



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

PO Box 47775 • Olympia, Washington 98504-7775 • (360) 407-6300

April 2, 2012

Mr. Mark A. Chandler
TOC Holdings Co.
2737 West Commodore Way
Seattle, WA 98199

Re: Further Action at the following Site:

- Site Name: J&D Mini Market 105
- Site Address: 408 North 23rd Avenue, Kelso
- Facility/Site No.: 24922556
- Cleanup Site ID No.: 5760
- VCP Project No.: SW1195

Dear Mr. Chandler:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your independent cleanup of the J&D Mini Market 105 facility (Site). This letter provides our opinion. We are providing this opinion under the authority of the Model Toxics Control Act (MTCA), Chapter 70.105D RCW.

This letter replaces the Ecology No Further Action (NFA) determination of February 5, 2002 for soil and groundwater, as well as the NFA determination of July 12, 2001 for soil only. Ecology's NFA determination of February 5, 2002 and July 12, 2001 issued to this Site is hereby rescinded while you conduct the necessary additional and final cleanup at this Site to address the MTCA substantive requirements for the petroleum hydrocarbons.

Issue Presented and Opinion

Is further remedial action necessary to clean up contamination at the Site?

YES. Ecology has determined that further remedial action is necessary to clean up contamination at the Site.

This opinion is based on an analysis of whether the remedial action meets the substantive requirements of MTCA, Chapter 70.105D RCW, and its implementing regulations, Chapter 173-340 WAC (collectively "substantive requirements of MTCA"). The analysis is provided below.

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Description of the Site

This opinion applies only to the Site described below. The Site is defined by the nature and extent of contamination associated with the following release:

- Petroleum hydrocarbons and related constituents into the Soil and Groundwater.

Enclosure A includes a detailed description and diagram of the Site, as currently known to Ecology.

Please note a parcel of real property can be affected by multiple sites. At this time, we have no information that the parcel(s) associated with this Site are affected by other sites.

Basis for the Opinion

This opinion is based on the information contained in the following documents:

1. Fourth Quarter 2011 Groundwater Monitoring Report, TOC Holdings Co. Facility No. 01-105, 408 North 23rd Avenue, Kelso, Washington, date January 20, 2012 by Kleinfelder. *[Note: this report summarizes all previous groundwater data, so all previous groundwater monitoring reports were not listed here but can be found in the Ecology site file]*
2. Groundwater Remediation Pilot Study Report, Time Oil Co. Facility Number 01-105, 408 North 23rd Avenue, Kelso, Washington, date August 31, 2005 by Kleinfelder.
3. Letter to Mr. Scott Sloan (Time Oil Company) from Mr. Charles S. Cline (Ecology), RE: No Further Action determination with institutional controls, dated February 5, 2002.
4. Letter to Mr. Scott Sloan (Time Oil Company) from Mr. Charles S. Cline (Ecology), RE: No Further Action determination for soil only, dated July 12, 2001.
5. Voluntary Cleanup Action Report, Time Oil Property No. 01-105, 408 North 23rd Avenue, Kelso, Washington, dated October 26, 2000 by Kleinfelder.
6. Results of Site Assessment, Time Oil Property #01-105, 408 North 23rd Avenue, Kelso, Washington, dated February 15, 1994 by Environmental Science and Engineering, Inc.
7. Underground Storage Tank Removal Investigation, Highlander Market Facility, 408 North 23rd Avenue, Kelso, Washington, dated May 21, 1991 by SEACOR.

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Those documents are kept in the Central Files of the Southwest Regional Office of Ecology (SWRO) for review by appointment only. You can make an appointment by calling the SWRO resource contact at (360) 407-6365.

This opinion is void if any of the information contained in those documents is materially false or misleading.

Analysis of the Cleanup

Ecology has concluded that **further remedial action** is necessary to clean up contamination at the Site. That conclusion is based on the following analysis:

1. Characterization of the Site.

Ecology has determined your characterization of the Site is not sufficient to establish cleanup standards and select a cleanup action.

The Site is currently owned by the North Congregation of Jehovah's Witnesses who operate the on-Site building. The remainder of the Site is paved parking and open grassy areas. A gasoline station and convenience store with a car wash formerly operated on Site. The underground storage tanks (USTs) and associated pump island were removed from the Site in 1991. Confirmation soil samples indicated that soils containing gasoline-range petroleum hydrocarbons (TPH-G) and benzene, toluene, ethylbenzene, and xylene (BTEX) compounds above MTCA Method A cleanup levels remained in place beyond the limits of the excavation (*see attached Table 1*).

Additional investigations at the Site in 1992 and 1993 included the installation of nine monitoring wells (MW-1 through MW-9). Groundwater data collected from these wells indicated that groundwater was impacted with TPH-G and BTEX compounds at concentrations exceeding MTCA Method A cleanup levels (*see attached Table 3*). The locations of these wells were sufficient to define the extent of the groundwater plume.

Soil borings advanced on Site in 1992, 1997, and 2000 confirmed that concentrations of TPH-G and BTEX compounds were still present in soil in excess of MTCA Method A cleanup levels (*see attached Tables 2, 5, and 6*). These investigations defined the lateral extent of residual contamination in soil; however, contamination was not defined vertically.

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Based on a review of the above-listed documents, Ecology has the following comments:

1. Since UST removal activities in 1991, no additional soil excavation is known to have occurred at the Site. Soil data collected since the UST removal activities have indicated residual contamination is present above MTCA Method A cleanup levels. In 2000, a Site-specific cleanup level of 4,326 milligrams per kilogram (mg/kg) was calculated for the Site for protection of the Direct Contact Pathway. This is a high value for a gasoline Site. Ecology used the same numbers to run the calculation in the current MTCA TPH11.1 worksheets and calculated a value of 2,287 mg/kg for direct contact and 17 mg/kg for protection of groundwater (*see attached worksheet*). Further, upon review of the soil data, much of the data shows contamination at depth that was never defined vertically. Additional soil borings need to be advanced at the Site in areas where soil contamination was historically detected to determine whether residual contamination is still present. Borings should be advanced in locations where contamination was previously identified above MTCA Method A cleanup levels, and sufficient samples need to be collected from each boring to adequately define the vertical extent of residual contamination. According to Tables 1, 2, 5, and 6 (*attached*) of the October 2000 report, the extent of contamination was not defined vertically in the excavation sidewall and dispenser bottom samples, as well as in borings B-1, GP-3, GP-6, GP-9, GP-15, GP-19, and GP-20. If residual contamination in soil at these locations can be shown to have attenuated below current MTCA Method A cleanup levels, then the soil at the Site will be considered to be in compliance.
2. If residual soil contamination is determined to still be present above current MTCA Method A cleanup levels, a Feasibility Study will need to be provided to identify and evaluate all practicable alternatives for cleanup. Ecology does not recommend using the Site-specific cleanup level calculated for the Site. The calculated value for protection of groundwater is 17 mg/kg, which is lower and more stringent than the Method A value of 30 mg/kg. While groundwater data collected to date has shown a decrease in concentrations to below MTCA cleanup levels, some of the impacted soil left in place in the former UST basin, dispenser area, and areas immediately to the south are covered with asphalt paving. The asphalt acts like a cap, preventing stormwater from leaching through the soil and mobilizing potentially contaminated soils. If residual contaminated soils are still present beneath the asphalt, then cleanup levels for protection of groundwater would apply. In addition, the existing restrictive covenant would need to remain in effect for the Site with periodic monitoring of the groundwater and maintenance of the cap until such time it could be demonstrated that soils beneath the Site are in compliance with Method A cleanup levels.

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3. If residual soil contamination is determined to still be present above current MTCA Method A cleanup levels, and the preferred remedy is to manage it in place under the existing restrictive covenant, then an evaluation of the soil-to-vapor pathway will need to be done. Please see WAC 173-340-740(3)(b)(iii)(C) for details on this requirement. The need for this evaluation would be triggered by the presence of volatile contaminants, such as TPH-G and benzene, in soil and/or groundwater above MTCA Method A cleanup levels. Please refer to Ecology's Guidance for Evaluating Soil Vapor Intrusion in Washington State for guidance on evaluating this pathway. The guidance can be found on Ecology's website at <http://www.ecy.wa.gov/programs/tcp/policies/VaporIntrusion/vig.html>. Ecology recommends that vapor samples be analyzed for volatile organic compounds (VOCs) and air-phase petroleum hydrocarbons (APH), and the results run through Ecology's four-phase model to determine cleanup levels protective of this pathway.
4. Ecology recommends providing a work plan for review for the activities noted above to ensure any additional work is likely to meet the substantive requirements of MTCA.
5. Ecology concurs that groundwater data collected to date has demonstrated compliance with MTCA cleanup standards. However, as noted above, if residual contaminated soil is still present beneath the Site, some frequency of long-term compliance monitoring will be required.
6. In accordance with WAC 173-340-840(5) and Ecology Toxics Cleanup Program Policy 840 (Data Submittal Requirements), data generated for Independent Remedial Actions shall be submitted simultaneously in both a written and electronic format. For additional information regarding electronic format requirements, see the website <http://www.ecy.wa.gov/eim>. Be advised that according to the policy, any reports containing sampling data that are submitted for Ecology review are considered incomplete until the electronic data has been entered. Please ensure that data generated during on-site activities is submitted pursuant to this policy. **Data must be submitted to Ecology in this format for Ecology to issue a No Further Action determination.** Please be sure to submit all soil and groundwater data collected to date, as well as any future data, in this format. Data collected prior to August 2005 (effective date of this policy) is not required to be submitted; however, you are encouraged to do so if it is available. Be advised that Ecology requires up to two weeks to process the data once it is received.

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2. Establishment of cleanup standards.

Ecology has determined the cleanup levels and points of compliance you established for the Site do not meet the substantive requirements of MTCA.

To date, cleanup levels used at the Site included Site-specific Method B values calculated for soil, and MTCA Method A cleanup levels for groundwater. Ecology no longer considers the Site-specific Method B cleanup level calculated for the Site in 2000 to be protective of human health and the environment. As noted in Comment #1 above, a Site-specific cleanup level of 4,326 mg/kg was calculated for the Site for protection of the Direct Contact Pathway. Not only is this a high value for a gasoline Site, but only one sample was used to represent the whole Site in the calculation. Ideally, at least three samples should be used to be representative of the distribution of contaminants at the Site, then use the average of the calculated values as your cleanup level. Ecology used the same numbers to run the calculation in the current MTCA TPH11.1 worksheets and calculated a value of 2,287 mg/kg for direct contact and 17 mg/kg for protection of groundwater (*see attached worksheet*). Since the calculated value for protection of groundwater is more stringent than the Method A value, and since the one sample is not necessarily representative of the entire Site, Ecology recommends using MTCA Method A cleanup levels for soil.

Standard points of compliance were used for the Site. The point of compliance for protection of groundwater shall be established in the soils throughout the Site. For soil cleanup levels based on human exposure via direct contact or other exposure pathways where contact with the soil is required to complete the pathway, the point of compliance shall be established in the soils throughout the Site from the ground surface to 15 feet bgs. In addition, the point of compliance for the groundwater shall be established throughout the Site from the uppermost level of the saturated zone extending vertically to the lowest most depth that could potentially be affected by the Site.

3. Selection of cleanup action.

Ecology has determined the cleanup action you selected for the Site does not meet the substantive requirements of MTCA.

Cleanup actions conducted at the Site to date included source removal and partial excavation of petroleum-contaminated soil (PCS), and enhanced biodegradation of the

groundwater through in-situ chemical oxidation (ISCO). Residual contaminated soils are potentially still present beneath the Site that may warrant further cleanup.

4. Cleanup.

Ecology has determined the cleanup you performed does not meet any cleanup standards at the Site.

The USTs, pump island, and associated piping were removed from the Site in 1991. Perched groundwater and free product were encountered in the excavation. About 250 gallons of water and product were recovered from the excavation. About 450 cubic yards of PCS was excavated and disposed off Site at a thermal desorption facility in Longview, WA. Confirmation soil samples collected from the sidewalls and base of the excavation indicated that clean limits had not been reached (*see attached Table 1*). The excavation was backfilled with gravel and resurfaced. No additional active cleanup of soil at the Site is known to have been conducted since the UST removal.

In April 2005, an ISCO event was performed at the Site, which included injecting Fenton's oxidation reagents into the shallow water-bearing zone. The ISCO event was done in an effort to reduce groundwater contaminant concentrations to below MTCA Method A cleanup levels. Additional ISCO events were conducted in August and November 2006, February 2007, and July, August and September 2008. As part of these activities, in June 2008, three injection wells (IW-1, IW-2, and IW-3) were installed upgradient of the former UST excavation to facilitate future focused events.

In August and November 2010, additional enhanced biodegradation activities were conducted in the form of introducing an oxygen-releasing compound, as well as the use of petroleum-degrading microorganisms in the vicinity of MW-4.

Quarterly monitoring of the groundwater has occurred at the Site since 2005. As of the latest monitoring event, December 2011, all monitoring wells at the Site have demonstrated four consecutive quarters of results below MTCA Method A cleanup levels, except in MW-3 (*see attached Table 1 – Summary of Groundwater Monitoring and Sample Results*). Benzene was present in MW-3 at 5.4 micrograms per liter ($\mu\text{g}/\text{L}$) in September 2011, which is just above the cleanup level of $5 \mu\text{g}/\text{L}$. However, prior to this detection, benzene was non-detect in MW-3 over 14 previous quarters, and was non-detect in the last sampling round. Since this detection is less than twice the cleanup level and was present in less than 10% of the monitoring events from this well over a four year period, statistically, Ecology considers this well to be in compliance.

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As previously noted, additional investigation is warranted to determine whether residual impacted soils are present beneath the Site.

Limitations of the Opinion

1. Opinion does not settle liability with the state.

Liable persons are strictly liable, jointly and severally, for all remedial action costs and for all natural resource damages resulting from the release or releases of hazardous substances at the Site. This opinion **does not**:

- Resolve or alter a person's liability to the state.
- Protect liable persons from contribution claims by third parties.

To settle liability with the state and obtain protection from contribution claims, a person must enter into a consent decree with Ecology under RCW 70.105D.040(4).

2. Opinion does not constitute a determination of substantial equivalence.

To recover remedial action costs from other liable persons under MTCA, one must demonstrate that the action is the substantial equivalent of an Ecology-conducted or Ecology-supervised action. This opinion does not determine whether the action you performed is substantially equivalent. Courts make that determination. *See* RCW 70.105D.080 and WAC 173-340-545.

3. State is immune from liability.

The state, Ecology, and its officers and employees are immune from all liability, and no cause of action of any nature may arise from any act or omission in providing this opinion. *See* RCW 70.105D.030(1)(i).

Contact Information

Thank you for choosing to clean up the Site under the Voluntary Cleanup Program (VCP). After you have addressed our concerns, you may request another review of your cleanup. Please do not hesitate to request additional services as your cleanup progresses. We look forward to working with you.

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For more information about the VCP and the cleanup process, please visit our web site: www.ecy.wa.gov/programs/tcp/vcp/vcpmain.htm. If you have any questions about this opinion, please contact me by phone at (360) 407-6347 or via email at sros461@ecy.wa.gov.

Sincerely,



Scott Rose, L.G.

Unit Supervisor

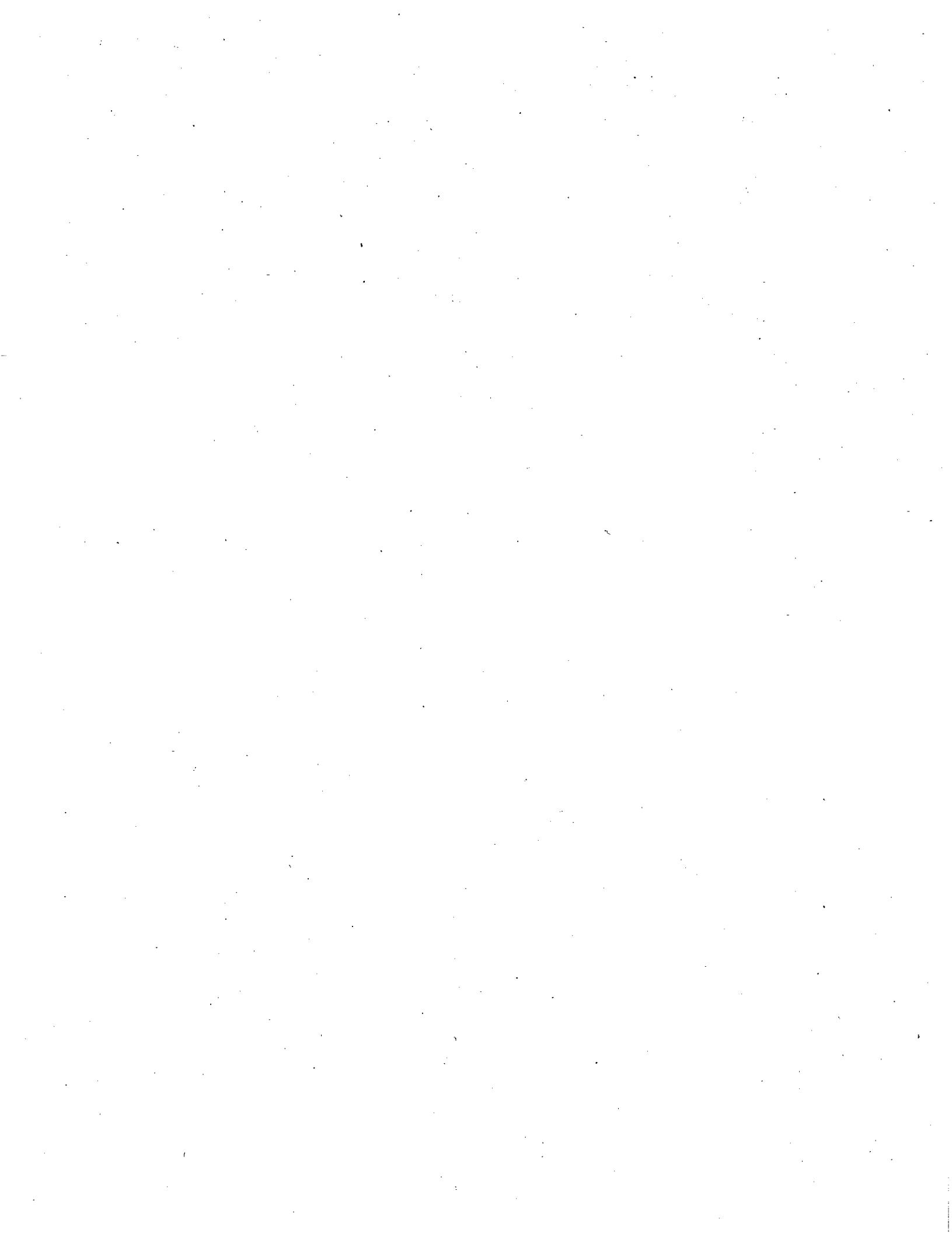
SWRO Toxics Cleanup Program

SIR/ksc:JD Mini Market Site Further Action

Enclosures: A -- Description and Diagrams of the Site

By certified mail: (7010 0780 0002 3403 3374)

cc: Peter Shingledecker – Kleinfelder
Paul Turner – Ecology
Dolores Mitchell – Ecology (w/o Enclosures)



Enclosure A

Description and Diagrams of the Site

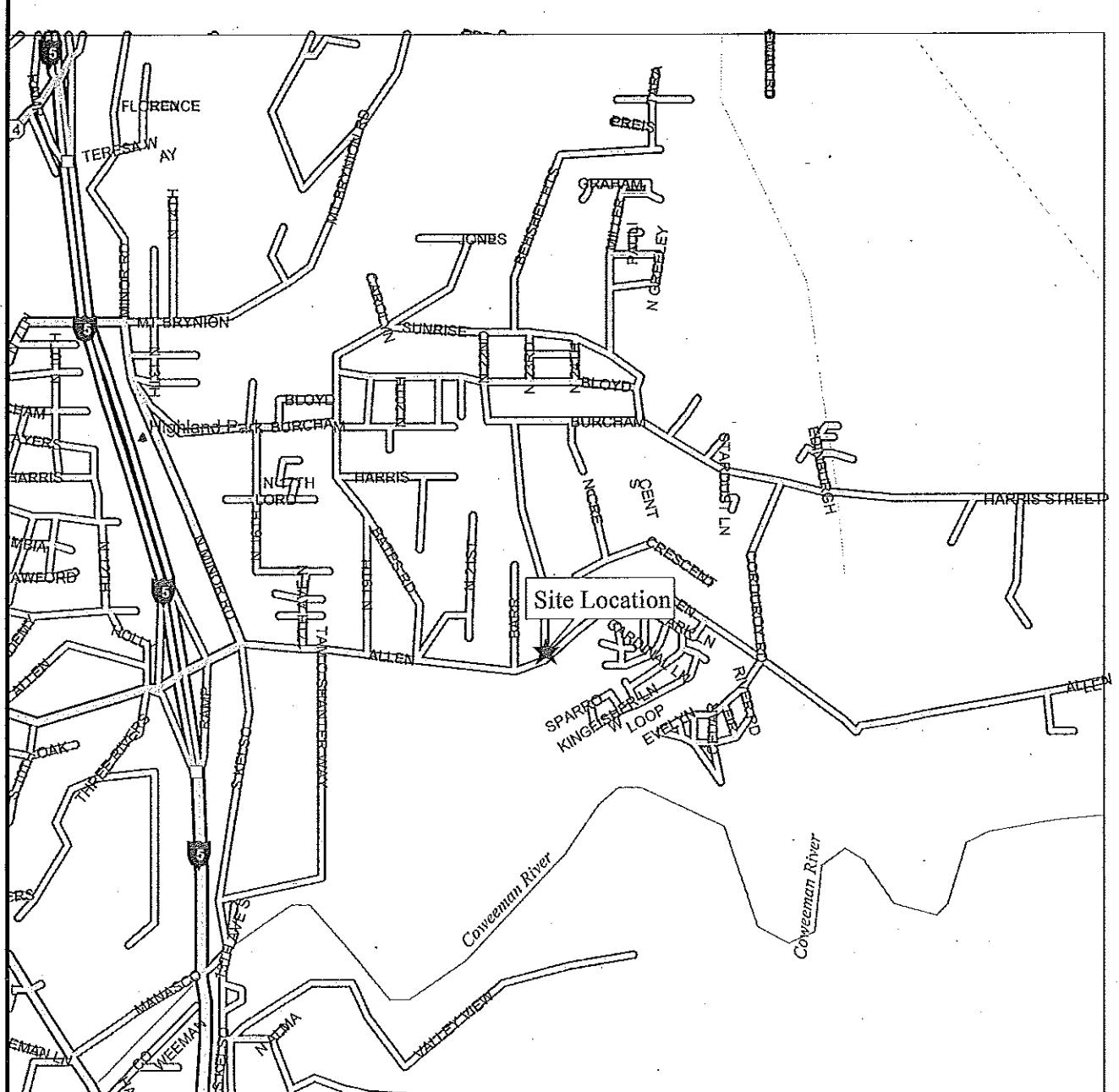


Site Description

The Site is located at 408 North 23rd Avenue in Kelso, Cowlitz County, Washington. The property is currently owned by the North Congregation of Jehovah's Witnesses who operate the on-Site building. The remainder of the Site is paved parking and open grassy areas. The Site is located in a predominantly residential area and is bounded by 23rd Avenue to the west, Allen Road to the south, Crescent Drive to the east, and residential properties to the north. A gasoline station and convenience store with a car wash formerly operated on Site.

The Site is located within the Willamette Valley/Puget Lowland physiographic province, which consists primarily of a north-south trending lowland. The Site is underlain by silty, fine-grained sand and sandy silt, which likely originated from the nearby Coweeman or Cowlitz Rivers. Fill material was reportedly imported during widening of the nearby roads and is present along the southern portion of the Site.

The depth to shallow groundwater ranges from about 2 to 9 feet below ground surface, and the direction of groundwater flow is predominantly to the south.

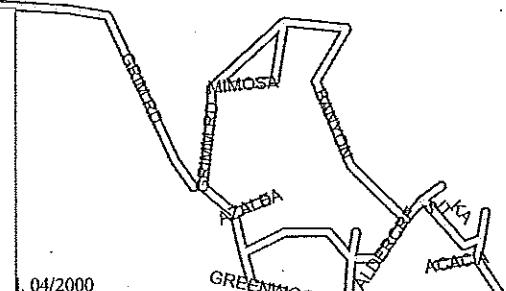


Mag 15.00
Tue Mar 02 11:31 2004
Scale 1:15,625 (at center)

1000 Feet
500 Meters



04/2000



PROJECT NO.	60975
DRAWN:	12/10
DRAWN BY:	TLK
CHECKED BY:	PJS
FILE NAME:	60975F1.cdr

VICINITY MAP

FIGURE:

1

TOC HOLDINGS CO
FACILITY NO. 01-105
408 N. 23RD AVENUE
KELSO, WASHINGTON

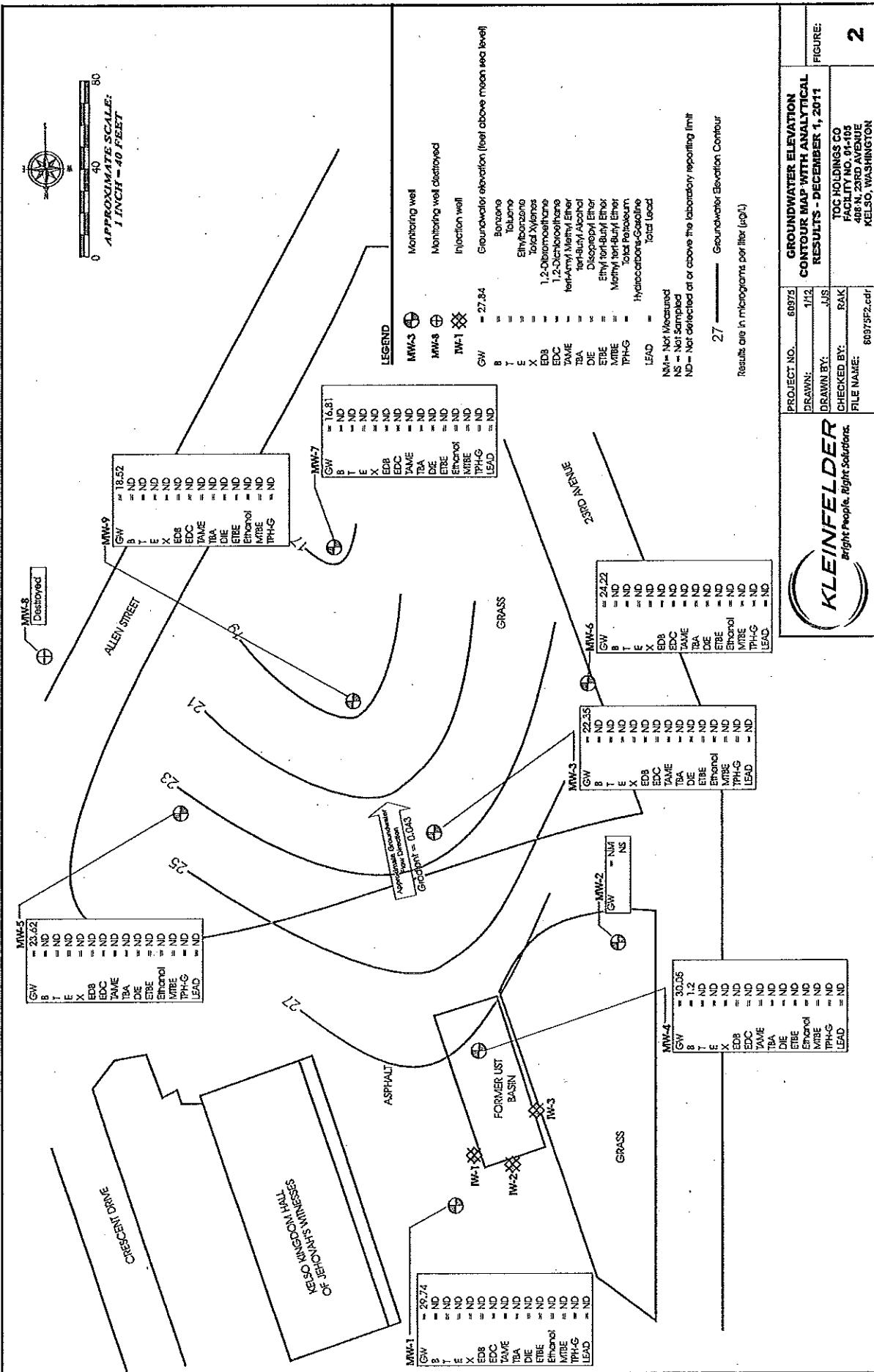




TABLE 1 (CONTINUED)
SUMMARY OF GROUNDWATER MONITORING AND SAMPLE RESULTS
TOC HOLDINGS CO. FACILITY NO. 01-105
408 NORTH 20TH AVENUE
KELSO, WASHINGTON
KLEINFELDER PROJECT NO. 62075

WELL ID.	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (feet)	DEPTH TO WATER (feet)	GROUNDWATER ELEVATION (feet)	CHANGE IN ELEVATION (feet)	S (ppm)	T (ppm)	E (ppm)	X (ppm)	MTBE (ppm)	TAME (ppm)	TBA (ppm)	EDC (ppm)	TBAC (ppm)	DIE (ppm)	TPH-G (ppm)	Load (ug/L)	Dissolved Oxygen (mg/L)
MW-2	11/10/92	28.59	—	23.26	-5.33	340	420	500	3000	—	—	—	—	—	—	—	16000	—
MW-2	09/21/93	28.59	28.59	27.79	25.50	—	—	60	65	21	—	—	—	—	—	—	3700	—
MW-2	05/04/95	28.59	28.59	3.14	23.45	—	—	51	3.9	140	750	—	—	—	—	—	2600	—
MW-2	08/18/95	28.59	28.59	2.69	25.90	—	—	45	53	7	120	540	—	—	—	—	3000	—
MW-2	11/15/95	28.59	28.59	2.31	26.28	—	—	38	54	2.4	140	740	—	—	—	—	2800	—
MW-2	03/04/96	28.59	28.59	2.04	26.55	—	—	27	7.41	0.916	32	169	—	—	—	—	2400	—
MW-2	04/20/97	28.59	28.59	3.78	24.81	—	—	7.4	4.6	0.9	22	100	—	—	—	—	2000	—
MW-2	06/03/98	28.59	28.59	1.73	26.86	—	—	2.05	4.9	0.8	14	75	—	—	—	—	1300	—
MW-2	02/19/99	28.59	28.59	5.14	23.45	—	—	3.41	ND<0.5	0.54	—	—	—	—	—	—	457	—
MW-2	09/15/99	28.59	28.59	6.41	23.19	—	—	ND<0.4	ND<0.5	ND<0.5	—	—	—	—	—	—	165	—
MW-2	09/27/00	28.59	28.59	5.60	22.99	—	—	0.19	—	—	—	—	—	—	—	—	ND<1.5	—
MW-2	09/17/01	28.59	28.59	5.08	22.91	—	—	0.08	ND<0.4	ND<0.5	—	—	—	—	—	—	ND<1.5	—
MW-2	05/24/02	28.59	28.59	5.34	23.26	—	—	0.34	ND<0.4	ND<0.5	—	—	—	—	—	—	ND<1.5	—
MW-2	10/14/03	28.59	28.59	4.35	24.24	—	—	0.93	—	—	—	—	—	—	—	—	ND<1.5	—
MW-2	10/01/04	28.59	28.59	3.30	25.29	—	—	1.05	ND<0.40	ND<0.500	—	—	—	—	—	—	ND<1.50	—
MW-2	04/11/05	28.59	28.59	3.00	25.59	—	—	0.30	ND<0.40	ND<0.500	—	—	—	—	—	—	ND<1.50	—
MW-2	04/21/05	28.59	28.59	—	—	—	—	—	—	—	—	—	—	—	—	—	3.68	—
MW-2	09/20/05	28.59	28.59	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
MW-2	12/27/05	28.59	28.59	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
MW-2	03/07/06	28.59	28.59	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
MW-2	06/12/06	28.59	28.59	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
MW-2	09/13/06	28.59	28.59	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
MW-2	12/04/06	28.59	28.59	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
MW-2	02/21/07	28.59	28.59	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
MW-2	03/05/07	28.59	28.59	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
MW-2	09/11/07	28.59	28.59	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
MW-2	12/05/07	28.59	28.59	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
MW-2	03/13/08	28.59	28.59	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
MW-2	05/18/08	28.59	28.59	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
MW-2	09/03/08	28.59	28.59	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
MW-2	12/02/08	28.59	28.59	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
MW-2	03/05/09	28.59	28.59	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
MW-2	06/02/09	28.59	28.59	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
MW-2	09/01/09	28.59	28.59	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
MW-2	12/07/09	28.59	28.59	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
MW-2	03/03/10	28.59	28.59	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
MW-2	05/01/10	28.59	28.59	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
MW-2	09/08/10	28.59	28.59	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
MW-2	12/05/11	28.59	28.59	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
MW-2 covered by landscaping	03/01/11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

MTCA METHOD A GROUNDWATER CLEANUP LEVEL (1)

Abbreviations:

B = Benzene

T = Toluene

E = Ethylenbenzene

X = Total xylenes

EDC = 1,2-Dibromoethane (Ethylene dibromide)

EDC = 1,2-Dichloroethane

TAME = tert-Amyl Methyl Ether

TBA = tert-Butyl Alcohol

DIE = Diisopropyl Ether

ETBE = Ethyl tert-Butyl Ether

MTBE = Methyl tert-Butyl Ether

TPH-G = Total polycyclic hydrocarbons as gasoline

Load = Total load

mg/l = Milligrams per Liter

ND = No detect or at or above the indicated detection limit.

No analysis/motored/capillary

Cleanup level not established by Department of Ecology

Notes:

(a) Cleaning elevation relative to mean sea level

(b) Groundwater elevation relative to mean sea level

(c) Well MW-2 destroyed during construction activities

(d) Duplicate sample of MW-2

(e) Model Toxics Control Act (MTCA), Department of Ecology

(f) Guidance for Remediation of Releases from Underground Storage Tanks, Washington State Department of Ecology

(g) Underground Storage Tanks, Washington State Department of Ecology

(h) Toxics Clean-up Program, Washington State Department of Ecology

TABLE 1 (CONTINUED)
SUMMARY OF GROUNDWATER MONITORING AND SAMPLE RESULTS
TOC HOLDINGS CO. FACILITY NO. 01-105
408 NORTH 23rd AVENUE
KELSO, WASHINGTON
KLEINFELDER PROJECT NO. 60075

WELL ID.	DATE OF SAMPLING / MONITORING	CASING ELEVATION (a) (FEET)	DEPTH TO WATER (FEET)	GROUNDWATER ELEVATION (b) (FEET)	CHANGE IN ELEVATION (c) (FEET)	E (ppm)	X (ppm)	EDS (ppm)	TAME (ppm)	TBA (ppm)	ETBE (ppm)	MTBE (ppm)	MTBE Load (kg/L)	Dissolved Oxygen (mg/L)
MW-3	11/10/92	27.98	—	—	—	170	ND	80	—	—	—	—	—	—
MW-3	09/21/93	27.98	9.16	18.82	—	120	75	6.5	—	—	—	—	640	—
MW-3	05/04/95	27.98	7.13	20.85	2.03	ND	1	24	—	—	—	—	420	—
MW-3	08/18/95	27.98	9.34	18.64	-2.21	75	0.73	2	14	—	—	—	130	—
MW-3	11/15/95	27.98	6.44	21.54	52	ND	—	6.2	—	—	—	—	580	—
MW-3	03/04/96	27.98	6.10	21.98	0.34	17	ND	0.5	—	—	—	—	340	—
MW-3	04/20/97	27.98	7.89	20.10	-1.78	17.1	ND	ND	—	—	—	—	110	—
MW-3	06/03/98	27.98	8.01	19.37	-0.13	56	0.5	0.7	—	—	—	—	330	—
MW-3	02/19/99	27.98	3.77	24.27	4.30	3.5	ND<0.5	ND<0.5	—	—	—	—	ND<100	—
MW-3	09/15/99	27.98	8.09	19.99	-0.98	0.44	0.92	0.53	2.76	—	—	—	278	—
MW-3	09/22/00	27.98	8.67	19.31	-4.96	4.6	0.71	1.3	4.2	—	—	—	385	—
MW-3	09/17/01	27.98	8.65	19.13	0.04	1.76	ND	ND	—	—	—	—	—	—
MW-3	09/24/02	27.98	8.96	19.92	-0.26	0.981	0.828	1.54	—	—	—	—	346	—
MW-3	10/14/03	27.98	8.97	19.11	-0.01	1.1	0.514	1.39	—	—	—	—	307	—
MW-3	10/01/04	27.98	7.89	20.10	1.05	ND<0.400	0.690	0.870	4.93	—	—	—	523	—
MW-3	04/11/05	27.98	6.22	21.78	1.66	1.41	ND<0.500	ND<0.500	0.670	0.04	—	—	313	—
MW-3	04/21/05	27.98	6.37	21.61	-0.15	8.32	ND<0.300	ND<0.300	0.770	1.71	—	—	181	—
MW-3	09/02/05	27.98	6.51	19.47	-2.14	33.2	ND<1.00	5.59	3.07	—	—	—	328	—
MW-3	09/22/05	27.98	6.51	19.47	-2.14	32.2	ND<1.00	5.59	1.29	—	—	—	1.10	—
MW-3	03/07/06	27.98	5.97	22.01	2.54	ND<0.300	ND<0.300	ND<0.500	ND<0.500	ND<1.00	ND<1.00	ND<1.00	3.91	3.30
MW-3	06/12/06	27.98	7.16	20.32	-1.19	11.4	ND<0.300	ND<0.300	ND<0.500	ND<0.500	ND<1.00	ND<1.00	ND<1.00	3.70
MW-3	09/13/06	27.98	7.23	20.75	-0.53	22.8	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<1.00	ND<1.00	ND<1.00	ND<1.00
MW-3	12/04/06	27.98	9.10	18.98	-1.07	13.2	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<1.00	ND<1.00	ND<1.00	0.3
MW-3	02/21/07	27.98	5.65	22.33	3.45	8.97	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<1.00	ND<1.00	ND<1.00	4.4
MW-3	03/08/07	27.98	6.12	21.95	-0.47	5.15	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<1.00	ND<1.00	ND<1.00	4.75
MW-3	03/09/07	27.98	6.24	21.74	-0.12	4.64	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<1.00	ND<1.00	ND<1.00	0.4
MW-3	09/11/07	27.98	8.40	19.98	-2.18	2.99	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<1.00	ND<1.00	ND<1.00	3.07
MW-3	12/05/07	27.98	9.12	18.98	-0.72	1.05	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<1.00	ND<1.00	ND<1.00	0.0
MW-3	03/13/08	27.98	4.83	23.95	4.29	0.820	0.610	0.790	2.28	—	—	—	ND<1.00	—
MW-3	04/18/08	27.98	7.48	20.50	-2.85	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	3.97	—
MW-3	09/03/08	27.98	7.93	20.02	-0.48	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	0.37	—
MW-3	12/20/08	27.98	6.25	19.73	-0.29	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	0.77	—
MW-3	03/29/09	27.98	7.58	20.10	0.67	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	0.22	—
MW-3	08/02/09	27.98	8.40	19.98	-2.18	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	0.13	—
MW-3	09/01/09	27.98	9.07	18.91	-1.53	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	1.3	—
MW-3	12/07/09	27.98	6.58	21.40	2.49	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	1.16	—
MW-3	03/03/10	27.98	6.45	21.59	0.13	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	1.20	—
MW-3	08/01/10	27.98	5.49	22.49	0.96	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	1.50	—
MW-3	09/08/10	27.98	8.82	13.16	-3.33	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	1.08	—
MW-3	12/06/10	27.98	5.64	21.18	2.18	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	1.43	—
MW-3	08/02/08	27.98	7.54	20.44	-0.74	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	0.0	—
MW-3	09/01/11	27.98	4.05	23.33	1.59	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	3.26	—
MW-3	08/14/11	27.98	7.40	20.98	-3.35	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	7.82	—
MW-3	09/13/11	27.98	9.15	18.93	-1.75	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	5.35	—
MW-3	12/01/11	27.98	5.63	23.24	3.52	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	3.77	—
MW-3	09/01/12	27.98	1.00	20.90	-3.90	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	1.14	—
MW-3	08/01/13	27.98	9.15	18.93	-1.78	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	0.71	—
MW-3	12/01/13	27.98	5.63	23.33	3.52	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	3.78	—
MW-3	09/01/14	27.98	7.40	20.98	-3.35	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	9.75	—
MW-3	08/01/15	27.98	9.15	18.93	-1.75	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	1.41	—
MW-3	12/01/15	27.98	5.63	23.24	3.52	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	0.00	—
MW-3	09/01/16	27.98	9.15	18.93	-1.78	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	0.56	—

NTCA METHOD A GROUNDWATER CLEANUP LEVEL (1)

Abbreviations:

- B Benzene
- T Toluene
- X Ethylbenzene
- EDB Total Xylenes
- EDS 1,2-Dibromoethane (Ethylene dibromide)
- TAME Tert-Amyl Methyl Ether
- TBA Diisopropyl Ether
- DIE Tert-Buyl Alcohol
- ETBE Ethyl-Tert-Buyl Ether

Notes:
 (a) Casing elevation relative to mean sea level.
 (b) Groundwater elevation relative to mean sea level.
 (c) Well MW-4 destroyed during construction activities.
 (d) Duplicate sample of MW-2.
 (e) Model Toxics Control Act (MTCA), Department of Ecology
 Guidance for Removal of Release from Underground Storage Tanks, Washington State Department of Ecology
 Toxics Cleanup Program.

TABLE 1 (CONTINUED)
SUMMARY OF GROUNDWATER MONITORING AND SAMPLE RESULTS
TOC HOLDINGS CO. FACILITY NO. 01-105
408 NORTH 23rd AVENUE
KELSO, WASHINGTON PROJECT NO. 60075

WELL ID.	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (FEET)	DEPTH TO GROUNDWATER ELEVATION (b) (FEET)	CHANGE IN ELEVATION (c) (FEET)	B (ppm)	T (ppm)	E (ppm)	X (ppm)	EDB (ppm)	EDC (ppm)	TIME (h ⁻¹)	TBA (ppm)	ETBE (ppm)	MTEBE (ppm)	TPH-G (ppm)	Land (ug/L)	Dissolved Oxygen (mg/L)
MW-4	11/10/02	31.43	—	—	380	32	61	240	—	—	—	—	—	—	—	1,700	—
MW-4	09/21/03	31.43	3.84	27.59	2.69	2.4	ND	490	0.7	1.1	—	—	—	—	8,600	—	
MW-4	05/04/05	31.43	1.24	30.19	—	—	ND	3.1	2.5	—	—	—	—	—	ND	—	
MW-4	06/18/05	31.43	2.00	29.43	—	—	80	1.2	1.7	59	—	—	—	—	ND	—	
MW-4	11/15/05	31.43	1.13	30.30	0.87	—	91	0.5	42	58	—	—	—	—	ND	—	
MW-4	03/04/06	31.43	0.99	30.44	—	—	ND	0.59	13.1	ND	3.94	4.51	—	—	ND	—	
MW-4	04/30/07	31.43	0.90	30.53	—	—	ND	0.61	7.5	ND	2.1	ND	—	—	ND	—	
MW-4	06/03/08	31.43	1.51	29.92	—	—	ND	0.67	ND	ND	—	—	—	—	ND	—	
MW-4	02/19/06	31.43	0.90	30.53	0.61	—	ND	0.60	2	71	7.8	—	—	—	1,000	—	
MW-4	04/11/07	31.43	1.22	29.80	—	—	ND	0.61	ND	ND	—	—	—	—	ND	—	
MW-4	09/27/06	31.43	3.72	27.71	—	—	ND	0.62	7.98	5.4	66	12	—	—	ND	—	
MW-4	09/17/01	31.43	4.23	27.00	0.12	453	—	3.77	40.5	9.2	—	—	—	—	ND	—	
MW-4	09/24/02	31.43	5.27	26.16	-1.04	1,150	—	8.35	118	12.1	—	—	—	—	ND	—	
MW-4	10/14/03	31.43	5.04	26.39	0.23	448	—	4.82	52.1	—	—	—	—	—	ND	—	
MW-4	10/07/04	31.43	5.28	26.15	—	—	ND	1.76	75.9	5.27	4.80	105	—	—	ND	—	
MW-4	04/11/05	31.43	1.45	20.98	1.83	—	ND	0.07	24.0	4.00	—	—	—	—	ND	—	
MW-4	04/21/05	31.43	1.07	20.36	0.38	—	ND	0.66	58.6	6.97	19.0	20.2	—	—	ND	—	
MW-4	08/22/05	31.43	3.64	27.73	2.57	208	—	2.35	17.2	9.28	—	—	—	—	ND	—	
MW-4	12/27/05	31.43	1.20	30.23	—	—	ND	0.50	4.55	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	
MW-4	03/07/06	31.43	1.42	30.01	—	—	ND	0.50	3.29	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	
MW-4	08/12/06	31.43	2.05	29.38	-0.63	13.4	—	2.05	0.70	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	
MW-4	09/13/06	31.43	4.18	27.25	-2.13	189	—	1.4	1.00	38.8	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00
MW-4	12/04/06	31.43	1.77	29.66	2.41	98.5	—	0.61	1.80	4.00	—	—	—	—	ND	—	
MW-4	03/22/07	31.43	1.12	30.31	0.85	—	ND	0.510	7.43	15.1	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<0.500
MW-4	03/06/07	31.43	1.36	30.07	-0.24	17.8	—	ND	0.500	3.09	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00
MW-4	06/06/07	31.43	2.91	28.52	—	2.25	ND<0.500	1.15	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<0.500	
MW-4	09/11/07	31.43	4.41	27.02	-1.50	158	—	7.06	2.47	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<0.500	ND<0.500	
MW-4	12/05/07	31.43	1.19	30.24	3.22	103	—	0.560	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	
MW-4	03/01/08	31.43	1.00	30.43	—	19	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00		
MW-4	06/18/08	31.43	1.98	29.45	-0.59	8.5	—	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	
MW-4	09/03/08	31.43	1.93	29.50	0.05	9.7	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	
MW-4	12/02/08	31.43	1.65	29.73	0.28	33	—	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	
MW-4	03/09/05	31.43	1.41	29.24	—	35	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	
MW-4	06/20/05	31.43	2.63	28.80	-1.49	64	—	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	
MW-4	08/02/05	31.43	4.43	27.00	-1.80	120	—	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	
MW-4	12/27/05	31.43	2.43	29.10	—	110	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	
MW-4	01/26/06	31.43	1.26	30.23	—	120	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	
MW-4	01/26/10	31.43	1.21	30.22	0.05	48	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	
MW-4	02/02/10	31.43	3.10	28.33	-1.89	10	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	
MW-4	12/06/2010	31.43	1.72	30.71	—	5.8	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	
MW-4	03/01/11	31.43	0.74	30.69	0.98	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	
MW-4	03/01/11	31.43	1.97	30.48	-1.23	1.22	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	
MW-4	06/30/11	31.43	3.59	30.74	—	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	
MW-4	12/03/11	31.43	1.38	30.05	2.21	1.2	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	
MTECA METHOD A GROUNDWATER CLEANUP LEVEL (1)																	
B	Benzene				5	1,000	700	1,000	0.01	5	NE	NE	NE	NE	20	800	15
T	Toluene																
E	Ethylbenzene																
X	Total Xylenes																
EDB	1,2-Dibromoethane																
EDC	1,2-Dichloroethane																
TAME	tert-Amyl Methyl Ether																
TBA	tert-Butyl Alcohol																
DIE	Disopropyl Ether																
ETBE	Ethyl tert-Butyl Ether																

ABBREVIATIONS:
 B Benzene
 T Toluene
 E Ethylbenzene
 X Total Xylenes
 EDB 1,2-Dibromoethane
 EDC 1,2-Dichloroethane
 TAME tert-Amyl Methyl Ether
 TBA tert-Butyl Alcohol
 DIE Disopropyl Ether
 ETBE Ethyl tert-Butyl Ether

NOTES:
 (a) Casting elevation relative to mean sea level.

(b) Groundwater elevation relative to major soil level.

(c) Well MW-8 destroyed during construction activities.

(d) Duplicate sample of MW-4.

(e) Model Toxics Control Act (MTCA), Department of Ecology.

(f) Guideline for Removal of Petroleum from Underground Storage Tanks, Washington State Department of Ecology.

(g) Quantray lower not established by Department of Ecology.

(h) Not analyzed/measured/available.

(i) ND Not Detected at or above the indicated detection limit.

(j) NE Not Established.

TABLE 1
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60975POR12R015
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January 20, 2012

TABLE 1 (CONTINUED)
SUMMARY OF GROUNDWATER MONITORING AND SAMPLE RESULTS
TOC HOLDINGS CO. FACILITY NO. 01-015
405 NORTH 23rd AVENUE
KELNSO, WASHINGTON
PROJECT NO. 60975

WELL ID.	DATE OF SAMPLING	CASING ELEVATION (a) (FEET)	DEPTH TO WATER ELEVATION (b) (FEET)	GROUNDWATER ELEVATION (b) (FEET)	CHANGE IN ELEVATION (b) (FEET)	B (µg/L)		X (µg/L)		EDC (µg/L)		TAME (µg/L)		TBK (µg/L)		MTBE (µg/L)		TPH-G (µg/L)		Lead (µg/L)		Dissolved Oxygen (mg/L)	
						T (µg/L)	E (µg/L)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-5	09/21/93	28.01	7.76	20.25	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-5	05/04/95	28.01	5.16	22.35	2.80	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-5	08/18/95	28.01	7.20	22.73	-2.04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-5	11/15/95	28.01	5.28	22.73	-1.92	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-5	03/04/96	28.01	4.71	23.30	-0.57	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-5	04/30/97	28.01	4.88	23.13	-0.17	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-5	06/03/98	28.01	5.95	22.06	-1.07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-5	02/19/99	28.01	3.63	24.38	-2.32	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-5	09/15/99	28.01	7.37	20.64	-0.74	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-5	09/27/00	28.01	6.31	21.70	-1.06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-5	09/21/01	28.01	7.99	20.02	-1.38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-5	09/24/02	28.01	7.94	20.07	0.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-5	10/14/03	28.01	7.82	20.19	0.12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-5	10/01/04	28.01	6.77	21.24	1.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-5	04/11/05	28.01	4.59	23.02	1.78	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-5	04/21/05	28.01	5.02	22.98	-0.03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-5	05/29/05	28.01	6.86	21.15	-1.84	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-5	12/27/05	28.01	4.30	23.71	2.58	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-5	05/07/06	28.01	5.13	22.89	-0.82	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-5	05/12/06	28.01	5.34	22.67	-0.22	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-5	09/13/06	28.01	6.91	21.20	-1.57	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-5	12/04/08	28.01	4.20	23.81	2.71	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-5	02/21/07	28.01	4.17	23.84	0.03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-5	03/08/07	28.01	4.41	23.86	-0.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-5	05/08/07	28.01	6.17	21.84	-1.76	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-5	09/11/07	28.01	7.15	20.92	-0.22	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-5	12/05/07	28.01	3.68	24.35	3.53	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-5	03/13/08	28.01	4.91	23.10	-1.25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-5	06/18/08	28.01	5.92	22.69	-1.01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-5	09/03/08	28.01	6.61	21.20	-0.89	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-5	12/02/08	28.01	5.93	22.06	0.88	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-5	03/09/09	28.01	4.92	23.09	1.01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-5	05/02/09	28.01	5.70	22.22	-0.97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-5	05/13/09	28.01	5.40	22.61	-1.61	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-5	12/07/09	28.01	5.32	22.59	2.08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-5	03/03/10	28.01	4.77	23.24	0.55	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-5	06/01/10	28.01	4.07	23.94	0.70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-5	09/08/10	28.01	6.75	21.26	-2.68	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-5	12/06/10	28.01	4.40	23.61	2.25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-5	03/01/11	28.01	2.53	25.49	-1.87	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-5	05/14/11	28.01	5.55	22.45	-2.03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-5	09/13/11	28.01	6.50	21.11	-1.44	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-5	12/01/11	28.01	4.39	23.02	2.51	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
WTCA METHOD A: GROUNDWATER CLEANUP LEVEL (1)						5	1,000	700	1,000	5	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	
ABBREVIATIONS:																							
B	Benzene																						
T	Toluene																						
E	Ethylbenzene																						
X	Total Nitro																						
EDB	1,4-Dioxane																						
EDC	1,2-Dichloroethane (Ethylene dichloride)																						
TAME	tert-Butyl Ether																						
TBA	tert-Butyl Alcohol																						
DIE	Diisopropyl Ether																						
ETBE	Ethyl tert-Butyl Ether																						

NOTES:
(1) Casing elevation relative to mean sea level
(2) Wall K-3 restored during construction activities
(3) Duplicate sample of MW-2
(4) Nodal Tools Control Act (NTCA), Department of Ecology, 2007.
Guidance for Remediation of Releases from Underground Storage Tanks, Washington State Department of Ecology
Toxics Cleanup Program.
Abbreviations:
B = Benzene
T = Toluene
E = Ethylbenzene
X = Total Nitro
EDB = 1,4-Dioxane
EDC = 1,2-Dichloroethane (Ethylene dichloride)
TAME = tert-Butyl Ether
TBA = tert-Butyl Alcohol
DIE = Diisopropyl Ether
ETBE = Ethyl tert-Butyl Ether

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TABLE 1 (CONTINUED)
SUMMARY OF GROUNDWATER MONITORING AND SAMPLE RESULTS
TOC HOLDINGS CO. FACILITY NO.01-01-05
408 NORTH 23rd AVENUE
KELSO, WASHINGTON PROJECT NO. 60075

WELL ID.	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (FEET)	DEPTH TO GROUNDWATER ELEVATION (a) (FEET)	CHANGE IN ELEVATION (a) (FEET)	B (ppm)	T (ppm)	E (ppm)	EDB (ppm)	EDC (ppm)	TAME (ppm)	JBA (ppm)	DIE (ppm)	ETBE (ppm)	MTBE (ppm)	TPH-G (ppm)	Lead (ppm)	Dissolved Oxygen (mg/L)	
(a)																		
MW-6	09/24/03	26.07	2.97	23.20	—	1.53	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-6	05/04/05	26.07	1.34	23.94	—	0.79	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-6	08/18/05	26.07	2.13	23.94	—	0.51	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-6	11/15/05	26.07	1.82	24.45	—	0.72	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-6	03/04/06	26.07	0.9	25.17	—	0.51	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-6	04/30/07	26.07	1.41	24.65	—	0.51	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-6	08/03/08	26.07	2.26	23.81	—	0.85	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-6	02/19/09	26.07	1.78	24.29	—	0.48	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-6	09/15/09	26.07	2.19	23.89	—	0.41	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-6	09/27/09	26.07	2.59	23.49	—	0.39	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-6	09/17/01	26.07	2.95	23.12	—	0.27	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-6	09/24/02	26.07	2.85	23.22	—	0.10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-6	10/14/03	26.07	2.69	23.38	—	0.16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-6	10/01/04	26.07	2.26	23.81	—	0.43	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-6	04/11/05	26.07	2.18	23.89	—	0.08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-6	04/22/05	26.07	2.19	23.88	—	0.01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-6	09/02/05	26.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
MW-6	12/27/05	26.07	1.78	24.23	—	—	—	—	—	—	—	—	—	—	—	—	—	
MW-6	03/07/06	26.07	1.98	24.71	—	0.42	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-6	06/12/06	26.07	1.80	24.27	—	0.44	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-6	09/13/06	26.07	2.20	23.87	—	0.49	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-6	12/04/06	26.07	1.91	24.16	—	0.29	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-6	02/21/07	26.07	1.49	24.58	—	0.42	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-6	03/08/07	26.07	1.45	24.62	—	0.04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-6	05/08/07	26.07	1.73	24.34	—	0.29	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-6	09/11/07	26.07	2.08	23.98	—	0.36	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-6	12/05/07	26.07	1.87	24.20	—	0.22	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-6	03/13/08	26.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
MW-6	06/18/08	26.07	2.05	24.01	—	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-6	09/03/08	26.07	2.13	23.94	—	0.07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-6	12/02/08	26.07	2.28	23.81	—	0.13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-6	03/09/09	26.07	1.16	24.91	—	1.10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-6	08/02/09	26.07	2.21	23.85	—	1.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-6	09/01/09	26.07	2.32	23.75	—	0.11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-6	12/07/09	26.07	2.28	23.70	—	0.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-6	03/03/10	26.07	2.03	23.04	—	0.35	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-6	06/07/10	26.07	1.94	24.13	—	0.09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-6	08/08/10	26.07	2.19	23.88	—	0.25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-6	12/06/10	26.07	2.07	24.00	—	0.12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-6	03/07/11	26.07	1.88	24.19	—	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-6	06/14/11	26.07	1.80	24.27	—	0.08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-6	08/11/11	26.07	1.95	24.12	—	0.15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-6	12/01/11	26.07	1.85	24.22	—	0.10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MTC A: GROUNDWATER CLEANUP LEVEL (1)																		
B	Benzene	5	1,000	700	1,000	0.03	5	NE	NE	NE	NE	NE	NE	NE	NE	20	900	15
T	Toluene																	
E	Ethyloxyethane																	
X	Total Xylenes																	
EDB	1,2-Dibromoethane (Ethylene dibromide)																	
EDC	1,2-Dichloroethane																	
TAME	1,2-Cyclohexanediol																	
TDA	Tert-Butyl Methyl Ether																	
DIE	Tert-Butyl Acetate																	
ETBE	Ethyl Propyl Ether																	

NOTES:
(a) Casting elevation relative to mean sea level.
(b) Groundwater elevation relative to mean sea level.
(c) Well MW-8 destroyed during construction activities.
(d) Duplicate sample of MW-2.
(e) Duplicate sample of MW-4.
(f) Model Toxics Control Act (MTCA) Department of Ecology, 2007, Guidance for Remediation of Releases from Underground Storage Tanks, Washington State Department of Ecology, Toxics Cleanup Program.

TABLE 1 (CONTINUED)
SUMMARY OF GROUNDWATER MONITORING AND SAMPLE RESULTS
TOC HOLDINGS CO. FACILITY NO. 01-105
405 NORTH 22nd AVENUE
KELSO, WASHINGTON
KLEINFELDER PROJECT NO. 60975

WELL I.D.	SAMPLING/ MONITORING	CASING ELEVATION (ft.)	DEPTH TO WATER (feet)	GROUNDWATER ELEVATION (ft.)	CHANGE IN ELEVATION (FEET)	X (µg/L)	E (µg/L)	EDB (µg/L)	TAME (µg/L)	TBA (µg/L)	DIE (µg/L)	ETBE (µg/L)	Ethanol (µg/L)	MTBE (µg/L)	TPH-G (µg/L)	Lead (µg/L)	Disolved Oxygen (mg/L)	
B (µg/L)	T (µg/L)																	
MW-10 (6)	06/13/98	-	-	-	-	4.6	24	1.10	-	-	-	-	-	-	-	2400	-	
MW-12 (6)	02/19/99	-	-	-	-	300	4.6	60.4	-	-	-	-	-	-	1000	-		
MW-10 (6)	09/27/00	-	-	-	-	992	8.2	122	10.7	-	-	-	-	-	1250	-		
MW-10 (6)	DUP-1(6)	10/14/03	-	-	-	468	4.67	50.1	11	-	-	-	-	-	1,330	-		
MW-10 (6)	10/01/04	-	-	-	-	75.8	2.05	16.9	4.41	-	-	-	-	-	1,330	-		
MW-10 (6)	09/02/05	-	-	-	-	208	1.31	3.57	9.38	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00		
MW-10 (6)	03/07/06	-	-	-	-	48.3	ND<0.500	ND<1.00	ND<0.500	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00		
MW-10 (6)	08/12/08	-	-	-	-	13.5	ND<0.500	ND<1.00	ND<0.500	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00		
MW-10 (6)	09/13/08	-	-	-	-	201	1.4	1.98	5.88	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	
MW-10 (6)	12/04/08	-	-	-	-	69.3	0.380	1.76	4.04	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	
MW-10 (6)	DUP-1(6)	03/21/07	-	-	-	19.3	ND<0.500	7.53	16.3	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	
MW-10 (6)	03/05/07	-	-	-	-	17.1	ND<0.500	2.94	10.2	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	
MW-10 (6)	06/05/07	-	-	-	-	2.42	ND<0.500	ND<0.500	ND<0.500	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00		
MW-10 (6)	09/11/07	-	-	-	-	180	1.29	7.74	2.60	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	
MW-10 (6)	12/05/07	-	-	-	-	11.1	ND<0.500	0.570	ND<1.00	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50		
MW-10 (6)	03/13/08	-	-	-	-	20	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0		
MW-10 (6)	06/18/08	-	-	-	-	62	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0		
MW-10 (6)	09/03/08	-	-	-	-	12	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0		
MW-10 (6)	12/02/08	-	-	-	-	32	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0		
MW-10 (6)	03/09/09	-	-	-	-	31	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0		
MW-10 (6)	06/02/09	-	-	-	-	72	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0		
MW-10 (6)	09/01/09	-	-	-	-	150	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0		
MW-10 (6)	09/01/09	-	-	-	-	110	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0		
MW-10 (6)	12/07/09	-	-	-	-	60	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0		
MW-10 (6)	03/13/10	-	-	-	-	60	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0		
MW-10 (6)	06/03/10	-	-	-	-	42	ND<1.0	1.3	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	
MW-10 (6)	09/05/10	-	-	-	-	10	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0		
MW-10 (6)	12/06/10	-	-	-	-	6.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0		
MW-10 (6)	03/01/11	-	-	-	-	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0		
MW-10 (6)	08/17/11	-	-	-	-	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0		
MW-10 (6)	09/19/11	-	-	-	-	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0		
MW-11 (6)	12/01/11	-	-	-	-	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0		
NTCA METHOD A GROUNDWATER CLEANUP LEVEL (1)																		
						5	1,000	700	1,000	0.01	5	NE	NE	NE	20	800	15	

ABBREVIATIONS:
 B Benzene
 T Toluene
 E Ethylbenzene
 X Total xylenes
 EDB 1,2-Dichloroethane (Ethylene dibromide)
 TAME tert-Butyl Methyl Ether
 TBA tert-Butyl Alcohol
 DIE Diisopropyl Ether
 ETBE Ethyl tert-Butyl Ether

Notes:
 (a) Methyl tert-Butyl Ether
 (b) Total petroleum hydrocarbons as gasoline
 (c) Total lead
 (d) Milligrams per Liter
 mg/L
 (e) Duplicate sample of MW-2
 (f) Duplicate sample of MW-4
 (g) Methyl Toxic Control Act (MTCA), Department of Ecology, 2007,
 Guidance for Remediation of Releases from
 Underground Storage Tanks, Washington State Department of Ecology
 Toxics Cleanup Program.

ND=detect at or above the indicated detection limit.

NE=Not analyzed/measured/analytical
 Cleanup level not established by Department of Ecology

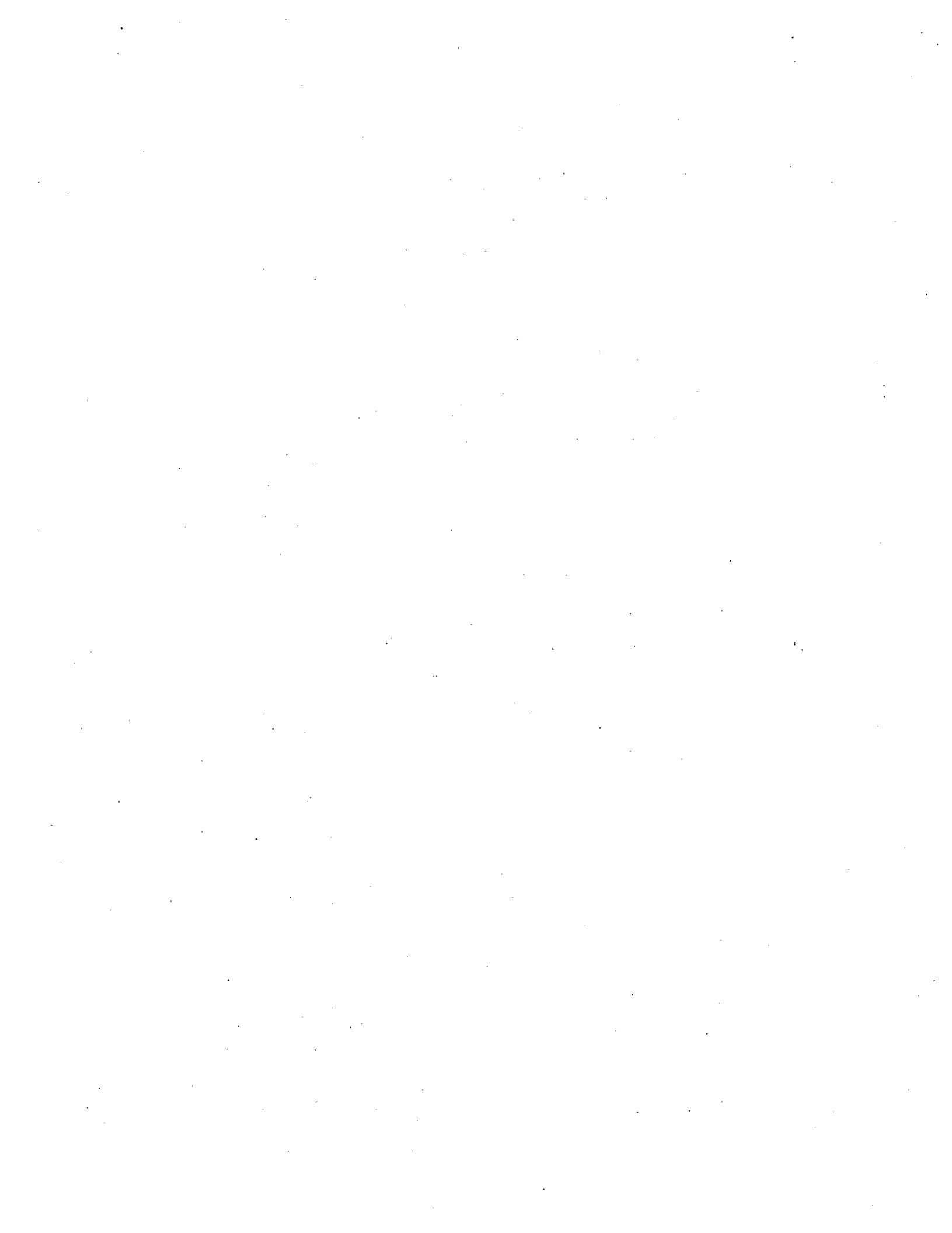


TABLE 1 Laboratory Results from Underground Storage Tank Removal Investigation Performed by SEACOR, March 20 - 22, 1991							
Sample No.	Location	EPA Method 8015	EPA Method 8020				EPA Method 7421
		Petroleum Hydrocarbons (gas)	Benzene	Toluene	Ethylbenzene	Xylenes	Total Lead
WW-1	West Side of Excavation @ 6'	100	0.25	0.86	1.6	9.7	ND
WW-2	West Side of Excavation @ 6'	2.6	0.2	ND	ND	0.11	ND
NSW	North Side of Excavation @ 8'	1.2	ND	ND	ND	ND	7.6
EW	East Side of Excavation @ 6'	ND	0.083	ND	ND	ND	10
SW-1	South Side of Excavation @ 6'	12	ND	ND	ND	0.58	ND
SW-2	South Side of Excavation @ 6'	270	ND	2	2.3	14	9.4
PI	Beneath Dispenser Island @ 3'	2600	11	170	69	410	ND
SP-1,2	Stockpile	950	ND	18	19	110	13
SP-3,4	Stockpile	650	3.3	28	11	86	21
SP-5,6	Stockpile	1800	22	150	48	270	17
SP-7,8	Stockpile	1000	3.5	30	19	110	17
MTCA Cleanup Levels		100	0.5	40	20	20	250

All concentrations shown in parts per million

ND = Non-Detect to laboratory detection limits

MTCA = State of Washington Model Toxics Control Act

TABLE 2

Laboratory Results from Environmental Site Assessment - Soil Samples

Conducted by Environmental Science and Engineering, Inc., November 1-2, 1992 and September 3-4, 1992

Location: Highland Market Facility
 Time Oil Facility No. 01-105
 408 23rd Avenue
 Kelso, Washington

Sample ID	Depth (ft)	EPA Method 8015		EPA Method 8020			EPA Method 7420 Total Lead
		TPH-Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	
B-1	3	1.2	<0.050	<0.050	<0.050	<0.10	NA
B-1	8	430	1.9	15	6.2	32	<15
B-2	3	<1.0	<0.050	<0.050	<0.050	<0.10	NA
B-2	7	<1.0	<0.050	<0.050	<0.050	<0.10	NA
B-3	3	<1.0	<0.050	<0.050	<0.050	<0.10	NA
B-3	5	<1.0	<0.050	<0.050	<0.050	<0.10	NA
B-4	3	<1.0	<0.050	<0.050	<0.050	<0.10	NA
B-4	8	<1.0	<0.050	<0.050	<0.050	<0.10	NA
B-5	3	<1.0	<0.050	<0.050	<0.050	<0.10	NA
B-5	6	<1.0	<0.050	<0.050	<0.050	<0.10	NA
MW-1	8	<1.0	<0.050	<0.050	<0.050	<0.10	NA
MW-2	4	23	0.16	<0.050	0.15	1.5	<15
MW-3	3	<1.0	<0.050	<0.050	<0.050	<0.10	NA
HAB-1	1	<1.0	<0.050	<0.050	<0.050	<0.10	NA
HAB-2	1	<1.0	<0.050	<0.050	<0.050	<0.10	NA
HAB-3	1	<1.0	<0.050	<0.050	<0.050	<0.10	NA
HAB-4	1	<1.0	<0.050	<0.050	<0.050	<0.10	NA
MW-5	5	<10.0	<0.050	<0.050	<0.050	<0.10	NA
MW-6	5	<10.0	<0.050	<0.050	<0.050	<0.10	NA
MW-7	5	<10.0	<0.050	<0.050	<0.050	<0.10	NA
MW-8	5	<10.0	<0.050	<0.050	<0.050	<0.10	NA
MW-9	5	<10.0	<0.050	<0.050	<0.050	<0.10	NA
MTCA Cleanup Limits		100	0.5	20	40	20	250

Notes:

mg/kg: Parts per million or milligrams per kilogram
 TPH: Total petroleum hydrocarbons
 NA: Not Analyzed
 <: Less than the laboratory detection limit
 MTCA: State of Washington Model Toxics Control Act

TABLE 5

Laboratory Results from Geoprobe Assessment - May 1, 1997 and June 27, 1997

Conducted by Quest, Quality Environmental Services Team, Inc.

Location: Highland Market Facility
 Time Oil Facility No. 01-105
 408 23rd Avenue
 Kelso, Washington

Sample ID	Depth (ft)	PID Readings	WTPH-Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes
GP-3	12	1,500	9.79	3.99	<0.05	0.542	0.269
	16	500	11.2	4.6	<0.05	0.586	1.06
GP-4	16	80	<5.0	<0.05	<0.05	<0.05	<0.1
GP-5	8	60	<5.0	<0.05	<0.05	<0.05	<0.1
GP-6	8	>2,000	263	<0.05	0.507	2.09	10.4
	13	900	180	0.421	0.541	1.94	8.96
GP-7	16	40	<5.0	<0.05	<0.05	<0.05	<0.1
GP-8	16	0	<5.0	<0.05	<0.05	<0.05	<0.1
GP-9	8	900	442	0.704	3.16	5.51	30.1
	10	>2,000	3,980	<0.05	34.4	44.2	244
	16	>2,000	25.6	0.0645	0.54	0.51	2.77
GP-11	4	70	<5.0	<0.05	<0.05	<0.05	<0.1
GP-12	8	20	<5.0	<0.05	<0.05	<0.05	<0.1
GP-13	4	10	<5.0	<0.05	<0.05	<0.05	<0.1
GP-14	8	0	<5.0	<0.05	<0.05	<0.05	<0.1
GP-15	4	1,400	13.8	<0.05	<0.05	<0.05	0.303
	8	200	6.17	0.274	<0.05	0.23	0.361
	12	230	46.2	<0.05	<0.05	<0.05	1.17
GP-16	8	0	<5.0	<0.05	<0.05	<0.05	<0.1
GP-17	12	0	<5.0	<0.05	<0.05	<0.05	<0.1
GP-18	4	20	<5.0	<0.05	<0.05	<0.05	<0.1
GP-19	8	1,000	58.7	<0.05	<0.05	0.0908	0.104
	12	70	<5.0	0.34	<0.05	<0.05	0.12
MTCA Cleanup Levels		100	0.5	40	30	20	

Notes:

ppm: parts per million or milligrams per kilogram

PID: Photoionization detector

WTPH: State of Washington total petroleum hydrocarbons

<: Less than laboratory detection limits

MTCA: State of Washington Model Toxics Control Act

**Samples shown from each geoprobe location with greatest PID readings

TABLE 6

Laboratory Results from Geoprobe Assessment - September 19, 2000
Conducted by Kleinfelder, Inc.

Conducted by Richfield, Inc.
Location: Highland Market Facility
Time Oil Facility No. 01-105
408 23rd Avenue
Kelso, Washington

Sample ID	Depth (ft)	PID Readings	NWTPH-Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes
GP-20	8	191	630	0.69	7	9.3	.38
GP-21	10	60	2.6	0.037	0.041	0.04	0.011
GP-22	14	25	7.1	0.038	0.024	0.016	<0.048
MTCA Cleanup Levels			100	5	40	30	20

Laboratory Results from Extended Petroleum Hydrocarbon and Volatile Petroleum Hydrocarbons

Conducted by Kleinfelder, Inc.

Location: Highland Market Facility
Time Oil Facility No. 01-105
408 23rd Avenue
Kelso, Washington

Soil Sample No. GP-20			Analysis			Analysis		
Analysis	Results	Units	Analysis	Results	Units	Analysis	Results	Units
<i>Volatile Petroleum Hydrocarbons</i>			<i>Extended Petroleum Hydrocarbons</i>			<i>Petroleum Aromatic Hydrocarbons</i>		
MTBE	ND	mg/kg	nC ₈ -10	3100	mg/kg	Naphthalene	84	mg/kg
Benzene	3.5	mg/kg	Aliphatic			2-Methylaphthalene	100	mg/kg
Toluene	27	mg/kg	nC ₈ -10-12	1400	mg/kg	Acenaphthylene	0.27	mg/kg
Ethylbenzene	33	mg/kg	Aliphatic			Acenaphthene	0.37	mg/kg
Xylenes	211	mg/kg	nC ₈ -12-16	300	mg/kg	Fluorene	0.23	mg/kg
Total EC>8-10	580	mg/kg	Aliphatic			Phenanthrene	0.43	mg/kg
Aromatics			nC ₈ -16-21	23	mg/kg	Anthracene	0.13	mg/kg
Total EC>5-6	240	mg/kg	Aliphatic			Fluoranthene	ND	mg/kg
Aliphatics			nC ₈ -21-34	39	mg/kg	Pyrene	0.16	mg/kg
Total EC>6-8	640	mg/kg	Aliphatic			Benzo(a)anthracene*	0.04	mg/kg
Aliphatics			nC ₈ -10-12	430	mg/kg	Chrysene*	0.025	mg/kg
Total EC>8-10	600	mg/kg	Aromatic			Benzo(b)fluoranthene*	0.012	mg/kg
Aliphatics			nC ₈ -12-16	230	mg/kg	Benzo(k)fluoranthene*	ND	mg/kg
			Aromatic			Benzo(a)pyrene*	ND	mg/kg
			nC ₈ -16-21	31	mg/kg	Indeno(1,2,3-cd)pyrene*	ND	mg/kg
			Aromatic			O-benz(a,h)anthracene*	ND	mg/kg
			nC ₈ -21-34	16	mg/kg	Benzo(g,h,i)perylene	0.055	mg/kg
			Aromatic					

A1 Soil Cleanup Levels: Worksheet for Soil Data Entry: Refer to WAC 173-340-720, 740, 745, 747, 750

1. Enter Site Information

Date: 02/10/12

Site Name: J&D Mini Mart

Sample Name: GP-20

2. Enter Soil Concentration Measured

Chemical of Concern or Equivalent Carbon Group	Measured Soil Conc dry basis mg/kg	Composition Ratio %
Petroleum EC Fraction		
AL_EC >5-6	210	2.88%
AL_EC >6-8	530	7.26%
AL_EC >8-10	3500	47.93%
AL_EC >10-12	1400	19.17%
AL_EC >12-16	300	4.11%
AL_EC >16-21	23	0.31%
AL_EC >21-34	39	0.53%
AR_EC >8-10	286	3.92%
AR_EC >10-12	386	5.29%
AR_EC >12-16	130	1.78%
AR_EC >16-21	31	0.42%
AR_EC >21-34	15.877	0.22%
Benzene	3.5	0.05%
Toluene	28	0.38%
Ethylbenzene	33	0.45%
Total Xylenes	201	2.75%
Naphthalene	84	1.15%
1-Methyl Naphthalene	0.115	0.00%
2-Methyl Naphthalene	100	1.37%
n-Hexane	0.01	0.00%
MTBE	1.25	0.02%
Ethylene Dibromide (EDB)	0.01	0.00%
1,2 Dichloroethane (EDC)	0.01	0.00%
Benzo(a)anthracene	0.04	0.00%
Benzo(b)fluoranthene	0.012	0.00%
Benzo(k)fluoranthene	0.0115	0.00%
Benzo(a)pyrene	0.0115	0.00%
Chrysene	0.025	0.00%
Dibenz(a,h)anthracene	0.0115	0.00%
Indeno(1,2,3-cd)pyrene	0.0115	0.00%
Sum	7301.895	100.00%

Notes for Data Entry

Set Default Hydrogeology

Clear All Soil Concentration Data Entry Cells

Restore All Soil Concentration Data cleared previously

REMARK:

Enter site-specific information here.....

3. Enter Site-Specific Hydrogeological Data

Total soil porosity:	0.43	Unitless
Volumetric water content:	0.3	Unitless
Volumetric air content:	0.13	Unitless
Soil bulk density measured:	1.5	kg/L
Fraction Organic Carbon:	0.001	Unitless
Dilution Factor:	20	Unitless

4. Target TPH Ground Water Concentration (if adjusted)

If you adjusted the target TPH ground water

concentration, enter adjusted ug/L
value here:

A2 Soil Cleanup Levels: Calculation and Summary of Results. Refer to WAC 173-340-720, 740, 745, 747, 750

Site Information

Date: 2/10/2012

Site Name: J&D Mini Mart

Sample Name: GP-20

Measured Soil TPH Concentration, mg/kg: 7,301.895

1. Summary of Calculation Results

Exposure Pathway	Method/Goal	Protective Soil TPH Conc, mg/kg	With Measured Soil Conc		Does Measured Soil Conc Pass or Fail?
			RISK @	HI @	
Protection of Soil Direct Contact: Human Health	Method B	2,287	1.31E-06	3.19E+00	Fail
	Method C	43,027	2.31E-07	1.70E-01	Pass
Protection of Method B Ground Water Quality (Leaching)	Potable GW: Human Health Protection	17	3.74E-04	3.70E+00	Fail
	Target TPH GW Conc. @ 800 ug/L	656	NA	NA	Fail

Warning! Check to determine if a simplified or site-specific Terrestrial Ecological Evaluation may be required (Refer to WAC 173-340-7490 through 7494).

Warning! Check Residual Saturation (WAC340-747(10)).

2. Results for Protection of Soil Direct Contact Pathway: Human Health

	Method B: Unrestricted Land Use	Method C: Industrial Land Use
Protective Soil Concentration, TPH mg/kg	2,286.86	43,026.67
Most Stringent Criterion	HI = 1	HI = 1

Soil Criteria	Protective Soil Concentration @Method B			Protective Soil Concentration @Method C				
	Most Stringent?	TPH Conc, mg/kg	RISK @	HI @	Most Stringent?	TPH Conc, mg/kg	RISK @	HI @
HI = 1	YES	2.29E+03	4.10E-07	1.00E+00	YES	4.30E+04	1.36E-06	1.00E+00
Total Risk = 1E-5	NO	5.57E+04	1.00E-05	2.44E+01	NO	3.17E+05	1.00E-05	7.36E+00
Risk of Benzene = 1E-6	NO	3.79E+04	6.80E-06	1.66E+01	NA			
Risk of cPAHs mixture = 1E-6	NO	3.71E+04	6.66E-06	1.62E+01				
EDB	NO	7.94E+03	1.42E-06	3.47E+00				
EDC	NO	7.41E+06	1.33E-03	3.24E+03				

3. Results for Protection of Ground Water Quality (Leaching Pathway)

3.1 Protection of Potable Ground Water Quality (Method B): Human Health Protection

Most Stringent Criterion	Total Risk = 1E-5
Protective Ground Water Concentration, ug/L	138.34
Protective Soil Concentration, mg/kg	16.55

Ground Water Criteria	Protective Potable Ground Water Concentration @Method B			Protective Soil Conc, mg/kg
	Most Stringent?	TPH Conc, ug/L	RISK @	
HI = 1	NO	3.44E+02	3.31E-05	1.00E+00
Total Risk = 1E-5	YES	1.38E+02	1.00E-05	4.18E-01
Total Risk = 1E-6	YES	1.41E+01	1.00E-06	4.28E-02
Risk of cPAHs mixture = 1E-5	NO	1.43E+03	4.03E-04	3.90E+00
Benzene MCL = 5 ug/L	NO	3.58E+02	3.52E-05	1.04E+00
MTBE = 20 ug/L	NO	7.66E+02	1.81E-04	2.40E+00

Note: 100% NAPL is 65000 mg/kg TPH.

3.2 Protection of Ground Water Quality for TPH Ground Water Concentration previously adjusted and entered

Ground Water Criteria	Protective Ground Water Concentration			Protective Soil Conc, mg/kg
	TPH Conc, ug/L	Risk @	HI @	
Target TPH GW Conc = 800 ug/L	8.00E+02	2.06E-04	2.57E+00	6.56E+02