

Site Hazard Assessment Worksheet 1 Summary Score Sheet

SITE INFORMATION

Name: Pacific Plaza LLC
Address: 1222 Pacific Avenue
City: Tacoma **County:** Pierce **State:** WA **Zip:** 98402
Section/Township/Range: 04 / 20N / 03E
Latitude: 47.25163 **Longitude:** -122.43863
Facility Site ID Number: 969

Site assessed/ranked for the February 2011 update.

October 21, 2010

Site Description (Include management areas, substances of concern, and quantities):

General Site Description

The subject site is located in a downtown section of the City of Tacoma (City) zoned as “Downtown Commercial Core”. It occupies approximately 0.22 acres which is entirely filled with a multi-level parking garage and office space. Pacific Avenue, South 13th Street, and Commerce Street bound the site to the east, south, and west. The topography slopes slightly downward along South 13th Street. Commerce Street is approximately ten feet (10’) higher than Pacific Avenue. Offices, retail, and food service businesses occupy the properties surrounding Pacific Plaza LLC.

The Thea Foss Waterway of Commencement Bay, Puget Sound is approximately one thousand feet down gradient to the east of the subject site. The nearest drinking water well is a Group B Water System, Tacoma (star) Ice, and is located over five thousand feet to the south.

The subsurface soils consist of silty sand with gravel fill material to a depth of approximately ten feet below ground surface (10’ bgs). Dense glacial till underlay’s the fill material to a depth of at least thirty five feet (35’). Perched groundwater exists within the fill layer, and a shallow aquifer is believed to be present beneath the semi-confining glacial till unit.¹

¹ GeoEngineers Letter Report Environmental Consulting Services Pacific Plaza Building Underground Storage Tank Tacoma Washington File No. 16574-001-03, December 18, 2009.

Site History

A former building was constructed on the site in at least 1885. The building was demolished in the 1970s and the existing parking garage was constructed. The structure was remodeled in 2008, which included the addition of office space on top of the parking garage.² The City purchased the property from VGR Investments in December 2007 and Pacific Plaza Development LLC purchased the property from the City in May 2008.

On April 11, 2008, the Tacoma-Pierce County Health Department (the Health Department) was onsite to inspect the decommissioning of a two thousand five hundred gallon underground storage tank (2500 gallon UST). The Health Department staff observed soil staining within the tank basin consistent with a petroleum hydrocarbon release. The subsurface soils were also wet, which is consistent with GeoEngineers observations of perched groundwater.

On April 11, 2008 the Washington State Department of Ecology (Ecology) was notified and the incident was added into Ecology's Environmental Report Tracking System (ERTS) with a tracking number of 605007. The Ecology ERTS coordinator referred the incident to the Health Department for follow up with an Initial Investigation as required under Washington State's Model Toxics Control Act (MTCA). At this point the Health Department was responsible for regulatory oversight through two different program elements; the Health Department's Underground Storage Tank Program, and the Health Department's Initial Investigation (II) program element.

Once the UST was removed, a partial excavation of contaminated soils was performed. The excavation was limited by site conditions such as structural footings and a utility corridor. The final excavation was approximately two thousand three hundred cubic feet in volume (2310 ft³) with dimensions of fifteen by fourteen by eleven feet (15'x14'x11'). Four hundred seventy two tons (472 tons) of petroleum contaminated soil (PCS) were removed and properly disposed.

GeoEngineers collected samples of the tank's product, and basin samples to characterize the excavation. Laboratory analytical results indicated that the contaminant of concern was heating fuel oil. Ten (10) confirmation samples were collected from the base and sidewalls. The samples were analyzed for diesel and oil range petroleum hydrocarbons by Method NWTPH-Dx. Two samples were also submitted for Resource Conservation Recovery Act metals (RCRA 7) by EPA Method 6000/7000 series, volatile organic compounds (VOCs) by EPA Method 8260, and carcinogenic polycyclic aromatic hydrocarbons (cPAHs) by EPA Method 8270 SIM.

The excavation was covered and GeoEngineers stated that no further remedial action was scheduled to begin. The Health Department continued to communicate with the environmental consultant to complete the remediation and/or submit a report detailing the site's remedial activities.

² GeoEngineers, *Phase I Environmental Site Assessment, South Park Garage Site*, May 23, 2007.

On March 17, 2009, the Health Department received a December 31, 2008 GeoEngineers report titled, “Underground Storage Tank Removal Pacific Plaza Garage 1250 Pacific Avenue Tacoma, Washington” (2008 Report). The 2008 Report discussed; the site’s history, geologic/hydrogeologic conditions, the performed remedial activities, provided the analytical data from the collected samples, and the current site conditions. The 2008 Report indicated that PCS (diesel) remained in-situ at concentrations above current MTCA Method A Cleanup Levels for Unrestricted Landuse in Soil (MTCA Method A – Soil).

On May 29, 2009 the Health Department concluded its Initial Investigation and submitted the II Field Report to Ecology with a recommendation of listing the subject site on Ecology’s Integrated Site Information System (ISIS) database. On September 17, 2009, Ecology listed the Pacific Plaza LLC site on the Confirmed or Suspected Contaminated Sites List (CSCSL) with a status of “Awaiting SHA”.

On March 15, 2010, the Health department received a courtesy copy of a letter from the City to Ecology. The letter was attached to a December 18, 2009 GeoEngineers report titled “GeoEngineers Letter Report Environmental Consulting Services Pacific Plaza Building Underground Storage Tank Tacoma Washington File No. 16574-001-03” (2009 Report). City expressed their disagreement with Ecology’s decision to include the site on the CSCSL stating that the remediation was performed to “industry standards”, and provided the 2009 Report as justification for their disagreement.

The attached 2009 Report discussed; GeoEngineers review of historical boring logs and geologic maps to evaluate groundwater conditions, interviews with onsite construction personnel to better understand the soil conditions at the time of the UST removal, cross-section schematics of the UST basin’s position with regards to structural limitations to the excavation, and the depth to groundwater. The 2009-Report asserted that the risk of impact to human health and the environment was not significant with regards to the three pathways that the MTCA cleanup levels are based on. Specifically, GeoEngineers stated that the structure(s), dense fill, subsurface semi-confining layer of glacial till, and low concentrations of diesel remaining in-situ (2010 mg/kg) would adequately protect human health and the environment from direct contact, vapor intrusion, and leaching to groundwater, despite concentrations slightly above MTCA Method A – Soil Cleanup Levels.

On April 15, 2010, (revised April 28, 2010) the Health Department issued a Memorandum that responded to GeoEngineers assertions and explained that the Health Department could not provide regulatory closure of the UST file while diesel remains in-situ without further investigation into the vertical and lateral extent of the contamination and the distance to groundwater. In regards to the CSCSL listing, the memorandum explained that the Pacific Plaza LLC site would have to enroll in Ecology’s Voluntary Cleanup Program (VCP) to obtain a No Further Action (NFA).³

³ Tacoma-Pierce County Health Department, *1222 (1250) Pacific Avenue: Pacific Plaza Memorandum*, April 15, 2010.

Special Considerations (Include limitations in site file data or data which cannot be accommodated in the model, but which are important in evaluating the risk associated with the site, or any other factor(s) over-riding a decision of no further action for the site):

The scope of this Site Hazard Assessment did not include a hydrogeologic survey of the subject site and surrounding area. The groundwater contamination documented or inferred at the subject site is therefore considered to have the potential to impact any well located within the prescribed 2-mile radius and all such wells were used in the scoring process.

ROUTE SCORES:

Surface Water/Human Health: NS

Surface Water/Environ. NS

Air/Human Health: NS

Air/ Environmental: NS

Ground Water/Human Health: 8.5

OVERALL RANK:

5

Worksheet 2--Route Documentation

1. SURFACE WATER ROUTE:

- a. List those substances to be considered for scoring: Source: 1,2,3
- b. Explain basis for choice of substances(s) to be used in scoring:
- c. List those management units to be considered for scoring: Source: 1,2,3
- d. Explain basis for choice of unit to be used in scoring:

2. AIR ROUTE: Not Scored

- a. List those substances to be considered for scoring: Source: 1,2,3
- b. Explain basis for choice of substances(s) to be used in scoring:
- c. List those management units to be considered for scoring: Source: 1,2,3
- d. Explain basis for choice of unit to be used in scoring:

3. GROUND WATER ROUTE:

- a. List those substances to be considered for scoring: Source: 1,2,3

TPH-Dx

- b. Explain basis for choice of substances(s) to be used in scoring:

TPH-dx will be used to score this site due to laboratory confirmation of contamination.

- c. List those management units to be considered for scoring: Source: 1,2,3

Spills, Discharges, and Contaminated Soil

- d. Explain basis for choice of unit to be used in scoring:

Spills, Discharges, and Contaminated Soil Contamination will be the management unit used for scoring due to the documented surface release due to the fact that the substance is available to the groundwater route through less than perfect containment.

Worksheet 6 – Ground Water Route

1.0 SUBSTANCE CHARACTERISTICS

1.1 Human Toxicity										
Substance	Drinking Water Standard (ug/l)	Val	Acute Toxicity (mg/kg-bw)	Val	Chronic Toxicity (mg/kg/day)	Val	Carcinogenicity		Val	
							WOE	PF*		
1	TPH-diesel	160	4	490 (rat)	5	0.004	3	--	--	ND
2										
3										
4										
5										
6										

***Potency Factor**

Source: 2, 3

Highest Value: 5
(Max=10)

Plus 2 Bonus Points? 0

Final Toxicity Value: 5
(Max=12)

1.2 Mobility (Use numbers to refer to above listed substances)	
Cations/Anions:	OR Solubility (mg/l):
1=	1= TPH-Diesel = 30 = 1
2=	2=
3=	3=
4=	4=
5=	5=
6=	6=
Source: <u>2, 3</u> Value: <u>1</u> (Max=3)	
1.3 Substance Quantity: 2,500 Gallons	
Explain basis: Default value of “one-filled volume of tank”.	Source: <u>1, 2</u> Value: <u>4</u> (Max=10)

2.0 MIGRATION POTENTIAL

2.1	Containment Spills, Discharges, and Contaminated Soil Explain basis: Scored as a landfill with a cover (0), no liner (3), no leachate collection system (2).	Source: <u>1,2</u>	Value: <u>5</u> (Max = 10)
2.2	Net precipitation: (Nov. – Apr.) <u>22.9</u> inches (29.3'' – 6.4'')	Source: <u>2,9</u>	Value: <u>3</u> (Max = 5)
2.3	Subsurface hydraulic conductivity: moderately permeable till	Source: <u>1,2</u>	Value: <u>2</u> (Max = 4)
2.4	Vertical depth to ground water: <u>25-50</u> feet	Source: <u>1,2,7</u>	Value: <u>6</u> (Max = 8)

3.0 TARGETS

3.1	Ground water usage: EPA Sole Source Aquifer	Source: <u>2,11</u>	Value: <u>10</u> (Max = 10)
3.2	Distance to nearest drinking water well: <u>5104'</u> feet. (Tacoma star ice)	Source: <u>2,7,11</u>	Value: <u>1</u> (Max = 5)
3.3	Population served within 2 miles: $\sqrt{\text{pop.}} = \sqrt{3} = \underline{0.54}$	Source: <u>2,8,11</u>	Value: <u>1</u> (Max = 100)
3.4	Area irrigated by (groundwater) wells within 2 miles: $(0.75) \sqrt{0} \text{ No. acres} = \underline{0} = \underline{0}$	Source: <u>2,6</u>	Value: <u>0</u> (Max = 50)

4.0 RELEASE

Explain basis for scoring a release to ground water: No release confirmed.	Source: <u>1,2</u>	Value: <u>0</u> (Max = 5)
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Sources Used in Scoring

1. Tacoma-Pierce County Health Department Site Hazard Assessment File/Ecology TCP File
2. Washington State Department of Ecology, WARM Scoring Manual, April 1992.
3. Washington State Department of Ecology, Toxicology Database for Use in Washington Ranking Method Scoring, January 1992.
4. U.S. Department of Interior Geological Survey Topographical Map
5. Soil Survey of Pierce County, U.S.D.A. Soil Conservation Service
6. Water Rights Information System (WRIS), Ecology
7. Department of Ecology/Tacoma-Pierce County Health Department Well Logs
8. Washington State Department of Health Public Water Supply System
9. Washington Climate for Pierce County, National Weather Service Forecast Office
10. Department of Fish and Wildlife, Catalog of Washington Streams and Salmon
11. Pierce County Geographic Information System Countyview Database