SITE HAZARD ASSESSMENT
Worksheet 1
Summary Score Sheet

SITE INFORMATION:

Cleanup Site ID: 3575

ATC Distribution Group

Facility/Site ID: 8162841

401 S Webster Street

Seattle, King County, WA 98108

Section:	29	Latitude:	47.53530
Township:	24N	Longitude:	-122.32920
Range:	4E	Tax/Parcel ID:	7327905955

Site Scored/ranked for the February 2015 Hazardous Sites List Publication

SITE DESCRIPTION:

The ATC Distribution Group site (Site) is a former transmission repair facility and fueling station located in Seattle, King County, Washington. The 1.26-acre property is located approximately 500 feet from the Duwamish River, and zoned for industrial (IG2 U/65) use.

Adjacent properties include manufacturing warehouses to the north, east, south, and west. A construction company is located to the northeast.

The Site is currently operated as an automatic transmission parts store by MKJ Properties LLC.

The property is located along the south side of South Webster Street, between 2nd Avenue South to the west and 5th Avenue South to the east. The property is bordered on the south by South Austin Street.

The Site is located within the Riverside Drive Source Control Area. Nearby state cleanup sites include Hurlen Construction (Cleanup Site ID (CSID) 9114) and 640 Riverside Drive (CSID 2549).

SITE BACKGROUND:

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

From	To	Operator/Tenant	Activity
	1995	White & White Properties	
1995	2008	DWW/MCW & JAW/BEW Partners Ltd	
	2009	Pro Sweep	Small truck parking and vehicle washing
	2009	North Industries, Inc.	Manufacturing of retail display cases
2008	2014	MKJ Properties LLC	Automatic transmission parts store

SITE CONTAMINATION:

In 1994 the ATC Distribution Group site was reported to Washington State Department of Ecology (Ecology) and placed on the Leaking Underground Storage Tank (LUST) list.

In 1994, one 3,000-gallon gasoline underground storage tank (UST) and one 2,000-gallon diesel UST were excavated and removed from the Site, along with the associated piping and dispensers.

During the UST removal, approximately 230 cubic yards of petroleum-impacted soil were excavated and stored onsite for treatment by landfarming. Olfactory evidence of petroleum hydrocarbons was observed in soil at approximately 4 feet below ground surface (bgs). Soil was overexcavated towards the north, south, west, and

base of the excavation. After overexcavation, soil samples were collected from the sidewalls and base of the excavation at approximately 9 feet bgs. Concentrations of gasoline and benzene, toluene, ethylbenzene, and xylenes (BTEX) were detected above Model Toxics Control Act (MTCA) Method A cleanup levels in soil samples collected along the east wall of the final excavation limits, next to the building foundation. Concentrations of benzene above the MTCA Method A cleanup level remained in the soils located at the east end of the north wall, the excavation base, and the east end of the south wall. However, the excavation was not extended to the east in order to maintain the structural integrity of the adjacent building foundation. The highest reported concentration of gasoline was 15,627 milligrams per kilogram (mg/kg), in the east end of the north wall of the excavation. Petroleum-impacted soil may be present beneath the existing building.

Visual evidence of petroleum impacts to water were observed in the excavation at approximately 7 feet bgs, and approximately 3,000 gallons of water were reportedly pumped out of the excavation. No groundwater samples were collected.

The east and north walls of the excavation were draped with plastic, and the excavation was backfilled with imported fill mixed with approximately 30 cubic yards of reportedly clean stockpiled soil.

PAST REMEDIATION ACTIVITIES:

A Phase I Environmental Site Assessment (ESA) was reportedly conducted at the Site in 2004, though this report was not available for review in Ecology's files. The report identified several areas of potential concern, including petroleum-impacted soil along the southern border of the property. No remedial actions have been reported for this area. Petroleum and transmission-fluid impacts are suspected in the southwestern quarter of the property, where petroleum hydrocarbons and transmission fluid were historically reported at the Site. Further information about this historical use was not available. Petroleum-impacted soil was also reportedly present near a floor drain in a covered wash area located in the southeast corner of the lot, and near a concrete vault in the northeastern corner of the yard. Concentrations of gasoline, diesel, oil, transmission fluid, chloroethene, 1,1,1-trichloroethane, aliphatic alcohols, ketones, and aromatic hydrocarbons have reportedly been documented at the Site and were mentioned in a subsequent report, but no further information about where and when these were documented was available for review.

In 2008, sixteen direct-push borings (GP1 through GP16) were advanced at the Site, and three of the borings were completed as monitoring wells MW01 through MW03. Olfactory evidence of petroleum was observed in soil at depth between 5 feet and 8 feet bgs from borings GP7, GP11, and GP12. Groundwater was encountered between 3.5 feet and 5 feet bgs. Soil samples collected from borings GP7 and GP11 contained concentrations of gasoline (76 mg/kg and 43 mg/kg) above the MTCA Method A cleanup level for soil with benzene, but below the MTCA Method A cleanup level for soil without detectable benzene. Concentrations of diesel, oil, and BTEX constituents were not detected in soil samples above MTCA Method A cleanup levels. Three soil samples were analyzed for trichloroethylene (TCE), and the sample from GP11 contained TCE (0.064 mg/kg) at a concentration above the MTCA Method A cleanup level. Five soil samples were analyzed for methylene chloride, and samples collected from GP1 (0.53 mg/kg), GP3 (0.94 mg/kg), and GP8 (0.51 mg/kg) contained concentrations of methylene chloride above the MTCA Method A cleanup level.

Groundwater samples were collected from temporary wells installed in each soil boring. Concentrations of diesel above the MTCA Method A cleanup level were detected in groundwater samples collected from GP7 (4,000 micrograms per liter (ug/L)) and GP12 (2,100 ug/L). The groundwater sample collected from GP7 contained gasoline (2,700 ug/L) above the MTCA Method A cleanup level, and a groundwater sample collected from GP10 contained oil (4,000 ug/L) above the MTCA Method A cleanup level. Benzene was detected in a groundwater sample collected from GP14 at a concentration above the MTCA Method A cleanup level. Groundwater samples did not contain TCE above the MTCA Method A cleanup level, and groundwater samples were not analyzed for methylene chloride.

CURRENT SITE CONDITIONS:

Petroleum-impacted soil stockpiled onsite in 1994 was reportedly intended to be landfarmed onsite, however no information was available regarding remediation or final disposition of this soil.

Petroleum-impacted soil is expected to remain underneath the existing building. Soil from GP11, in the floor drain area, contained TCE at a concentration above the MTCA Method A cleanup level. Concentrations of methylene

chloride in soils from GP1, GP3, and GP8 were reported above the MTCA Method A cleanup level.

During initial site characterization, site groundwater contained concentrations of diesel, gasoline, oil, and benzene above MTCA Method A cleanup levels. No record of ongoing groundwater monitoring was available for review.

The approximate depth to groundwater is 3.5 to 7 feet below ground surface, with groundwater flowing to the east (based on groundwater elevations). Subsurface soils are sand with layers of sandy silt, clayey silt, gravel, and construction debris (based on soil borings).

SPECIAL CONSIDERATIONS:

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

☐ **Surface Water**

Release likely occurred to subsurface soil.

☑ **Air**

Release of volatile compounds occurred to subsurface soil.

☑ **Groundwater**

In 2008, groundwater at the Site contained concentrations of diesel, gasoline, oil, and benzene above MTCA Method A cleanup levels.

ROUTE SCORES:

Surface Water/ Human Health:		Surface Water/ Environment:	
Air/ Human Health:	16.7	Air/ Environment:	1.5
Groundwater/ Human Health:	43.7		

Overall Rank: 4

REFERENCES:

1 Ecology and the Environment, Inc., 2009, Executive Summary Leaking Underground Storage Tanks Special Pilot Project, RPM Merit. May 6, 2009.

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

3 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

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

5 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

6 Nowicki and Associates, 1994. RPM Merit UST Removals and Soil Remediation. August 17, 1994.

7 Sound Environmental Strategies Corporation, 2008, Subsurface Investigation Report. February 14, 2008.

8 WARM Scoring Manual

9 WARM Toxicological Database

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

11 Washington State Department of Ecology, 2009, Initial Investigation Field Report Site Name RPM Merit. June 10, 2009.

SITE HAZARD ASSESSMENT
Worksheet 2
Route Documentation

Cleanup Site ID: 3575 ATC Distribution Group

Facility/Site ID: 8162841

1. SURFACE WATER ROUTE

List those substances to be considered for scoring:

Not applicable

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

List those management units to be considered for scoring:

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

2. AIR ROUTE

List those substances to be considered for scoring:

Gasoline (benzene), toluene, ethylbenzene, xylenes, TCE, and methylene chloride

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

Prior detection in Site soil 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:

Gasoline (benzene), diesel, oil, toluene, ethylbenzene, xylenes, TCE, and methylene chloride

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

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

List those management units to be considered for scoring:

Groundwater

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

Presence in groundwater at concentrations above MTCA Method A cleanup levels and potential for transport to groundwater

Worksheet 5

Air Route

CSID: 3575 **Site Name:** ATC Distributing

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
Gasoline (benzene)	10	3	X	5
Toluene	1	X	1	X
Ethylbenzene	1	X	X	X
Xylenes	1	3	1	X
TCE	10	3	X	4
Methylene chloride	9	3	1	4

Highest Value	10
Bonus Points?	2
Toxicity Value	12

1.3 Mobility

Gaseous Mobility	Max Value:	4
Particulate Mobility	Soil Type:	
	Erodibility:	
	Climatic Factor:	

Mobility Value: 4

1.4 Final Human Health Toxicity/Mobility Matrix Value **HH Final Matrix Value** 24

1.5 Environmental Toxicity/Mobility

Substance	Non-human Mammalian Inhalation Toxicity (mg/m3)	Acute Value	Mobility Value	Table A-7 Matrix Value
Gasoline (benzene)	31947	3	4	6
Toluene	X	X	4	X
Ethylbenzene	X	X	3	X
Xylenes	21714	3	3	5
TCE	15583	3	4	6
Methylene chloride	88000	3	4	6

Env. Final Matrix Value: 6

1.6 Substance Quantity

Amount: 2,000 square feet

Basis: Estimated extent of impacted soil

Substance Quantity Value: 4

Worksheet 5

Air Route

CSID: 3575 **Site Name:** ATC Distributing

2.0 Migration Potential

2.1 Containment Containment Value: 5

Explain Basis: At least two feet of soil cover but no vapor collection system present

3.0 Targets

3.1 Nearest Population Population Distance Value: 10

Approximately 660 feet to the nearest dwelling

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

Approximately 460 feet to the Duwamish River

3.3 Population within 0.5 miles Population Value: 20

400 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}	178
REL_A = Release to Air	REL_A	0
TAR_{AH} = Nearest Population + Population within 1/2 mile	TAR_{AH}	30
	AIR_H	16.7

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}	70
REL_A = Release to Air	REL_A	0
TAR_{AE} = Nearest Sensitive Environment	TAR_{AE}	7
	AIR_E	1.5

Worksheet 6

Groundwater Route

CSID: 3575 **Site Name:** ATC Distributing

1.0 Substance Characteristics

1.1 Human Toxicity

Substance	Drinking Water Standard Value	Acute Toxicity Value	Chronic Toxicity Value	Carcinogenicity Value
Gasoline (benzene)	8	3	X	5
Diesel	4	5	3	X
Toluene	2	3	1	X
Ethylbenzene	4	3	1	X
Xylenes	2	10	1	X
TCE	8	3	X	4
Methylene chloride	8	3	1	2

Highest Value 10

Bonus Points? 2

Toxicity Value 12

1.2 Mobility

Cations/Anions Max Value:

Solubility Max Value: 3 Mobility Value 3

1.3 Substance Quantity

Amount: 135 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

2.4 Vertical Depth to Groundwater 3.5 to 7 feet

Confirmed release: Yes Depth to Aquifer Value 8

3.0 Targets

3.1 Groundwater Usage Aquifer Use Value 4

3.2 Distance to Nearest Drinking Water Well 9,100 feet

Well Distance Value 1

3.3 Population Served within 2 Miles Population Served Value 3

12 people

Worksheet 6

Groundwater Route

CSID: 3575 **Site Name:** ATC Distributing

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}	201
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}	8.5
	GW_H	43.7

Washington Ranking Method

Route Scores Summary and Ranking Calculation Sheet

Site Name: ATC Distributing **CSID:** 3575

Site Address: 401 South Webster Street **FSID:** 8162841

HUMAN HEALTH ROUTE SCORES

Enter Human Health Route Scores for all Applicable Routes:

Pathway	Route Score	Quintile Group
Surface Water	ns	0
Air	16.7	3
Groundwater	43.7	4

H=	4
M=	3
L=	0

$$\frac{H^2 + 2M + L}{8} = \frac{16 + 6 + 0}{8}$$

Human Health Priority Bin Score: **3**

rounded up to next whole number

ENVIRONMENT ROUTE SCORES

Enter Environment Route Scores for all Applicable Routes:

Pathway	Route Score	Quintile Group
Surface Water	ns	0
Air	1.5	1

H=	1
L=	0

$$\frac{H^2 + 2L}{7} = \frac{1 + 0}{7}$$

Environment Priority Bin Score: **1**

rounded up to next whole number

Comments/Notes:

FINAL MATRIX RANKING **4**

FOR REFERENCE:

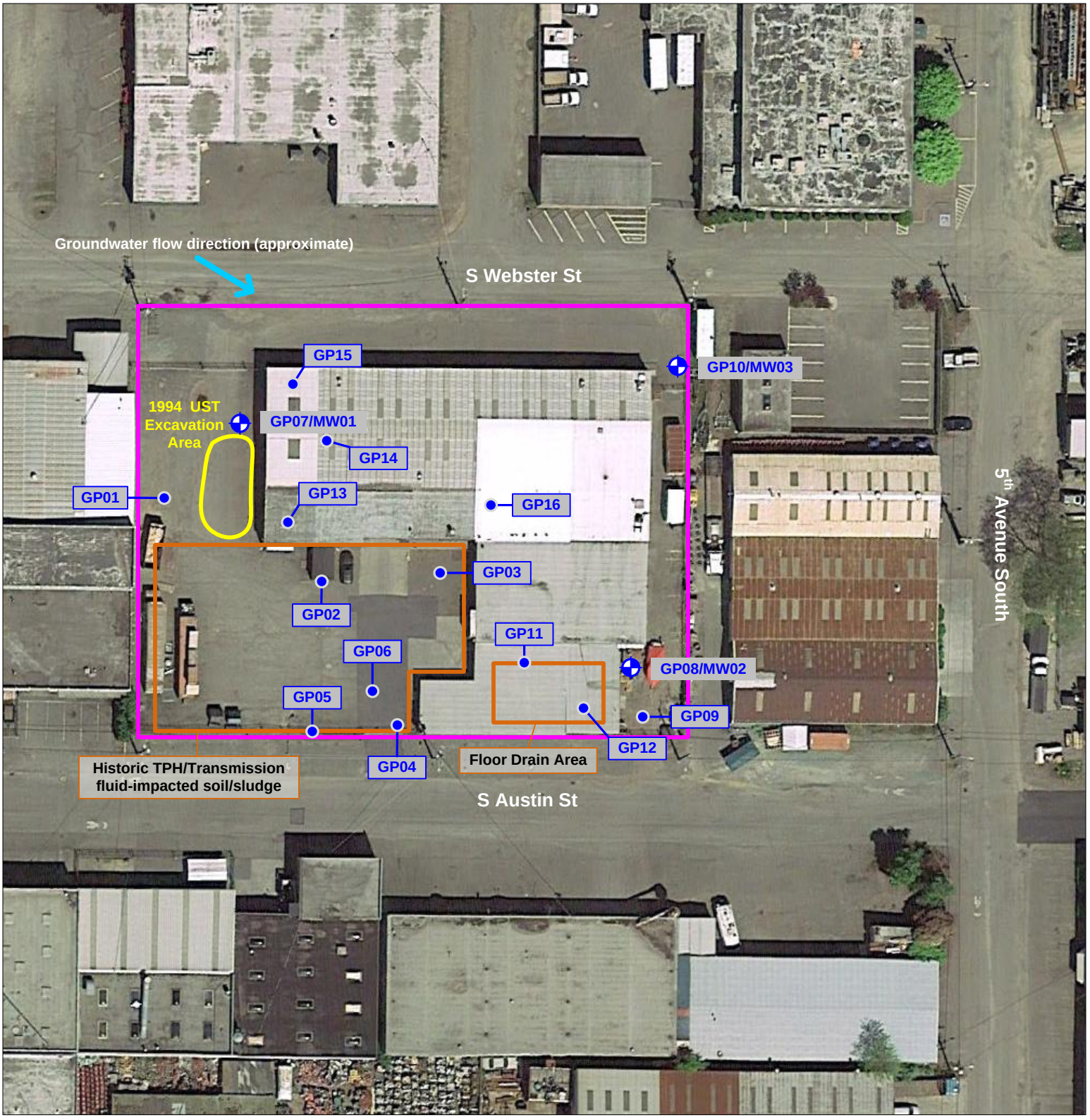
Final WARM Bin Ranking Matrix

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 - August 2014 Values

Quintile	Human Health: Surface Water	Human Health: Air	Human Health: Ground Water	Environment: Surface Water	Environment: Air
5	>= 30.7	>= 37.3	>= 51.9	>= 49.8	>= 30.3
4	>= 22.5	>= 23.0	>= 41.0	>= 30.9	>= 23.0
3	>= 13.0	>= 14.5	>= 33.1	>= 23.2	>= 14.1
2	>= 6.8	>= 8.1	>= 23.5	>= 10.7	>= 1.6
1	<= 6.7	< 8.1	<= 23.4	<= 10.6	<= 1.5

Quintile value associated with each route score entered above



Legend:

- Property location (approximate)
- Excavation area (approximate)
- Former Site feature/use (approximate)
- Monitoring well (approximate)
- Soil boring (approximate)

Notes:

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

N

ATC Distribution Group
401 South Webster Street
Seattle, WA 98108

DEPARTMENT OF ECOLOGY
State of Washington

Site Overview Map

CSID 3575
CSID3575.vsd