUCTS LC: C42520	PROJECT LOCATION: 235 MAIN STREET BARONS, ALBERTA
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SITE AND SURROUNDING LAND USE

DWN BY: CDM	SCALE: 1:1000	DATE: 2023 06 15	SERIES No: REV.: 0
CHK'D: NC	PLOT: 20230703.1046	CADFILE: 696070R00	696070-002

MW-9 **		Screen Interval: Unknown					
Date (yyyymmdd)	Depth to Water (mbgs)	B	T	E	X	F1-BTEX	F2
2002 06 14	[3.65]	<0.001	<0.001	<0.001	<0.001	<0.01	<0.1
2008 03 13	—	<0.001	<0.001	<0.001	<0.001	<0.2	0.1
2010 05 17	2.50	<0.001	<0.001	<0.001	<0.001	<0.2	<0.1
2014 09 02	2.23	<0.001	<0.001	<0.001	<0.001	<0.2	<0.2
2015 03 31	2.53	<0.001	<0.0004	<0.001	<0.001	<0.1	<0.1

MW-10 **		Screen Interval: Unknown					
Date (yyyymmdd)	Depth to Water (mbgs)	B	T	E	X	F1-BTEX	F2
2002 06 14	[4.78]	<0.001	<0.001	<0.001	<0.001	<0.01	<0.1
2008 03 13	—	0.010	0.013	0.004	0.019	<0.2	0.1

MW-7		Screen Interval: Unknown					
Date (yyyymmdd)	Depth to Water (mbgs)	B	T	E	X	F1-BTEX	F2
2002 06 14	[3.90]	6.41	9.54	0.239	8.01	42.4	3.5

MW-1 **		Screen Interval: Unknown					
Date (yyyymmdd)	Depth to Water (mbgs)	B	T	E	X	F1-BTEX	F2
2001 12 19	—	16.4	3.26	1.07	11.8	85.3	4.4
2008 03 13	—	0.002	<0.001	<0.001	0.098	0.5	0.1
2010 05 17	1.99	<0.001	<0.001	<0.001	<0.001	<0.2	<0.1
2014 09 02	2.13	0.103	0.002	0.017	<0.001	<0.2	<0.2
2015 03 31	2.76	0.096	<0.0004	0.039	<0.001	0.2	1.0

MW-2		Screen Interval: Unknown					
Date (yyyymmdd)	Depth to Water (mbgs)	B	T	E	X	F1-BTEX	F2
2001 12 19	—	LNAPL Detected					
2002 06 20	[4.85]	LNAPL Unknown, Monitored Only					

MW-21		Screen Interval: 3.0 – 6.0 mbgs					
Date (yyyymmdd)	Depth to Water (mbgs)	B	T	E	X	F1-BTEX	F2
2015 03 31	1.77	0.002	0.0006	<0.001	<0.001	<0.1	1.2

MW-18		Screen Interval: 3.0 – 6.1 mbgs					
Date (yyyymmdd)	Depth to Water (mbgs)	B	T	E	X	F1-BTEX	F2
2010 05 17	1.50	<0.001	<0.001	<0.001	<0.001	<0.2	<0.1
2015 03 31	1.45	<0.001	<0.0004	<0.001	<0.001	<0.1	0.5

MW-23		Screen Interval: 3.0 – 6.0 mbgs					
Date (yyyymmdd)	Depth to Water (mbgs)	B	T	E	X	F1-BTEX	F2
2015 03 31	2.21	0.446	0.0071	0.113	0.479	5.3	613

MW-22		Screen Interval: 3.0 – 6.0 mbgs					
Date (yyyymmdd)	Depth to Water (mbgs)	B	T	E	X	F1-BTEX	F2
2015 03 31	2.00	2.01	0.0004	0.451	0.051	0.8	1.4

BH6		Screen Interval: 1.8 – 9.4 mbgs					
Date (yyyymmdd)	Depth to Water (mbgs)	B	T	E	X	F1-BTEX	F2
1993 07 27	[2.35]	2.74	3.90	0.695	4.64	2.43	(79.0)

MW-5		Screen Interval: Unknown					
Date (yyyymmdd)	Depth to Water (mbgs)	B	T	E	X	F1-BTEX	F2
2001 12 19	—	2.17	0.051	0.009	2.81	8.1	—
2008 03 13	—	1.07	0.015	0.041	0.801	11.6	14.5
2010 05 17	1.46	0.002	<0.001	<0.001	0.010	<0.2	0.9
2014 09 02	1.58	0.011	<0.001	0.006	<0.001	0.9	2.6
2015 03 31	1.51	<0.001	<0.0004	0.002	0.002	0.1	21.9

MW-19		Screen Interval: 3.0 – 6.1 mbgs					
Date (yyyymmdd)	Depth to Water (mbgs)	B	T	E	X	F1-BTEX	F2
2010 05 17	1.37	<0.001	<0.001	<0.001	0.001	<0.2	<0.1
2015 03 31	1.60	<0.001	<0.0004	<0.001	<0.001	<0.1	1.7

MW-3		Screen Interval: Unknown					
Date (yyyymmdd)	Depth to Water (mbgs)	B	T	E	X	F1-BTEX	F2
2001 12 19	—	2.49	1.40	0.203	2.49	8.60	0.6
2008 03 13	—	LNAPL Detected					
2010 05 17	—	2.93	0.046	0.413	4.69	21.1	—
2014 09 02	2.98	LNAPL Detected					
2015 03 31	1.67	2.01	0.0031	0.578	1.16	9.6	1680

MW-11		Screen Interval: Unknown					
Date (yyyymmdd)	Depth to Water (mbgs)	B	T	E	X	F1-BTEX	F2
2003 01 06	—	<0.001	<0.001	<0.001	<0.001	<0.01	<0.1
2010 05 17	1.16	<0.001	<0.001	<0.001	<0.001	<0.2	1.0
2014 09 02	—	0.001	<0.001	0.002	0.009	<0.2	<0.2
2015 03 31	1.19	<0.001	<0.0004	<0.001	<0.001	<0.1	0.3

MW-4		Screen Interval: Unknown					
Date (yyyymmdd)	Depth to Water (mbgs)	B	T	E	X	F1-BTEX	F2
2001 12 19	—	0.516	0.083	0.001	0.581	1.97	1.2
2008 03 13	—	0.040	0.027	0.048	0.258	2.6	32.3
2010 05 17	1.43	0.294	0.002	0.297	0.345	3.6	—
2014 09 02	1.56	LNAPL Detected					

MW-12		Screen Interval: Unknown					
Date (yyyymmdd)	Depth to Water (mbgs)	B	T	E	X	F1-BTEX	F2
2003 01 06	—	<0.001	0.002	0.001	0.008	0.06	0.1

MW-20		Screen Interval: 1.5 – 4.6 mbgs					
Date (yyyymmdd)	Depth to Water (mbgs)	B	T	E	X	F1-BTEX	F2
2010 05 17	1.46	<0.001	<0.001	<0.001	<0.001	<0.2	<0.1
2014 09 02	1.52	<0.001	<0.001	<0.001	<0.001	<0.2	<0.2

MW-15		Screen Interval: Unknown					
Date (yyyymmdd)	Depth to Water (mbgs)	B	T	E	X	F1-BTEX	F2
2009 01 20	2.86	<0.001	<0.001	<0.001	0.002	<0.2	<0.1
2010 05 17	1.27	<0.001	<0.001	<0.001	<0.001	<0.2	<0.1

GROUNDWATER GUIDELINES (mg/L) ^a							
	B	T	E	X	F1-BTEX	F2	
Commercial Land Use	0.005	0.024	0.0016	0.02	2.2	1.1	
30m Residential Buffer **	0.005	0.024	0.0016	0.02	2.2	1.1	

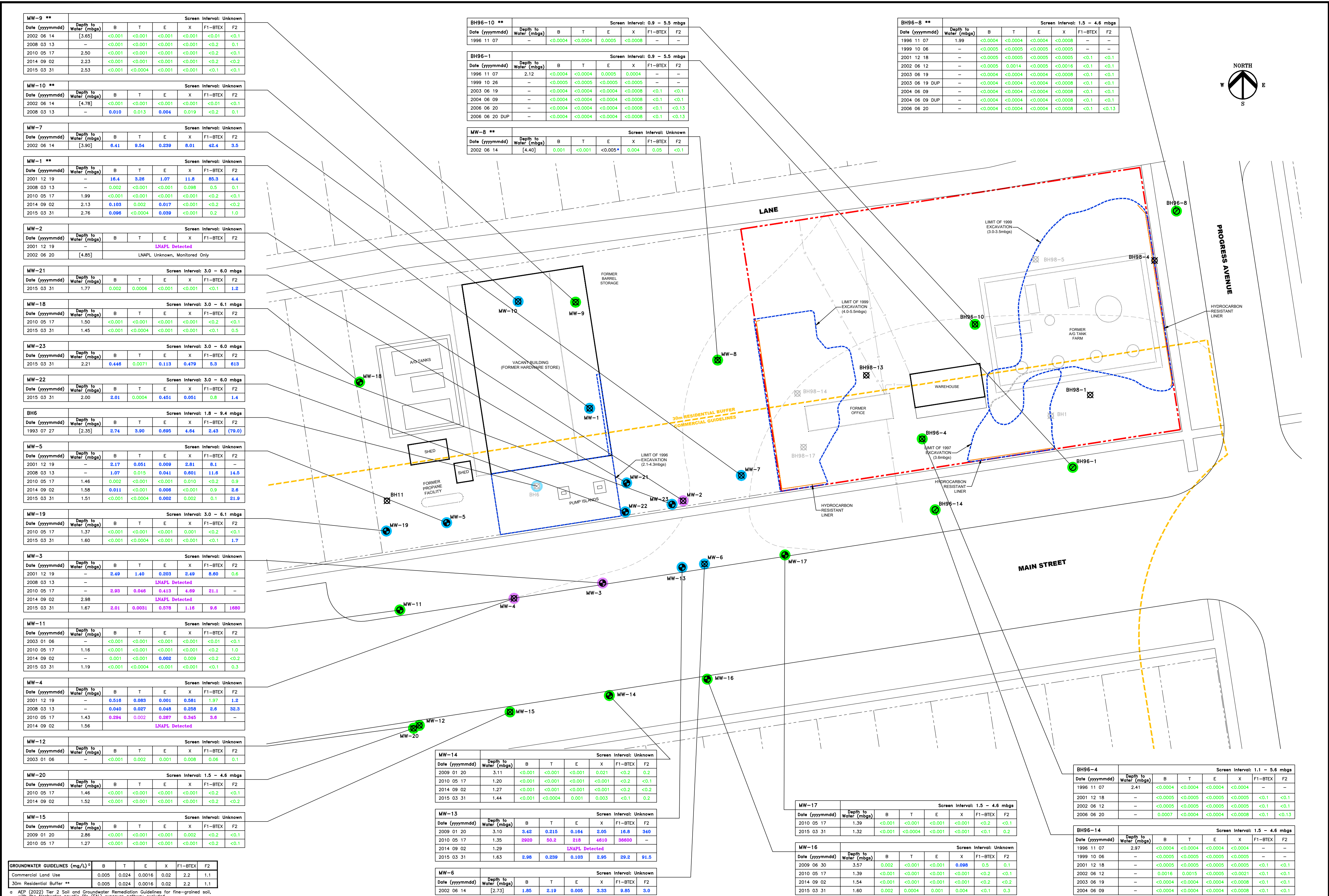
^a AEP (2022) Tier 2 Soil and Groundwater Remediation Guidelines for fine-grained soil, with the freshwater aquatic life (FAL) exposure pathway excluded.

BH96-10 **		Screen Interval: 0.9 – 5.5 mbgs					
Date (yyyymmdd)	Depth to Water (mbgs)	B	T	E	X	F1-BTEX	F2
1996 11 07	—	<0.0004	<0.0004	0.0005	<0.0008	—	—

BH96-1		Screen Interval: 0.9 – 5.5 mbgs					
Date (yyyymmdd)	Depth to Water (mbgs)	B	T	E	X	F1-BTEX	F2
1996 11 07	2.12	<0.0004	<0.0004	0.0005	0.0004	—	—
1999 10 26	—	<0.0005	<0.0005	<0.0005	<0.0005	—	—
2003 06 19	—	<0.0004	<0.0004	<0.0004	<0.0008	<0.1	<0.1
2004 06 09	—	<0.0004	<0.0004	<0.0004	<0.0008	<0.1	<0.1
2006 06 20	—	<0.0004	<0.0004	<0.0004	<0.0008	<0.1	<0.13
2006 06 20 DUP	—	<0.0004	<0.0004	<0.0004	<0.0008	<0.1	<0.13

MW-8 **		Screen Interval: Unknown					
Date (yyyymmdd)	Depth to Water (mbgs)	B	T	E	X	F1-BTEX	F2
2002 06 14	[4.40]	0.001	<0.001	<0.005*	0.004	0.05	<0.1

BH96-8 **		Screen Interval: 1.5 – 4.6 mbgs					
Date (yyyymmdd)	Depth to Water (mbgs)	B	T	E	X	F1-BTEX	F2
1996 11 07	1.99	<0.0004	<0.0004	<0.0004	<0.0008	—	—
1999 10 06	—	<0.0005	<0.0005	<0.0005	<0.0005	—	—
2001 12 18	—	<0.0005	<0.0005	<0.0005	<0.0005	<0.1	<0.1
2002 06 12	—	<0.0005	0.0014	<0.0005	<0.0016	<0.1	<0.1
2003 06 19	—	<0.0004	<0.0004	<0.0004	<0.0008	<0.1	<0.1
2003 06 19 DUP	—	<0.0004	<0.0004	<0.0004	<0.0008	<0.1	<0.1
2004 06 09	—	<0.0004	<0.0004	<0.0004	<0.0008	<0.1	<0.1
2004 06 09 DUP	—	<0.0004	<0.0004	<0.0004	<0.0008	<0.1	<0.1
2006 06 20	—	<0.0004	<0.0004	<0.0004	<0.0008	<0.1	<0.13



MW-14		Screen Interval: Unknown					
Date (yyyymmdd)	Depth to Water (mbgs)	B	T	E	X	F1-BTEX	F2
2009 01 20	3.11	<0.001	<0.001	<0.001	0.021	<0.2	0.2
2010 05 17	1.20	<0.001	<0.001	<0.001	<0.001	<0.2	<0.1
2014 09 02	1.27	<0.001	<0.001	<0.001	<0.001	<0.2	<0.2
2015 03 31	1.44	<0.001	<0.0004	0.001	0.003	<0.1	0.2

MW-13		Screen Interval: Unknown					
Date (yyyymmdd)	Depth to Water (mbgs)	B	T	E	X	F1-BTEX	F2
2009 01 20	3.10	3.42	0.215	0.164	2.05	16.8	340
2010 05 17	1.35	2920	50.2	218	4610	36600	—
2014 09 02	1.29	LNAPL Detected					
2015 03 31	1.63	2.98	0.239	0.103	2.95	29.2	91.5

MW-6		Screen Interval: Unknown					
Date (yyyymmdd)	Depth to Water (mbgs)	B	T	E	X	F1-BTEX	F2
2002 06 14	[2.73]	1.85	2.19	0.005	3.33	9.85	3.0

MW-17	
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MW-9 **		Screen Interval: Unknown						
Date (yyyymmdd)	Depth to Water (mbgs)	B	T	E	X	F1-BTEX	F2	
2002 06 14	[3.65]	<0.001	<0.001	<0.001	<0.001	<0.01	<0.1	
2008 03 13	—	<0.001	<0.001	<0.001	<0.001	<0.2	0.1	
2010 05 17	2.50	<0.001	<0.001	<0.001	<0.001	<0.2	<0.1	
2014 09 02	2.23	<0.001	<0.001	<0.001	<0.001	<0.2	<0.2	
2015 03 31	2.53	<0.001	<0.0004	<0.001	<0.001	<0.1	<0.1	

MW-10 **		Screen Interval: Unknown						
Date (yyyymmdd)	Depth to Water (mbgs)	B	T	E	X	F1-BTEX	F2	
2002 06 14	[4.78]	<0.001	<0.001	<0.001	<0.001	<0.01	<0.1	
2008 03 13	—	0.010	0.013	0.004	0.019	<0.2	0.1	

MW-7		Screen Interval: Unknown						
Date (yyyymmdd)	Depth to Water (mbgs)	B	T	E	X	F1-BTEX	F2	
2002 06 14	[3.90]	6.41	9.54	0.239	8.01	42.4	3.5	

MW-1 **		Screen Interval: Unknown						
Date (yyyymmdd)	Depth to Water (mbgs)	B	T	E	X	F1-BTEX	F2	
2001 12 19	—	16.4	3.26	1.07	11.8	85.3	4.4	
2008 03 13	—	0.002	<0.001	<0.001	0.098	0.5	0.1	
2010 05 17	1.99	<0.001	<0.001	<0.001	<0.001	<0.2	<0.1	
2014 09 02	2.13	0.103	0.002	0.017	<0.001	<0.2	<0.2	
2015 03 31	2.76	0.096	<0.0004	0.039	<0.001	0.2	1.0	

MW-2		Screen Interval: Unknown						
Date (yyyymmdd)	Depth to Water (mbgs)	B	T	E	X	F1-BTEX	F2	
2001 12 19	—	LNAPL Detected						
2002 06 20	[4.85]	LNAPL Unknown, Monitored Only						

MW-21		Screen Interval: 3.0 – 6.0 mbgs						
Date (yyyymmdd)	Depth to Water (mbgs)	B	T	E	X	F1-BTEX	F2	
2015 03 31	1.77	0.002	0.0006	<0.001	<0.001	<0.1	1.2	

MW-18		Screen Interval: 3.0 – 6.1 mbgs						
Date (yyyymmdd)	Depth to Water (mbgs)	B	T	E	X	F1-BTEX	F2	
2010 05 17	1.50	<0.001	<0.001	<0.001	<0.001	<0.2	<0.1	
2015 03 31	1.45	<0.001	<0.0004	<0.001	<0.001	<0.1	0.5	

MW-23		Screen Interval: 3.0 – 6.0 mbgs						
Date (yyyymmdd)	Depth to Water (mbgs)	B	T	E	X	F1-BTEX	F2	
2015 03 31	2.21	0.446	0.0071	0.113	0.479	5.3	613	

MW-22		Screen Interval: 3.0 – 6.0 mbgs						
Date (yyyymmdd)	Depth to Water (mbgs)	B	T	E	X	F1-BTEX	F2	
2015 03 31	2.00	2.01	0.0004	0.451	0.051	0.8	1.4	

BH6		Screen Interval: 1.8 – 9.4 mbgs						
Date (yyyymmdd)	Depth to Water (mbgs)	B	T	E	X	F1-BTEX	F2	
1993 07 27	[2.35]	2.74	3.90	0.695	4.64	2.43	(79.0)	

MW-5		Screen Interval: Unknown						
Date (yyyymmdd)	Depth to Water (mbgs)	B	T	E	X	F1-BTEX	F2	
2001 12 19	—	2.17	0.051	0.009	2.81	8.1	—	
2008 03 13	—	1.07	0.015	0.041	0.601	11.6	14.5	
2010 05 17	1.46	0.002	<0.001	<0.001	0.010	<0.2	0.9	
2014 09 02	1.58	0.011	<0.001	0.006	<0.001	0.9	2.6	
2015 03 31	1.51	<0.001	<0.0004	0.002	0.002	0.1	21.9	

MW-19		Screen Interval: 3.0 – 6.1 mbgs						
Date (yyyymmdd)	Depth to Water (mbgs)	B	T	E	X	F1-BTEX	F2	
2010 05 17	1.37	<0.001	<0.001	<0.001	0.001	<0.2	<0.1	
2015 03 31	1.60	<0.001	<0.0004	<0.001	<0.001	<0.1	1.7	

MW-3		Screen Interval: Unknown						
Date (yyyymmdd)	Depth to Water (mbgs)	B	T	E	X	F1-BTEX	F2	
2001 12 19	—	2.49	1.40	0.203	2.49	8.60	0.6	
2008 03 13	—	LNAPL Detected						
2010 05 17	—	2.93	0.046	0.413	4.69	21.1	—	
2014 09 02	2.98	LNAPL Detected						
2015 03 31	1.67	2.01	0.0031	0.578	1.16	9.6	1680	

MW-11		Screen Interval: Unknown						
Date (yyyymmdd)	Depth to Water (mbgs)	B	T	E	X	F1-BTEX	F2	
2003 01 06	—	<0.001	<0.001	<0.001	<0.001	<0.01	<0.1	
2010 05 17	1.16	<0.001	<0.001	<0.001	<0.001	<0.2	1.0	
2014 09 02	—	0.001	<0.001	0.002	0.009	<0.2	<0.2	
2015 03 31	1.19	<0.001	<0.0004	<0.001	<0.001	<0.1	0.3	

MW-4		Screen Interval: Unknown						
Date (yyyymmdd)	Depth to Water (mbgs)	B	T	E	X	F1-BTEX	F2	
2001 12 19	—	0.516	0.083	0.001	0.581	1.97	1.2	
2008 03 13	—	0.040	0.027	0.048	0.258	2.6	32.3	
2010 05 17	1.43	0.294	0.002	0.267	0.345	3.6	—	
2014 09 02	1.56	LNAPL Detected						

MW-12		Screen Interval: Unknown						
Date (yyyymmdd)	Depth to Water (mbgs)	B	T	E	X	F1-BTEX	F2	
2003 01 06	—	<0.001	0.002	0.001	0.008	0.06	0.1	

MW-20		Screen Interval: 1.5 – 4.6 mbgs						
Date (yyyymmdd)	Depth to Water (mbgs)	B	T	E	X	F1-BTEX	F2	
2010 05 17	1.46	<0.001	<0.001	<0.001	<0.001	<0.2	<0.1	
2014 09 02	1.52	<0.001	<0.001	<0.001	<0.001	<0.2	<0.2	

MW-15		Screen Interval: Unknown						
Date (yyyymmdd)	Depth to Water (mbgs)	B	T	E	X	F1-BTEX	F2	
2009 01 20	2.86	<0.001	<0.001	<0.001	0.002	<0.2	<0.1	
2010 05 17	1.27	<0.001	<0.001	<0.001	<0.001	<0.2	<0.1	

GROUNDWATER GUIDELINES (mg/L) ^a		B	T	E	X	F1-BTEX	F2
Commercial Land Use		3.9	240	150	74	9.9	3.1
30m Residential Buffer **		0.57	82	42	21	6.5	1.8

a AEP (2022) Tier 2 Soil and Groundwater Remediation Guidelines for fine-grained soil, with the freshwater aquatic life (FAL) and domestic use aquifer (DUA) exposure pathways excluded.

LEGEND

	MONITORING WELL		GAS LINE
	DECOMMISSIONED MONITORING WELL		SEWER LINE
	DESTROYED MONITORING WELL		TELEPHONE LINE
	LIMIT OF EXCAVATION		WATER LINE
	SITE PROPERTY LINE		LOCATION WHERE HISTORICAL GROUNDWATER SAMPLING EVENT ENCOUNTERED LNAPL, SHOWN IN LIGHT PURPLE
	LOT LINE		EXCAVATED GROUNDWATER SAMPLE LOCATION
	FORMER STRUCTURE		

● LOCATION WHERE MOST RECENT GROUNDWATER SAMPLING EVENT MEETS APPLICABLE GUIDELINE FOR ALL PARAMETERS ANALYZED, SHOWN IN GREEN

● LOCATION WHERE MOST RECENT GROUNDWATER SAMPLING EVENT EXCEEDS APPLICABLE GUIDELINE FOR AT LEAST ONE PARAMETER ANALYZED, SHOWN IN BLUE

○ EXCAVATED GROUNDWATER SAMPLE LOCATION

mbgs METRES BELOW GROUND SURFACE
 < LESS THAN
 B BENZENE
 T TOLUENE
 E ETHYLBENZENE
 X XYLENES
 F1 PETROLEUM HYDROCARBON FRACTION 1 (C6-C10 minus BTEX)
 F2 PETROLEUM HYDROCARBON FRACTION 2 (>C10-C16)
 TVH TOTAL VOLATILE HYDROCARBONS
 TEH TOTAL EXTRACTABLE HYDROCARBONS
 * LABORATORY REPORTABLE DETECTION LIMIT EXCEEDS GUIDELINE
 PURPLE LNAPL DETECTED IN WELL

MW-14		Screen Interval: Unknown						
Date (yyyymmdd)	Depth to Water (mbgs)	B	T	E	X	F1-BTEX	F2	
2009 01 20	3.11	<0.001	<0.001	<0.001	0.021	<0.2	0.2	
2010 05 17	1.20	<0.001	<0.001	<0.001	<0.001	<0.2	<0.1	
2014 09 02	1.27	<0.001	<0.001	<0.001	<0.001	<0.2	<0.2	
2015 03 31	1.44	<0.001	<0.0004	0.001	0.003	<0.1	0.2	

MW-13		Screen Interval: Unknown						
Date (yyyymmdd)	Depth to Water (mbgs)	B	T	E	X	F1-BTEX	F2	
2009 01 20	3.10	3.42	0.215	0.164	2.05	16.8	340	
2010 05 17	1.35	2920	50.2	218	4810	36600	—	
2014 09 02	1.29	LNAPL Detected						
2015 03 31	1.63	2.98	0.239	0.103	2.95	28.2	91.5	

MW-6		Screen Interval: Unknown						
Date (yyyymmdd)	Depth to Water (mbgs)	B	T	E	X	F1-BTEX	F2	
2002 06 14	[2.73]	1.85	2.19	0.005	3.33	9.85	3.0	

BH96-10 **		Screen Interval: 0.9 – 5.5 mbgs						
Date (yyyymmdd)	Depth to Water (mbgs)	B	T	E	X	F1-BTEX	F2	
1996 11 07	—	<0.0004	<0.0004	0.0005	<0.0008	—	—	

BH96-1		Screen Interval: 0.9 – 5.5 mbgs						
Date (yyyymmdd)	Depth to Water (mbgs)	B	T	E	X	F1-BTEX	F2	
1996 11 07	2.12	<0.0004	<0.0004	0.0005	0.0004	—	—	
1999 10 26	—	<0.0005	<0.0005	<0.0005	<0.0005	—	—	
2003 06 19	—	<0.0004	<0.0004	<0.0004	<0.0008	<0.1	<0.1	
2004 06 09	—	<0.0004	<0.0004	<0.0004	<0.0008	<0.1	<0.1	
2006 06 20	—	<0.0004	<0.0004	<0.0004	<0.0008	<0.1	<0.13	
2006 06 20 DUP	—	<0.0004	<0.0004	<0.0004	<0.0008	<0.1	<0.13	

MW-8 **		Screen Interval: Unknown						
Date (yyyymmdd)	Depth to Water (mbgs)	B	T	E	X	F1-BTEX	F2	
2002 06 14	[4.40]	0.001	<0.001	<0.005*	0.004	0.05	<0.1	

BH96-8 **		Screen Interval: 1.5 - 4.6 mbgs						
Date (yyyymmdd)	Depth to Water (mbgs)	B	T	E	X	F1-BTEX	F2	
1996 11 07	1.99	<0.0004	<0.0004	<0.0004	<0.0008			
1999 10 06	--	<0.0005	<0.0005	<0.0005	<0.0005			
2001 12 18	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.1	<0.1	
2002 06 12	--	<0.0005	0.0014	<0.0005	<0.0016	<0.1	<0.1	
2003 06 19	--	<0.0004	<0.0004	<0.0004	<0.0008	<0.1	<0.1	
2003 06 19 DUP	--	<0.0004	<0.0004	<0.0004	<0.0008	<0.1	<0.1	
2004 06 09	--	<0.0004	<0.0004	<0.0004	<0.0008	<0.1	<0.1	
2004 06 09 DUP	--	<0.0004	<0.0004	<0.0004	<0.0008	<0.1	<0.1	
2006 06 20	--	<0.0004	<0.0004	<0.0004	<0.0008	<0.1	<0.13	