CSID 2344

NFA

SITE HAZARD ASSESSMENT
WORKSHEET 1
SUMMARY SCORE SHEET

Site Name/Location (Street, City, County, Section/Township/Range, TCP ID Number):

Joseph Simon & Sons Kent
1025 S Central Avenue
Kent, WA 98032
King County
T-22N, R-04E, Sec-25
TCP ID# N-17-5677-000
Longitude: 122* 13′ 49″
Latitude: 47* 22′ 15″
Site assessed for August 27, 2002

Site Description (Include management areas, substances of concern, and quantities):

The Joseph Simon & Sons Kent site consists of two parcels in a mixture of commercial, industrial, and agricultural properties in the city of Kent. The southern parcel is approximately 3.88 acres in size and bordered to the south by the Reliable Imports auto dealership and the former Atomic Auto Wrecking site. The northern parcel is approximately 2.35 acres in size and is leased to Familian Northwest (Familian). ThermoKing Northwest, Inc. is north of the Familian parcel. Both parcels are bordered to the east by South Central Avenue and to the west by Burlington Northern and Santa Fe (BNSF) Railway Company tracks. The site is located on a flood plain about 1/8 mile northeast of the Green River with the flow of surface water heading approximately northwest.

The southern parcel of the site is currently used as a parking area for truck trailers by McKinney Trailer Rentals and has been used for this purpose since May 2001. The site has an onsite building and is unpaved with local vegetation. Previous uses of the southern parcel appeared to be for agricultural purposes through at least the mid-1940′s and then an automobile wrecking yard with a small building present by 1960. Auto wrecking activities appear to have been discontinued by 1977, although automobile bodies apparently were stored on the southernmost portion of the parcel as overlap from an auto wrecking facility called Atomic Auto Wrecking previously located south of the site. From approximately 1981 to 1985, there was presence of an automobile wrecking yard and storage of scrap metal. By 1986 to 2000, the densely vegetated southern parcel was used by Placo Coal and Wood Products for storage of bulk wood.

Although automobile bodies were present on a portion of the northern parcel based on a 1968 aerial photograph, the parcel was apparently used for agricultural purposes through the 1960′s. Familian currently leases the northern parcel and has occupied this parcel since the late 1980′s. The Joseph Simon & Sons Kent site is located in an area with municipal water and sewer systems. The Kent Water Department wellhead is the nearest public water system within two miles of the site measuring approximately 8,130 feet northeast of the site.

On April 12, 1996, the Washington State Department of Ecology (Ecology) received a letter dated April 10, 1996 by the Law Offices of Eisenhower & Carlson regarding a confirmed release of hazardous substances discovered at the Joseph Simon & Sons Kent site based on the Phase I/Phase II Environmental Site Assessment. The assessment was conducted on behalf of the site owners on March 1996.

Ecology performed an initial investigation on May 27, 1999 and met with the attorney representing the property owners and the company controller at the Joseph Simon & Sons Kent site. At the time of the site visit, the vacant area along the western portion of the site appeared to have been accessed by vagrants through a hole in the fence by the railroad tracks. No scrap metal was visible on surface. The site was graded upon purchasing the property.

Based on the 1996 Phase I/Phase II Environmental Site Assessment, the levels of the confirmed releases of petroleum products, metals, and carcinogenic polyaromatic hydrocarbons in the soil media exceeded the current Model Toxics Control Act (MTCA) Method A cleanup levels for those hazardous substances. As a result, the Joseph Simon & Sons Kent site was added onto Ecology's Confirmed and Suspected Contaminated Sites (CSCS) list on July 6, 1999. Ecology sent an Early Notice Letter to the property owner on the same day regarding the listing of the property.

On April 2, 2002, Yolanda King of the Public Health - Seattle & King County (PHSKC) spoke with Mark Burley, company controller regarding any sampling results more recent than the 1996 Phase I/Phase II Environmental Site Assessment. Mr. Burley referred PHSKC to Ty Schreiner from Kennedy/Jenks Consultants who prepared the Site Data Summary and Preliminary Hazard Assessment on January 9, 2002. PHSKC contacted Mr. Schreiner and requested a copy of the January 2002 site data summary compiling groundwater and soil sampling data from June 1995 to September 1997.

On April 4, 2002, PHSKC received the January 2002 site data summary from Mr. Schreiner and conducted a site hazard assessment (SHA) visit the following day. PHSKC observed a fence that surrounded the entire site. The site surface was unpaved and covered with some vegetation. No activity on the site was observed at the time of the SHA visit. Based on the January 2002 site data summary, numerous contaminants had levels that exceeded the current Model Toxics Control Act (MTCA) Method A cleanup levels for their respective contaminants in the soil media. However, the elevated contaminant levels that had the most impact on human health and the environment were arsenic, cadmium, and lead. The following table indicates the highest detected level in parts per million (ppm) throughout the site for each contaminant from 1995 to 1997 with a sample depth between 0.5 to 3.0 feet.

Soil samples (ppm)	Arsenic	Cadmium	Lead
1995 samples	**146**	**22.4**	**3,680**
1996 samples	**180**	**18**	**16,000**
1997 samples	0.06	1.93	**2,110**
MTCA Method A Cleanup Level	20	2	250

Elevated levels of arsenic, chromium, and lead were detected in seven, groundwater samples collected in September 1995 on the southern parcel of the Joseph Simon & Sons Kent site. The following table indicates the highest detected level in parts per billion (ppb) among the seven samples for each contaminant.

Groundwater samples (ppb)	Arsenic	Chromium (total)	Lead
1995 samples	**30**	**227**	**34**
MTCA Method A Cleanup Level	5	50	15

Based on the most recent sampling data for the Joseph Simon & Sons Kent site, elevated levels of arsenic and lead were discovered in both the soil and groundwater media. Elevated cadmium levels were also present, but only in the

soil. In addition, elevated chromium (total) levels were confirmed in groundwater. On the basis of this SHA, completed by the PHSKC's Environmental Health Division, this site will be scored for the surface water, air, and groundwater routes under the MTCA regulations.

Special Considerations (Include limitations in site file data or data which cannot be accommodated in the model, but which are important in evaluating the risk associated with the site, or any other factor(s) over-riding a decision of no further action for the site): N/A

ROUTE SCORES:

Surface Water/Human Health: 26.4

Surface Water/Environ.: 55.8

Air/Human Health: 19.2

Air/Environmental: 31.1

Ground Water/Human Health: 64.0

OVERALL RANK: 1

WORKSHEET 2
ROUTE DOCUMENTATION

1. SURFACE WATER ROUTE

List those substances to be considered for scoring: Source: 2

Arsenic, Cadmium, Chromium, Lead

Explain basis for choice of substance(s) to be used in scoring.

All of the above substance concentrations are above their respective MTCA Method A cleanup levels in on-site soils/groundwater.

List those management units to be considered for scoring: Source: 3

Surface soil contamination

Explain basis for choice of unit to be used in scoring. Source: 3

Surface soil is exposed to weather with no containment.

2. AIR ROUTE

List those substances to be considered for scoring: Source: 2

Arsenic, Cadmium, Chromium, Lead

Explain basis for choice of substance(s) to be used in scoring.

All of the above substance concentrations are above their respective MTCA Method A cleanup levels in on-site soils/groundwater.

List those management units to be considered for scoring: Source: 3

Surface soil contamination

Explain basis for choice of unit to be used in scoring. Source: 3

Surface soil is exposed to weather with no containment.

WORKSHEET 2 (CONTINUED)
ROUTE DOCUMENTATION

3. GROUND WATER ROUTE

List those substances to be considered for scoring: Source: 2

Arsenic, Cadmium, Chromium, Lead

Explain basis for choice of substance(s) to be used in scoring.

All of the above substance concentrations are above their respective MTCA Method A cleanup levels in on-site soils/groundwater.

List those management units to be considered for scoring: Source: 3

Surface soil contamination

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

Surface soil is exposed to weather with no containment.

WORKSHEET 3
SURFACE WATER ROUTE

1.0 SUBSTANCE CHARACTERISTICS

1.1 Human Toxicity

Substance	Drinking Water Standard (ug/l)	Val.	Acute Toxicity (mg/kg-bw)	Val.	Chronic Toxicity (mg/kg/day)	Val.	Carcinogenicity WOE	PF*	Val.
1.Arsenic	50	6	763	5	0.001	5	A	1.75	7
2.Cadmium	5.0	8	225	5	0.0005	5	B1	ND	-
3.Chromium (total)	100	6	-	ND	1	1	-	-	-
4.Lead	5.0	8	ND	-	ND	-	B2	-	-

*Potency Factor

Source: 1,2
Highest Value: 8
(Max.=10)

+2 Bonus Points? yes
Final Toxicity Value: 10
(Max.=12)

1.2 Environmental Toxicity

(x) Freshwater
( ) Marine

Substance	Acute Water Quality Criteria (ug/l)	Value	Non-human Mammalian Acute Toxicity (mg/kg)	Value
1.Arsenic	360	4		
2.Cadmium	3.9	8		
3.Lead	82	6		

Source: 1,2 **Value: 8**
(Max.=10)

1.3 Substance Quantity: 540,000 cu ft÷2'= 270,000 sq ft Source: 3 **Value: 9**
Explain basis: assume 2'depth, vol area = 20,000 cu yds
27 cu ft (20,000 cu yds) = 540,000 cu ft
(Max.=10)

2.0 MIGRATION POTENTIAL

2.1 Containment Source: 3 **Value: 10**
Explain basis: spill/discharge at surface with no run-on/runoff control
(Max.=10)

2.2 Surface Soil Permeability: silt-sand mixtures Source: 3 **Value: 3**
(Max.=7)

2.3 Total Annual Precipitation: 33.8 inches Source: 5 **Value: 3**
(Max.=5)

2.4 Max. 2-Yr/24-hour Precipitation: 1 - 2 inches Source: 5 **Value: 2**
(Max.=5)

2.5 Flood Plain: not in flood plain Source: 6 **Value: 0**
(Max.=2)

2.6 Terrain Slope: < 2 % Source: 3 **Value: 1**
(Max.=5)

WORKSHEET 3 (CONTINUED)
SURFACE WATER ROUTE

3.0 TARGETS

3.1 Distance to Surface Water: 660 ft Source: 3 **Value: 10** (Max.=10)

3.2 Population Served within 2 miles (See WARM Scoring Manual Regarding Direction): pop. = 0 Source: 8 **Value: 0** (Max.=75)

3.3 Area Irrigated within 2 miles 0.75 √no. acres = (Refer to note in 3.2.): 0.75 (√1036) = 24 Source: 8 **Value: 24** (Max.=30)

3.4 Distance to Nearest Fishery Resource: 660 ft Source: 3 **Value: 12** (Max.=12)

3.5 Distance to, and Name(s) of, Nearest Sensitive Environment(s) Green River Trail Site = 590 feet Source: 6 **Value: 12** (Max.=12)

4.0 RELEASE

Explain basis for scoring a release to surface water: none confirmed Source: 3 **Value: 0** (Max.=5)

WORKSHEET 4
AIR ROUTE

1.0 SUBSTANCE CHARACTERISTICS

1.1 Introduction

1.2 Human Toxicity

Substance	Air Standard (ug/m^3)	Val.	Acute Toxicity (mg/m^3)	Val.	Chronic Toxicity (mg/kg/day)	Val.	Carcino-genicity WOE	PF*	Val.
1.Arsenic	.00023	10	ND	-	ND	-	A	50	9
2.Cadmium	.00056	10	25	10	ND	-	B1	6.1	6
3.Chromium(total)	1.7	9	ND	-	5.70E-07	10	ND	-	-
4.Lead	0.05	10	ND	-	ND	-	B2	ND	-

*Potency Factor

Source: 1,2
Highest Value: 10
(Max.=10)

+2 Bonus Points? yes
Final Toxicity Value: 12
(Max.=12)

1.3 Mobility (Use numbers to refer to above listed substances)

1.3.1 Gaseous Mobility
Vapor Pressure(s) (mmHg): 1= ; 2= ; 3= ; 4= ; 5= ; 6=
Source:
Value:
(Max.=4)

1.3.2 Particulate Mobility
Soil type: sandy clay loam
Erodibility: 56
Climatic Factor: 1-10
Source: 3
Value: 1
(Max.=4)

1.4 Highest Human Health Toxicity/Mobility Matrix Value (from Table A-7)
equals **Final Matrix Value: 6**
(Max.=24)

1.5 Environmental Toxicity/Mobility Source: 1

Substance	Non-human Mammalian Acute Inhal. Toxicity (mg/m^3)	Value	Mobility (mmHg)	Value	(Table A-7) Matrix Value
2.Cadmium	25 (rat)	10	0.0E+00	1	5

Highest Environmental Toxicity/Mobility Matrix Value
(From Table A-7) equals **Final Matrix Value: 5**
(Max.=24)

1.6 Substance Quantity: 5.03 acres Source: 3 **Value: 7**
Explain basis: area=.9(2.35 acres)+.75(3.88 acres)
(Max.=10)

WORKSHEET 4 (CONTINUED)
AIR ROUTE

2.0 MIGRATION POTENTIAL

2.1 Containment: No cover; discharges/spills directly onto ground surface Source: 3 **Value: 10** (Max.=10)

3.0 TARGETS

3.1 Nearest Population: Green River Trail Site= 590 ft Source: 3 **Value: 10** (Max.=10)

3.2 Distance to, and Name(s) of, Nearest Sensitive Environment(s) Green River Trail Site = 590 feet Source: 6 **Value: 7** (Max.=7)

3.3 Population within 0.5 miles: $\sqrt{}$pop.= $\sqrt{}$(478x3) = 38 Source: 3 **Value: 38** (Max.=75)

4.0 RELEASE

Explain basis for scoring a release to air: No confirmed release Source: 3 **Value: 0** (Max.=5)

WORKSHEET 5
GROUND WATER ROUTE

1.0 SUBSTANCE CHARACTERISTICS

1.1 Human Toxicity

Substance	Drinking Water Standard (ug/l)	Val.	Acute Toxicity (mg/kg-bw)	Val.	Chronic Toxicity (mg/kg/day)	Val.	Carcino-genicity WOE	PF*	Val.
1.Arsenic	50	6	763	5	0.001	5	A	1.75	7
2.Cadmium	5.0	8	225	5	0.0005	5	B1	ND	-
3.Chromium (total)	100	6	-	ND	1	1	-	-	-
4.Lead	5.0	8	ND	-	ND	-	B2	-	-

*Potency Factor

Source: 1,2
Highest Value: 8
(Max.=10)

+2 Bonus Points? yes
Final Toxicity Value: 10
(Max.=12)

1.2 Mobility (Use numbers to refer to above listed substances)
Cations/Anions: 1 = 3 ; 2 = 3 ; 3 = 1 ; 4 = 2 Source: 1 **Value: 3**
(Max.=3)

OR

Solubility(mg/l): 1= ; 2= ; 3= ; 4= ; 5= ; 6= .

1.3 Substance Quantity: 20,000 cu yds of contam. soil Source: 3 **Value: 5**
Explain basis: at 2'depth, vol area = 20,000 cu yds
(Max.=10)

2.0 MIGRATION POTENTIAL

2.1 Containment Source: 3 **Value: 10**
Explain basis: spill/discharge onto ground
(Max.=10)

2.2 Net Precipitation: 19.2 inches Source: 5 **Value: 2**
(Max.=5)

2.3 Subsurface Hydraulic Conductivity: silty sand Source: 3 **Value: 3**
(Max.=4)

2.4 Vertical Depth to Ground Water: 0 - 25 feet Source: 3 **Value: 8**
(Max.=8)

WORKSHEET 5 (CONTINUED)
GROUND WATER ROUTE

3.0 TARGETS

3.1 Ground Water Usage: public supply, but alternate sources available with minimum hookup reqs Source: 8 **Value: 4** (Max.=10)

3.2 Distance to Nearest Drinking Water Well: 5,716 ft Source: 8 **Value: 1** (Max.=5)

3.3 Population Served within 2 Miles: √pop.=√pop>10000 Source: 8 **Value: 100** (Max.=100)

3.4 Area Irrigated by (Groundwater) Wells within 2 miles: 0.75 √no.acres = 0.75 (√ 50 acres) = 5 Source: 7 **Value: 5** (Max.=50)

4.0 RELEASE

Explain basis for scoring a release to ground water: confirmed release Source: 3 **Value: 5** (Max.=5)

SOURCES USED IN SCORING

1. Washington Ranking Method Toxicological Database
2. Analytical results for Joseph Simon & Sons Kent collected June 1995, and Site Data Summary and Preliminary Hazard Assessment, Kennedy/Jenks Consultants, January 9, 2002
3. Site Hazard Assessment, Public Health - Seattle & King County, August 27, 2002
4. National Weather Service Data
5. Isopluvials of 2-YR, 24-HR precipitation, NOAA Atlas 2, Vol.IX
6. Sensitive Areas Coverage, King County Geographic Information System Data
7. Washington State Department of Health Public Water Supply Listing
8. Washington State Water Use Data