CSID 2983

SITE HAZARD ASSESSMENT
WORKSHEET 1
SUMMARY SCORE SHEET

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

Kevik Cleaners
(AKA Desimone Property, Penthouse Cleaners, Kwik Drive-In Cleaners, 7-11 Food Store)
1614 Bellevue Way SE
Bellevue, WA 98004
T-24N, R-5E, Sec-5
TCP ID#: N17-5232-000
Tax Parcel #: 532610-0071
Longitude: 122°, 11', 52.87"
Latitude: 47°, 35', 46.97"
Method: 99
Site Assessed for the August 31, 1999 Update

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

The Kevik Cleaners site is a 0.20 acre commercial property located in the City of Bellevue. The site is served by the city sewer and water systems. Impervious surface and footing drainage water from this site is collected and drained by pipes and discharges to a storm drainage system pipe running south under Bellevue Way SE. This drainage system eventually discharges to surface water at Mercer Slough Nature Park, about 1200 feet from the site. The soils of the site are mostly covered by a one story retail building, concrete sidewalks, and asphalt covered parking areas and driveways. Some areas such as planting strips and landscaped areas, as well as low area below a concrete wall at the south of the site are open soils. The soils of the site are mainly glacial till consisting of silt and sand mixtures, and may include various amounts of fill, taken from the hillside which was excavated and replaced by a concrete bulkhead that buttresses the east end building against the slope.

Various dry cleaning establishments operated at this site from 1958 to 1983. These businesses were called Kevik Cleaners, Kwik Drive-In Cleaners, and Penthouse Cleaners. The last occupant of the building was a 7/11 Food Store. The building is now (June 1999) unoccupied. The site is owned by the Desimone family. The Desimone family also currently owns the neighboring property to the south, formally owned by and known as the Unocal property.

The Kevik Cleaners site was suspected as a source of Tetrachloroethylene contamination due to the site's history as a dry cleaning establishment. An Initial Investigation was conducted by Gail Colburn, Washington State Department of Ecology(Ecology), Northwest Regional Office (NWRO) on October 30, 1993. The investigation was conducted due to PCE (Tetrachloroethylene)contamination found in the ground water and property line soil of the neighboring and downslope property owned at that time by Unocal. The Unocal property was being remediated for petroleum contaminated soils due to leaking underground storage tanks which were being removed from the Unocal site.

The Kevik Cleaners site was listed on Ecology's Known or Suspected Hazardous Waste Sites List for suspected Halogenated Organic Compounds in soil and groundwater media on February 7, 1994. An Early Notice Letter was sent by Ecology to the owner of the property, Mondo Desimone, informing him of the inclusion of the site onto the Known or Suspected sites list on February 8, 1994.

Dalton, Olmstead, & Fugelvand, Inc., Bothell, WA (DOF Inc.)was hired as a consultant in 1994 to investigate the presence and extent of contamination on the Desimone

property. Groundwater monitoring wells were drilled and sampled, soil samples were collected, and soil vapor probes were completed on the site. Tetrachloroethylene contamination was found on the site with the most heavily contaminated area being located at the front of the building under the asphalt layer. Soil samples from this area showed contamination in the top two feet of soil, with the highest readings at MWD-2 showing 32 mg/kg Tetrachloroethylene at 1.5 feet depth, and BD-4 showed 8.1 mg/kg Tetrachloroethylene at 1 foot depth. No sampling was conducted under the building. Ground water sampling conducted in October to December 1994 by DOF Inc. showed levels of Tetrachloroethylene from 1.8 ug/l to 570 ug/l.

The most recent sampling event was conducted April 11, 1997, by SECOR International Incorporated, with the samples analyzed by Transglobal Environmental Geosciences Northwest Inc. Levels of Tetrachloroethylene were found above Model Toxic Control Act (MTCA) cleanup levels for ground water (5 ug/l for Tetrachloroethylene). MWD-1A showed levels of >600 ug/l, and 1280 ug/l for Tetrachloroethylene (duplicate samples). Other contaminants were found which did not exceed Method A levels. These levels were in MWD-2 where Tetrachloroethylene was found at 3.4 ug/l, and in MWD-1A where Trichloroethylene was found at 1.4 ug/l (Method A cleanup = 5 ug/l for Trichloroethylene), and Chloroform was found at 1.4 ug/l (No Method A cleanup level listed for Chloroform).

On the basis of this Site Hazard Assessment, completed by SKCDPH's Environmental Health Division, this site will be scored for the air, ground water and surface water routes.

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):

The Air/Environmental pathway is not scored due to lack of acute inhalation toxicity data for Tetrachloroethylene.

PATHWAY SCORES:

Surface Water/Human Health: 7.4 Surface Water/Environ.: 9.5

Air/Human Health: 26.5 Air/Environmental: **NS**

Ground Water/Human Health: ~~17.6~~ 21.3

OVERALL RANK: 4

WORKSHEET 2
ROUTE DOCUMENTATION

1. SURFACE WATER ROUTE

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

Tetrachloroethylene

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

The above substance concentrations are above MTCA Method A cleanup standards.

List those management units to be considered for scoring: Source: 2,3

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

Tetrachloroethylene

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

The above substance concentrations are above MTCA Method A cleanup standards.

List those management units to be considered for scoring: Source: 2,3

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

Tetrachloroethylene

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

The above substance concentrations are above MTCA Method A cleanup standards.

List those management units to be considered for scoring: Source: 2,3

Surface soil contamination.

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

Surface soil is exposed to weather with no containment.

WORKSHEET 4
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.	Carcino-genicity WOE	PF*	Val.
1.Tetrachloroethylene	5.0	8	800	5	0.01	3	B2	0.051	4
2.									
3.									
4.									
5.									
6.									

*Potency Factor

Source: 1
Highest Value: 8 (Max.=10)
+2 Bonus Points? No
Final Toxicity Value 8 (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.Tetrachloroethylene	5280	2		
2.				
3.				
4.				
5.				
6.				

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

1.3 Substance Quantity: Unknown- use default Source: 3 **Value: 1** (Max.=10)
Explain basis: estimated remaining contamination amount appears to be in range of 1 to 200 gal.

WORKSHEET 4 (CONTINUED)
SURFACE WATER ROUTE

2.0 MIGRATION POTENTIAL

2.1 Containment — Source: 3 — **Value: 4** (Max.=10)
Explain basis: spill/discharge, unmaintained run on, run off control.

2.2 Surface Soil Permeability: Sand & silt mix — Source: 3 — **Value: 3** (Max.=7)

2.3 Total Annual Precipitation: 34.8 inches — Source: 4 — **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 a flood plain. — Source: 8 — **Value: 0** (Max.=2)

2.6 Terrain Slope: drainage is piped at the street — Source: 8 — **Value: 3** (Max.=5)

3.0 TARGETS

3.1 Distance to Surface Water: 1,200 feet — Source: 8 — **Value: 7** (Max.=10)

3.2 Population Served within 2 miles (See WARM Scoring Manual Regarding Direction): $\sqrt{pop.} = \sqrt{0} = 0$ — Source: 6 — **Value: 0** (Max.=75)

3.3 Area Irrigated within 2 miles no. acres= 4
(Refer to note in 3.2.): $0.75\sqrt{4} = 0.75(2) = 1.5$ — Source: 7 — **Value: 2** (Max.=30)

3.4 Distance to Nearest Fishery Resource: 1,200 feet — Source: 8 — **Value: 9** (Max.=12)

3.5 Distance to, and Name(s) of, Nearest Sensitive Environment(s) 1,200 feet to Mercer Slough Nature Park a Fisheries Resource — Source: 8 — **Value: 9** (Max.=12)

4.0 RELEASE

Explain basis for scoring a release to surface water: No Confirmed release to surface water — Source: - — **Value: 0** (Max.=5)

WORKSHEET 5
AIR ROUTE

1.0 SUBSTANCE CHARACTERISTICS

1.1 Introduction (WARM Scoring Manual) - Please review before scoring

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. Tetrachloroethylene	1.1	9	-	ND	-	ND	B2	-	ND
2.									
3.									
4.									
5.									

*Potency Factor

Source: 1
Highest Value: 9 (Max.=10)
+2 Bonus Points? No
Final Toxicity Value: 9 (Max.=12)

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

1.3.1 Gaseous Mobility
Vapor Pressure(s) (mmHg): 1= 18 ; 2= ; 3= ; 4= ; 5= ; 6= Source: 1
Value: 4 (Max.=4)

1.3.2 Particulate Mobility
Soil type: sandy loam Source: 3
Erodibility: 86 Value: 1 (Max.=4)
Climatic Factor: 1-10

1.4 Highest Human Health Toxicity/Mobility Matrix Value (from Table A-7) equals **Final Matrix Value: 18** (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
1. Tetrachloroethylene	No Data				
2.					
3.					
4.					
5.					

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

1.6 Substance Quantity: Unknown- use default Source: 3 **Value: 1** (Max.=10)
Explain basis: estimated remaining contamination amount appears to be in range of 1 to 200 gal.

WORKSHEET 5 (CONTINUED)
AIR ROUTE

2.0 MIGRATION POTENTIAL

2.1 Containment: Covered by asphalt, no vapor collection system present. Source: 3 **Value: 5** (Max.=10)

3.0 TARGETS

3.1 Nearest Population: less than 1,000 feet Source: 3 **Value: 10** (Max.=10)

3.2 Distance to, and Name(s) of, Nearest Sensitive Environment(s) 1,027 feet- Mercer Slough Nature Park. Source: 3 **Value: 6** (Max.=7)

3.3 Population within 0.5 miles: $\sqrt{pop.} = \sqrt{2,624} = 51.22$ Source: 3 **Value: 51** (Max.=75)

4.0 RELEASE

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

WORKSHEET 6
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. Tetrachloroethylene	5.0	8	800	5	0.01	3	B2	0.051	4
2.									
3.									
4.									
5.									
6.									

*Potency Factor

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

+2 Bonus Points? No
Final Toxicity Value: 8 (Max.=12)

1.2 Mobility (Use numbers to refer to above listed substances)
Cations/Anions: 1= ; 2= ; 3= ; 4= ; 5= ; 6= . Source: 1 **Value: 2** (Max.=3)

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

1.3 Substance Quantity: Unknown- use default Source: 3 **Value: 1** (Max.=10)
Explain basis: estimated remaining contamination amount appears to be in range of 1 to 200 gal.

2.0 MIGRATION POTENTIAL

2.1 Containment Source: 3 **Value: 6** (Max.=10)
Explain basis: Covered by asphalt, no maintenance, no liner, no Leachate collection, no bulk liquids known disposed at site.

2.2 Net Precipitation: 18.7 inches Source: 4 **Value: 2** (Max.=5)

2.3 Subsurface Hydraulic Conductivity: Sandy Silt Source: 3 **Value: 3** (Max.=4)

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

WORKSHEET 6 (CONTINUED)
GROUND WATER ROUTE

3.0 TARGETS

3.1 Ground Water Usage: Public supply, alternate sources available. Source: 3 **Value:** 4 (Max.=10)

3.2 Distance to Nearest Drinking Water Well: 4,000 ft Source: 6 **Value:** 2 (Max.=5)

3.3 Population Served within 2 Miles: √pop.= √390 Source: 6 **Value:** 20 (Max.=100)

3.4 Area Irrigated by (Groundwater) Wells within 2 miles: 0.75 √no.acres= 0.75 √ 0 =0.75 (0)= 0 Source: 7 **Value:** 0 (Max.=50)

4.0 RELEASE

Explain basis for scoring a release to ground water: No confirmed release Source: - **Value:** ~~0~~ 5 (Max.=5)

SOURCES USED IN SCORING

1. Washington Ranking Method Toxicological Data-base.
2. Analytical Results from Letter Report for Groundwater Sampling and Soil Gas Survey, 1614 and 1624 Bellevue Way SE, Bellevue, WA, SECOR PN:00335-002-01, sampled by SECOR International Inc., reported on April 11, 1997. Analytical results by Transglobal Environmental Geosciences Northwest Inc.
3. Site Hazard Assessment site visit, Public Health Seattle and King County, June 4, 1999
4. National Weather Service Data.
5. Isopluvials of 2-Year, 24 Hour Precipitation, NOAA atlas 2, Vol. IX.
6. Washington State Department of Health Public Water Supply Listing.
7. Washington State Water Use Data.
8. City of Bellevue Permit Center Data and Maps, May 1999.