

SITE HAZARD ASSESSMENT

Worksheet 1

Summary Score Sheet

SITE INFORMATION:

Triad Machinery Inc. Tukwila
11210 Tukwila International Blvd
Tukwila, King County, WA 98168

Cleanup Site ID: 1800

Facility/Site ID: 86248197

Section:	9	Latitude:	47.50227
Township:	23N	Longitude:	-122.29229
Range:	4E	Tax/Parcel ID:	0923049152

Site Scored/ranked for the August 2014 Hazardous Sites List Publication

SITE DESCRIPTION:

The Triad Machinery Inc. Tukwila site (Site) is a former warehouse facility located in Tukwila, King County, Washington. The 3.4-acre property is located approximately 600 feet from the Duwamish River, and zoned for manufacturing industrial (MIC/H) use.

Adjacent properties include a motel to the south and a transit warehouse to the east. To the north, across South 112th Street, and to the west, across Tukwila International Boulevard, are office buildings surrounded by parking lots.

The Site is currently operated as a truck part distributor, paint shop, and body shop by Geo Heiser Body Co Inc.

Current activities at the Site include truck sales, painting, and truck body work, including welding and fiberglass.

The Site is located on the southeast corner of the intersection of Tukwila International Boulevard and South 112th Street. The Site is close to the east bank of the Duwamish River, which is approximately 600 feet south and 2,500 feet east of the Site. According to the King County Assessor's website, this property includes three buildings, including two service repair garages totaling approximately 19,000 square feet, and one office building at approximately 3,000 square feet.

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>
	1997	Peerless Corporation	
1997	2001	East Fork Corporation	General Trailers Company/Triad Machinery
2001	2014	George Heiser Body Co. Inc.	Truck body, paint, and repair shop

SITE CONTAMINATION:

In 2002 the Triad Machinery Inc. Tukwila site was reported to Washington State Department of Ecology (Ecology) and placed on the Confirmed and Suspected Contaminated Sites (CSCSL) list with ID number 1800.

In 1997, a Phase II Environmental Site Assessment reportedly identified diesel-range hydrocarbons in soils at concentrations above the Model Toxics Control Act (MTCA) (1997) Method A cleanup level. Soil samples were collected at depths ranging from 0.5 to 1 foot below ground surface (bgs).

In 2001, arsenic was detected in groundwater at concentrations above the MTCA Method A groundwater cleanup levels, and cadmium and lead were detected in soils at concentrations above MTCA Method A cleanup levels.

PAST REMEDIATION ACTIVITIES:

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As part of a 2001 Phase II Environmental Site Assessment and 2002 soil remediation activities, eight soil borings were completed to approximately 15 feet bgs. Temporary monitoring wells were installed in seven borings to facilitate grab sampling of groundwater, and thirteen soil and seven groundwater samples were collected and submitted for analysis. Two areas of concern were identified at the Site. In one area, soils reportedly contained cadmium and lead at concentrations above the MTCA Method A unrestricted land use cleanup levels for soil, though the vertical extent of the contamination is likely limited to within 7 feet of ground surface. Heavy oil-range petroleum hydrocarbons were detected in soils in another section of the Site, but concentrations were below the MTCA Method A cleanup level. In the area with cadmium and lead detections in soil above MTCA Method A cleanup levels, a 20 foot by 20 foot area was excavated to a depth of 5.5 feet. Approximately 75 cubic yards of material were removed and stockpiled. Soil samples from the stockpiled soil and the base of the excavation area were reported to contain cadmium and lead at concentrations below MTCA Method A cleanup levels. The stockpiled soil was reportedly disposed of offsite. Groundwater samples in 2001 were reported to contain concentrations of diesel-range and motor-oil-range hydrocarbons below 0.63 milligrams per kilogram (mg/kg), which is above the MTCA Method A cleanup level for groundwater (0.5 milligrams per liter (mg/L)).

CURRENT SITE CONDITIONS:

Groundwater and soil contamination were identified at the Site during two Phase II Environmental Site Assessments, conducted in 1997 and 2001. Soil samples from the 2002 excavation of cadmium and lead containing soil suggest that cadmium and lead concentrations in soil are generally below MTCA Method A cleanup levels, though a very limited volume above the cleanup level may be present. This soil is expected to be located in the yard and beneath an addition built after 2002.

Arsenic, and possibly diesel, is present in groundwater at concentrations exceeding the MTCA Method A cleanup level, based on sampling conducted in 2001.

The approximate depth to groundwater is 10-12 feet below ground surface, with groundwater flowing to the southwest. Subsurface soils are fine to coarse sand with gravel and silt.

SPECIAL CONSIDERATIONS:

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

☐ **Surface Water**

Diesel release likely occurred in the subsurface. As the Site is paved, soil concentrations of metals are not expected to impact surface water.

☐ **Air**

No volatile compounds were released in the subsurface. Metals in soil are not expected be available to the air route.

☒ **Groundwater**

Contaminated soil and groundwater is present at the Site.

ROUTE SCORES:

Surface Water/ Human Health:

Surface Water/ Environment:

Air/ Human Health:

Air/ Environment:

Groundwater/ Human Health: 34.9

Overall Rank: 3

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REFERENCES:

- 1 Ecology Water Resources Explorer, accessed February 2014.
<https://fortress.wa.gov/ecy/waterresources/map/WaterResourcesExplorer.aspx>
 - 2 GeoEngineers, 2001, Phase II Environmental Site Assessment, General Trailers Company/Triad Machinery Site, Tukwila, Washington. March 29, 2001.
 - 3 GeoEngineers, 2002, Soil Remedial Activities, Heiser Corporation Facility, Tukwila, Washington. September 24, 2002.
 - 4 King County GIS Center iMAP application, Property Information, Groundwater Program, and Sensitive Areas mapsets. Accessed January 2013.
<http://www.kingcounty.gov/operations/GIS/Maps/iMAP.aspx>
 - 5 Missouri Census Data Center, Circular Area Profiles - 2010 census data around a point location. <http://mcdc.missouri.edu/websas/caps10c.html>. Accessed February 2014.
 - 6 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>
 - 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/Wa24hrlspoluvials.pdf>
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SITE HAZARD ASSESSMENT

Worksheet 2

Route Documentation

Cleanup Site ID: 1800

Triad Machinery Inc. Tukwila

Facility/Site ID: 86248197

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:

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:

Arsenic and diesel

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

Arsenic detected above MTCA Method A cleanup levels in groundwater; diesel is present in site soil below MTCA Method A cleanup levels, but has the potential to impact site groundwater

List those management units to be considered for scoring:

Groundwater

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

Presence of arsenic detected in groundwater at concentrations exceeding MTCA Method A cleanup levels

Worksheet 6
Groundwater Route

CSID: 1800

Site Name: Triad Machinery, Inc.-Tukwila

1.0 Substance Characteristics

1.1 Human Toxicity

Substance	Drinking Water Standard Value	Acute Toxicity Value	Chronic Toxicity Value	Carcinogenicity Value
Arsenic	8	5	5	7
Diesel	4	5	3	X

Highest Value 8

Bonus Points? 0

Toxicity Value

1.2 Mobility

Cations/Anions Max Value: 3

Solubility Max Value: 1

Mobility Value

1.3 Substance Quantity

Amount: 80 cubic yards

Basis: Estimated volume of impacted soil based
on soil borings (assumes 3 foot depth)

Substance Quantity Value

2.0 Migration Potential

2.1 Containment

Containment Value

Explain Basis: Contaminated soil

2.2 Net Precipitation

>10 to 20 inches

Net Precipitation Value

2.3 Subsurface Hydraulic Conductivity

Fine to coarse sand with gravel and silt

Conductivity Value

2.4 Vertical Depth to Groundwater

0 to 25 feet

Confirmed release: Yes

Depth to Aquifer Value

3.0 Targets

3.1 Groundwater Usage

Aquifer Use Value

Private supply, but alternate sources are available with minimum hookup requirements

3.2 Distance to Nearest Drinking Water Well

>5,000 to 10,000 feet

Well Distance Value

3.3 Population Served within 2 Miles

30 people

Population Served Value

Worksheet 6
Groundwater Route

CSID: 1800

Site Name: Triad Machinery, Inc.-Tukwila

3.4 Area Irrigated by GW Wells within 2 miles

Area Irrigated Value 2

9 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

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}	156
MIG_G	14
REL_G	5
TAR_{GH}	12.7
GW_H	34.9

Washington Ranking Method

Route Scores Summary and Ranking Calculation Sheet

Site Name: Triad Machinery, Inc.- Tukwila

CSID: 1800

Site Address: 11210 Tukwila International Boulevard

FSID: 86248197

HUMAN HEALTH ROUTE SCORES

Enter Human Health Route Scores for all Applicable Routes:

Pathway	Route Score	Quintile Group
Surface Water	ns	0
Air	ns	0
Groundwater	34.9	3

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	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	N/A

Quintile Values for Route Scores - March 2014 Values

Quintile	Human Health			Environment	
	Surface Water	Air	Ground Water	Surface Water	Air
5	>= 30.0	>= 35.6	>= 50.7	>= 49.6	>= 29.5
4	>= 21.1	>= 22.4	>= 40.4	>= 30.6	>= 20.5
3	>= 12.5	>= 14.1	>= 32.2	>= 22.7	>= 9.5
2	>= 6.2	>= 7.9	>= 23.1	>= 10.2	>= 1.4
1	< 6.2	< 7.9	< 23.1	< 10.2	< 1.4

Quintile value associated with each route score entered above



Legend:

- Property location (approximate)
- Excavation area (approximate)
- Remaining soil contamination (approximate)
- ⊕ Monitoring well (approximate)

Notes:

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



Triad Machinery, Inc.- Tukwila
11210 Tukwila International Boulevard
Tukwila, WA 98168



Site Overview Map

CSID 1800
 CSID1800.vsd