SITE INFORMATION:

Name: Chevron 97348
Address: 500 and 510 N. Wenatchee Ave. (Formerly 502 N. Wenatchee Ave.)

City: Wenatchee   County: Chelan   State: WA   Zip: 98801
Section/Township/Range: 03/22/20E
Latitude: 47.43099   Longitude: -120.31700
Facility Site ID No. 15685336
TCP Cleanup Site No. 5586

Site scored/ranked for the February 2015 update

SITE DESCRIPTION AND HISTORY

Chevron operated a gasoline service station on this site until 1990. All structures and buildings were removed in 1991. Currently the site includes two parcels with an office building, parking lot and car wash.

The site is in a commercial zone located in the center of Wenatchee's downtown business district. The surrounding area is a mix of restaurants, businesses, hotels, and apartments. The Columbia River is 1,323 feet east of this property and the Wenatchee river confluence with the Columbia River is 9,010 feet north, northeast of the property. There is no other surface water within 2 miles of the site.

SAMPLING AND SUBSTANCES OF CONCERN

In December 1990, Groundwater Technologies, Inc. submitted an Environmental Site Assessment of the Site. The report assessed the property for the presence of contaminants in the soil and ground water. Five soil borings were drilled and the soil sampled. The initial soil tests for TPH as gasoline, TPH-418.1, BTEX, PCB, HVO and toxic metals were all ND or below Method A soil cleanup levels. Four groundwater monitoring wells (MW) were installed in four of the borings and groundwater was sampled. One boring, by the pump station, was dry. The groundwater was tested in December 1990. Several of the results exceeded the cleanup levels for Ethylbenzene, Xylene, TPH and lead.

In February 1991, the buildings and structures were removed. Then the underground storage tanks (UST) were removed. Two 9,960 and one 5,000 gallon gasoline tanks and one 750 gallon used oil tank were removed from the north corner, by the pump stations. Behind the building a used oil and a heating oil tank, both of unknown size were removed. Excavation depths were approximately 18-20 feet and groundwater was not encountered. MW 3 was destroyed during the excavation. Excavation also occurred under the areas previously occupied by the dispenser

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islands, product lines and three hydraulic lifts, which were previously inside the service building. Test results for the soils left in place indicated all soil contamination is below the cleanup levels.

In 2007, two more monitoring wells, MW-6 and MW-7, were installed. The soil sampled from the boring material was tested for TPH-G, TPH-Dx, BTEX, MTBE, EDB, EDC, HVOCs, PAHs, PCBs and lead. Four days later groundwater was sampled and tested for the same contaminants as the soil. All soil test results were below MTCA. The groundwater results were below MTCA cleanup level except for lead in MW-6 with a result of 260 ug/L.

Groundwater sampling continued at irregular intervals from 1991-1996, 2001-2009 and 2011-2013. The table below is a summary of the results from the last four sampling events for each well. Monitoring well 7 was only sampled 3 times.

Last four groundwater sampling event results
Test Results in ug/kg

Well#	Sample Date	GW depth ft.	TPH-HRO	Lead	Total PAHs
MW-2	02-09-2009	20.27	--	3.4	0.03869
MW-2	03-08-2011	20.17	--	1.7	0.0158
MW-2	12-14-2012	20.34	*860*	*37.7*	0.06731
MW-2	03-21-2013	20.35	97	7.7	*0.1191*
MW-4	09-28-2007	25.72	<260	<2	0.02978
MW-4	11-07-2007	25.38	<260	4.1	0.01545
MW-4	12-14-2012	22.73	--	0.36	<0.01435
MW-4	03-21-2013		--	<0.073	<0.014496
MW- 5	02-09-2009	14.70	*630*	1.9	*0.1243*
MW- 5	03-08-2011	14.45	340	2.1	0.0726
MW- 5	12-14-2012	15.05	<67	1.6	0.02932
MW- 5	04-12-2013	15.46	83	2.7	*0.1467*
MW-6	09-28-2007	21.93	<350	*260*	0.0517
MW-6	11-07-2007	21.74	<230	*380*	0.01787
MW-6	03-26-2008	22.73	--	22	--
MW-6	05-13-2008	22.83	<100	0.94	--
MW-7	09-28-2007	19.82	<260	3	--
MW-7	11-07-2007	19.59	<250	8.1	--
MW-7	05-13-2008	20.66	<94	0.23	--
MTCA *			500	15	0.1

-- Means this contaminant was not tested
Results exceeding cleanup level* are in *red /italics*.
*Method A cleanup levels from MTCA Table 720-1, updated 2-12-2001. The PAHs cleanup level is based on the cleanup level for Benzo(a)pyrene.

SPECIAL CONSIDERATIONS

Groundwater sampling has occurred at irregular intervals from 1991-1996, 2001-2009 and 2011-2013. This SHA is scored based on the worse case assumption. The highest test results from most recent four sampling events are used.

The documented contamination is subsurface, therefore surface water and air routes are not applicable for WARM scoring for this site. Only the groundwater route is scored.

ROUTE SCORES:

Surface Water/Human Health: __NS__   Surface Water/Environmental.: __NS__
Air/Human Health: __NS__   Air/Environmental: __NS__
Groundwater/Human Health: __63.7 =>Q5__

                                                 OVERALL RANK: __2__

1. **SURFACE WATER ROUTE –** *Not Scored*

2. **AIR ROUTE –** *Not Scored*

3. **GROUNDWATER ROUTE** –

   a. List those substances to be <u>considered</u> for scoring: Source: <u>1, 2, 3</u>

      TDH (Heavy oil range), Lead and PAHs (benzo(a)pyrene is used as the reference chemical for scoring calculations)

   b. Explain basis for choice of substance(s) to be <u>used</u> in scoring: Source: <u>1, 2, 3</u>

      TDH (Heavy oil range), Lead and PAHs are present in the groundwater in concentrations exceeding MTCA Method A Cleanup levels.

   c. List those management units to be <u>considered</u> for scoring: Source: <u>1, 2, 3</u>

      Contaminated groundwater

   d. Explain basis for choice of unit to be <u>used</u> in scoring: Source: <u>1, 2, 3</u>

       TDH (Heavy oil range), Lead and PAHs groundwater contamination is confirmed by laboratory tests.

WORKSHEET 6
Groundwater Route

1.0   **SUBSTANCE CHARACTERISTICS**

1.2	**Human Toxicity**								
Substance	**Drinking Water Standard (µg/L)**	**Value**	**Acute Toxicity (mg/ kg-bw)**	**Value**	**Chronic Toxicity (mg/kg/day)**	**Value**	**Carcinogenicity**		**Value**
							WOE	**PF***	
1 Lead	15	6	ND	ND	<0.001 (NOAEL)	10	B2	ND	ND
2 PAHs (benzo(a) pyrene)	0.2	10	50(rat)	10	-	ND	B2	12	7
3 TPH-HRO (TPH-Dx)	20	4	490(rat)	5	0.004	3	ND	ND	ND

* Potency Factor   Source: 3, 4

Highest Value: 10
(Max = 10)
Plus 2 Bonus Points? 2
Final Toxicity Value: 12
(Max = 12)

1.2	**Mobility (use numbers to refer to above listed substances)**
Cations/Anions **OR**	**Solubility (mg/L)**
1= 0.1 to 1.0 value 2	**1**=
2=	**2**= 1.2E-03 value 0
3=	**3**= 3.0E+01 value 1

$1.2 \times 10^{-3} = 1.2 \times 0.01 = 0.012$ Source: 4, 5
$3.0 \times 10 = 30$ **Value: 2**
                 (Max = 3)

1.3	**Substance Quantity:**	
	Use the once filled volume of the tanks to estimate quantity. Three UST contained gasoline, total capacity equals 24,920 gallons plus one 750 gallon UST contained used oil equals 25,670 gallons. Two USTs containing used oil and heating oil of unknown capacity.	Source: 1, 4 **Value: 6** (Max=10)

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2.0 MIGRATION POTENTIAL

		Source	Value
2.1	**Containment (explain basis):** Contaminated soil from leaking underground storage tank.	1, 2, 3	**10** (Max = 10)
2.2	**Net precipitation:** 3"	6	**1** (Max = 5)
2.3	**Subsurface hydraulic conductivity:** sandy loam	8	**3** (Max = 4)
2.4	**Vertical depth to groundwater:** 14-25 feet	3	**8** (Max = 8)

3.0 TARGETS

		Source	Value
3.1	**Groundwater usage:** There are wells and water rights within 2 miles of site. However, area is served by municipal domestic system with wells located across river and miles upstream.	9	**2** (Max = 10)
3.2	**Distance to nearest drinking water well:** >10,000 feet	9	**0** (Max = 5)
3.3	**Population served within 2 miles:** $\sqrt{}$ **pop.** = 180 2012 Population of Wenatchee 32,562	10	**100** (Max = 100)
3.4	**Area irrigated by (groundwater) wells within 2 miles:** **(0.75)*$\sqrt{}$# acres = 0** Irrigation districts serve the area from surface water sources over 5 miles away from site.	11	**0** (Max = 50)

4.0 RELEASE

	Source	Value
Explain basis for scoring a release to groundwater: Groundwater testing over last 23 years show variable levels of contaminants. During the last four testing events for each well, tests for lead, PAHs and heavy oil are over the cleanup levels.	1, 2, 3	**5** (Max = 5)

SOURCES USED IN SCORING

1. Report of Environmental Site Assessment Chevron Service Station #7348 by Groundwater Technology, Inc. December 1990.
2. Report of Underground Storage Tank Closure, Chevron Service Station #7348 by Groundwater Technology, Inc. April 1991.
3. 2013 Annual Groundwater Monitoring Report, Chevron Site No. 9-7348, by Arcadis. October 2013.
4. Washington State Department of Ecology, Toxicology Database for Use in Washington Ranking Method Scoring, January 1992
5. Washington State Department of Ecology, WARM Scoring Manual, April 1992.
6. Washington Climate – Net Rainfall Table 27
7. Query for latitude and longitude of site from Find Latitude and Longitude, www.findlatitudeandlongitude.com .
8. USDA-NRCS Web Soil Survey information for site.
9. Ecology Water Resources Explorer for 2 mile radius from site.
10. Population from www.city-data.com/city/Wenatchee-Washington.html
11. Known information from familiarity of area.