# SITE HAZARD ASSESSMENT
# Worksheet 1
# Summary Score Sheet

## SITE INFORMATION:

Cleanup Site ID: 6262

Consolidated Freightways Seattle

Facility/Site ID: 54757868

6050 E Marginal Way S

Seattle, King County, WA 98108

| | | | |
|---|---|---|---|
| Section: | 20 | Latitude: | 47.54735 |
| Township: | 24N | Longitude: | -122.33212 |
| Range: | 4E | Tax/Parcel ID: | 5367204646 |

*Site Scored/ranked for the Hazardous Sites List Publication: August 2015*

## SITE DESCRIPTION:

The Consolidated Freightways Seattle site (Site) is a former truck depot and storage yard for shipping containers located in Seattle, King County, Washington. The 13.58-acre property is located approximately 360 feet from the Lower Duwamish Waterway (LDW), and zoned for industrial (IG2 U/85) use.

Adjacent properties include warehouses to the north and northeast, Franks Used Cars (Cleanup Site ID (CSID) 1755) to the west, and the First Avenue Bridge beyond Frank's Used Cars to the west. To the south and southeast are several fast food restaurants. To the east is a warehouse and a wholesale market, and Western Parcel Express (CSID 6021) is located approximately one block to the east.

The Site is currently operated as a vacant property by 6050 Emway South LLC.

The site was reportedly used as a truck depot and storage yard for shipping containers from approximately 2006 through 2011.

The site is located on the north side of the intersection of East Marginal Way South and South Michigan Street. The site is bordered on the west by East Marginal Way South, between First Avenue South to the north and South Michigan Street to the south.

## SITE BACKGROUND:

A summary of prior operations/tenants at the subject property is presented below.

| From | To | Operator/Tenant | Activity |
|---|---|---|---|
| 1985 | 2005 | Consolidated Freightways | Transportation company truck depot |

## SITE CONTAMINATION:

In 1988 the Consolidated Freightways Seattle site was reported to Washington State Department of Ecology (Ecology) and placed on the Leaking Underground Storage Tank (LUST) list.

The tanks present at the Site in 1988 reportedly included three unused underground storage tanks (USTs), including one 10,000-gallon diesel UST, one 8,000-gallon diesel UST, one 5,000-gallon motor oil UST. Active USTs at the site in 1988 included two 3,000-gallon used oil USTs, and two 20,000-gallon diesel USTs. A 10,000-gallon gasoline UST was reportedly present on another part of the terminal. Several tanks located at the Site reportedly failed tightness tests, however it is not clear from the available documentation which tanks these were.

## PAST REMEDIATION ACTIVITIES:

In April 1988, the 8,000-gallon diesel UST 10,000-gallon diesel UST, 5,000-gallon motor oil UST, and 10,000-gallon gasoline UST were reportedly removed from two separate excavations; the exact location of the gasoline tank excavation is not known. Visual evidence of petroleum-impacted soil was observed in the diesel and motor oil UST excavation. Excavated soil (approximately 125 cubic yards) was stockpiled onsite. Soil samples collected

from the west sidewall of the diesel and motor oil excavation contained concentrations of diesel above the Model Toxics Control Act (MTCA) Method A cleanup level. Two soil samples collected from the east and west ends of the 5,000-gallon motor oil tank contained concentrations of oil and grease up to 11,970 milligrams per kilogram (mg/kg), above the MTCA Method A cleanup level. In the gasoline tank excavation, gasoline and benzene, toluene, ethylbenzene, and xylenes (BTEX) were not detected in soil sidewall samples at concentrations above the MTCA Method A cleanup levels. Groundwater grab samples were collected from the base of each excavation, and total petroleum hydrocarbons (TPH) were present in the sample collected from the diesel excavation at a concentration above the MTCA Method A cleanup levels for diesel, heavy oil, and gasoline.

In June 1988, two 3,000-gallon used oil tanks located adjacent to the diesel tank excavation were removed from the Site. Approximately 60 cubic yards of soil were excavated and stockpiled at the Site. Four soil samples and one groundwater grab sample were collected from the excavation, and were analyzed for metals, halogenated organics, and TPH as diesel and oil. Three of the four soil samples contained concentrations of diesel and oil above MTCA Method A cleanup levels. The groundwater sample also contained diesel and oil above the MTCA Method A cleanup levels.

Five monitoring wells were installed at the Site in June 1988. Concentrations of diesel in soil samples collected from the borings were below MTCA Method A cleanup levels, with the exception of MW-5 at a depth of 5 feet below ground surface (bgs) (4,797 mg/kg diesel). Groundwater samples did not contain concentrations of diesel at or above the laboratory reporting limit. Monitoring wells were reportedly monitored quarterly for one year, however only third and fourth quarter monitoring results were available for review. During both of these sampling events, TPH was not detected in groundwater at or above the reporting limit of 10 milligrams per liter (mg/L), however 10 mg/L is above the MTCA Method A cleanup levels for diesel, oil, and gasoline in groundwater. The wells were abandoned in January 1990.

Two 20,000-gallon diesel tanks were reportedly still operating at the Site in 1988. In March 1997, a leak was reported in a fuel line running from one of the 20,000-gallon tanks to the maintenance building. The fuel line was replaced in two areas, and an unknown volume of soil was excavated and stockpiled at the Site. In August 1997, ten soil borings (P-1 through P-10) were advanced at the Site, and twenty soil and ten groundwater samples were collected. Concentrations of diesel above the MTCA Method A cleanup level were detected in two soil samples, from P-2 at 5 to 8 feet bgs (19,000 mg/kg), and from P-4 at 5 to 8 feet bgs (3,500 mg/kg). Groundwater samples from P-2 and P-4 also contained concentrations of diesel above the MTCA Method A cleanup level. The remaining samples did not contain concentrations of diesel above the MTCA Method A cleanup level. Groundwater was not analyzed for gasoline or BTEX constituents.

In 1998, monitoring wells (MW-1, MW-2, and MW-3) were installed at three locations at the Site, along with two product recovery wells (RW-1 and RW-2). Soil samples collected from RW-1 and RW-2 contained concentrations of diesel (8,800 mg/kg to 13,000 mg/kg) above the MTCA Method A cleanup level. These soil samples also contained ethylbenzene and xylenes above the MTCA Method A cleanup levels.

In July 1998, the two 20,000-gallon diesel USTs and associated piping were excavated and removed from the Site. RW-1 was abandoned at this time. Groundwater was encountered in the excavation at a depth of approximately 13 feet bgs. Approximately 818 tons of soil and 450 gallons of water were reportedly removed from the excavation and disposed of offsite. Nine soil samples and one groundwater grab sample were collected from the excavation and beneath the product lines. Concentrations of diesel above the MTCA Method A cleanup level were detected in soil samples collected from beneath the center of the product lines (4,780 mg/kg), the north sidewall (28,700 mg/kg) and west sidewall (2,700 mg/kg). One sample collected from beneath the center of the product lines also contained diesel (4,780 mg/kg) above the MTCA Method A cleanup level. The groundwater grab sample contained concentrations of diesel above the MTCA Method A cleanup level. The excavation was reportedly backfilled with clean imported fill. A new 20,000-gallon diesel UST was installed at the Site to the northeast of the maintenance building.

In 1999, thirteen soil borings were advanced at the Site, and completed as temporary monitoring wells. Groundwater samples were collected from the borings to assess the extent of the groundwater impacts. Concentrations of diesel above the MTCA Method A cleanup level were detected in groundwater samples collected from MW-2, MW-3, RW-2, GP-1, GP-5, GP-6, GP-7, GP-9, GP-10, GP-11, and GP-13. Concentrations of oil above the MTCA Method A cleanup level were detected in groundwater samples collected from MW-2, MW-3, GP-1, GP-3, GP-6, GP-10, and GP-11. The consultant conducting the activities suggested that diesel in groundwater at a concentration greater than 1 mg/kg does not extend beyond the property boundaries. Three

additional monitoring wells and quarterly groundwater monitoring were proposed for the Site by the consultant; however no record of installation of additional wells was available for review in Ecology's files.

In September 2002, Consolidated Freightways Corporation filed for Chapter 11 bankruptcy protection. The 20,000-gallon diesel UST was reportedly temporarily closed in place in 2003. The site has reportedly been vacant since approximately 2011, and no further remedial activities are on file at Ecology.

## CURRENT SITE CONDITIONS:

Residual diesel- and oil-impacted soil likely remains at the Site in the sidewalls of the former UST excavations, as there is no mention of overexcavation of excavation sidewalls for any of the excavations. Groundwater at the Site during the last sampling event (1999) contained concentrations of diesel and oil above MTCA Method A cleanup levels. Ethylbenzene and xylenes have been detected in soil near the former product lines at concentrations above their respective MTCA Method A cleanup levels.

The approximate depth to groundwater is 7 to 13 feet below ground surface, with groundwater flowing to the southwest to northwest (based on investigations by Blymyer Engineers and Golder Associates). The elevation and direction of groundwater flow may change depending on tides. Subsurface soils are medium sand and gravel grading into fine sand and silt (based on soil encountered in the UST excavations and soil borings).

## SPECIAL CONSIDERATIONS:

Checked boxes indicate routes applicable for Washington Ranking Method (WARM) scoring

☑ **Surface Water**

Diesel and oil are present in Site groundwater at concentrations above MTCA Method A cleanup levels. Site groundwater levels and flow direction are reported to fluctuate with tidal changes in the LDW, so groundwater at the site has the potential to impact surface water in the LDW.

☑ **Air**

Release occurred to subsurface soils. While diesel and oil are not expected to impact the air route due to low volatility, residual ethylbenzene and xylenes in soils have the potential for transport via the air pathway.

☑ **Groundwater**

Diesel and oil were detected in Site groundwater at concentrations above their respective MTCA Method A cleanup levels.

Tidal fluctuations in the LDW have been documented to affect groundwater elevations and flow directions at the Site, so the surface water route has been scored for potential groundwater impacts to surface water in the LDW. The LDW is located approximately 360 feet west of the Site.

## ROUTE SCORES:

| | | | |
|---|---|---|---|
| Surface Water/ Human Health: | 15.6 | Surface Water/ Environment: | 35.1 |
| Air/ Human Health: | 4.9 | Air/ Environment: | 1.4 |
| Groundwater/ Human Health: | 34.9 | | |

**Overall Rank: 4**

## REFERENCES:

1 Blymyer and Sons Engineers, Inc., 1988, Memo: Consolidated Freightways, Seattle, WA, Summary of Sample Analysis Results, Sample Location Maps for the subject facility for your information. April 25, 1988.

2 Blymyer Engineers, Inc., 1988, Phase I Contamination Investigation For Consolidated Freightways 6050 East Marginal Way South Seattle, Washington. August 3, 1988.

3 Blymyer Engineers, Inc., 1989, Consolidated Freightways 6050 East Marginal Way South Seattle, Washington, Fourth and Final Quarterly Groundwater Sampling Report. December 15, 1989.

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5 Blymyer Engineers, Inc., 2003, Underground Storage Tank (UST) Temporary Closures Consolidated Freightways, Seattle, Spokane, Fife, and Woodinville, WA. February 10, 2003.

6 Ecology Water Resources Explorer, accessed July 2014. https://fortress.wa.gov/ecy/waterresources/map/WaterResourcesExplorer.aspx

7 Fluor Daniel GTI, 1998, Report of Permanent UST Decommissioning and Closure at Consolidated Freightways Facility 6050 East Marginal Way Seattle, Washington. Prepared for Jeanna Hudson, Blymyer Engineers INC. September 22, 1998.

8 Golder Associates Inc., 1998, Letter Re: Disposal of Petroleum Contaminated Soils and Investigative Derived Waste at the Consolidated Freightways Site, Seattle, Washington. December 7, 1998.

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10 Groundwater Technology, Inc., 1990, Letter Re: Consolidated Freightways, 6050 East Marginal Way South, Seattle, Washington. February 15, 1990.

11 King County GIS Center iMAP application, Property Information, Groundwater Program, and Sensitive Areas mapsets. Accessed March 2014. http://www.kingcounty.gov/operations/GIS/Maps/iMAP.aspx

12 Lewis, Mike, 1988, Telephone Record: LUST – Consolidated Freight at 6050 E. Marginal Way. February 12, 1988.

13 Missouri Census Data Center, Circular Area Profiles - 2010 census data around a point location. http://mcdc.missouri.edu/websas/caps10c.html. Accessed March 2014.

14 National Climatic Data Center 2011 Local Climatological Data for Seattle, Seattle Tacoma Airport. http://www1.ncdc.noaa.gov/pub/orders/IPS-90B1F39F-6CFA-4A6B-AA82-5ED1FF897CCC.pdf

15 Shannon and Wilson, Inc., 1997, Results of Initial Site Investigation 6050 East Marginal Way South Seattle, Washington. October 27, 1997.

16 WARM Scoring Manual

17 WARM Toxicological Database

18 Washington Department of Transportation 24-hour Isopluvial Maps, January 2006 update. http://www.wsdot.wa.gov/publications/fulltext/Hydraulics/Wa24hrIspoluvials.pdf

19 Washington State Department of Ecology, 1988, Miscellaneous notes, Consolidated Freight. April 20, 1988.

# SITE HAZARD ASSESSMENT
# Worksheet 2
# Route Documentation

Cleanup Site ID: 6262 Consolidated Freightways Seattle

Facility/Site ID: 54757868

## 1. SURFACE WATER ROUTE

**List those substances to be considered for scoring:**

Diesel, ethylbenzene, xylenes

**Explain the basis for choice of substances to be used in scoring:**

Prior detection in Site groundwater and soil at concentrations above MTCA Method A cleanup levels

**List those management units to be considered for scoring:**

Surface water (LDW)

**Explain basis for choice of unit to be used in scoring:**

Potential for groundwater to impact surface water due to groundwater interaction with the LDW

## 2. AIR ROUTE

**List those substances to be considered for scoring:**

Ethylbenzene, xylenes

**Explain the basis for choice of substances to be used in scoring:**

Prior detection in Site soils at concentrations above MTCA Method A cleanup levels

**List those management units to be considered for scoring:**

Soil vapor

**Explain basis for choice of unit to be used in scoring:**

Potential for vapor transport

## 3. GROUNDWATER ROUTE

**List those substances to be considered for scoring:**

Diesel, ethylbenzene, xylenes

**Explain the basis for choice of substances to be used in scoring:**

Prior detection in Site groundwater or soil at concentrations above MTCA Method A cleanup levels

**List those management units to be considered for scoring:**

Groundwater

**Explain basis for choice of unit to be used in scoring:**

Presence of diesel in Site groundwater, potential for transport to groundwater (ethylbenzene and xylenes)

**Worksheet 4**

**Surface Water Route**

**CSID:** 6262 **Site Name:** Consolidated Freightways Seattle

**1.0 Substance Characteristics**

**1.1 Human Toxicity**

| Substance | Drinking Water Standard Value | Acute Toxicity Value | Chronic Toxicity Value | Carcinogenicity Value |
|---|---|---|---|---|
| Diesel | 4 | 5 | 3 | X |
| Ethylbenzene | 4 | 3 | 1 | X |
| Xylenes | 2 | 10 | 1 | X |
| | | | | |
| | | | | |
| | | | | |

| | |
|---|---|
| Highest Value | 10 |
| Bonus Points? | 0 |
| Human Health Toxicity Value | 10 |

**1.2 Environmental Toxicity**

| Substance | Acute Water Quality Criteria ug/L | Value | Non-human Mammalian Acute Toxicity mg/kg | Value |
|---|---|---|---|---|
| Diesel | 2350 | 2 | 490 | 5 |
| Ethylbenzene | 430 | 4 | 3500 | 3 |
| Xylenes | X | X | 5000 | 3 |
| | | | | |
| | | | | |
| | | | | |

| | |
|---|---|
| Environmental Toxicity Value | 4 |

**1.3 Substance Quantity**

Amount: 8,100 square feet

Basis: Estimated extent of remaining petroleum-impacted soil

Substance Quantity Value: 7

**2.0 Migration Potential**

**2.1 Containment** — Containment Value: 10

Explain Basis: Contaminated soil in subsurface only, groundwater may discharge to surface water

**2.2 Surface Soil Permeability** — Soil Permeability Value: 1

Sand, gravel, and silt

**2.3 Total Annual Precipitation** — Total Precipitation Value: 3

37 inches

**2.4 Max 2-yr/24-hour Precipitation** — 2YR/24HR Precipitation Value: 3

2.4 inches

**2.5 Floodplain** — Floodplain Value: 0

Not in the floodplain

**2.6 Terrain Slope** — Slope Value: 1

Less than 2% slope

**Worksheet 4**

**Surface Water Route**

**CSID:** 6262 **Site Name:** Consolidated Freightways Seattle

**3.0 Targets**

**3.1 Distance to Surface Water** — Surface Water Distance Value: 10

Approximately 360 feet to the LDW

**3.2 Population Served within 2 miles** — Population Value: 0

0 people

**3.3 Area Irrigated within 2 miles** — Irrigation Value: 0

0 acres

**3.4 Distance to Nearest Fishery Resource** — Fishery Value: 12

Approximately 360 feet to the LDW

**3.5 Distance to and Name of Nearest Sensitive Environment** — Sensitive Environment Value: 12

Approximately 360 feet to the LDW

**4.0 Release** — Release to Surface Water Value: 0

Explain basis for scoring a release to surface water

No confirmed release to surface water, but confirmed release to groundwater

**Pathway Scoring - Surface Water Route, Human Health Pathway**

$SW_H = (SUB_{SH}*40/175)*[(MIG_S*25/24) + REL_S + (TAR_{SH}*30/115)]/24$

Where:

| | | |
|---|---|---|
| $SUB_{SH}$ = (Human Toxicity Value + 3)*(Containment + 1) + Substance Quantity | $SUB_{SH}$ | 150 |
| $MIG_S$ = Soil Permeability + Annual Precip + Rainfall Frequency + Floodplain + Slope | $MIG_S$ | 8 |
| $REL_S$ = Release to Surface Water | $REL_S$ | 0 |
| $TAR_{SH}$ = Distance to Surface Water + Population Served by Surface Water + Area Irrigated | $TAR_{SH}$ | 10.0 |
| | $SW_H$ | 15.6 |

**Pathway Scoring -Surface Water Route, Environmental Pathway**

$SW_E = (SUB_{SE}*40/153)*[(MIG_S*25/24) + REL_S + (TAR_{SE}*30/34)]/24$

Where:

| | | |
|---|---|---|
| $SUB_{SE}$ = (Env Tox Value + 3) * (Containment + 1) + Substance Qty | $SUB_{SE}$ | 84 |
| $MIG_S$ = Soil Permeability + Annual Precip + Rainfall Frequency + Floodplain + Slope | $MIG_S$ | 8 |
| $REL_S$ = Release to Surface Water | $REL_S$ | 0 |
| $TAR_{SE}$ = Distance to Surface Water + Distance to Fishery + Distance to Sensitive Environment | $TAR_{SE}$ | 34.0 |
| | $SW_E$ | 35.1 |

**Worksheet 5**

**Air Route**

**CSID:** 6262 **Site Name:** Consolidated Freightways Seattle

**1.0 Substance Characteristics**

**1.1 Introduction (WARM Scoring Manual) - Please Review before scoring**

**1.2 Human Toxicity**

| Substance | Ambient Air Standard Value | Acute Toxicity Value | Chronic Toxicity Value | Carcinogenicity Value |
|---|---|---|---|---|
| Ethylbenzene | 1 | X | X | X |
| Xylenes | 1 | 3 | 1 | X |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Highest Value 3

Bonus Points? 0

Toxicity Value 3

**1.3 Mobility**

| | | |
|---|---|---|
| Gaseous Mobility | Max Value: | 3 |
| Particulate Mobility | Soil Type: | |
| | Erodibility: | |
| | Climatic Factor: | |

Mobility Value 3

**1.4 Final Human Health Toxicity/Mobility Matrix Value** **HH Final Matrix Value** 5

**1.5 Environmental Toxicity/Mobility**

| Substance | Non-human Mammalian Inhalation Toxicity (mg/m3) | Acute Value | Mobility Value | Table A-7 Matrix Value |
|---|---|---|---|---|
| Ethylbenzene | X | X | 3 | X |
| Xylenes | 21714 | 3 | 3 | 5 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Env. Final Matrix Value 5

**1.6 Substance Quantity**

Amount: Approximately 8,100 square feet

Basis: Estimated extent of remaining petroleum-impacted soil

Substance Quantity Value 5

**Worksheet 5**

**Air Route**

**CSID:** 6262 **Site Name:** Consolidated Freightways Seattle

**2.0 Migration Potential**

**2.1 Containment** Containment Value: 5

Explain Basis: Soil cover of at least 2 feet, and no vapor collection system present

**3.0 Targets**

**3.1 Nearest Population** Population Distance Value: 10

600 feet to Martin Court Apartments

**3.2 Distance to and name of nearest sensitive environments** Sensitive Environment Value: 7

Approximately 360 feet to the LDW

**3.3 Population within 0.5 miles** Population Value: 14

202 population

**4.0 Release** Release to Air Value: 0

Explain basis for scoring a release to air:

No confirmed release to air

**Pathway Scoring - Air Route, Human Health Pathway**

$AIR_H = (SUB_{AH}*60/329)*[REL_A+(TAR_{AH}*35/85)]/24$

Where:

| | | |
|---|---|---|
| $SUB_{AH}$ =(Human toxicity + 5) * (Containment + 1) + Substance Qty | $SUB_{AH}$ | 65 |
| $REL_A$ = Release to Air | $REL_A$ | 0 |
| $TAR_{AH}$ = Nearest Population + Population within 1/2 mile | $TAR_{AH}$ | 24.2 |
| | $AIR_H$ | 4.9 |

**Pathway Scoring - Air Route, Environmental Pathway**

$AIR_E = (SUB_{AE}*60/329)*[REL_A+(TAR_{AE}*35/85)]/24$

Where:

| | | |
|---|---|---|
| $SUB_{AE}$ =(Environmental Toxicity Value +5)*(Containment +1) +Substance Qty | $SUB_{AE}$ | 65 |
| $REL_A$ = Release to Air | $REL_A$ | 0 |
| $TAR_{AE}$ = Nearest Sensitive Environment | $TAR_{AE}$ | 7.0 |
| | $AIR_E$ | 1.4 |

**Worksheet 6**

**Groundwater Route**

**CSID:** 6262 **Site Name:** Consolidated Freightways Seattle

**1.0 Substance Characteristics**

**1.1 Human Toxicity**

| Substance | Drinking Water Standard Value | Acute Toxicity Value | Chronic Toxicity Value | Carcinogenicity Value |
|---|---|---|---|---|
| Diesel | 4 | 5 | 3 | X |
| Ethylbenzene | 4 | 3 | 1 | X |
| Xylenes | 2 | 10 | 1 | X |
| | | | | |
| | | | | |
| | | | | |

Highest Value 10

Bonus Points? 0

Toxicity Value 10

**1.2 Mobility**

Cations/Anions Max Value:

Solubility Max Value: 2 Mobility Value 2

**1.3 Substance Quantity**

Amount: 900 cubic yards

Basis: Estimated volume of remaining petroleum-impacted soil

Substance Quantity Value 3

**2.0 Migration Potential**

**2.1 Containment** Containment Value 10

Explain Basis: Contaminated soil

**2.2 Net Precipitation** > 10 to 20 inches Net Precipitation Value 2

**2.3 Subsurface Hydraulic Conductivity** Conductivity Value 4

Sand, gravel, and silt

**2.4 Vertical Depth to Groundwater** 7 to 9 feet

Confirmed release: Yes Depth to Aquifer Value 8

**3.0 Targets**

**3.1 Groundwater Usage** Aquifer Use Value 2

Groundwater not used, but usable

**3.2 Distance to Nearest Drinking Water Well** >10,000 feet

Well Distance Value 0

**3.3 Population Served within 2 Miles** Population Served Value 0

0 people

**Worksheet 6**

**Groundwater Route**

**CSID:** 6262 **Site Name:** Consolidated Freightways Seattle

**3.4 Area Irrigated by GW Wells within 2 miles** Area Irrigated Value 0

0 acres

**4.0 Release** Release to Groundwater Value 5

Explain basis for scoring a release to groundwater:

Confirmed release to groundwater

**Pathway Scoring - Groundwater Route, Human Health Pathway**

$GW_H = (SUB_{GH}*40/208)*[(MIG_G*25/17)+REL_G+(TAR_{GH}*30/165)]/24$

Where:

| | | |
|---|---|---|
| $SUB_{GH}$ =(Human toxicity + mobility + 3) * (Containment + 1) + Substance Qty | $SUB_{GH}$ | 168 |
| $MIG_G$=Depth to Aquifer+Net Precip + Hydraulic Conductivity | $MIG_G$ | 14 |
| $REL_G$ = Release to Groundwater | $REL_G$ | 5 |
| $TAR_{GH}$ = Aquifer Use + Well Distance + Population Served + Area Irrigated | $TAR_{GH}$ | 2.0 |
| | $GW_H$ | 34.9 |

## Washington Ranking Method

## Route Scores Summary and Ranking Calculation Sheet

**Site Name:** Consolidated Freightways Seattle **CSID:** 6262

**Site Address:** 6050 East Marginal Way South **FSID:** 54757868

**HUMAN HEALTH ROUTE SCORES**

Enter Human Health Route Scores for all Applicable Routes:

| Pathway | Route Score | Quintile Group |
|---|---|---|
| Surface Water | 15.6 | 3 |
| Air | 4.9 | 1 |
| Groundwater | 34.9 | 3 |

H= 3
M= 3
L= 1

$$\frac{H^2 + 2M + L}{8} = \frac{9 + 6 + 1}{8}$$

**Human Health Priority Bin Score:** **2**

rounded up to next whole number

**ENVIRONMENT ROUTE SCORES**

Enter Environment Route Scores for all Applicable Routes:

| Pathway | Route Score | Quintile Group |
|---|---|---|
| Surface Water | 35.1 | 4 |
| Air | 1.4 | 1 |

H= 4
L= 1

$$\frac{H^2 + 2L}{7} = \frac{16 + 2}{7}$$

**Environment Priority Bin Score:** **3**

rounded up to next whole number

**Comments/Notes:**

**FINAL MATRIX RANKING** **4**

**FOR REFERENCE:**

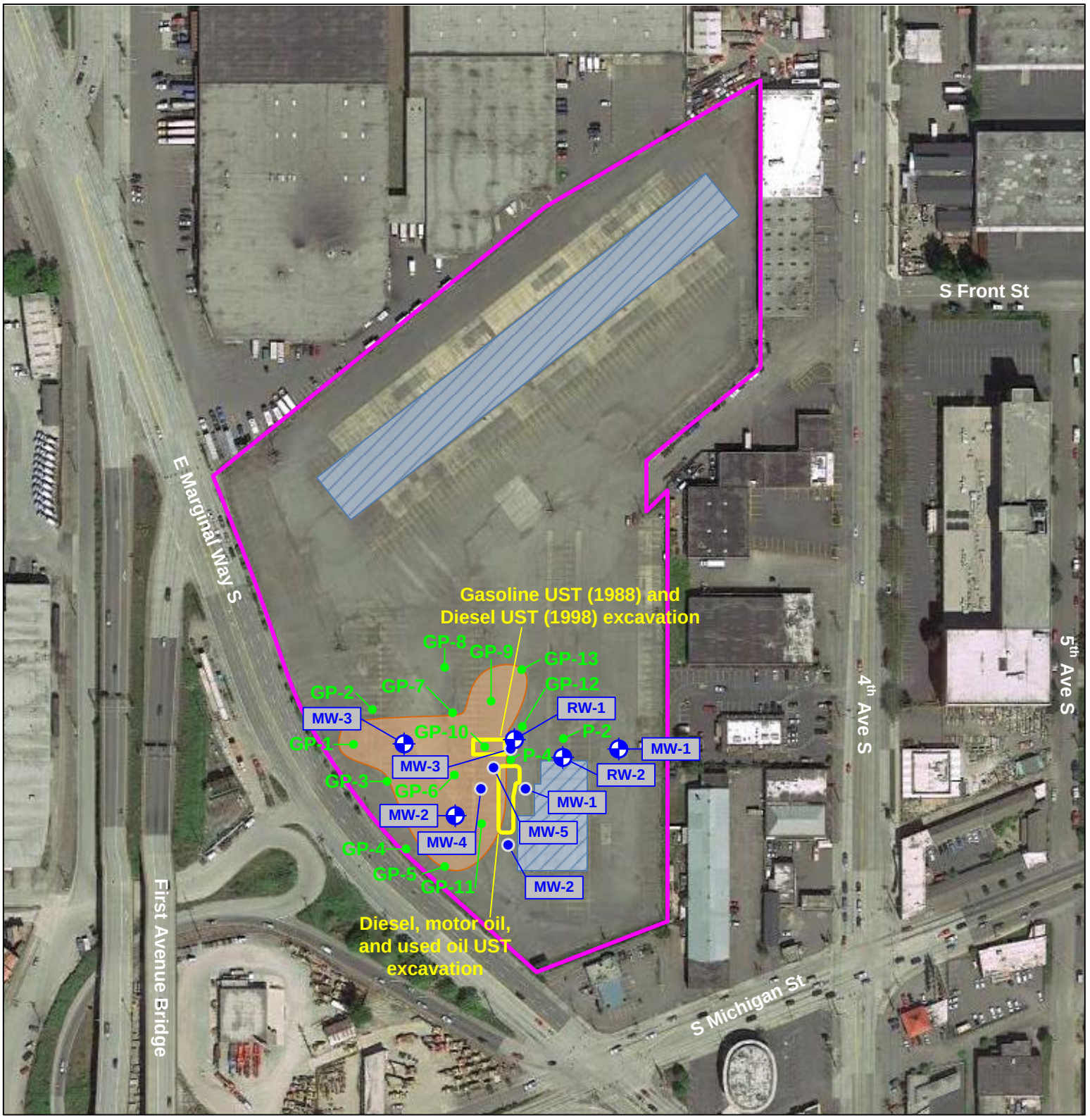
**Final WARM Bin Ranking Matrix**

| Human Health Priority | Environment Priority 5 | 4 | 3 | 2 | 1 | N/A |
|---|---|---|---|---|---|---|
| **5** | 1 | 1 | 1 | 1 | 1 | 1 |
| **4** | 1 | 2 | 2 | 2 | 3 | 2 |
| **3** | 1 | 2 | 3 | 4 | 4 | 3 |
| **2** | 2 | 3 | 4 | 4 | 5 | 3 |
| **1** | 2 | 3 | 4 | 5 | 5 | 5 |
| **N/A** | 3 | 4 | 5 | 5 | 5 | NFA |

**Quintile Values for Route Scores - February 2015 Values**

| Quintile | Human Health Surface Water | Air | Ground Water | Environment Surface Water | Air |
|---|---|---|---|---|---|
| 5 | >= 30.7 | >= 37.6 | >= 51.6 | >= 50.9 | >= 29.9 |
| 4 | >= 23.1 | >= 23.8 | >= 40.9 | >= 31.2 | >= 22.5 |
| 3 | >= 14.1 | >= 15.5 | >= 33.2 | >= 23.6 | >= 14.0 |
| 2 | >= 7.0 | >= 8.5 | >= 23.5 | >= 11.0 | >= 1.6 |
| 1 | <= 6.9 | <= 8.4 | <= 23.4 | <= 10.9 | <= 1.5 |

Quintile value associated with each route score entered above




Legend:

- Property location (approximate)
- Excavation area (approximate)
- Extent of diesel-impacted groundwater (approximate)
- Former building location (approximate)
- Monitoring well (approximate)
- 1988 Monitoring well (former) (approximate)
- Soil sample (approximate)

Notes:

1. All locations are approximate, and not to scale.

N

**Consolidated Freightways Seattle**
**6050 East Marginal Way South**
**Seattle, WA 98108**

DEPARTMENT OF ECOLOGY
State of Washington

## Site Overview Map

**CSID 6262**

CSID6262.vsd