

# SITE HAZARD ASSESSMENT

## Worksheet 1

### Summary Score Sheet

#### SITE INFORMATION:

Independent Metals Storage Lot  
703 S. Monroe Street  
Seattle, King County, WA 98108

Cleanup Site ID: 12299

Facility/Site ID: 21489

Section:	32	Latitude:	47.53105
Township:	24N	Longitude:	-122.32519
Range:	4E	Tax/Parcel ID:	7327901445 & 7327901465

*Site scored/ranked for the Hazardous Sites List Publication: February 2016*

#### SITE DESCRIPTION:

The Independent Metals Storage Lot site (Site) is a former and current scrap metal recycling and handling facility located in Seattle, King County, Washington. The 0.45-acre property is located approximately 1,200 feet from the Lower Duwamish Waterway (LDW), and zoned for industrial buffer (IB U/45) use.

Adjacent properties include Seidelhuber Iron Works to the west, across 7th Avenue South, a storage yard for Anthony Construction to the south (across South Elmgrove Street), and Wright Machine to the east. Another Independent Metals facility property is located beyond Wright Machine. Several residences located immediately north across South Monroe Street, and to the southeast of the Site.

The Site is currently operated as a container storage yard by Green Day Trading & Recycling.

Independent Metals receives and recycles scrap metal and used metal equipment. A shipping container storage yard is located at 703 South Monroe Street. Independent Metals has other nearby properties, including Plant 1 located to the east at 747 South Monroe Street (Cleanup Site ID (CSID) 12299), and Plant 2, located to the northeast at 816 South Kenyon Street (CSID 12300).

The Site is located within the 8th Avenue combined sewer outfall (CSO) basin, contained in the Riverside Drive source control area for the Lower Duwamish Waterway. The Site is bound to the north by South Monroe Street, to the south by South Elmgrove Street, and to the west by 7th Avenue South and is located in the South Park neighborhood of Seattle, which is a mix of industrial and residential properties.

#### SITE BACKGROUND:

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

<u>From</u>	<u>To</u>	<u>Operator/Tenant</u>	<u>Activity</u>
1996	2014	Independent Metals	Scrap metal handling and recycling - storage yard
2014	2015	Green Day Trading & Recycling	Scrap metal handling and recycling - storage yard

#### SITE CONTAMINATION:

In 2012 the Independent Metals Storage Lot site was reported to Washington State Department of Ecology (Ecology) and placed on the Confirmed and Suspected Contaminated Sites (CSCSL) list with ID number 12299.

During a routine site inspection in January 2012, Ecology observed an oily sheen on surface water puddled on the storage lot and on stormwater flowing into a nearby storm drain. A stormwater sample was collected at the catch basin located onsite and contained polychlorinated biphenyls (PCBs) at a concentration of 7.2 micrograms per liter (ug/L).

Follow-up inspections were conducted at the Independent Metals storage lot property in February and April 2012, during which Ecology and Seattle Pacific Utilities discussed findings with the facility operator. Ecology recommended corrective actions including modification of the National Pollutant Discharge Elimination System (NPDES) Industrial Stormwater General Permit (ISGP) [for Independent Metals Plant 2 (CSID 12300)] to include

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coverage of the storage lot, an updated Stormwater Pollution Prevention Plan (SWPPP) for the storage lot area (following permit modification) and that the operator cease the storage of scrap metal containers without tight-fitting lids or covers.

During an April 2013 inspection conducted following a heavy rain, a stormwater sample and an accumulated solid sample were collected from the catch basin at the Site and found to contained concentrations of PCBs (1.9 ug/L in stormwater and 54 micrograms per kilogram (ug/kg), corrected for dry weight, in accumulated solids). It's unclear whether the samples were collected from the same location sampled in January 2012. The stormwater sample was also found to contain benzo(a)pyrene (1.9 ug/L) and bis(2-ethylhexylphthalate) (7.2 ug/L) at concentrations above laboratory detection limits and the National Toxics Rule Marine Water organisms only criteria.

In 2015, Pacific Crest Environmental collected soil and groundwater samples from the property. PCB concentrations in soils and groundwater sampled were below laboratory detection limits. Acetone, cis-1,2-dichloroethene, methyl tert butyl ether (MTBE) and several polycyclic aromatic hydrocarbons (PAHs) were present in groundwater samples at concentrations greater than laboratory detection limits and less than corresponding MTCA Method A/B cleanup levels.

#### PAST REMEDIATION ACTIVITIES:

No information regarding remedial activities conducted at the Site was available for review in Ecology's files.

#### CURRENT SITE CONDITIONS:

PCB contamination has been noted in water and accumulated solids samples collected from a catch basin onsite, which ultimately discharges to the Lower Duwamish Waterway.

PCBs have been detected in stormwater and an accumulated solids samples, collected from a catch basin at the site. Benzo(a)pyrene and bis(2-ethylhexyl)phthalate have also been identified in stormwater at the Site.

The approximate depth to groundwater is estimated at 3 to 15 feet below ground surface, with groundwater flowing to the east (assumed based on surface topography). Subsurface soils are assumed to be silty sand with gravel.

#### SPECIAL CONSIDERATIONS:

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

**Surface Water**

Confirmed release of PCBs to stormwater conveyance system, as identified by water and accumulated sediment samples collected by Ecology in 2012 and 2013. Benzo(a)pyrene and bis(2-ethylhexyl)phthalate have also been identified in stormwater.

**Air**

No suspected impacts to air from site contaminants of concern

**Groundwater**

Groundwater and/or soil impacts may be present, but have not been investigated at the site

#### ROUTE SCORES:

Surface Water/ Human Health: 15.7

Surface Water/ Environment: 32.1

Air/ Human Health:

Air/ Environment:

Groundwater/ Human Health:

**Overall Rank: 4**

# SITE HAZARD ASSESSMENT

## Worksheet 1

### Summary Score Sheet

#### REFERENCES:

- 1 Ecology Water Resources Explorer, accessed February 2014.  
<https://fortress.wa.gov/ecy/waterresources/map/WaterResourcesExplorer.aspx>
  - 2 FEMA Map Service Center, accessed February 2014.  
<https://msc.fema.gov/webapp/wcs/stores/servlet/FemaWelcomeView?storeId=10001&catalogId=10001&langId=-1>
  - 3 King County GIS Center iMAP application, Property Information, Groundwater Program, and Sensitive Areas mapsets. Accessed February 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](http://mcdc.missouri.edu/websas/caps10c.html). Accessed February 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 Pacific Crest Environmental, 2015, Email to Priscilla Tomlinson and Donna Musa regarding preliminary investigation data at Independent Metals Plant 1, prepared by April Wiebenga. Dated 1 July 2015.
  - 7 SAIC, 2012, Lower Duwamish Waterway RM 2.2 to 3.4 West Riverside Drive Summary of Existing Information and Identification of Data Gaps. April 2012.
  - 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/Wa24hrIsopluvials.pdf>
  - 11 Washington State Department of Health Source Water Assessment Maps. March 2011 update. <https://fortress.wa.gov/doh/eh/dw/swap/maps/>
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**SITE HAZARD ASSESSMENT**  
**Worksheet 2**  
**Route Documentation**

Cleanup Site ID: 12299

Independent Metals Storage Lot

Facility/Site ID: 21489

**1. SURFACE WATER ROUTE**

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

PCBs, benzo(a)pyrene, and bis(2-ethylhexylphthalate)

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

PCBs reported in water and sediment samples collected at the site. Benzo(a)pyrene and bis(2-ethylhexyl)phthalate have been identified in stormwater.

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

Stormwater

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

Stormwater discharges to Lower Duwamish Waterway

**2. AIR 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:**

**3. GROUNDWATER 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:**

**Worksheet 4**  
**Surface Water Route**

CSID: 12299

Site Name: Independent Metals Storage Yard

**1.0 Substance Characteristics**

**1.1 Human Toxicity**

Substance	Drinking Water Standard Value	Acute Toxicity Value	Chronic Toxicity Value	Carcinogenicity Value
PCBs	10	3	X	6
benzo(a)pyrene	10	10	X	7
bis(2-ethylhexyl)phthalate	X	1	1	4

Highest Value 10

Bonus Points? +2

Human Health Toxicity Value

**1.2 Environmental Toxicity**

Substance	Acute Water Quality Criteria		Toxicity	
	ug/L	Value	mg/kg	Value
PCBs	10	8	1,315	3
benzo(a)pyrene	300	4	50	8
bis(2-ethylhexyl)phthalate	2944	2	30,600	1

Environmental Toxicity Value

**1.3 Substance Quantity**

Amount: 12,000 sq feet

Basis: Estimated areal extent of potentially contaminated surface soils

Substance Quantity Value

**2.0 Migration Potential**

**2.1 Containment**

Containment Value

Explain Basis: Spill/Discharge present at the surface in an area with unmaintained or ineffectively maintained stormwater controls

**2.2 Surface Soil Permeability**

Soil Permeability Value

Assumes silty-sand soils beneath surface gravel

**2.3 Total Annual Precipitation**

Total Precipitation Value

37 inches

**2.4 Max 2-yr/24-hour Precipitation**

2YR/24HR Precipitation Value

2.4 inches

**2.5 Floodplain**

Floodplain Value

Not located in the floodplain

**2.6 Terrain Slope**

Slope Value

Piped-to Lower Duwamish Waterway through CSO

**3.0 Targets**

**3.1 Distance to Surface Water**

Surface Water Distance Value

<250 feet to CSO input; 1,300 feet to Lower Duwamish Waterway

**3.2 Population Served within 2 miles**

Population Value

0 people

**3.3 Area Irrigated within 2 miles**

Irrigation Value

0 acres

**3.4 Distance to Nearest Fishery Resource**

<250 feet to CSO input; 1,300 feet to Lower Duwamish Waterway

Fishery Value

**3.5 Distance to and Name of Nearest Sensitive Environment**

<250 feet to CSO input; 1,300 feet to Lower Duwamish Waterway

Sensitive Environment Value

**4.0 Release**

Explain basis for scoring a release to surface water

Confirmed release to surface water

Release to Surface Water Value

**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

$MIG_S$  = Soil Permeability + Annual Precip + Rainfall Frequency + Floodplain + Slope

$REL_S$  = Release to Surface Water

$TAR_{SH}$  = Distance to Surface Water + Population Served by Surface Water + Area Irrigated

$SUB_{SH}$	82
$MIG_S$	12
$REL_S$	5
$TAR_{SH}$	10
$SW_H$	15.7

**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

$MIG_S$  = Soil Permeability + Annual Precip + Rainfall Frequency + Floodplain + Slope

$REL_S$  = Release to Surface Water

$TAR_{SE}$  = Distance to Surface Water + Distance to Fishery + Distance to Sensitive Environment

$SUB_{SE}$	62
$MIG_S$	12
$REL_S$	5
$TAR_{SE}$	34
$SW_E$	32.1

## Washington Ranking Method

### Route Scores Summary and Ranking Calculation Sheet

**Site Name:** Independent Metals Storage Lot

**CSID:** 12299

**Site Address:** 703 S Monroe Street; Seattle, WA 98108

**FSID:** 21489

#### HUMAN HEALTH ROUTE SCORES

Enter Human Health Route Scores for all Applicable Routes:

Pathway	Route Score	Quintile Group
Surface Water	15.7	3
Air	ns	0
Groundwater	ns	0

H= 3  
M= 0  
L= 0

$$\begin{array}{c} H^2 \\ 9 \end{array} + \begin{array}{c} 2M \\ 0 \end{array} + \begin{array}{c} L \\ 0 \end{array} = \frac{\quad}{8}$$

**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	32.1	4
Air	ns	0

H= 4  
L= 0

$$\begin{array}{c} H^2 \\ 16 \end{array} + \begin{array}{c} 2L \\ 0 \end{array} = \frac{\quad}{7}$$

**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 - September 2015 Values

Quintile	Human Health			Environment	
	Surface Water	Air	Ground Water	Surface Water	Air
5	>= 29.9	>= 39.4	>= 50.1	>= 50.0	>= 28.2
4	>= 22.7	>= 25.0	>= 40.2	>= 32.0	>= 16.5
3	>= 15.5	>= 16.0	>= 32.9	>= 24.0	>= 2.5
2	>= 8.0	>= 8.5	>= 23.6	>= 11.1	>= 1.5
1	<= 7.9	<= 8.4	<= 23.5	<= 11.0	<= 1.4

Quintile value associated with each route score entered above



**Legend:**

-  Property location (approximate)
-  Catch basin
-  Soil boring locations (approximate)

**Notes:**

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



**Independent Metals Storage Lot**  
**703 S. Monroe Street**  
**Seattle, WA 98108**



DEPARTMENT OF  
**ECOLOGY**  
 State of Washington

**Site Overview Map**

**CSID 12299**

CSID12299.vsd