



Stantec Consulting Services Inc.
725 East Fireweed Lane Suite 200, Anchorage AK 99503-2245

December 12, 2023

Stantec Project Number: 203723237

Mr. Eric Swaisgood
Marathon Petroleum Company, LP
539 South Main Street
Findlay, Ohio 45840

Reference: **Corrective Action Plan for 2024**
Former Tesoro Northstore #101and IFC
Marathon Petroleum Company (MPC) Site #157575
3569 South Cushman Street, Fairbanks, Alaska
ADEC Facility ID #2960; ADEC File #100.26.022

Dear Mr. Swaisgood:

This letter presents the 2024 (calendar year) Corrective Action Plan (CAP) for the monitoring and remediation of petroleum contamination at the above referenced site. The 2024 CAP was prepared by Stantec Consulting Services, Inc. (Stantec) on behalf of Tesoro Refining & Marketing Company (Tesoro) c/o Marathon Petroleum Company (MPC) for former Tesoro Northstore #101and Interior Fuel Company (IFC) that is currently owned by Crowley Petroleum Distribution, Inc. (Crowley).

Subject to your acceptance, this 2024 CAP will be presented at the annual work session with the Alaska Department of Environmental Conservation (ADEC), MPC and Stantec. The work session is scheduled for December 12, 2023, and will be presented by Stantec on behalf of MPC to Pete Campbell, ADEC representative, virtually via Microsoft Teams app.

Attached to this letter are the following items associated with the completion of the 2023 CAP tasks: Location and Vicinity Map, Site Plan with Analytical Results November 2023 Annual GWM Event and Analytical Data Results Tables of Historical Monitoring Events. The site plans, sampling test results and additional site documents for the subject site will be included in a PowerPoint presentation that will be delivered by Stantec during the December 12 work session.

The following sections provide a summary of the work plan tasks that were completed under the current 2023 CAP and the proposed work plan tasks for the 2024 CAP.

Current 2023 CAP Work Plan Tasks

- *Task 1 –Groundwater Monitoring*
 - ✓ This task was completed in accordance with the approved 2023 CAP.
- *Task 2 – O&M Remediation System*
 - ✓ This task was completed in accordance with the approved 2023 CAP. Free

product accumulation in CRW-2 and MW-19-1 was monitored monthly and periodically removed with a peristaltic pump using a line attached to a water level meter to verify the free product presence above the water interface. The free product collected with the peristaltic pump from the above referenced wells is temporarily stored on-site in a 55-gallon drum that is contained in an over-pack drum (secondary containment). Approximately 50 gallons of free product collected from the free product recovery wells (CRW-2, WRW 2020, MW 19-1 and MW 19-2) was hauled off-site for disposal by US Ecology. The entire free product recovery system was shut down for over a month in June and August due to an issue with the electrical power company.

- Task 3 – Drill 6 Confirmation Soil Borings on former TNS 101 and IFC property (currently owned by Crowley).
 - ✓ This task was completed in accordance with the approved 2023 CAP. The 6 confirmation soil borings were drilled in September 2023 and reported to ADEC in the Technical Memorandum dated November 13, 2023, prepared by Stantec.

Proposed 2024 CAP Work Plan Tasks

The following table summarizes the proposed tasks and implementation schedule for the 2024 CAP:

2024 CAP Work Plan Tasks and Schedule

Work Plan Task		1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Task 1	Monitoring Wells: MW-3, MW-4, MW-8, MW-14, MW-17, MW-19-1, MW-19-2, CRW, ERW, OMW-3, OMW-4, and Aeration Treatment Tank (effluent discharged to the drainfield)			V, G, D, P & I	
Task 2	O&M Free Product Recovery Systems in remediation wells CRW-2 and WRW 2020. In addition, free product will be monitored and removed when found in MW 19-1 and MW 19-2.	✓	✓	✓	✓
Task 3	Install and operate a submersible pump in remediation well CRW		✓	✓	✓

Key:

AK – Alaska Test Method

D – Diesel range organics by AK102.

G – Gasoline range organics by AK101.

I – Intrinsic indicators consisting of dissolved oxygen, specific conductance, oxygen-reduction potential, pH, and temperature.

O&M – Operation and Maintenance

V – Volatile organic compounds by EPA Test Method 8260C.

P – Polynuclear aromatic hydrocarbons (PAHs), i.e., semi-volatile organic compounds, by EPA Test Method 8270D Selective Ion Monitoring (SIM).

- *Task 1 – Groundwater Monitoring*

Annual monitoring of the groundwater wells and the free product recovery wells will be conducted. Sampling locations and analyses for the groundwater monitoring wells and free product recovery wells are listed on the 2024 Work Plan Schedule shown above.

The number of wells to be monitored in 2023 increased in number compared to past annual groundwater monitoring events and include the following four wells located upgradient of the existing Interceptor Trench on the Crowley property (former IFC) as shown on the attached site plan: CRW, ERW, OMW-3, and OMW-4.

- *Task 2 – O&M Remediation System*

Perform monthly maintenance on the free product recovery wells CRW-2 and WRW 2020. The O&M work will include monthly maintenance on the free product recovery wells, the groundwater drawdown pump, the aeration blower, the iMonnit sensors and extraction of free product with a peristaltic pump as necessary.

The submersible drawdown pumps in wells CRW-2 and WRW 2020 are operated on a continuous basis (24 hours per day). The drawdown water from both wells discharges to the on-site 1,500 gallon, 2 compartment aeration treatment tank that flows into the on-site drainfield Infiltrator® system for additional treatment.

The free product recovered from remediation wells CRW-2 and WRW 2020 and groundwater monitoring wells MW 19-1 and MW 19-2 will be collected with a peristaltic pump and temporarily stored on-site in a double-walled drum. The volume of the stored free product will be measured and properly disposed of at an ADEC approved off-site treatment facility.

- *Task 3 – Install and seasonally operate a submersible pump in remediation well CRW for discharge and treatment in the 1,500 gallon aeration treatment tank.*

The purpose of this task is to capture and treat fuel contaminated groundwater on the former IFC property (currently owned by Crowley) that was discovered during the 2023 annual groundwater monitoring event. This task consists of installing a 0.5 HP submersible pump in remediation well CRW – an 8" diameter remediation well located in northwest corner of Crowley property (former IFC). The pump will be seasonally operated and connected to the existing 1,500-gallon aeration treatment tank. The well will be sampled monthly for the same chemicals listed for Task 1 to determine if the concentration of dissolved contaminants is being degraded. Prior to implementing this task, Stantec will prepare a work plan for the installation of the submersible pump and piping system for discharge to the aeration tank and submit the work plan to ADEC for review and approval.



The Corrective Action Work Plan for the year 2024 will be implemented by Stantec on behalf of Tesoro c/o MPC. Groundwater monitoring will be conducted to track migration and trends of contaminants that are present at the site.

All sampling activities will be completed in accordance with ADEC's *Underground Storage Tanks Procedures Manual– Standard Sampling Procedures* (March 22, 2017). The methods that will be used for conducting a monitoring event, unless otherwise noted in the monitoring report, will include:

- The static water levels in the monitoring wells will be measured with respect to the top of each well casing. The elevation of the static water level will be based on an arbitrary datum established on-site during a vertical control survey that will be completed by Stantec on an annual basis. The survey will be performed during the summer after the seasonal frost layer thaws.
- The monitoring wells will be purged of a minimum of three well bore volumes prior to collecting the water samples. A new, disposable, PET bailer will be used to sample each well. The first bail of water removed from each well will be examined for petroleum odor, sheen, and any other unique physical features.
- Water samples will be collected in laboratory-supplied sample containers. The samples will be delivered to an ADEC-approved laboratory in accordance with standard chain-of-custody procedures.
- Additional water samples will be collected from the monitoring wells after the well has been purged, as described above, and tested in the field for chemical and physical intrinsic parameters listed in the 2024 Work Plan Schedule shown above.

If you have any questions or need additional information concerning this 2024 Corrective Action Work Plan, please contact us at (907) 248-8883.

Regards,

STANTEC CONSULTING SERVICES, INC.

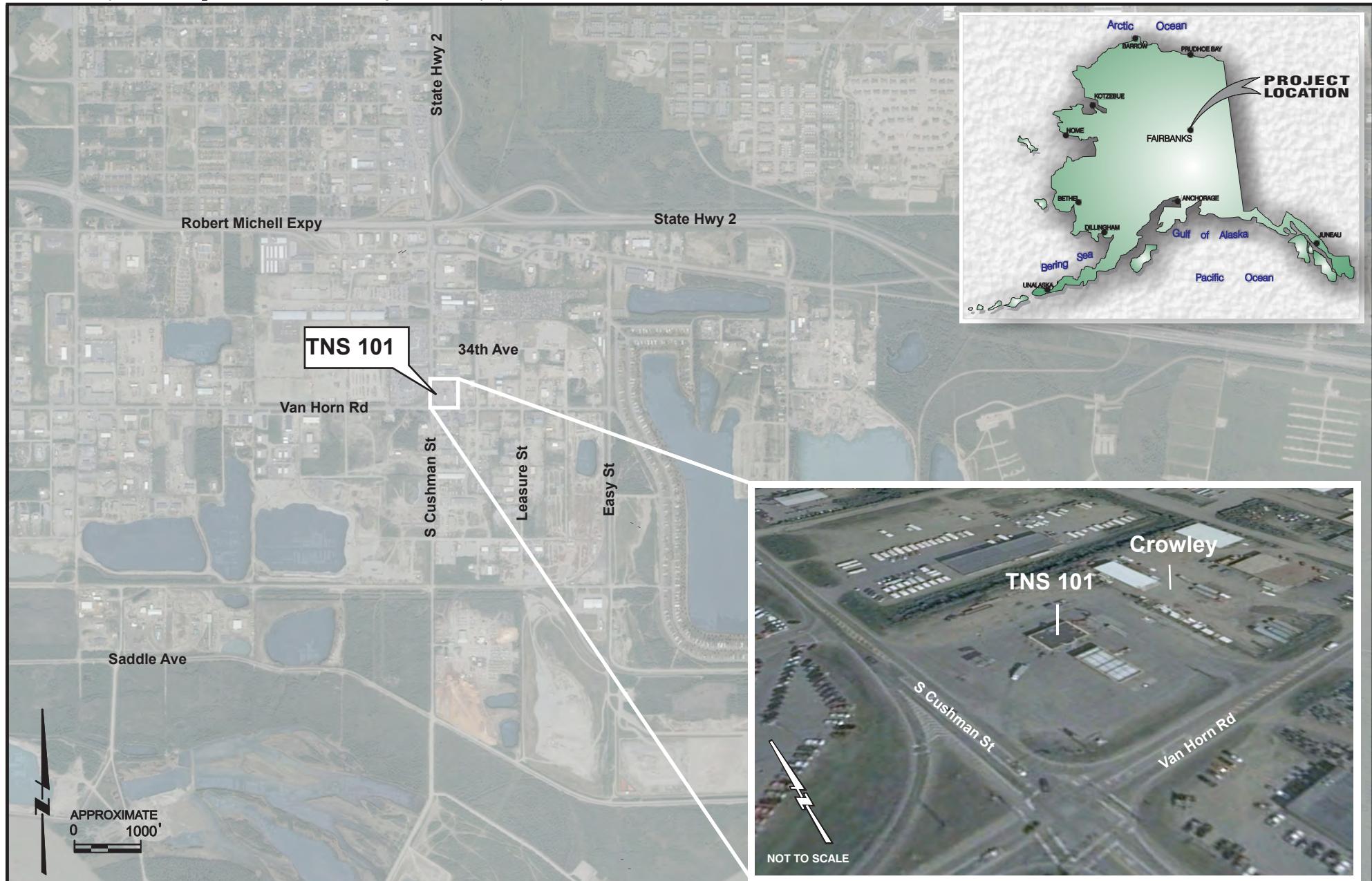
A handwritten signature in black ink that reads "Michael A. Zidek".


Michael A. Zidek, PMP
Project Manager

A handwritten signature in black ink that reads "Bob Gilfilian".

Bob Gilfilian, P.E.
Project Technical Lead

Attachments: Location and Vicinity Map
Site Plan with Analytical Data Results September 2023 Annual GWM Event
Analytical Data Results Tables of Historical Monitoring Events





		Well Screen Interval	Ground Water Elevation	124-TMB	135-TMB	Benzene	DRO	Ethylbenzene	GRO	Naphthalene	Toluene	Xylenes
Unit	ft	ft	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
GW Human Health Cleanup			0.056	0.06	0.0046	1.5	0.015	2.2	0.0017	1.1	0.19	
CRW		--	0.07730	0.0220	0.0051500	2.01	0.02950	0.541	0.01510	0.000488000	0.176	
CRW-2		--	--	--	--	U (0.0005) 0.001400	U (0.439) 1.20	--	U (0.05) 0.0500	--	--	--
09/24/2013	--	--	--	--	--	0.0160	0.96	--	0.35	--	--	--
05/07/2014	--	--	--	--	--	0.0130	2.80	--	0.91	--	--	--
09/07/2017	--	--	--	--	--	0.0110	1.40	--	0.99	--	--	--
09/19/2022	--	--	--	--	--	0.0073900	1.51	--	0.385	--	--	--
10/05/2023	--	--	0.105	0.03050	0.000936000	2.35	0.03350	0.602	0.0059600	0.000641000	0.155	0.145
ERW		--	0.047	0.0158	0.00201	0.736	0.017	0.0000628	0.00259	0.00100	0.000521000	
IFC Aeration Tank		--	U(0.00100)	U(0.00100)	U(0.00100)	0.398	U(0.00100)	U(0.100)	U(0.000250)	U(0.00100)	U(0.000521000)	
05/24/2012	--	--	--	--	--	0.0048600	0.478	--	0.532	--	--	--
05/26/2015	--	--	--	--	--	0.006500	21.0	--	0.59	--	--	--
05/12/2016	--	--	--	--	--	0.00500	U (0.43)	--	0.21	--	--	--
09/07/2017	--	--	--	--	--	U (0.00040)	0.74	--	U (0.150)	--	--	--
09/07/2018	--	--	--	--	--	U (0.00040)	0.28	--	U (0.150)	--	--	--
10/23/2019	--	--	--	--	--	U (0.003)	0.37	--	U (0.25)	--	--	--
10/22/2020	--	--	--	--	--	0.000701000	0.988	--	0.08610	--	--	--
09/19/2022	--	--	0.0079600	0.0025600	0.000169000	1.51	0.0029200	0.07120	U(0.000250)	U(0.00100)	0.01590	
10/05/2023	--	--	0.0065700	0.0027800	0.000175000	5.52	0.0015100	0.07740	U(0.000250)	U(0.000358000)	0.000358000	0.01210
MW19-1			--	--	--	0.0480	2.0 H	--	5.20	--	--	--
06/26/2019	--	--	--	--	--	0.0850	42 H	--	8.60	--	--	--
10/23/2019	--	--	0.27	0.103	0.0210	12.2	0.132	2.93	0.126	0.0048100	0.627	
MW19-2			--	--	--	0.0740	5.0 H	--	7.40	--	--	--
06/26/2019	--	--	0.428	0.148	0.0046800	16.4	0.12	2.83	0.04410	U(0.00100)	0.817	
MW-3			--	--	--	0.0900	--	--	--	--	--	--
04/13/1995	--	--	--	--	--	0.48	200	--	--	--	--	--
10/25/1995	--	--	--	--	--	0.0500	--	--	--	--	--	--
05/22/1996	--	--	--	--	--	0.0950	--	--	--	--	--	--
03/19/1997	--	--	--	--	--	0.04210	--	--	2.20	--	--	--
04/29/1998	--	--	--	--	--	0.02730	118	--	2.30	--	--	--
05/06/2014	--	--	--	--	--	U (0.0005)	1.10	--	0.0720	--	--	--

		Well Screen Interval	Ground Water Elevation	124-TMB	135-TMB	Benzene	DRO	Ethylbenzene	GRO	Naphthalene	Toluene	Xylenes
Unit	ft	ft	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
GW Human Health Cleanup			0.056	0.06	0.0046	1.5	0.015	2.2	0.0017	1.1	0.19	
09/07/2017	--	--	--	--	0.0240	160	--	3.70	--	--	--	--
09/07/2018	--	--	--	--	0.003300	60.0	--	1.30	--	--	--	--
10/23/2019	--	--	--	--	0.004700	210	--	3.10	--	--	--	--
10/21/2020	--	--	--	--	0.0073500	2.67	--	1.37	--	--	--	--
09/19/2022	--	--	0.168	0.08260	0.0032500	5.91	0.0430	1.87	0.03580	0.0230	0.638	
10/05/2023	--	--	0.901	0.418	0.01060	215	0.12	5.24	0.38	0.03110	1.90	
MW-4												
11/04/1991	--	--	--	--	U (0.0005)	--	--	--	--	--	--	--
01/28/1992	--	--	--	--	--	--	--	--	--	--	--	--
04/23/1992	--	--	--	--	U (0.0005)	--	--	--	--	--	--	--
07/16/1992	--	--	--	--	--	U (0.581)	--	--	--	--	--	--
08/11/1992	--	--	--	--	--	--	--	0.308	--	--	--	--
09/10/1992	--	--	--	--	U (0.0005)	--	--	--	--	--	--	--
10/07/1992	--	--	--	--	--	U (0.05)	--	--	--	--	--	--
12/21/1992	--	--	--	--	--	--	--	--	--	--	--	--
03/09/1993	--	--	--	--	U (0.417)	--	--	--	--	--	--	--
09/23/1994	--	--	--	--	U (0.0005)	--	--	--	--	--	--	--
03/12/1995	--	--	--	--	--	U (0.455)	--	--	--	--	--	--
04/13/1995	--	--	--	--	U (0.0005)	--	--	--	--	--	--	--
07/19/1995	--	--	--	--	--	U (0.565)	--	--	--	--	--	--
10/25/1995	--	--	--	--	--	--	--	U (0.05)	--	--	--	--
05/22/1996	--	--	--	--	--	U (0.439)	--	--	--	--	--	--
11/06/1996	--	--	--	--	U (0.0005)	--	--	--	--	--	--	--
03/19/1997	--	--	--	--	--	--	--	U (0.05)	--	--	--	--
11/17/1997	--	--	--	--	--	U (0.400)	--	--	--	--	--	--
04/29/1998	--	--	--	--	U (0.0005)	--	--	--	--	--	--	--
10/13/1998	--	--	--	--	--	U (0.565)	--	--	--	--	--	--
11/05/1999	--	--	--	--	--	U (0.400)	--	--	--	--	--	--
06/04/2001	--	--	--	--	U (0.0005)	--	--	--	--	--	--	--
11/30/2001	--	--	--	--	--	--	--	U (0.05)	--	--	--	--
08/20/2002	--	--	--	--	--	U (0.41)	--	--	--	--	--	--
08/04/2003	--	--	--	--	U (0.001)	--	--	--	--	--	--	--
05/03/2004	--	--	--	--	--	--	--	U (0.05)	--	--	--	--
05/16/2006	--	--	--	--	--	U (0.21)	--	--	--	--	--	--
09/14/2006	--	--	--	--	U (0.0020)	--	--	--	--	--	--	--
05/14/2007	--	--	--	--	--	--	--	U (0.1)	--	--	--	--
06/04/2008	--	--	--	--	--	0.78	--	--	--	--	--	--
05/13/2009	--	--	--	--	U (0.00040)	--	--	--	U (0.150)	--	--	--
06/15/2010	--	--	--	--	--	--	--	--	--	--	--	--
05/26/2011	--	--	--	--	--	0.59	--	--	--	--	--	--

		Well Screen Interval	Ground Water Elevation	124-TMB	135-TMB	Benzene	DRO	Ethylbenzene	GRO	Naphthalene	Toluene	Xylenes
Unit	ft	ft	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
GW Human Health Cleanup			0.056	0.06	0.0046	1.5	0.015	2.2	0.0017	1.1	0.19	
05/24/2012	--	--	--	--	U (0.00040)	--	--	--	--	--	--	--
08/12/2013	--	--	--	--	--	--	--	U (0.150)	--	--	--	--
05/06/2014	--	--	--	--	U (0.028)	--	--	--	--	--	--	--
05/26/2015	--	--	--	--	U (0.003)	--	--	--	--	--	--	--
05/12/2016	--	--	--	--	--	--	--	U (0.25)	--	--	--	--
09/07/2017	--	--	--	--	0.33 H	--	--	--	--	--	--	--
09/07/2018	--	--	--	--	U(0.001)	--	--	--	--	--	--	--
10/23/2019	--	--	--	--	--	--	--	0.595	--	--	--	--
10/21/2020	--	--	--	--	--	0.95	--	--	--	--	--	--
09/19/2022	--	--	U(0.00100)	U(0.00100)	U(0.00100)	U(0.840)	U(0.00100)	0.04330	U(0.000250)	0.01220	U(0.00300)	
10/05/2023	--	--	U(0.00100)	U(0.00100)	U(0.00100)	0.905	U(0.00100)	U(0.100)	U(0.000750)	0.000797000	U(0.00300)	U(0.00300)
MW-8												
08/30/2004	--	--	--	--	0.0051600	1.69	--	0.329	--	--	--	--
09/27/2005	--	--	--	--	U (0.0005)	U (0.4)	--	U (0.05)	--	--	--	--
05/16/2006	--	--	--	--	0.000695000	4.12	--	0.07660	--	--	--	--
09/14/2006	--	--	--	--	0.0064500	0.956	--	0.284	--	--	--	--
06/04/2008	--	--	--	--	0.0018800	5.81	--	0.45	--	--	--	--
05/13/2009	--	--	--	--	0.0023800	12.6	--	0.74	--	--	--	--
06/15/2010	--	--	--	--	0.0046700	2.45	--	1.39	--	--	--	--
05/26/2011	--	--	--	--	0.0018800	13.1	--	1.10	--	--	--	--
05/24/2012	--	--	--	--	0.0013400	1.88	--	0.524	--	--	--	--
05/07/2014	--	--	--	--	0.00067000	43.0	--	2.20	--	--	--	--
05/26/2015	--	--	--	--	0.002500	65.0	--	2.80	--	--	--	--
05/12/2016	--	--	--	--	0.00087000	12.0	--	0.86	--	--	--	--
09/07/2017	--	--	--	--	0.0160	27.0	--	0.39	--	--	--	--
09/07/2018	--	--	--	--	0.00067000	20.0	--	0.28	--	--	--	--
10/23/2019	--	--	--	--	U (0.003)	12.0	--	0.45	--	--	--	--
10/21/2020	--	--	--	--	0.000695000	8.97	--	0.126	--	--	--	--
09/19/2022	--	--	0.245	0.116	U(0.00500)	11.3	0.02690	1.50	0.05090	0.0040700	0.456	
10/05/2023	--	--	0.257	0.124	U(0.00100)	38.3	0.01310	1.49	0.05670	0.02840	0.31	
MW-14												
04/01/2005	--	--	--	--	0.01620	22.0	--	2.16	--	--	--	--
09/27/2005	--	--	--	--	0.01940	4.34	--	1.07	--	--	--	--
09/14/2006	--	--	--	--	0.0032300	1.51	--	0.457	--	--	--	--
06/04/2008	--	--	--	--	0.01280	3.02	--	0.964	--	--	--	--
05/13/2009	--	--	--	--	0.02670	1.77	--	2.18	--	--	--	--
06/15/2010	--	--	--	--	0.01190	1.89	--	1.15	--	--	--	--
05/26/2011	--	--	--	--	0.01030	3.78	--	1.23	--	--	--	--
05/24/2012	--	--	--	--	0.0027100	2.72	--	0.284	--	--	--	--
08/12/2013	--	--	--	--	0.04420	120	--	3.77	--	--	--	--

		Well Screen Interval	Ground Water Elevation	124-TMB	135-TMB	Benzene	DRO	Ethylbenzene	GRO	Naphthalene	Toluene	Xylenes
Unit	ft	ft	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
GW Human Health Cleanup			0.056	0.06	0.0046	1.5	0.015	2.2	0.0017	1.1	0.19	
05/06/2014	--	--	--	--	0.0270	67.0	--	12.0	--	--	--	
05/26/2015	--	--	--	--	0.0200	6.40	--	3.60	--	--	--	
09/07/2017	--	--	--	--	0.0500	14.0	--	6.50	--	--	--	
09/07/2018	--	--	--	--	0.0740	26.0	--	U (7.5)	--	--	--	
10/23/2019	--	--	--	--	0.0540	15 H	--	12.0	--	--	--	
10/21/2020	--	--	--	--	0.05850	4.75	--	6.68	--	--	--	
09/19/2022	--	--	0.565	0.174	0.03490	2.72	0.532	6.86	0.331	0.0300	3.37	
10/05/2023	--	--	0.555	0.185	0.04930	3.04	0.384	6.26	0.219	0.02690	2.68	
MW-17												
07/27/2000	--	--	--	--	0.0700	57.6	--	6.80	--	--	--	
08/04/2003	--	--	--	--	0.001600	4.50	--	0.535	--	--	--	
05/03/2004	--	--	--	--	0.08230	65.2	--	1.14	--	--	--	
04/01/2005	--	--	--	--	0.01480	118	--	5.37	--	--	--	
09/27/2005	--	--	--	--	0.0042200	6.53	--	0.204	--	--	--	
05/16/2006	--	--	--	--	0.000652000	51.2	--	0.633	--	--	--	
09/14/2006	--	--	--	--	0.0063400	9.33	--	0.642	--	--	--	
05/14/2007	--	--	--	--	0.0018200	74.1	--	0.467	--	--	--	
06/04/2008	--	--	--	--	0.00054000	3.49	--	0.213	--	--	--	
05/13/2009	--	--	--	--	U (0.0005)	1.11	--	U (0.05)	--	--	--	
06/15/2010	--	--	--	--	0.0038400	3.70	--	0.148	--	--	--	
05/26/2011	--	--	--	--	U (0.0005)	0.963	--	U (0.05)	--	--	--	
05/24/2012	--	--	--	--	U (0.0005)	1.05	--	0.122	--	--	--	
08/12/2013	--	--	--	--	U (0.0005)	114	--	1.68	--	--	--	
05/06/2014	--	--	--	--	U (0.0005)	28.0	--	1.20	--	--	--	
05/26/2015	--	--	--	--	U (0.0010)	32.0	--	3.90	--	--	--	
05/12/2016	--	--	--	--	U (0.00026)	74.0	--	3.30	--	--	--	
09/07/2017	--	--	--	--	0.005900	47.0	--	2.40	--	--	--	
09/07/2018	--	--	--	--	0.006400	24.0	--	2.90	--	--	--	
10/23/2019	--	--	--	--	0.007700	14.0	--	0.38	--	--	--	
10/21/2020	--	--	--	--	0.07320	17.7	--	3.20	--	--	--	
09/19/2022	--	--	0.0016300	0.000709000	0.000136000	3.40	0.000494000	0.226	0.000355000	0.002600	0.0032700	
10/05/2023	--	--	0.04340	0.01160	0.0034200	3.39	0.02880	0.285	U(0.000250)	0.0011200	0.186	
OMW-3			U(0.00100)	U(0.00100)	U(0.00100)	0.766	U(0.00100)	U(0.100)	U(0.000250)	U(0.00100)	U(0.00300)	
WRW2020												
07/16/2020	--	--	--	--	10.6	--	--	--	--	--	--	
10/22/2020	--	--	--	--	0.0033900	1.05	--	0.588	--	--	--	
09/19/2022	--	--	0.07150	0.0220	0.0021700	0.237	0.03970	0.563	0.01590	U(0.00100)	0.171	
10/05/2023	--	--	0.06620	0.01990	0.0011200	1.22	0.02880	0.11	0.000201000	U(0.00100)	0.13	