CSID 852

WORKSHEET 1
SUMMARY SCORE SHEET

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

EASTSIDE LAUNDRY
116 N Turner Street
Olympia, WA 98506

Thurston County, S11/T18N/R2W
Tax Parcel #: 80800500102
Facility ID: 14214153
Date scored 02/01/02

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

Low concentrations of tetrachloroethene (PCE) were first discovered in subsurface soil in and around Eastside Laundry in March 2000 during a site assessment. Subsequent investigations conducted in the same area in April 2001 and August 2001 revealed low levels of PCE and several petroleum hydrocarbons in the soil, and moderately high levels of PCE in the groundwater.

Various practices by former owners/operators of Eastside Laundry were reported to be responsible for the PCE contamination, this included dry cleaning machine maintenance and leak problems, along with the disposal of laundry wash waters onto the floor. Reportedly, when the current owner of the Eastside Laundry acquired the business, several self-serve dry-cleaning machines, which had been in operation at the time, were found to be leaking solvent and the floor had significant staining. These machines were removed, and replaced with the current closed-loop machine.

Thurston County Health Department along with Washington Department of Health (DOH) conducted air sampling of the adjacent barbershop and insurance building in January of 2002. Analytical results showed elevated levels of PCE, toluene, ethylbenzene and mixed xylenes in the businesses.

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 suspected source of petroleum hydrocarbons (toulene, xylenes,and ethylbenzene) detected in interior soil samples may be from impurities within the original dry cleaning solvent, while the suspected source of petroleum hydrocarbons detected in exterior soil samples is believed to be the result of a release of petroleum products by the adjacent automobile maintenance facility. Other suspected sources of contamination include the possible location of a former underground storage tank and a floor drain located in the area of the present dry cleaning machine.

Due to contamination documented onsite as being subsurface, all route will be scored with the exception of the surface water route. The complete site is paved and scored as a landfill. Only PCE will be scored in the air route. The air analytical data can not conclusively confirm that PCE is being released from subsurface soils.

ROUTE SCORES:

Surface Water/Human Health: NS

Surface Water/Environ.: NS

Air/Human Health: 31.3

Air/Environmental: NS

Ground Water/Human Health: 22.7

OVERALL RANK: 3

WORKSHEET 2
ROUTE DOCUMENTATION

1. SURFACE WATER ROUTE-Not scored

List those substances to be considered for scoring. Source: NS

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

List those management units to be considered for scoring. Source: NS

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

2. AIR ROUTE

List those substances to be considered for scoring. Source: 10
Tetrachloroethylene (PCE)

Explain basis for choice of substance(s) to be used in scoring.
The above substance was detected in air samples

List those management units to be considered for scoring. Source: 3,10
Contaminated on site subsurface soils.

Explain basis for choice of unit to be used in scoring.
Analytical results from air sampling

3. GROUND WATER ROUTE

List those substances to be considered for scoring. Source: 3
Tetrachloroethylene (PCE

Explain basis for choice of substance(s) to be used in scoring.
The above substance was detected at elevated concentration in ground water in excess of MTCA clean-up levels.

List those management units to be considered for scoring. Source: 3
Subsurface soils. The site is scored as a landfilled area that has contaminated soils remaining.

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

WORKSHEET 3 (If Required)
SUBSTANCE CHARACTERISTICS WORKSHEET
FOR MULTIPLE UNIT/SUBSTANCE SITES

Unit: **NA**

	Combination 1	Combination 2	Combination 3
1. SURFACE WATER ROUTE Substance(s):			
Human Toxicity Value:			
Environ. Toxicity Value:			
Containment Value:			
Rationale:			
Surface Water Human Subscore:	(+3)(+1)= ( )( ) =	(+3)(+1)= ( )( ) =	(+3)(+1)= ( )( ) =
Surface Water Environ. Subscore:	(+3)(+1)= ( )( ) =	(+3)(+1)= ( )( ) =	(+3)(+1)= ( )( ) =
2. AIR ROUTE Substance(s):			
Human Toxicity/Mobility Value:			
Containment Value:			
Rationale:			
Air Human Subscore:	(+3)(+1)= ( )( ) =	(+3)(+1)= ( )( ) =	(+3)(+1)= ( )( ) =
Air Environ. Subscore:	(+3)(+1)= ( )( ) =	(+3)(+1)= ( )( ) =	(+3)(+1)= ( )( ) =
3. GROUND WATER ROUTE Substance(s):			
Human Toxicity Value:			
Containment Value:			
Rationale:			
Ground Water Subscore:	(+3)(+1)= ( )( ) =	(+3)(+1)= ( )( ) =	(+3)(+1)= ( )( ) =

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

Surface Water -
Air -
Ground Water -

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		Acute Toxicity		Chronic Toxicity		Carcinogenicity		
	(ug/m^3)	Val.	(mg/m^3)	Val.	(mg/kg/day)	Val.	WOE	PF	Val.
1. Tetrachoroethene	1.1	9	-	-	-	-	B2	-	-
2.									
3.									
4.									
5.									

Source: 10 Value: 9 (Max. =10)
+2 Bonus Points?____
Final Toxicity Value: 9

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

1.3.1 Gaseous Mobility
Vapor Pressures (mmHg) **Source: 1 Value: 4 (Max. =4)**
1. 18=4
2.
3.
4.
5.

1.3.2 Particulate Mobility **Source:_____ Value: NS (Max. =4)**
Soil Type:
Erodibility:
Climactic Factor:

1.4 Highest Human Health Toxicity/Mobility Matrix Value (from Table A-7)
Equals Final Matrix Value **Source: 1 Value: 18 (Max. =24)**

1.5 Environmental Toxicity/Mobility

Non-human Mammalian Acute (Table A-7)

Substance	Inhalation Toxicity (mg/m^3)	Value	Mobility (mmHg)	Value	Matrix Value
1. Not scored					
2.					
3.					
4.					
5.					

Highest Environmental Toxicity/Mobility Matrix Value (From Table A-7) equals
Final Matrix Value: ns

1.6 Substance Quantity: **Source: 3 Value: 1 (Max. =10)**

Explain basis: Unknown

2.0 MIGRATION POTENTIAL

2.1 Containment: **Source: 2 Value: 5 (Max. =10)**
contaminated soil - no vapor collection system.

3.0 TARGETS

3.1 Nearest Population **Source: 6 Value: 10 (Max. =10)**
Less than 500 feet

3.2 Distance to and Names of Nearest Sensitive Environments
Source: NA Value: NA (Max. =7)
Not applicable

3.3 Population within 0.5 miles: **Source: 6 Value: 62 (Max. =75)**
pop. = 3900 = 62.4

4.0 RELEASE
Explain basis for scoring a release to air:
Analytical results from the drycleaners show elevated Levels of PCE. This does not conclusively indicate that the release is from subsurface soils. **Source: 10 Value: 0 (Max. =5)**

WORKSHEET 6
GROUND WATER ROUTE

1.0 SUBSTANCE CHARACTERISTICS

1.1 Human Toxicity

Substance	Drinking Water Standard		Acute Toxicity		Chronic Toxicity		Carcinogenicity		
	(ug/m^3)	Val.	(mg/kg/bw)	Val.	(mg/kg/day)	Val.	WOE	PF	Val.
1. Tetrachloroethene (PCE)	5	8	800	5	0.01	3	B2	0088	3
2.									
3.									
4.									
5.									

Source: 1, 3 **Value:** 8 **(Max. =10)**
+2 Bonus Points? ____
Final Toxicity Value: 8

1.2 Mobility
(Use numbers to refer to above listed substances)
Cations/Anions **Source:** __ **Value:** __ **(Max. =12)**
1.
2.
3.
4.
5.

OR Solubility **Source:** 1 **Value:** 2 **(Max. =3)**
1. 150=2
2.
3.
4.
5.

1.3 Substance Quantity **Source:** 3 **Value:** 1 **(Max. =10)**

Explain basis: unknown

2.0 MIGRATION POTENTIAL

2.1 Containment **Source:** 2 **Value:** 5 **(Max. =10)**
Scored as a landfill
Explain Basis: No liner -3 maintained engineered cover - 0
No leachate collection system - 2

2.2 Net Precipitation (inches): **Source:** 4, 5 **Value:** 4 **(Max. =5)**
November - April = 33.58"

2.3 Subsurface Hydraulic Conductivity: **Source:** 3 **Value:** 3 **(Max. =4)**
Exploration Logs

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

3.0 Targets

3.1 Ground Water Usage: **Source:** 6 **Value:** 4 **(Max. =10)**
Private Supply, alternative source

3.2 Distance to Nearest Drinking Well (ft): **Source:** 6 **Value:** 2 **(Max. =5)**
~3,000 feet

3.3 Population Served within 2 miles: **Source:** 9 **Value:** 31 **(Max. =100)**
941 people
pop. = x = n
147 from wells, 500 from artsian well

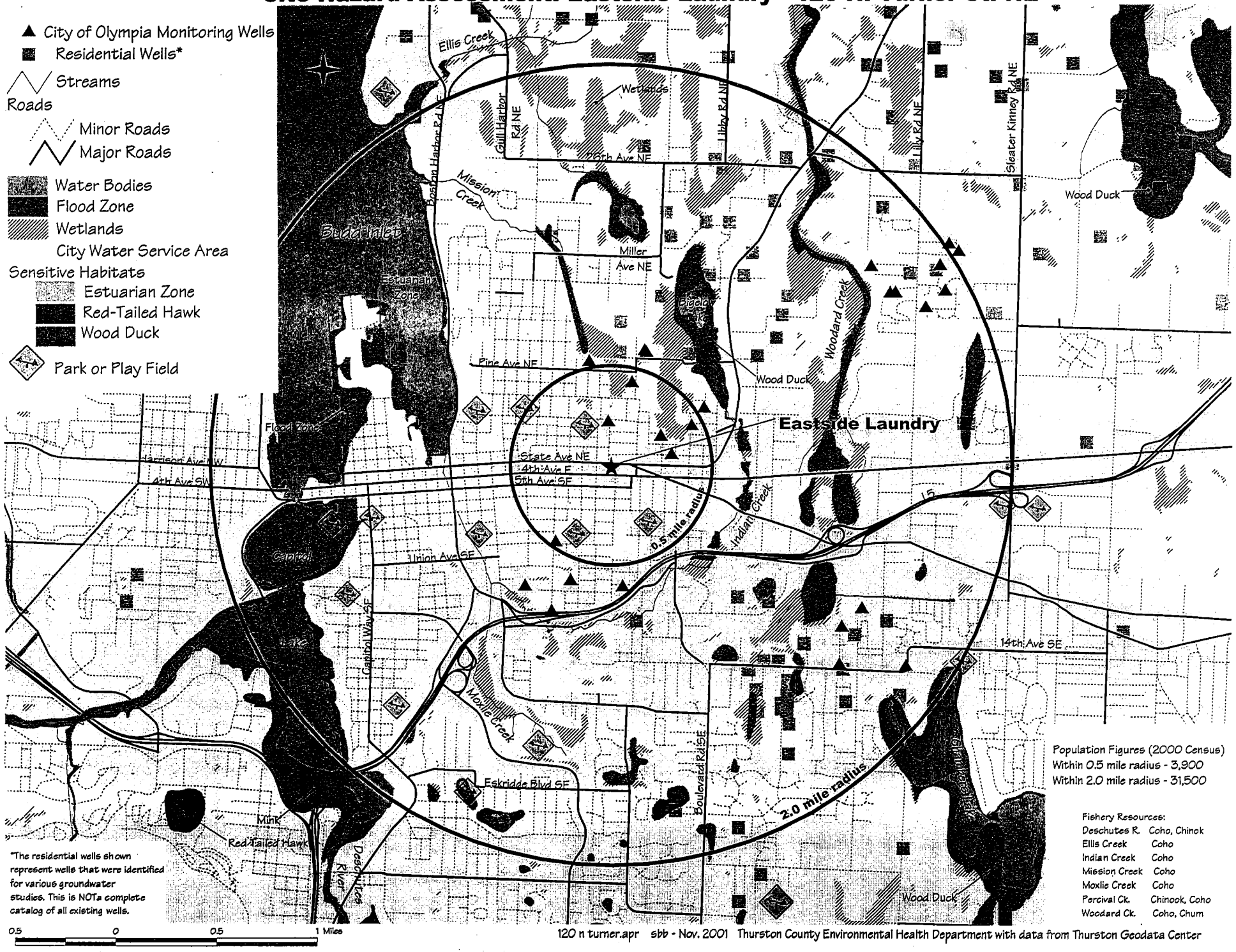
3.4 Area irrigated by Wells within 2 miles: **Source:** 8 **Value:** 11 **(Max. =50)**
225 acres
0.75 # of acres = n
0.75 x = 0.75(y) = n

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

SOURCES USED IN SCORING

1. Washington Department of Ecology, Toxicology Database for use in WARM scoring. January 1992.
2. Washington Department of Ecology, WARM ranking manual. April 1992.
3. Subsurface Exploration and Installation of Groundwater Monitoring Wells, Eastside Laundry, prepared by G-Logic, Inc. October 2001.
4. Thurston County Climactic Data, National Weather Service, 1993-2000.
5. "Table 16 - Estimated Evapotranspiration (Inches of Water), EM .2462, p.42" for Thurston County at Olympia Airport. Sum of (Precip. -Ea(6)) for months of November - April.
6. Thurston County Geodata Center Map and Figure - 120n turner. Apr/s66 - November 2001.
7. Phase 1 and 2 Environmental Site Assessment, prepared by Saltbush Environmental. March 22, 2000.
8. Washington Department of Ecology, Southwest Regional Office, Water Rights Application Tracking System. December 11, 2001.
9. Victoria DeCillo, City of Olympia. Personal Communication, December 12, 2001.
10. Atmospheric Analysis & Consulting, Inc., Laboratory Analysis report dated 1/14/02-Votatile organic compounds by EPA TO-15.

Site Hazard Assessment: Eastside Laundry - 120 N. Turner St. NE



Population Figures (2000 Census)
Within 0.5 mile radius - 3,900
Within 2.0 mile radius - 31,500

Fishery Resources:

Deschutes R.	Coho, Chinok
Ellis Creek	Coho
Indian Creek	Coho
Miesion Creek	Coho
Moxlie Creek	Coho
Percival Ck.	Chinook, Coho
Woodard Ck.	Coho, Chum

*The residential wells shown represent wells that were identified for various groundwater studies. This is NOTa complete catalog of all existing wells.

120 n turner.apr sbb - Nov. 2001 Thurston County Environmental Health Department with data from Thurston Geodata Center