

CSID 4679

**WORKSHEET 1  
SUMMARY SCORE SHEET**

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

Shelton Laundry & Cleaners  
117 N. 1<sup>st</sup> Street  
Shelton, Mason county, WA 98584-3541  
Longitude: 123.00° 06' 0.00"  
Latitude: 47.00° 12' 48.8"

Sec 19/T20N/R03W  
Ecology Facility Site ID: 65663568

Site scored/ranked for 02/26/02 update

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

On June 20, 1997, the Washington State Department of Ecology (Ecology) Southwest Regional Office (SWRO) received a January 1997 Phase I Environmental Site Assessment (ESA) Letter Report and a May 1997 Phase II Subsurface Investigation Report, regarding potential subsurface soil/groundwater contamination at the Shelton Dry Cleaners, aka Shelton Laundry & Cleaners and Shelton Cleaners and Laundry. The reports were submitted by Wells Fargo Bank for site assessment activities at their Shelton, Washington property, and the resultant data indicated the cleaning business to be the prime suspect in reportable concentrations of tetrachloroethylene (perchloroethylene, or PCE) found in groundwater samples.

The site was listed on Ecology's Confirmed and Suspected Contaminated Sites List (aka Integrated Site Information System or ISIS List) on December 12, 1997, as Shelton Laundry & Cleaners (SLC), with suspected contamination of soil and ground water by halogenated organic compounds (i.e., PCE).

Wells Fargo contractor, Building Analytics, conducted a Phase I ESA of the Shelton bank property in January 1997, identifying a dry cleaning business to the north (SLC), and several gasoline stations to the east and northeast/northwest. A follow-up Phase II subsurface investigation was conducted in May 1997, with five shallow soil probes advanced to a maximum depth of approximately 11 feet below ground surface. Groundwater and soil samples were collected from each boring.

Since there were no reportable total petroleum hydrocarbon or other volatile organic compounds such as benzene, toluene, ethylbenzene, or xylene (BETX) detected in any of the five water samples, no analyses were done on the soil samples, and it was concluded there was no impact on the Wells Fargo property from any of the nearby gasoline service stations. However, the groundwater sample taken from the boring directly south of the dry cleaners showed a PCE concentration of 130 parts per billion (ppb), significantly in excess of its Model Toxic Control Act (MTCA) Method A concentration of 5 ppb.

No initial investigation by Ecology SWRO was noted in the site files, however under MTCA, the Building Analytics report can serve as sufficient documentation for an ISIS listing for further investigation at the site under MTCA.

Additional information about the site was presented in an August 10, 1998 subsurface investigation report prepared by GeoEngineers for SLC. The commercial laundry and dry cleaning facility has been in operation since 1935. The current dry cleaning machine was installed in 1993, with the obsolete machine being sold for scrap. An unknown quantity of dry cleaning solvent, assumed to be PCE, was reportedly spilled in the alley to the south of the building when the older machine was loaded onto a truck. The PCE reportedly infiltrated through the broken asphalt of the alley into the underlying soil. It was noted that two additional groundwater samples, collected by SLC consultant May 21, 1997 immediately adjacent to the site property southern boundary, showed PCE concentrations of 620 ppb and 1510 ppb, the latter sample taken in the general area of the PCE spill.

GeoEngineers conducted additional soil and ground water sampling July 24, 1998. PCE concentrations of 280 ppb and 100 ppb were detected, as well as significant concentrations of trichloroethylene (TCE), cis-1,2-dichloroethylene and trans-1,2-dichloroethylene. Followup groundwater sampling was conducted by GeoEngineers in November 1998, July 1999, and September 2000. While PCE concentrations were lower than previously measured (130, 39 and 25 ppb), they were still in excess of the MTCA Method A cleanup level for PCE in groundwater of 5 ppb.

**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):**

Due to the significant contamination documented on-site being primarily subsurface, the surface water and air routes are not applicable for WARM scoring for this site, thus only the ground water route will be scored. The total population usage of groundwater for drinking water from all private and public supply wells appears to be in excess of 10,000, so the maximum value of 100 will be used for that scoring value.

**ROUTE SCORES:**

Surface Water/Human Health:	<u>NS</u>	Surface Water/Environ.:	<u>NS</u>
Air/Human Health:	<u>NS</u>	Air/Environmental:	<u>NS</u>
Ground Water/Human Health:	<u>62.1</u>		

**OVERALL RANK:** 2

\*Not scored

**WORKSHEET 2  
ROUTE DOCUMENTATION**

**1. SURFACE WATER ROUTE - Not Applicable/Not Scored.**

**2. AIR ROUTE - Not Applicable/Not Scored.**

**3. GROUND WATER ROUTE**

**List those substances to be considered for scoring:                      Source: 1-3**

Tetrachloroethylene (aka perchloroethylene or PCE), trichloroethylene (TCE);  
Cis-1,2-dichloroethylene (Cis-1,2-DCE); and trans-1,2-dichloroethylene (Trans-1,2-  
DCE).

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

All of these have been documented to occur in significant concentrations in subsurface soil or groundwater samples and are attributable to the site. The most recent measured concentrations of PCE still exceed its MTCA method A cleanup level. Whereas the latter components were not detected in the latest ground water sampling event (September 2000), they will still be used in assigning scoring values for ranking the site, as they are known PCE breakdown products and sufficient sampling has yet occurred to rule out their re-occurrence.

**List those management units to be considered for scoring:                      Source: 1-3**

Contaminated surface/subsurface soils.

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

Spill/discharge caused contaminated subsurface soils/groundwater.

**WORKSHEET 3 (If Required)**  
**SUBSTANCE CHARACTERISTICS WORKSHEET**  
**FOR MULTIPLE UNIT/SUBSTANCE SITES**  
Combination 1    Combination 2    Combination 3

Unit: Section Not Applicable.

**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:  
 Environ. 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 6  
GROUND WATER ROUTE**

**1.0 SUBSTANCE CHARACTERISTICS**

**1.1 Human Toxicity**

Substance	Drinking Water Standard		Acute Toxicity		Chronic Toxicity		Carcinogenicity		
	(ug/l)	Val.	(mg/kg-bw)	Val.	(mg/kg/day)	Val.	WOE	PF	Val.
1. PCE	5	8	800	5	0.01	3	B2=.8	.051=5	4
2. TCE	5	8	2402	3	ND	-	B2=.8	.011=5	4
3. Cis-1,2-DCE	70	6	ND	-	0.01	3	ND	ND	-
4. Trans-1,2-DCE	100	6	7902	1	0.02	1	ND	ND	-

Potency Factor Source: 1-3,5  
Highest Value: 8  
(Max.=10)  
+2 Bonus Points? 2  
**Final Toxicity Value: 10**  
(Max.=12)

1.2 Mobility (Use numbers to refer to above listed substances)  
 Cations/Anions: \_\_\_\_\_ Source: 1-3,5 Value: 3  
(Max.=3)

Or

Solubility(mg/l): 1) 1.5E+02 = 2; 2) 1.1E+03 = 3;  
3) 3.5E+03 = 3; 4) 6.3E+03 = 3;

1.3 Substance Quantity: Unknown, use default value = 1 Source: 6 Value: 1  
 Explain basis: \_\_\_\_\_  
(Max.=10)

**2.0 MIGRATION POTENTIAL**

2.1 Containment Source: 1-3,6 Value: 9  
 Explain basis: Spill to "ground", contaminated soil through  
Asphalt "cover". Score as "landfill": No liner (3); low perm.  
Cover/unknown maintenance (1); No leachate collection system (2);  
Free liquid documented to have been disposed (3).  
(Max.=10)

2.2 Net Precipitation: Nov-April = 49.8"-5.3" = 44.5" Source: 7 Value: 5  
(Max.=5)

2.3 Subsurface Hydraulic Conduct.: Sands/gravels/silts Source: 1-3 Value: 3  
(Max.=4)

2.4 Vertical Depth to Ground Water: Obs. Release = 0' Source: 1-3 Value: 8  
(Max.=8)

**WORKSHEET 6 (CONTINUED)**  
**GROUND WATER ROUTE**

**3.0 TARGETS**

- |     |  |                    |  |
|-----|--|--------------------|--|
| 3.1 | Ground Water Usage: <u>Unthr. Alts available</u>   | Source: <u>8,9</u> | Value: <u>4</u><br><small>(Max.=10)</small>    |
| 3.2 | Dist. to Nearest Drinking Water Well: <u>600-1,300'</u>  | Source: <u>8,9</u> | Value: <u>4</u><br><small>(Max.=5)</small>     |
| 3.3 | Population Served within 2 Miles: <u>Pop. &gt;10,000=100</u>   | Source: <u>8,9</u> | Value: <u>100</u><br><small>(Max.=100)</small> |
| 3.4 | Area Irrigated by (Groundwater) Wells<br>within 2 miles: <u>0.75(no.acres)<sup>1/2</sup></u><br><u>None doc.</u> | Source: <u>8,9</u> | Value: <u>0</u><br><small>(Max.=50)</small>    |
- 4.0 RELEASE**  
Explain basis for scoring a release to ground water: Documented by analytical data      Source: 1-3      Value: 5  
(Max.=5)
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**SOURCES USED IN SCORING**

1. Letter Report/Phase II Subsurface Investigation, Wells Fargo Bank Property, Building Analytics, June 1997.
2. Report - Subsurface Investigation, Shelton Cleaners and Laundry, Shelton, Washington, GeoEngineers, August 10, 1998..
3. Report - Ground Water Monitoring, Shelton Cleaners and Laundry, Shelton, Washington, GeoEngineers, October 2, 2000.
4. Site Drive-by, September 14, 2001.
5. Washington Department of Ecology, Toxicology Database for Use in Washington Ranking Method Scoring, January 1992.
6. Washington Department of Ecology, WARM Scoring Manual, April 1992.
7. See attached table identified as Reference 7.
8. U.S. EPA SITEINFO GIS Query for lat./long. of site - attached.
9. Water Rights Application System (WRATS) printout for two-mile radius of site.