

# SITE HAZARD ASSESSMENT

## Worksheet 1

### Summary Score Sheet

#### SITE INFORMATION:

Glitsa American Inc

327 S Kenyon St

Seattle, King County, WA 98108

Cleanup Site ID: 9951

Facility/Site ID: 63168342

Section: 32

Latitude: 47.53164

Township: 24N

Longitude: -122.32877

Range: 4E

Tax/Parcel ID: 7328400740

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

#### SITE DESCRIPTION:

The Glitsa American Inc site (Site) is a former paint manufacturing facility and floor finish company located in Seattle, King County, Washington. The 1.17-acre property is located approximately 1,530 feet from the Duwamish River, and zoned for industrial (IG2 U/65) use.

Adjacent properties include a lumber storage yard, office, and warehouse to the north, a warehouse to the south, and another lumber yard to the east. The Site is bordered by West Marginal Way South to the west, South Kenyon Street to the north, and 5th Avenue South to the east. The South Seattle Hazardous Waste disposal facility is located west of the Site across West Marginal Way South.

The Site is currently operated as a floor finish warehouse and storage facility by Tenor Company.

The Site is located on the southwest corner of the intersection of South Kenyon Street and 5th Avenue South. West Marginal Way South borders the Site to the southwest.

Other state cleanup sites located in the vicinity of the Site are Olympic Steel Door (Cleanup Site ID (CSID) 9298), approximately 800 feet to the northeast of the Site, and Ryder Student Transportation Service (CSID 6414) to the northwest, across West Marginal Way South. The Site is located in the Riverside Drive Source Control Area of the Lower Duwamish Waterway Superfund site.

#### 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>
1965	1978	Farwest Paint Manufacturing Company	Paint manufacturer
1978	2008	Glitsa American	Distributor of hardwood floor finishes
2008	2014	Duane Bartel	

#### SITE CONTAMINATION:

In 1992 the Glitsa American Inc site was reported to Washington State Department of Ecology (Ecology) and placed on the Leaky Underground Storage Tank (LUST) list with ID number 2324.

In 1992, contractors attempted to close-in-place one 6,000 or 7,500-gallon Stoddard solvent underground storage tank (UST) (reported size varies). Holes were reportedly cut in the bottom of the tank at each end, and three soil samples were collected. Groundwater was observed near the bottom of the tank, and was reportedly entering the tank through the holes. The soil sample collected from below the west end of the tank contained 3,700 milligrams per kilogram (mg/kg) heavy oil-range petroleum hydrocarbons, above the Model Toxics Control Act (MTCA) Method A cleanup level. The other two samples, one from below the east end of the tank (3 feet from the end), and one from the west end of the tank at a depth of 5 to 8 inches bgs, contained less than 100 mg/kg oil-range petroleum hydrocarbons. The tank was not removed or closed-in-place. The consultant indicated that a site assessment may be conducted at the Site, but no record of a site assessment was available for review in

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Ecology's files.

The onsite tank has reportedly been empty since 1976. In 2002, the tank reportedly contained approximately ten inches of liquid in the bottom, but no olfactory evidence of petroleum was observed from the top of the tank.

Four monitoring wells were installed at the Site sometime between 1992 and 2008, possibly as part of a site assessment.

Groundwater samples were collected in December 2008 from MW-1 through MW-4, and a grab groundwater sample was collected from boring B-5. At MW-1 and MW-4, samples contained ethylbenzene and xylenes (MW-1 only) above the detection limit, but below the MTCA Method A cleanup levels. Groundwater samples from two wells (MW-1, 11,000 micrograms per liter (ug/L); and MW-4, 2,500 ug/L) contained concentrations of petroleum hydrocarbons in the Stoddard solvent range above the MTCA Method A cleanup level.

In February 2010, several buried remnants of 55-gallon drums containing dried paint were discovered on the property. Heavy metals (lead and chromium) and Stoddard solvent were reportedly detected in soil samples collected from the area around the drums at concentrations above the corresponding MTCA Method A (or B) cleanup levels, along with paint containing heavy metals that did not pass the Toxicity Characteristic Leaching Procedure, which means that the paint is classified as dangerous waste under WAC 173-303. No analytical results were available for review.

In 2011, three groundwater wells were installed along the south and southeast property lines. One soil sample collected from the well boring located in the southwest corner of the property reportedly contained lead (304 mg/kg) at a concentration above the MTCA Method A cleanup level. Concentrations of lead and Stoddard solvent were not detected in groundwater from these three wells at concentrations above the MTCA Method A cleanup levels. The current property tenant's operations reportedly do not allow for further characterization or cleanup of the paint debris.

#### **PAST REMEDIATION ACTIVITIES:**

In March 2009, the UST was excavated and removed from the Site. Approximately 1,500 gallons of water was reportedly pumped from the UST prior to removal. The south and west sides of the tank were excavated, and the tank was removed. Stoddard solvent odor was reportedly observed during excavation of the tank overburden, and groundwater was observed near the base of the excavation (approximately 9 feet below ground surface (bgs)). Product lines extended from the west end of the UST to the adjacent building. It is unclear if the product lines were removed during excavation. Approximately 178 tons of impacted soil was disposed of offsite. Soil samples were collected from the sidewalls and base of the excavation, and one sample collected from the west sidewall of the excavation contained Stoddard solvent (19,000 mg/kg), xylenes (40 mg/kg) and ethylbenzene (23 mg/kg) at concentrations above MTCA Method A cleanup levels. Samples collected from the other sidewalls and base of the excavation did not contain concentrations of Stoddard solvent or benzene, toluene, ethylbenzene or xylenes (BTEX) above MTCA Method A cleanup levels.

Soil overexcavation continued to the west, but the final extent was limited by the onsite building. Three soil samples were collected from the final western sidewall, two of which (RE-W-6 and RE-SW-6) contained concentrations of Stoddard solvent ranging from 4,100 mg/kg to 4,700 mg/kg. Both of these soil samples also contained concentrations of xylenes above the MTCA Method A cleanup level. Sample RE-SW-6 also contained ethylbenzene at a concentration above the MTCA Method A cleanup level. The excavation was reportedly backfilled with clean imported fill. Approximately 40 cubic yards of impacted soil were estimated to remain at the Site beneath the building.

Groundwater samples collected from three monitoring wells during UST removal in 2009 contained Stoddard solvent at concentrations of 92 ug/L (MW-2), 71 ug/L (MW-3) and 2,500 ug/L (MW-4).

In April 2009, four soil borings were advanced at the Site, two of which were completed as monitoring wells MW-5 and MW-6. One of the soil borings (LAR1) was advanced in an area where a small volume of petroleum-impacted soil was reportedly previously removed. The other soil boring (LAR2) was advanced within the onsite warehouse. A soil sample collected from LAR2 at 5 to 6 feet bgs contained 92,000 mg/kg Stoddard solvent and 20 mg/kg xylenes, above the respective MTCA Method A cleanup levels.

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Six additional soil borings were advanced at the Site within the warehouse building, and were completed as wells VES-1 through VES-6. Soil samples collected from VES-1, VES-3, and VES-6 contained concentrations of Stoddard solvent ranging from 980 mg/kg to 15,000 mg/kg (in VES-4 at 7 to 8 feet bgs), above the MTCA Method A cleanup level. Soil samples from these three borings also contained concentrations of xylenes and ethylbenzene (VES-4 only) above the MTCA Method A cleanup levels. Soil samples were tested for selected metals, and arsenic was present in soil samples from VES-4, VES-5, and VES-6 (all from 3 to 4 feet bgs) at concentrations above the MTCA Method B screening (carcinogen) for soils, but below the MTCA Method A cleanup level.

In groundwater samples from April and May 2009, gasoline was detected at concentrations above the MTCA Method A cleanup level at boring LAR2 (170,000 ug/L), VES-4 (86,000 ug/L), VES-5 (57,000 ug/L), and VES-6 (65,000 ug/L). Groundwater from LAR2 and VES-4 also contained concentrations of benzene above the MTCA Method A cleanup level. Monitoring wells MW-1 through MW-4 were not sampled in 2009. LAR2, MW-5, and MW-6 were also tested for chlorinated VOCs, and vinyl chloride was detected in LAR2 at a concentration above the MTCA Method A cleanup level.

Active remediation of the Site was initiated in July 2009, using a combination of vapor extraction and groundwater pump and treat technologies. The vapor extraction system utilized the onsite wells VES-1, VES-4, and VES-6, as well as perforated lines that were installed in the former tank excavation area. Well VES-5 was equipped with a jet pump to recover free product. The pump system reportedly processed approximately 200 gallons per day. The jet pump was replaced in September 2009 with three peristaltic pumps, which allowed processing of approximately 250 gallons per day. The water was pumped into a holding tank, and the solvent was reportedly skimmed 3 to 4 times a week. In September 2009, six additional peristaltic pumps were reportedly added to the system, which reportedly processed approximately 750 gallons per day.

The system was shut down between October 2009 and January 2010, while ten additional wells were installed within the warehouse building. A trench was also excavated to install additional piping for the VES system. The system was reportedly back in service in February 2010.

Soil samples collected during installation of the new vapor extraction wells contained Stoddard solvent at concentrations above the MTCA Method A cleanup level in the sampled wells (W2, W3, W6, W7, W10, W11 and W12) at 7 to 8 feet bgs. Concentrations of Stoddard solvent in these soil samples ranged from 318 mg/kg to 9,800 mg/kg. Groundwater samples collected in April 2010 from eight of the remediation wells (W1, W4, W5, W6, W7, W8, W9, and W11) contained Stoddard solvent at concentrations above the MTCA Method A cleanup level. The concentrations of Stoddard solvent detected in groundwater on April 18, 2010 ranged from 4,800 ug/L (W11) to 16,000 ug/L (W7).

In May 2011, the VES and pump and treat systems were shut down. An oxygen reducing compound (ORC) (Regenox) was used in June 2011, and was reportedly injected through a drain field system installed in 2009 to 2010, which is located approximately 4 feet bgs. Groundwater samples collected from three wells (MW-2, MW-5, and MS-14) in September 2011 showed a decrease in concentrations of Stoddard solvent compared to January 2011, however in October 2011 concentrations of Stoddard solvent in groundwater increased. In January 2012, a second Regenox treatment was performed at the Site. In January, March, July, and December 2013, an 8% solution of hydrogen peroxide mixed with water was reportedly used at the Site. Concentrations of Stoddard solvent in groundwater reportedly increased in concentration from June 2011 through December 2013, which has been attributed by the property owner and the owner's consultant as Stoddard solvent mobilized from the smear zone during high water events.

In May 2014, the property owner reportedly installed a new air pump system at the Site, however the system did not function well and was shut off in July 2014. In August 2014, a shallow well submersible pump system was reportedly installed at the Site. As of August 15, 2014, the VES system is reportedly back in operation, as well as the submersible pump system.

#### **CURRENT SITE CONDITIONS:**

As of 2014, the vapor extraction and pump and treat systems were reportedly operating at the Site. As of August 2014, the paint drums were still in place at the Site.

Soil samples indicate gasoline-range and heavy oil-range petroleum hydrocarbons, ethylbenzene, xylenes,

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chromium, and lead are present at the Site at concentrations above the MTCA Method A cleanup levels. Arsenic has also been detected in Site soils at concentrations above the MTCA Method B (carcinogen) cleanup level in soil.

Gasoline and benzene have been detected in groundwater at concentrations above the MTCA Method A cleanup level. Vinyl chloride was detected in groundwater from one soil boring location at a concentration above the MTCA Method A cleanup level, and may be associated with prior activities unrelated to the leaky Stoddard solvent tank. Site groundwater has not been analyzed for arsenic.

The approximate depth to groundwater is 9.5 feet below ground surface, with groundwater flowing to the northeast (estimated based on surface topography). Subsurface soils are clayey silt overlying fine grained sand (6 feet bgs).

#### SPECIAL CONSIDERATIONS:

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

☐ **Surface Water**

Release occurred in the subsurface.

☒ **Air**

Release of volatile compounds occurred to subsurface soil. Chromium, lead, and arsenic are also present in Site soils, and part of the Site is unpaved.

☒ **Groundwater**

Stoddard solvent, benzene, and vinyl chloride have been detected in groundwater at concentrations above the MTCA Method A cleanup level. Heavy oil, chromium and lead were detected in soil at concentrations above the MTCA Method A cleanup levels, and have the potential to transport to groundwater. Arsenic was also detected in Site soils above the MTCA Method B screening level.

This Site is reportedly within the boundary of the former South Park Landfill. Some sections of the landfill were capped with cement kiln dust (CKD), however boring logs from this Site do not mention white ash or cement byproducts.

#### ROUTE SCORES:

Surface Water/ Human Health:

Surface Water/ Environment:

Air/ Human Health: 9.8

Air/ Environment:

Groundwater/ Human Health: 43.5

**Overall Rank: 3**

#### REFERENCES:

- 1 Bison Environmental Northwest, Inc., 1992, Letter: Glitsa American UST Closure. September 2, 1992.
- 2 Ecology Water Resources Explorer, accessed April 2014.  
<https://fortress.wa.gov/ecy/waterresources/map/WaterResourcesExplorer.aspx>
- 3 Environmental Associates, Inc., 2009, Supplemental Exploration and Further Remediation Feasibility Study, Former Glitsa, Inc. Property, 327 South Kenyon Street, Seattle, Washington. June 11, 2009.
- 4 Environmental Associates, Inc., 2009, Underground Storage Tank Removal and Limited Cleanup Action, Former Glitsa, Inc. Property, 327 South Kenyon Street, Seattle, Washington. April 1, 2009.

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- 5 Environmental Associates, Inc., 2010, Independent Cleanup Action Status Report (LUST Release #3910), Former Glitsa, Inc. Property, 327 South Kenyon Street, Seattle, Washington. June 23, 2010.
  - 6 Environmental Associates, Inc., 2010, Letter: 90-day Site Discovery Reporting WDOE Facility #63168342. May 6, 2010.
  - 7 Glitsa American, 2002, Letter: Glitsa American, Inc., 327 South Kenyon St., Seattle / Ecology UST #6178; information requested regarding site cleanup activities and options. September 11, 2002.
  - 8 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>
  - 9 Missouri Census Data Center, Circular Area Profiles - 2010 census data around a point location. <http://mcdc.missouri.edu/websas/caps10c.html>. Accessed March 2014.
  - 10 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>
  - 11 Science Applications International Corporation, 2012, Lower Duwamish Waterway RM 2.2 to 3.4 West Riverside Drive Summary of Existing Information and Identification of Data Gaps. Prepared for the Washington State Department of Ecology. April 2012.
  - 12 Seattle Public Utilities, 2008, Letter: Results from the Environmental Compliance Inspection: Corrective Action Required. February 21, 2008.
  - 13 Seattle Public Utilities, 2008, Letter: Results from the Environmental Compliance re-inspection: In Compliance. April 7, 2008.
  - 14 Tenor Company, LLC., 2014, Site Hazard Assessment - Glitsa American Inc. Ecology FA ID: 63168342 / CS ID: 9951. August 15, 2014.
  - 15 WARM Scoring Manual
  - 16 WARM Toxicological Database
  - 17 Washington Department of Transportation 24-hour Isopleth Maps, January 2006 update. <http://www.wsdot.wa.gov/publications/fulltext/Hydraulics/Wa24hrIsopleths.pdf>
  - 18 Washington State Department of Ecology, 1992, Underground Storage Tank Notice of Confirmed Release, Glitsa American Inc. September 2, 1992.
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# **SITE HAZARD ASSESSMENT**

## **Worksheet 2**

### **Route Documentation**

Cleanup Site ID: 9951

Glitsa American Inc

Facility/Site ID: 63168342

#### **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, ethylbenzene, xylenes, chromium, lead, arsenic

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

Presence in Site soils at concentrations above the MTCA Method A cleanup level

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

Soil vapor, particulates (Worksheet 3 indicated that particulates, not soil vapor, should be scored for the air route)

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

Potential for vapor or particulate transport

#### **3. GROUNDWATER ROUTE**

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

Gasoline (benzene), vinyl chloride, chromium, lead, heavy oil-range petroleum hydrocarbons, arsenic

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

Prior detections in groundwater at concentrations above the MTCA Method A cleanup levels, or detection in Site soil at concentrations above the MTCA Method A (or B) cleanup level

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

Groundwater

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

Presence in Site groundwater at concentrations above the MTCA Method A cleanup level, or potential for transport to groundwater

## Substance Characteristics Worksheet For Multiple Unit/Substance Sites

**Site Name** Glitsa American

### Combination 3

## Management Unit:

Rationale:

## Surface Water Environment Subscore

## 2. Air Route

Rationale:

### Air Environment Subscore

### 3. Ground Water Route

Rationale:

Groundwater Subscore

Based on the highest scoring toxicity/containment combinations, the following management units will be used for route scoring:

Surface Water:

Air:

Ground Water:

## Paint Drums

**Worksheet 5****Air Route**

CSID: 9951

Site Name: Glitsa American  
(Paint Drums)**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
Chromium	9	X	10	X
Lead	10	X	X	X
Arsenic	10	X	X	9

Highest Value 10

Bonus Points? 2

Toxicity Value **1.3 Mobility**

Gaseous Mobility	Max Value:	
Particulate Mobility	Soil Type:	Clayey silt
	Erodibility:	86
	Climatic Factor:	1 to 10

Mobility Value **1.4 Final Human Health Toxicity/Mobility Matrix Value**HH Final Matrix Value **1.5 Environmental Toxicity/Mobility**

Substance	Non-human Mammalian Inhalation Toxicity (mg/m3)	Acute Value	Mobility Value	Table A-7 Matrix Value
Chromium	X	X	1	X
Lead	X	X	1	X
Arsenic	X	X	1	X

Env. Final Matrix Value **1.6 Substance Quantity**

Amount: 1,600 square feet

Basis: Estimated extent of remaining  
impacted soilSubstance Quantity Value



**Worksheet 5****Air Route**

CSID: 9951

Site Name: Glitsa American

**2.0 Migration Potential****2.1 Containment**Containment Value 

Explain Basis: Uncontaminated soil cover  
less than 2 feet thick

**3.0 Targets****3.1 Nearest Population**Population Distance Value 

Approximately 800 feet to the nearest dwelling

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

Approximately 1,500 feet to the South Park Playground

**3.3 Population within 0.5 miles**Population Value 

1,216 population

**4.0 Release**Release to Air Value 

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:

$SUB_{AH} = (\text{Human toxicity} + 5) * (\text{Containment} + 1) + \text{Substance Qty}$

$REL_A = \text{Release to Air}$

$TAR_{AH} = \text{Nearest Population} + \text{Population within 1/2 mile}$

$SUB_{AH}$	70
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$REL_A$	0
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$TAR_{AH}$	45
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$AIR_H$	9.8
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**Pathway Scoring - Air Route, Environmental Pathway**

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

Where:

$SUB_{AE} = (\text{Environmental Toxicity Value} + 5) * (\text{Containment} + 1) + \text{Substance Qty}$

$REL_A = \text{Release to Air}$

$TAR_{AE} = \text{Nearest Sensitive Environment}$

$SUB_{AE}$	not scored
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$REL_A$	0
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$TAR_{AE}$	6
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$AIR_E$	not scored
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**Worksheet 6**  
**Groundwater Route**

**CSID:** 9951

**Site Name:** Glitsa American

**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
Vinyl chloride	8	5	X	7
Diesel	4	5	3	X
Chromium	6	X	1	X
Lead	6	X	10	X
Arsenic	8	5	5	7

Highest Value 10

Bonus Points? 2

Toxicity Value

**1.2 Mobility**

Cations/Anions Max Value:

Solubility Max Value: 3

Mobility Value

**1.3 Substance Quantity**

Amount: 84 cubic yards

Basis: Estimated volume of  
petroleum-impacted soil

Substance Quantity Value

**2.0 Migration Potential**

**2.1 Containment**

Containment Value

Explain Basis: Contaminated soil

**2.2 Net Precipitation**  inches

Net Precipitation Value

**2.3 Subsurface Hydraulic Conductivity**

Conductivity Value

Fine grained sand

**2.4 Vertical Depth to Groundwater**  feet

Confirmed release: Yes

Depth to Aquifer Value

**3.0 Targets**

**3.1 Groundwater Usage**

Aquifer Use Value

Private supply, but alternate source available with minimum hookup requirements

**3.2 Distance to Nearest Drinking Water Well**  feet

Well Distance Value

**3.3 Population Served within 2 Miles**

Population Served Value

12 people

**Worksheet 6**  
**Groundwater Route**

**CSID:** 9951

**Site Name:** Glitsa American

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

Area Irrigated Value

0 acres

**4.0 Release**

Release to Groundwater Value

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

$MIG_G$  = Depth to Aquifer + Net Precip + Hydraulic Conductivity

$REL_G$  = Release to Groundwater

$TAR_{GH}$  = Aquifer Use + Well Distance + Population Served + Area Irrigated

$SUB_{GH}$	200
$MIG_G$	14
$REL_G$	5
$TAR_{GH}$	8.5
$GW_H$	43.5

## Washington Ranking Method

### Route Scores Summary and Ranking Calculation Sheet

Site Name: Glitsa American

CSID: 9951

Site Address: 327 South Kenyon Street

FSID: 63168342

#### HUMAN HEALTH ROUTE SCORES

Enter Human Health Route Scores for all Applicable Routes:

Pathway	Route Score	Quintile Group
Surface Water	ns	0
Air	9.8	2
Groundwater	43.5	4

H=	4
M=	2
L=	0

$$\begin{array}{c} H^2 \\ 16 \end{array} + \begin{array}{c} 2M \\ 4 \end{array} + \begin{array}{c} L \\ 0 \end{array} = \frac{\quad}{8}$$

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	ns	0

H=	0
L=	0

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

Environment  
Priority Bin Score:  
**N/A**  
rounded up to next  
whole number

Comments/Notes:

**FINAL MATRIX  
RANKING**

**3**

#### FOR REFERENCE:

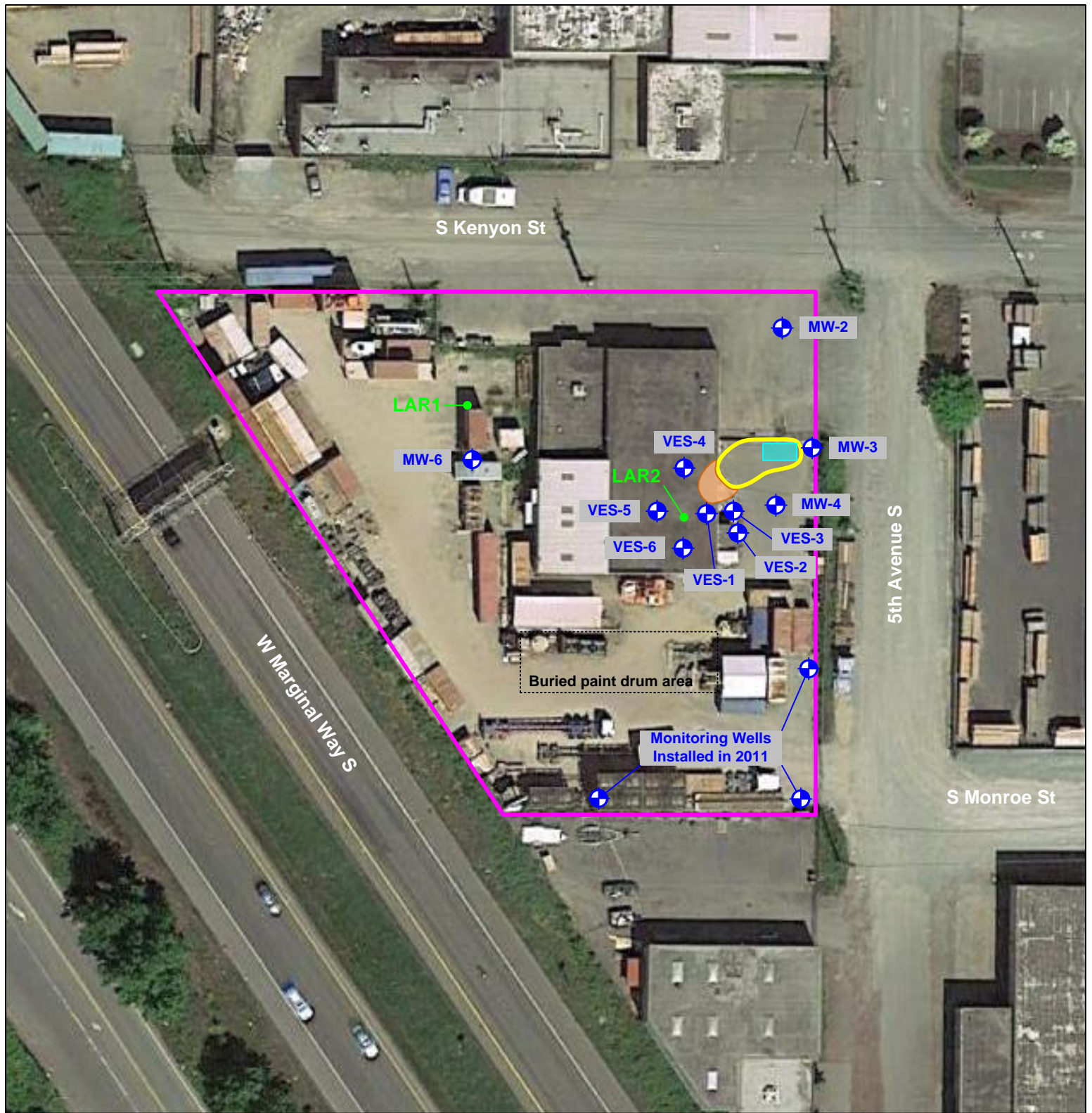
##### Final WARM Bin Ranking Matrix

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			Environment	
	Surface Water	Air	Ground Water	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)
- Remaining soil contamination (approximate)
- Former UST location (approximate)
- + Monitoring well (approximate)
- Soil sample (approximate)

**Notes:**

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



**Glitsa American Inc**  
**327 South Kenyon Street**  
**Seattle, WA 98108**

**Site Overview Map**

**CSID 9951**  
CSID9951.vsd