SITE HAZARD ASSESSMENT
Worksheet 1
Summary Score Sheet

SITE INFORMATION:

Cleanup Site ID: 12300

Independent Metals Plant 2

Facility/Site ID: 16139

816 S Kenyon St

Seattle, King County, WA 98108

Section:	29	Latitude:	47.53198
Township:	24N	Longitude:	-122.32246
Range:	4E	Tax/Parcel ID:	7327902520 & 7327903645

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

SITE DESCRIPTION:

The Independent Metals Plant 2 site (Site) is a former scrap metal sorting and handling facility located in Seattle, King County, Washington. The 2.73-acre property is located adjacent to the Lower Duwamish Waterway (LDW), and zoned for industrial (IG2 U/65) use.

Adjacent properties include several residences to the west, across 8th Avenue South, and residences to the south across South Kenyon Street. A small municipal park is located immediately north of the site on the waterfront and the Lower Duwamish Waterway is located immediately to the east.

The property is owned by Silver Bay Logging, and was previously operated by Independent Metals as a scrap metal handling facility. Independent Metals went out of business in 2014, and it is believed that Green Day Trading company, a metal recycling and handling business, now operates at the property. Aerial photographs available from the King County Assessor's website depicts stockpiled materials contained within Ecology block 'bins' and a number of trucks present at the property. A dock is located along the Lower Duwamish Waterway, and reportedly scrap metal may be delivered to the site by barges. Three structures are present at the southern end of the property, including an office building, a large shop building, and a smaller warehouse building, all constructed between 1950 and the mid-1970s. Reportedly, a scrap processor is located inside the warehouse.

The site is located in the South Park neighborhood of Seattle, Washington, on the west bank of the Lower Duwamish Waterway, and is part of the Riverside Drive source control area. The site is located on the east side of 8th Avenue South, between South Portland Street to the north, and South Kenyon Street at the south. South Chicago Street dead-ends near the central portion of the property at 8th Avenue South. Alternate addresses for the property include 7814 8th Avenue South, and 7760 8th Avenue South.

The neighborhood is a mix of industrial and residential properties. Independent Metals has two other facilities in the neighborhood, located at 747 S. Monroe Street (CSID: 12298) and 703 S. Monroe Street (CSID: 12299) within 1/2 mile from this location.

SITE BACKGROUND:

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

From	To	Operator/Tenant	Activity
1976	1995	Workboats Northwest	Manufacture of work boats
2007	2014	Independent Metals	Scrap and recycles metal sorting and handling
1996	2015	Silver Bay Logging (owner)	Transfer of processed logs to barges bound for lumber milling

SITE CONTAMINATION:

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In 2009 the Independent Metals Plant 2 site was reported to Washington State Department of Ecology (Ecology) and placed on the Confirmed and Suspected Contaminated Sites (CSCSL) list with ID number 12300.

In June 2009, Seattle Public Utilities (SPU) collected a sediment sample from a catch basin (CB206) located at the site. Analytical results identified concentrations of polychlorinated biphenyls (PCBs), copper, lead, mercury, zinc, polycyclic aromatic hydrocarbons (PAHs), phthalates, diesel and heavy oil range hydrocarbons, 4-methylphenol, and benzoic acid exceeding storm drain screening values. Independent Metals was previously monitoring total petroleum hydrocarbons (oil & grease), zinc, copper, lead, pH and turbidity in stormwater under an existing National Pollutant Discharge Elimination System (NPDES) permit, and Ecology required the addition of PCBs and metals following the findings of SPU's catch basin sampling.

The former Independent Metals business operated under NPDES Permit SO3009725, issued August 15, 2007 and WAR009725, issued January 1, 2010. Following an Ecology inspection conducted in February 2008, Ecology's findings indicated stormwater sampling was required by the NPDES permit, a revision to the Stormwater Pollution Prevention Plan (SWPPP) was necessary, and several other corrective actions related to use of E2000 (used for petroleum spill management) at the site were warranted. As part of these corrective actions, a modified NPDES permit was issued on October 21, 2009, extending the permit area to include the Silver Bay Logging area on parcel 7327903645.

PAST REMEDIATION ACTIVITIES:

A follow-up stormwater inspection was conducted by Ecology in November 2009, which identified several issues of concern and suggested corrective actions to revise the SWPPP, source control and pollution prevention best management practices (BMPs), prevention of discharge of petroleum or contaminated discharge into holes in pavement, and the addition of mercury and PCBs to the stormwater discharge sampling program. Reportedly, Independent Metals addressed these issues following a noncompliance warning letter from Ecology issued in December 2009.

In March and April 2011, SPU collected storm drain solids samples from catch basin RCB229, located in the right-of-way adjacent to Independent Metals, and from onsite catch basin CB206. Reportedly, concentrations of PCBs, copper, mercury, zinc, PAHs, phthalates, phenol, benzyl alcohol, n-nitrosodiphenylamine, and diesel-range hydrocarbons and heavy oil-range hydrocarbons were above storm drain screening values used in the LDW source control investigation. Ecology conducted a follow-up inspection in August 2011, and identified deficiencies in the SWPPP regarding mandatory source control BMPs, vehicles tracking debris into the right-of-way while leaving the site, areas of distressed pavement, and dirty, oily stormwater in the processing area. Ecology identified a series of corrective actions following the inspection to address SWPPP deficiencies, containment of dirt and debris on the property, pavement maintenance, monitoring of mercury and PCB in stormwater by methods acceptable to Ecology, and verification of stormwater flow patterns near areas of the shredded vehicle residue (fluff) dumpster.

Stormwater from the Independent Metals site is treated by an oil/water separator and sand filter treatment system prior to discharge at outfall 2010 to the Lower Duwamish Waterway. The stormwater system is designed such that untreated stormwater may overflow and discharge directly if the system capacity is exceeded.

The fourth quarter 2011 discharge monitoring report (DMR) indicated a concentration of zinc exceeded benchmark values, though concentrations of copper, lead, total petroleum hydrocarbons (TPH) and turbidity were below benchmark levels.

In 2012, Ecology, with assistance from a contractor, prepared a Summary of Existing Information and Data Gaps for the Riverside Drive source control area, which identified that the potential for LDW sediment recontamination from this property by stormwater or surface runoff is potentially moderate to high, depending on the effectiveness of source control BMPs and frequency of untreated stormwater discharges to the LDW. The same report indicated the potential for sediment recontamination by spills was expected to be low to moderate, with reduced potential if Independent Metals implemented a plan to design a process area to contain spills from recyclable material.

In 2009, Ecology investigated a complaint at the property regarding scrap materials overflowing bins and accumulating on the river bank, during which the stormwater treatment system was observed to be overflowing, with untreated stormwater discharging to the Lower Duwamish Waterway. Independent Metals reportedly made

corrective improvements to the stormwater treatment systems following Ecology's inspection. In October 2012, a release of diesel fuel occurred at the dock while equipment was being unloaded from a barge. A third party reported a hydrocarbon sheen on the Lower Duwamish and traced the source back to the dock outside the Independent Metals Plant 2 facility.

Ecology conducted an inspection in April 2013, during which treated effluent was sampled, as was sediment from a catch basin. Concentrations of cadmium, copper, lead, mercury, zinc, PAHs, phthalates, phenols and PCBs in sediment exceeded Sediment Management Standard (SMS) criteria, and similarly, concentrations of copper, lead, mercury, nickel, zinc and PCBs exceeded surface water quality standards. The DMR submitted from second quarter 2013 indicated PCBs were present at 0.5 micrograms per liter (ug/L) at one monitoring location.

The industrial stormwater general permit number WAR009725, issued to Independent Metals at this site address expired on January 1, 2015. As of this Site Hazard Assessment, there is no active industrial stormwater general permit assigned to Independent Metals, Silver Bay Logging or Green Day Trading and Recycling for this address.

No reports were available to indicate whether soils or groundwater at the site have been investigated for contamination. There is a potential for sediment recontamination by soil and groundwater discharge, however no physical data is available to confirm this pathway.

CURRENT SITE CONDITIONS:

No environmental investigations of soil and/or groundwater conditions have been reported for the Independent Metals (South Kenyon Street) site. Catch basin solids sampling conducted by SPU in spring 2011 identified concentrations of PCBs, copper, mercury, zinc, PAHs, phthalates, phenol, benzyl alcohol, n-nitrosophenylamine, and diesel- and heavy oil-range hydrocarbons greater than LDW source control investigation storm drain screening values. These may be available for stormwater discharge to the LDW, potentially impacting surface water and LDW sediments. A 2013 DMR suggests discharge of zinc from the stormwater system to the LDW exceeds the benchmark value, and copper, mercury, lead, nickel, zinc and PCBs are present in stormwater discharge at measureable concentrations.

Contamination of stormwater and catch basin solids by metals, PCBs and other LDW contaminants of concern have been previously identified 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 not currently known, but expected to be dominantly silty sand.

SPECIAL CONSIDERATIONS:

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

☑ **Surface Water**

Confirmed release to surface water when stormwater treatment capacity exceeded. Discharges to the Lower Duwamish River have documented discharges of PCBs at concentrations exceeding surface water quality guidelines. Metals, phthalates, diesel, oil, phenols, n-nitrosodiphenylamine and benzyl alcohold have also been identified in catch basin solids.

☐ **Air**

Release or availability to air route not anticipated.

☐ **Groundwater**

Potential impacts to soils and groundwater have not been investigated, however, groundwater at the site would likely be in communication with adjacent LDW surface water.

No environmental investigation activities have been conducted into site soil or groundwater conditions related to possible releases due to material handling, other site processes and stormwater conveyance at the site. Metals identified under the NPDES Industrial General stormwater permit are not considered in scoring the surface water route.

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ROUTE SCORES:

Surface Water/ Human Health: 18.0

Surface Water/ Environment: 32.6

Air/ Human Health:

Air/ Environment:

Groundwater/ Human Health:

Overall Rank: 4

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. 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 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.

7 WARM Scoring Manual

8 WARM Toxicological Database

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

10 Washington State Department of Health Source Water Assessment Maps. March 2011 update. https://fortress.wa.gov/doh/eh/dw/swap/maps/

SITE HAZARD ASSESSMENT
Worksheet 2
Route Documentation

Cleanup Site ID: 12300 Independent Metals Plant 2

Facility/Site ID: 16139

1. SURFACE WATER ROUTE

List those substances to be considered for scoring:

PCBs, mercury and PAHs. Other substances have been identified in catch basin solids; however, those substances are not included on worksheet 4 because the toxicity scoring is sufficiently conservative.

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

Substances detected in stormwater treatment system or in stormwater effluent at concentrations exceeding either permitting benchmarks or surface water quality guidelines

List those management units to be considered for scoring:

Stormwater

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

Stormwater discharges directly 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: 12300 **Site Name:** Independent Metals Plant 2

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
mercury	8	X	5	X

Highest Value 10

Bonus Points? +2

Human Health Toxicity Value 12

1.2 Environmental Toxicity

Substance	Acute Water Quality Criteria ug/L	Value	Toxicity mg/kg	Value
PCBs	10	8	1,315	3
mercury	2.1	8	X	X

Environmental Toxicity Value 8

1.3 Substance Quantity

Amount: 3 cubic yards

Basis: Estimated volume of contaminated catch basin solids.

Substance Quantity Value 3

2.0 Migration Potential

2.1 Containment Containment Value 4

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 7

Adjacent to surface water

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 located in the floodplain

2.6 Terrain Slope Slope Value 3

Piped-to outfall to Lower Duwamish Waterway

3.0 Targets

3.1 Distance to Surface Water Surface Water Distance Value 10

< 100 feet feet

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

<100 feet to Lower Duwamish Waterway

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

<100 feet to Duwamish Waterway Park

4.0 Release — Release to Surface Water Value: 5

Explain basis for scoring a release to surface water

Confirmed release to surface water

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}	78
MIG_S = Soil Permeability + Annual Precip + Rainfall Frequency + Floodplain + Slope	MIG_S	16
REL_S = Release to Surface Water	REL_S	5
TAR_{SH} = Distance to Surface Water + Population Served by Surface Water + Area Irrigated	TAR_{SH}	10
	SW_H	18.0

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}	58
MIG_S = Soil Permeability + Annual Precip + Rainfall Frequency + Floodplain + Slope	MIG_S	16
REL_S = Release to Surface Water	REL_S	5
TAR_{SE} = Distance to Surface Water + Distance to Fishery + Distance to Sensitive Environment	TAR_{SE}	34
	SW_E	32.6

Washington Ranking Method

Route Scores Summary and Ranking Calculation Sheet

Site Name: Independent Metals Plant 2 **CSID:** 12300

Site Address: 816 S Kenyon Street, Seattle, WA 98108 **FSID:** 16139

HUMAN HEALTH ROUTE SCORES

Enter Human Health Route Scores for all Applicable Routes:

Pathway	Route Score	Quintile Group
Surface Water	18.0	3
Air	ns	0
Groundwater	ns	0

H= 3
M= 0
L= 0

$$\frac{H^2 + 2M + L}{8} = \frac{9 + 0 + 0}{8}$$

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	32.6	4
Air	ns	0

H= 4
L= 0

$$\frac{H^2 + 2L}{7} = \frac{16 + 0}{7}$$

Environment Priority Bin Score: **3**

rounded up to next whole number

Comments/Notes:

FINAL MATRIX RANKING **4**

FOR REFERENCE:

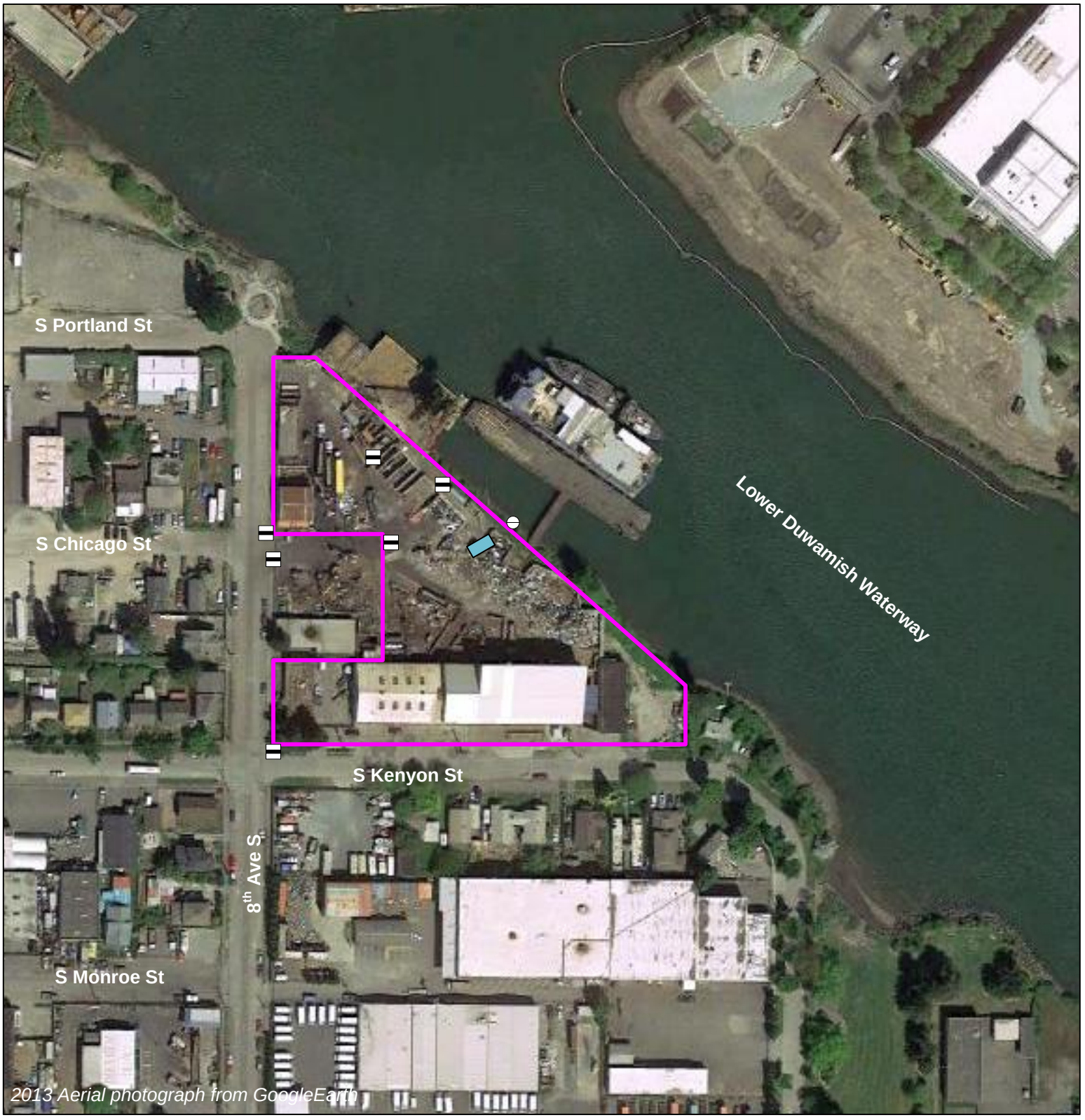
Final WARM Bin Ranking Matrix

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 Surface Water	Human Health Air	Human Health Ground Water	Environment Surface Water	Environment 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
- Permitted outfall
- Stormwater Treatment System

Notes:

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

N

Independent Metals Plant 2
816 S. Kenyon Street
Seattle, WA 98108

DEPARTMENT OF ECOLOGY
State of Washington

Site Overview Map

CSID 12300
CSID12300.vsd