Seeds, Tena (ECY)

From: Kristin Anderson <Kristin.Anderson@floydsnider.com>
Sent: Wednesday, October 8, 2025 4:40 PM
To: Seeds, Tena (ECY)
Cc: Doug Ciserella; Mike Ciserella; Kim Hempel; Pamela Osterhout; Meg McCann
Subject: Time Oil Bulk Terminal Q3 monitoring summary
Attachments: Figure 1 Shallow WBZ GW Elevations Q3 2025.pdf; TOC_2025-Q3 Tables_2025-1008.pdf

External Email

Hi Tena,

Here is a summary of our Q3 2025 activities and results, which included sampling of the ASKO, Bulk Terminal, and East Waterfront monitoring wells, collection of site-wide groundwater level measurements, and installation of 02MW20R at the East Waterfront. A map of Shallow WBZ groundwater elevation contours and supporting analytical data tables are attached.

Groundwater Elevations

- Water level measurements were collected in collaboration with BNSF at wells within the shallow WBZ on the ASKO, BNSF, Bulk Terminal, and East Waterfront parcels.
- Water levels and primary flow paths across the Bulk Terminal and ASKO properties remain primarily north to northwest. The groundwater flow path on the BNSF/ASKO parcel boundaries continues to be westerly, influenced by the CAA-4 monolith, with a transition to northern flow across the ASKO parcel. The groundwater flow path across the East Waterfront parcel travels primarily to the north/northwest.

Bulk Terminal

Samples were collected from Shallow WBZ wells 01MW19R, 01MW40, and 01MW84:

- TPH concentrations generally remain stable to decreasing with seasonal fluctuation, while benzene remains stable or non-detect at the downgradient well locations.
    - 01MW19R had GRO less than the CUL and total DRO+ORO results greater than the CUL (730 ug/L vs the CUL of 500 ug/L), and benzene concentrations remained stable at 1.1 ug/L.
    - 01MW84 had GRO results greater than the CUL (1,400 ug/L vs the CUL of 800 ug/L) and DRO+ORO results were detected greater than the CUL (710 ug/L)
- TPH and benzene concentrations are stable to downward trending in the central portion of the property near CAA-1.
    - 01MW40 continues to have GRO concentrations less than the CUL and benzene was additionally less than the CUL for the last 3 monitoring events. Total DRO+ORO is more variable at this location and was detected at 760 ug/L during Q3.

Recommendations:

- Continue monitoring semiannually at 01MW19R, 01MW40 and 01MW84 and annually at 01MW66 and 01MW87, with the following modifications:
    - Discontinue monitoring of GRO at 01MW19R since the last four consecutive monitoring events have been less than the CUL.
    - Discontinue monitoring of GRO and benzene at 01MW40 since GRO has never exceeded the CUL at this well post-remediation, and benzene was less than the CUL for the last three consecutive monitoring events.

ASKO

Samples were collected from Shallow WBZ wells 01MW15, 01MW46, 01MW53R, 01MW56, 01MW58R, 01MW85, 01MW107, MW05, and MW06:

- CVOC and TPH concentrations were variable at upgradient well locations.
    - CVOC concentrations at 01MW58R continue to vary with the maximum post-remediation TCE concentration of 380 ug/L being observed again in Q3 (as seen during Q1 of 2025). Vinyl chloride concentrations are variable, but still exceed the CUL of 0.20 ug/L. Total DRO+ORO decreased relative to Q2 and was detected at the CUL of 500 ug/L.
    - At 01MW15 upgradient of the ISS monolith, TCE remained stable relative to Q2, while vinyl chloride decreased to 35 ug/L versus a result of 89 ug/L in Q2.
- TCE concentrations in the vicinity of the CAA-4 source area at 01MW46 continue to decline while breakdown products continued to increase, indicating ongoing biodegradation. Benzene was non-detect for a third consecutive quarter, at elevated reporting limits due to analytical interferences from CVOCs.
- CVOC concentration trends in the downgradient portions of the property were variable.
    - Concentrations at 01MW56 remain relatively low level with a decrease in TCE and slight increase in vinyl chloride relative to Q1.
    - Concentrations at MW05 continue to trend downward, and vinyl chloride concentrations continue to increase steeply, indicating ongoing biodegradation
    - TCE concentrations at MW06 decreased significantly from 410 ug/L in Q1 to 260 ug/L in Q3. Vinyl chloride slightly decreased (from 3.6 to 2.6 ug/L) while cis-1,2-DCE slightly increased (from 99 to 130 ug/L).
- CVOC concentration trends were also variable near the CPOC and the potential effects of the supplemental PlumeStop application are not yet apparent.
    - At 01MW53R, TCE decreased relative to Q2 (from 22 to 17 ug/L). Vinyl chloride slightly increased.
    - 01MW85, TCE decreased slightly relative to the Q2 result. Vinyl chloride continues to increase at this location indicating ongoing biodegradation.
    - At contingency well 01MW107 downgradient of the CPOC, TCE was detected near the laboratory detection limit at 0.097 ug/L, less than the CUL of 0.5 ug/L, while other CVOCs remained non-detect.

Recommendations:

- Continue monitoring per the GMP from the designated “initial” short-term monitoring network with the following considerations:
    - Continue sampling 01MW53R and 01MW85 on a quarterly basis.

- Discontinue monitoring Total DRO+ORO at 01MW58R.
- Discontinue monitoring for benzene at MW06 as concentrations have been non-detect for more than 3 consecutive monitoring events.
- Retain monitoring of contingency well 01MW107 for CVOCs in Q4 2025.

Gravity Well

One grab sample was collected from the gravity well and analyzed for select CVOCs.

- TCE in the gravity well decreased relative to Q2 but remains at elevated concentrations with seasonal fluctuation, while other CVOCs increased.

Recommendations

- Continue to collect grab samples from the influent and clear vaults and the gravity well for CVOCs on an annual basis, with the next sampling to occur in Q3 2026.
- Open the influent and clear vaults in Q4 2025 to observe if any LNAPL present, given recent observations of LNAPL in the perched WBZ monitoring well MW-BN-05 on the upgradient BNSF property.

East Waterfront

Per the GMP, long-term confirmation annual monitoring began at the East Waterfront wells in Q3. Replacement monitoring well 02MW20R was installed on August 13, 2025. Samples were collected from Shallow WBZ wells 02MW04R, 02MW07, 02MW17, 02MW19, and 02MW20R.

- TPH and benzene remain less than the CUL or non-detect downgradient of the CPOC at all locations.
- Arsenic was not detected at 02MW17 and was detected at concentrations less than the CUL established in the Cleanup Action Plan (CAP) at 02MW07 and 02MW19.
- Arsenic was detected at 7.3 ug/L at 01MW20R, which is greater than the CUL of 5.0 ug/L based on natural background specified in the CAP but less than the revised Puget Sound Basin natural background concentration of 8.0 ug/L established by Ecology in 2022.

Recommendations:

- Continue annual monitoring at the established long-term monitoring network
- Incorporate the updated Puget Sound Basin background groundwater arsenic concentration in the 2025 Annual Report

Thanks,

Kristin Anderson, LHG Associate Principal, Senior Geologist (she/her)
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Legend

- Shallow WBZ Monitoring Well
- Gravity Well
- Groundwater Contour (feet NAVD 88)
- Shallow WBZ Groundwater Flow Direction

Cleanup Action Components

- Excavated to CULs
- Excavated to RELs
- In Situ Stabilization/Solidification
- PlumeStop Injection
- ORC-A Treatment
- Interceptor Trench
- PRB Wall for Trench

Other Site Features

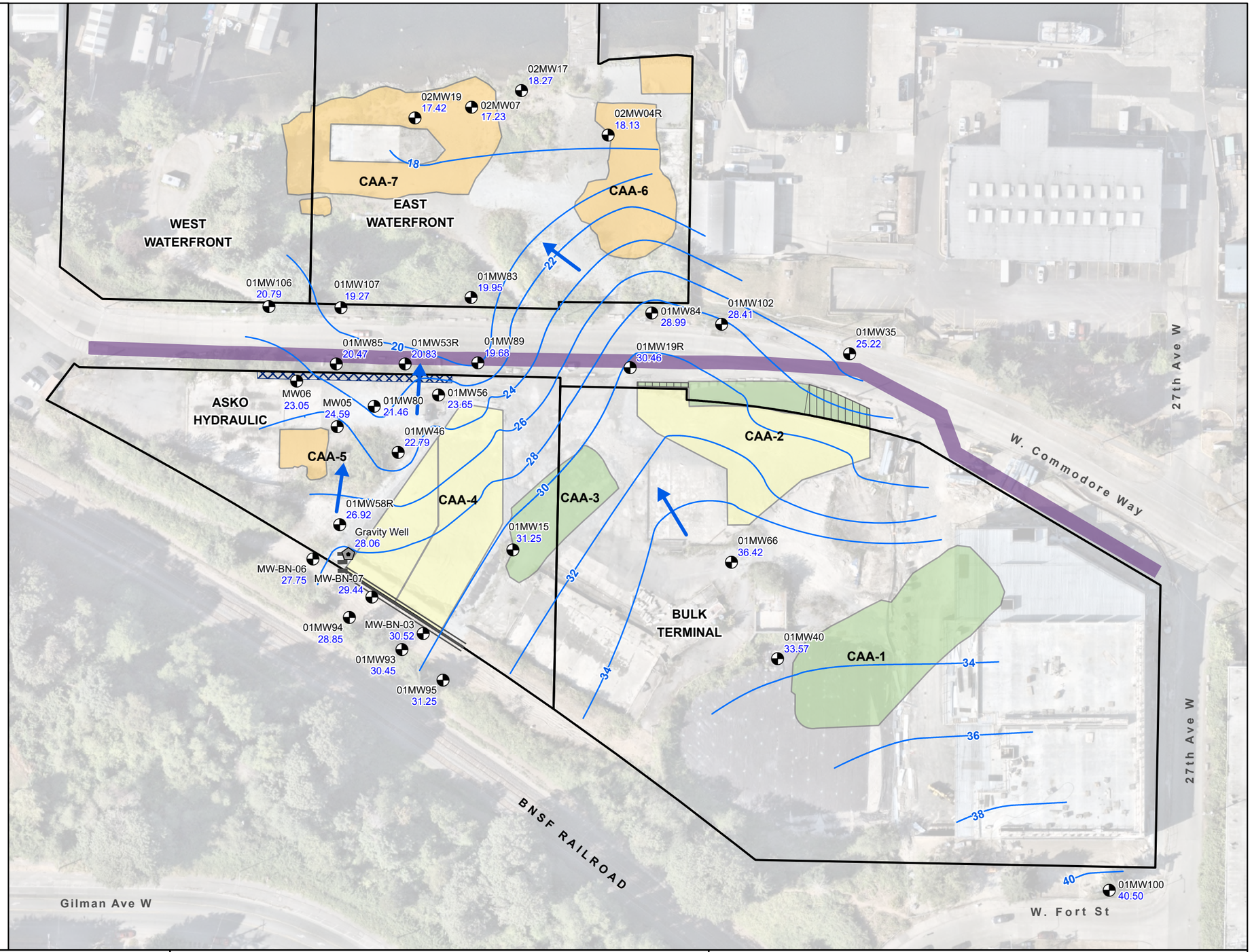
- Property Boundary for the Former TOC Seattle Terminal

Notes:
· Parcel boundaries obtained from King County Geographic Information Systems Center, 2011. Lot lines are approximate. Not for legal use.
· Orthoimagery obtained from Nearmap, 2024.

Abbreviations:
BNSF = BNSF Railway Company
CUL = Cleanup level
ORC-A = Oxygen Release Compound Advanced
NAVD 88 = North American Vertical Datum of 1988
PRB = Permeable reactive barrier
REL = Remediation level
TOC = TOC Holdings Co. and any predecessor entity including Time Oil Company
WBZ = Water-bearing zone

0 45 90 180
Scale in Feet

N



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Time Oil Seattle Q3 2025 Potentiometric Map
Time Oil Bulk Terminal
Seattle, Washington

Figure 1
Shallow WBZ Groundwater Elevations–
September 2025

I:\GIS\Projects\Cantera-TOC\01-Tasks\06-Groundwater Monitoring\02-Quarterly Reports\2025_Q3\TimeOil_Q32025_Potentiometric.aprx
10/2/2025

For Discussion Purposes Only

Discussion Draft

Pre- and Post-Remediation Groundwater Results for Indicator Hazardous Substances

		Analyte Class	Metals	TPH		VOCs	cVOCs			SVOCs
		Analyte	Arsenic	GRO	Total DRO + ORO	Benzene	TCE	cis-1,2-DCE	Vinyl Chloride	Penta
		CAS No.	7440-38-2	--	-- (U=0)	71-43-2	79-01-6	156-59-2	75-01-4	87-86-5
		Unit	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
		Cleanup Level	5.0 (1)	800	500	0.44	0.50	--	0.20	0.20
		Natural Background Level (2)	8.0	--	--	--	--	--	--	--
Parcel	Location	Sample Date								
Bulk Terminal	**01MW12**									
	Pre-remediation	4/30/2019		100 U	**590** (3)	**3.0**				
	Post-remediation	1/31/2023		100 U	**1,000** (3)	0.35 U				
		6/28/2023		110	**1,200** (3)	**1.3**				
		2/26/2024		100 U	**550** (3)	0.35 U				
		8/7/2024		100 U	**1,300** (3)	0.35 U				
		3/3/2025		100 U	**1,400** (3)	0.35 U				
	01MW19/01MW19R									
	Pre-remediation	4/30/2019		**10,000**	**1,900** (3)	**2,600**	*1.0 U*	1.0 U	0.20 U	
	Post-remediation	1/31/2023		**990**	**910** (3)	**5.2**				
		4/7/2023		**1,100**	**700** (3)	**4.4**				
		6/28/2023		**1,300**	**810** (3)	**2.1**				
		10/10/2023		**1,200**	**890** (3)	**1.6**				
				1,300	**920** (3)	**1.8**				
		2/26/2024		560	**600** (3)	**1.9**				
		5/15/2024		750	**680** (3)	**2.1**				
				1,000	**720** (3)	**2.2**				
		8/7/2024		500	**580** (3)	**0.98**				
		11/20/2024		490	**1,100** (3)	**1.0**				
		3/3/2025		500	**510** (3)	**1.1**				
		9/16/2025		750	**730** (3)	**1.1**				
	01MW35									
	Pre-remediation	5/1/2019		100 U	**550** (3)	0.35 UJ				
	Post-remediation	1/31/2023		100 U	110 (3)	0.35 U				
		4/7/2023		100 U	120 (3)	0.35 U				
		6/28/2023		100 U	76 (3)	0.35 U				
		10/10/2023		100 U	56 (3)	0.35 U				
	01MW40									
	Pre-remediation	4/30/2019			**1,100** (3)	0.35 UJ				
	Post-remediation	1/31/2023		100 U	**5,300** (3)	**0.73**				
		6/28/2023		100 U	**620** (3)	0.35 U				
		2/26/2024		110	**5,500** (3)	**1.6**				
		8/7/2024		100 U	**980** (3)	0.35 U				
		3/3/2025		100 U	**2,100** (3)	0.35 U				
		9/17/2025		100 U	**760** (3)	0.35 U				
	01MW49/01MW49R									
	Pre-remediation	5/1/2019		100 U	**850** (3)	0.35 UJ				
	Post-remediation	1/31/2023		100 U	260 (3)	0.35 U				
		6/29/2023		100 U	160 (3)	0.35 U				
		2/26/2024		100 U	200 (3)	0.35 U				
		8/7/2024		100 U	240 (3)	0.35 U				
	01MW51									
	Post-remediation	4/7/2023		100 U	250 U	0.35 U				
	01MW66									
	Pre-remediation	4/30/2019		100 U	250	0.35 UJ				**3.6**
	Post-remediation	1/31/2023								**1.9**
		2/26/2024								**0.76**
		3/3/2025								**0.84**

Discussion Draft

Pre- and Post-Remediation Groundwater Results for Indicator Hazardous Substances

		Analyte Class	Metals	TPH		VOCs	cVOCs			SVOCs
		Analyte	Arsenic	GRO	Total DRO + ORO	Benzene	TCE	cis-1,2-DCE	Vinyl Chloride	Penta
		CAS No.	7440-38-2	--	-- (U=0)	71-43-2	79-01-6	156-59-2	75-01-4	87-86-5
		Unit	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
		Cleanup Level	5.0 (1)	800	500	0.44	0.50	--	0.20	0.20
		Natural Background Level (2)	8.0	--	--	--	--	--	--	--
Parcel	Location	Sample Date								
Bulk Terminal (Cont'd)	**01MW84**									
	Pre-remediation	5/1/2019		**8,400**	**2,800** (3)	*5.0 U*				
	Post-remediation	1/31/2023		**2,300**	**810** (3)	0.35 U				
				2,200	**830** (3)	0.35 U				
		4/7/2023		**5,500**	**1,500** (3)	0.35 U				
		6/28/2023		**4,600**	**1,400** (3)	0.35 U				
				4,300	**1,300** (3)	0.35 U				
		10/10/2023		**3,500**	**1,500** (3)	0.35 U				
		2/26/2024		**1,800**	**540** (3)	0.35 U				
		5/15/2024		**3,900**	**1,400** (3)	0.35 U				
		8/7/2024		**2,500**	**970** (3)	0.35 U				
		11/20/2024		**1,800**	**1,200** (3)	0.35 U				
		3/3/2025		**960**	440 (3)	0.35 U				
		9/16/2025		**1,400**	**690** (3)					
				1,300	**710** (3)					
	01MW87									
	Pre-remediation	5/26/2019		100 U		*1.0 U*				
		5/1/2019			110					
	Post-remediation	4/7/2023		100 U	250 U	0.35 U				
ASKO	**01MW15**									
	Pre-remediation	5/2/2019		100 U	220 (3)	0.41	0.50 U	1.7	**7.2**	
	Post-remediation	2/1/2023					0.50 U	6.4	**36**	
		6/28/2023					0.50 U	5.7	**28**	
		2/26/2024					**27**	88	**59**	
		5/15/2024					**2.7**	18	**58**	
		8/7/2024					**0.59**	8.9	**36**	
		3/3/2025					**7.4**	41	**110**	
		6/5/2025					**1.0**	9.0	**89**	
		9/16/2025					**0.99**	16	**35**	
	01MW46									
	Pre-remediation	5/2/2019			280 (3)	**14**	**880**	220	**11**	
	Post-remediation	2/1/2023				**3.8**	**240**	140	**17**	
		4/7/2023				*3.5 U*	**140**	110	**9.3**	
		6/28/2023				**4.3**	**280**	260	**25**	
		10/10/2023				**4.8**	**300**	400	**36**	
		2/26/2024				**3.1**	**220**	520	**69**	
		5/15/2024				**2.8 J**	**220**	490	**69**	
		8/7/2024				**3.1 J**	**160**	610	**96**	
		11/20/2024				*3.5 U*	**130**	770	**160**	
		3/3/2025				*3.5 U*	**130**	550	**130**	
		9/16/2025				*3.5 U*	**45**	580	**220**	
	01MW53/01MW53R									
	Pre-remediation	5/2/2019			94 (3)	0.35 U	0.50 U	4.4	**0.26**	
	Post-remediation	2/1/2023					**2.9**	5.4	**0.57**	
		4/7/2023					**2.1**	3.2	**0.36**	
		6/28/2023					**2.0**	2.9	**0.51**	
		10/10/2023					**1.5**	2.4	**0.59**	
		2/27/2024					**26**	2.9	**0.60**	
		5/15/2024					**12**	1.6	**0.33**	
		8/8/2024					**13**	2.0	**0.76**	
		11/20/2024					**15**	2.2	**0.41**	
		3/3/2025					**22**	2.2	**0.38**	
		6/5/2025					**22**	3.4	**4.5**	
		9/16/2025					**17**	2.8	**6.3**	
	01MW56									
	Pre-remediation	5/2/2019			**1,000** (3)	0.35 U	0.50 U	1.0 U	**0.61**	
	Post-remediation	2/1/2023					**0.81**	1.0 U	**0.99**	
		6/28/2023					**0.62**	1.0 U	**0.97**	
		2/26/2024					**2.1**	1.0 U	**1.1**	
		8/7/2024					**0.97**	1.0 U	**1.2**	
		3/3/2025					**3.7**	1.1	**1.4**	
		9/16/2025					**0.72**	1.0 U	**1.6**	

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		Analyte Class	Metals	TPH		VOCs	cVOCs			SVOCs
		Analyte	Arsenic	GRO	Total DRO + ORO	Benzene	TCE	cis-1,2-DCE	Vinyl Chloride	Penta
		CAS No.	7440-38-2	--	-- (U=0)	71-43-2	79-01-6	156-59-2	75-01-4	87-86-5
		Unit	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
		Cleanup Level	5.0 (1)	800	500	0.44	0.50	--	0.20	0.20
		Natural Background Level (2)	8.0	--	--	--	--	--	--	--
Parcel	Location	Sample Date								
ASKO (Cont'd)	**01MW58/01MW58R**									
	Pre-remediation	5/2/2019			100 (3)		**42**	1.6	**0.30**	
	Post-remediation	2/27/2024					**40**	520	**31**	
		5/15/2024					**38**	490	**33**	
		8/7/2024			**1,300 (3)**		**23**	270	**13**	
		11/20/2024			**570 (3)**		**92**	200	**24**	
		3/3/2025			**770 (3)**		**340**	380	**75**	
					1,000 (3)		**380**	390	**79**	
		6/5/2025			**530 (3)**		**290**	510	**92**	
					690 (3)		**280**	490	**90**	
		9/16/2025			500 (3)		**380**	310	**54**	
	01MW61									
	Post-remediation	3/3/2025			470 (3)	0.35 U	0.050 U	1.0 U	0.020 U	
	01MW80									
	Pre-remediation	5/2/2019			380 (3)	**16**	**710**	250	**10**	
	Post-remediation	5/15/2024					**190**	350	**51**	
		8/8/2024				**2.4 J**	**180**	350	**65**	
	01MW85									
	Pre-remediation	5/3/2019			450 (3)		0.50 U	2.4	**7.9**	
	Post-remediation	1/31/2023					**5.7**	1,200	**13**	
		4/7/2023					**6.2**	1,200	**17**	
		6/28/2023					**110**	1,000	**13**	
		10/10/2023					**13**	1,100	**18**	
		2/27/2024					*5.0 U*	990	**28**	
		5/15/2024					**6.2**	970	**26**	
		8/8/2024					**6.5**	1,100	**33**	
		11/20/2024					**5.0**	990	**36**	
		3/3/2025					**4.7**	1,200	**42**	
		6/5/2025					**4.9**	1,200	**46**	
		9/16/2025					**4.4**	1,200	**61**	
	01MW89									
	Post-remediation	2/27/2024					0.50 U	1.0 U	0.020 U	
	01MW107									
	Pre-remediation	5/6/2019					0.50 U	1.0 U	0.020 U	
	Post-remediation	6/28/2023					0.50 U	1.0 U	0.020 U	
		10/10/2023					0.50 U	1.0 U	0.020 U	
		2/26/2024					0.50 U	1.0 U	0.020 U	
		5/15/2024					0.50 U	1.0 U	0.020 U	
		8/8/2024					0.50 U	1.0 U	0.020 U	
		11/20/2024					0.50 U	1.0 U	0.020 U	
		3/3/2025					0.070	1.0 U	0.020 U	
		6/5/2025					0.057	1.0 U	0.020 U	
		9/16/2025					0.097	1.0 U	0.020 U	
	01MW108									
	Pre-remediation	5/3/2019					0.50 U	1.0 U	**0.33**	
	Post-remediation	2/1/2023					0.50 U	1.0 U	**0.27**	
		6/29/2023					0.50 U	1.0 U	0.065	
		2/26/2024					0.50 U	1.0 U	0.11	
		8/7/2024					0.50 U	1.0 U	0.081	
	MW01									
	Post-remediation	3/3/2025			140 (3)	0.35 U	0.050 U	1.0 U	0.020 U	

Discussion Draft

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		CAS No.	7440-38-2	--	-- (U=0)	71-43-2	79-01-6	156-59-2	75-01-4	87-86-5
		Unit	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
		Cleanup Level	5.0 (1)	800	500	0.44	0.50	--	0.20	0.20
		Natural Background Level (2)	8.0	--	--	--	--	--	--	--
Parcel	Location	Sample Date								
ASKO (Cont'd)	**MW05**									
	Pre-remediation	5/3/2019		140	310 (3)	**1.0**	**240**	120	**27**	
	Post-remediation	2/1/2023				**1.4**	**140**	360	**6.8**	
		6/28/2023				**1.5 J**	**160**	360	**6.9**	
		2/27/2024				**1.1 J**	**120**	840	**24**	
		8/8/2024				**0.83 J**	**51**	840	**81**	
		3/3/2025				*3.5 U*	**23**	680	**110**	
		9/16/2025				*3.5 U*	**12**	750	**160**	
	MW06									
	Pre-remediation	5/3/2019			370 (3)	**2.6**	**330**	31	**2.8**	
	Post-remediation	2/1/2023				0.35 U	0.50 U	1.0 U	**2.6**	
		2/27/2024				0.35 U	**7.7**	68	**4.5**	
		8/8/2024				0.35 U	**48**	50	**2.1**	
		3/3/2025				*3.5 U*	**410**	99	**3.6**	
		9/16/2025				*3.5 U*	**260**	130	**2.6**	
East Waterfront	**02MW04/02MW04R**									
	Pre-remediation	5/3/2019				**3.7**				
	Post-remediation	2/1/2023		100 U	69 (3)	0.35 U				
		4/7/2023		100 U	250 U	0.35 U				
		6/29/2023		100 U	65 (3)	**29**				
		10/10/2023		100 U	250 U	0.35 U				
		2/27/2024		100 U	250 U	0.35 U				
				100 U	250 U	0.35 U				
		5/15/2024		100 U	52 (3)	0.35 U				
		8/7/2024		100 U	96 (3)	0.35 U				
		9/17/2025		100 U	200 U	0.35 U				
	02MW07									
	Pre-remediation	5/3/2019	4.2		**670 (3)**					
		7/25/2019	3.9							
	Post-remediation	2/1/2023	1.0 U	100 U	86 (3)	0.35 U				
		4/7/2023	1.0 U	100 U	250 U	0.35 U				
		6/29/2023	1.1	100 U	76 (3)	0.35 U				
		10/10/2023	1.2	100 U	73 (3)	0.35 U				
		2/27/2024	1.0 U	100 U	250 U	0.35 U				
		9/17/2025	3.9	100 U	95 (3)	0.35 U				
	02MW17									
	Pre-remediation	5/6/2019	1.8	100 U	220 (3)	0.35 UJ				
	Post-remediation	9/17/2025	1.0 U	100 U	200 U	0.35 U				
	02MW19									
	Pre-remediation	5/6/2019	**23**	100 U	380 (2)					
		7/25/2019	**14**							
	Post-remediation	2/1/2023	3.3	100 U	150 (3)	0.35 U				
		4/7/2023	4.7	100 U	76 (3)	0.35 U				
			4.8	100 U	84 (3)	0.35 U				
		6/29/2023	4.2	100 U	76 (3)	0.35 U				
		10/10/2023	3.1	100 U	81 (3)	0.35 U				
		2/27/2024	4.8	100 U	110 (3)	0.35 U				
		9/17/2025	3.8	100 U	91 (3)	0.35 U				
	02MW20/02MW020R									
	Pre-remediation	5/6/2019	**6.7**	100 U	210 (3)	0.35 UJ				
		7/25/2019	**12**							
	Post-remediation	9/17/2025	7.3	100 U	170 (3)	0.35 U				

Discussion Draft
Pre- and Post-Remediation Groundwater Results for Indicator Hazardous Substances

Analyte Class			Metals	TPH		VOCs	cVOCs			SVOCs
Analyte			Arsenic	GRO	Total DRO + ORO	Benzene	TCE	cis-1,2-DCE	Vinyl Chloride	Penta
CAS No.			7440-38-2	--	-- (U=0)	71-43-2	79-01-6	156-59-2	75-01-4	87-86-5
Unit			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Cleanup Level			5.0 (1)	800	500	0.44	0.50	--	0.20	0.20
Natural Background Level (2)			8.0	--	--	--	--	--	--	--
Parcel	Location	Sample Date								

Notes:

Blanks are intentional. Data not collected for specific analyte.

Italic Reporting limit exceeds cleanup level.

BOLD Detected exceedance of cleanup level.

1 The arsenic cleanup level was originally established in the Cleanup Action Plan (Ecology 2020) and is based on natural background.

2 The revised Puget Sound Basin background arsenic value was established by the study "Natural Background Groundwater Arsenic Concentrations in Washington State (Ecology 2022)."

3 Laboratory noted that the sample chromatographic pattern does not resemble the fuel standard used for quantitation for one or more of the detected concentrations in the sum.

Abbreviations:

CAS Chemical Abstracts Service
cVOC Chlorinated volatile organic compound
DCE Dichloroethene
DRO Diesel-range organics
GRO Gasoline-range organics
µg/L Micrograms per liter
ORO Oil-range organics
Penta Pentachlorophenol
SVOC Semivolatile organic compound
TCE Trichloroethene
TPH Total petroleum hydrocarbons
VOC Volatile organic compound

Qualifiers:

J Analyte was detected; concentration is an estimate.
U Analyte was not detected at the given reporting limit.
UJ Analyte was not detected at the given reporting limit, which is considered estimated.

Discussion Draft

Permeable Reactive Barrier Grab Sample Results

		Analyte Class	TPH	cVOCs		
		Analyte	Total DRO + ORO	TCE	cis-1,2-DCE	Vinyl Chloride
		CAS No.	71-55-6	79-01-6	156-59-2	75-01-4
		Unit	µg/L	µg/L	µg/L	µg/L
		Cleanup Level	500	0.50	--	0.20
Parcel	Location	Sample Date				
ASKO	Gravity Well	10/10/2023		**490**	130	**11**
		11/9/2023		**370**	98	**21**
		2/26/2024		**110**	23	**27**
		5/15/2024		**700**	610	**260**
		8/7/2024	380 (1)	**840**	540	**6.3**
		11/20/2024		**370**	410	**35**
		3/3/2025		**16**	2.6	**0.63**
		6/5/2025	220 (1)	**250**	240	**2.3**
		9/16/2025		**170**	330	**5.9**
	Clear Vault	11/9/2023		**31**	1.4	0.058
		2/26/2024		**17**	1.0 U	0.020 U
		5/15/2024		**13**	1.0 U	0.020 U
		8/7/2024		**9.2**	1.0 U	0.020 U
		11/20/2024		**11 J**	1.4	0.020 U
		3/3/2025		**7.3**	1.0 U	0.020 U
		6/5/2025		**5.5**	1.0 U	0.020 U
	Influent Vault	2/26/2024		**40**	3.6	0.15
		5/15/2024		**25**	4.2	0.16
		8/7/2024		**26**	4.6	0.18
		11/20/2024		**14**	4.9	**0.22**
		3/3/2025		**91**	2.0	0.081
		6/5/2025		**44**	4.1	0.15

Notes:

BOLD Detected exceedance of cleanup level.

1 Laboratory noted that the sample chromatographic pattern does not resemble the fuel standard used for quantitation for one or more of the detected concentrations in the sum.

Abbreviations:

cVOC Chlorinated volatile organic compound
DCE Dichloroethene
DRO Diesel-range organics
µg/L Micrograms per liter
ORO Oil-range organics
TCE Trichloroethene
TPH Total petroleum hydrocarbons

Qualifier:

U Analyte was not detected at the given reporting limit.