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MEMORANDUM

DATE: November 30, 2004

TO: Maura O'Brien, Washington State Department of Ecology

FROM: Julie K.W. Wukelic, Principal, Hart Crowser

RE: **Summary of Previous Environmental Investigations and Cleanup**
Kent Station Property
Southeast Corner of James and Fourth Avenue North
Kent, Washington
17057-00

This memorandum summarizes the main findings of the previous environmental activities that have occurred on the subject property over the past 17 years. The subject property has been considered cleaned up, and Tarragon LLC submitted a request for a No Further Action (NFA) Determination to the Washington State Department of Ecology (Ecology) through the Voluntary Cleanup Program (VCP) in June 2004. Groundwater monitoring has been conducted on two remaining monitoring wells at the subject property for the past three quarters. Since June 2004, the subject property has been undergoing site preparation for the proposed development. Subsurface excavation and surface grading have been conducted and no significant environmental issues have been discovered, therefore, further supporting our conclusion that the property has been successfully cleaned up.

It is our opinion that the subject property has been successfully cleaned up and is a low risk to human health and the environment.

The following section highlights the site investigations, areas of cleanup, and previous environmental issues of concern.

Groundwater Sampling and Analysis Background and Summary

Groundwater Monitoring was conducted by EMCON from 1987 through 2000.

No groundwater samples were collected from 2000 to 2002. Monitoring wells MW-7 and MW-10 were sampled in 2002 (once) and 2004 (three times).

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The following is a summary of the groundwater monitoring wells sampled and analyzed for nitrate, methanol, and formaldehyde. Other analytes were analyzed at various times (e.g., TPH, volatiles, semivolatiles, and metals) but most of the results were either non-detectable (ND) or very low concentrations below cleanup standards.

Up to ten groundwater monitoring wells were sampled from approximately 1987 to 2000. In addition, nineteen groundwater samples were collected from temporary wellpoints in 1987, 1988, and 1991. Most of the permanent groundwater monitoring wells were decommissioned in 2003. Monitoring wells MW-7 and MW-10 are the only remaining active wells on the subject property.

BC-MW-1

Sampled from 1987 through 2000 (18 events) for analysis of nitrate, ammonia, and methanol (1993 to 2000).

Sampled for analysis of formaldehyde from 1988 to 1991 (four events).

Concentrations of nitrate ranged from ND (nine times) to 0.7 mg/L (1993). ND from 1997 to 2000 (sampled once a year).

No concentrations of methanol were detected from 1993 to 2000 (eight events).

Concentrations of formaldehyde ranged from ND (two times) to 30 ug/L.

Closed on April 3, 2003, by URS.

BC-MW-2

Sampled in 1987 only for analysis of nitrate, ammonia, and phenol.

A nitrate concentration of 0.18 mg/L was detected in 1987.

The well was closed in 1987, and MW-7 then replaced MW-2.

BC-MW-3

Sampled from 1987 through 2000 (18 events) for analysis of nitrate, ammonia, and methanol (1993 to 2000).

Sampled for analysis of formaldehyde from 1988 to 1991 (four events).

Concentrations of nitrate ranged from ND (five times) to 0.2 mg/L (1994). ND from 1995 to 2000 (sampled once a year).

No concentrations of methanol were detected from 1993 to 2000 (eight events).

No concentrations of formaldehyde were detected from 1988 to 1991 (four events).

Closed in August 2002 by URS.

BC-MW-4 Sampled from 1987 through 2000 (16 events) for analysis of nitrate, ammonia, and methanol (1993 to 2000).

Sampled for analysis of formaldehyde from 1988 to 1991 (four events).

Concentrations of nitrate ranged from ND (nine times) to 2.1 mg/L (1996). No concentrations of nitrate were detected from 1997 to 2000 (sampled once a year).

No concentrations of methanol were detected from 1993 to 2000 (eight events).

No concentrations of formaldehyde were detected from 1988 to 1991 (four events).

Closed on April 3, 2003, by URS.

BC-MW-5 Sampled from 1987 through 2000 (16 events) for analysis of nitrate, ammonia, and methanol (1993 to 2000).

Sampled for analysis of formaldehyde from 1989 to 1991 (three events).

Concentrations of nitrate ranged from ND (nine times) to 0.2 mg/L (1996). ND from 1997 to 2000 (sampled once a year).

No concentrations of methanol were detected from 1993 to 2000 (nine events) except for a suspect result in 1999. This well was re-sampled the same year and the result was ND.

No concentrations of formaldehyde were detected from 1989 to 1991(three events).

Closed on April 3, 2003, by URS.

BC-MW-6 Sampled from 1987 through 1996 (11 events) for analysis of nitrate, ammonia, and methanol (1993 to 1995).

Sampled for analysis of formaldehyde from 1989 to 1991 (three events).

Concentrations of nitrate ranged from ND (one time) to 8.8 mg/L (1989). Much lower concentrations from 1991 to 1996.

No concentrations of methanol were detected from 1993 to 1995 (two events).

No concentrations of formaldehyde were detected from 1989 to 1991 (three events).

Closed on April 3, 2003, by URS.

BC-MW-7 Sampled from 1987 through 2000 (16 events) for analysis of nitrate, ammonia, and methanol (1993 to 2000).

Sampled for analysis of formaldehyde from 1988 to 1991 (four events).

Concentrations of nitrate ranged from 1.1 mg/L (1987) to 300 mg/L (1989). Nitrate concentrations ranged from 34 mg/L (1998) to 69 mg/L (1997) from 1997 to 2000.

December 2002 - 1.09 mg/L nitrate.

2004 - Q1 (May 3, 2004) - 48.4 mg/L nitrate.

2004 - Q2 (August 5, 2004) - 9.2 mg/L nitrate.

2004 - Q3 (November 23, 2004) - 6.5 mg/L nitrate.

No concentrations of methanol were detected from 1993 to 2000 (eight events).

No concentrations of formaldehyde were detected from 1989 to 1991 (four events).

The well is still active.

BC-MW-8s

Sampled from 1988 through 2000 (13 events) for analysis of nitrate, ammonia, and methanol (1993 to 2000).

Sampled for analysis of formaldehyde in 1991(one event).

Concentrations of nitrate ranged from ND (five times) to 3.1 mg/L (1999).

No concentrations of methanol were detected from 1993 to 2000 (eight events) except for a suspect result in 1999. The well was re-sampled the same year and the results were ND.

No concentrations of formaldehyde were detected in the 1991 sampling event.

Closed on April 3, 2003, by URS.

BC-MW-8d

Sampled from 1988 through 2000 (11 events) for analysis of nitrate, ammonia, and methanol (1993 to 2000).

Sampled for analysis of formaldehyde in 1991 (one event).

Concentrations of nitrate ranged from ND (six times) to 0.3 mg/L (1999).

No concentrations of methanol were detected from 1993 to 2000 (eight events) except for a suspect result in 1999. The well was re-sampled the same year and the results were ND.

A concentration of 40 ug/L of formaldehyde was detected in the groundwater in 1991.

Closed on April 3, 2003, by URS.

BC-MW-9 Sampled in 1988 and was closed (date unknown). Only nitrate and ammonia were analyzed for in 1988. There were no detectable concentrations of nitrate.

No formaldehyde analysis was conducted on this sample in 1988.

Closed in 1991 by EMCON.

BC-MW-10 Sampled from 1993 to present (12 events) for analysis of nitrate, ammonia (only eight events), and methanol.

There were no detections of nitrate in any of the 8 sampling events.

Methanol was detected above 10,000 mg/L from 1993 to 1999. However, from 1993 to 1999, methanol decreased significantly from 41,000 to 2,200 mg/L.

Four rounds of groundwater sampling for methanol have occurred since 1999 and the results are as follows:

December 2002 - ND (<10 mg/L) methanol

2004 - Q1 (May 7, 2004) - ND (<0.5 mg/L) methanol

2004 - Q2 (August 5, 2004) - ND (<0.5 mg/L) methanol

2004 - Q3 (November 23, 2004) - ND (<0.5 ug/mL) methanol

In addition, formaldehyde analysis was conducted on the November 3, 2004, sample and the result was ND except the reporting limit was 100 ug/L.

The well is still active.

Nineteen groundwater samples were collected from temporary wellpoints in 1987, 1988, and 1991. The 10 groundwater samples collected in 1987 and 1988 did not report formaldehyde analysis results because of analytical difficulties. Four of the five groundwater samples collected from the temporary wellpoints in 1991 contained non-detectable

concentrations (< 20 ug/L) to 30 ug/L of formaldehyde. A concentration of 1,800 ug/L was detected in the water sample from SB-1 (temporary wellpoint).

The nitrate results ranged from ND (<0.05 mg/L) in three of the five wells and 0.46 (SB-4) and 45 mg/L (SB-2) in the other two samples.

Findings for Analytes of Interest

Formaldehyde

Over 30 groundwater samples have been collected and analyzed for formaldehyde from approximately 14 different sample points across the property.

Groundwater samples have not had a concentration over 30 ug/L except for one. The water sample from the temporary wellpoint SB-1 in 1991 had a formaldehyde concentration of 1,800 ug/L.

A groundwater sample collected in November 2004 from MW-10 (near the former SB-1 location) was ND (23 ug/L MDL and 100 ug/L reporting limit).

Monitoring well MW-1, MW-8d, SB-3, SB-4, and SB-5 had concentrations of formaldehyde below 30 ug/L.

The results of the rest of the samples were below the detection limit for formaldehyde.

Based on the other dozens of groundwater samples collected and analyzed on the property, including the recent groundwater sample from MW-10 (near SB-1), the concentration detected in SB-1 in 1991 appears to be an anomaly and an isolated occurrence. In addition, formaldehyde is very water soluble and readily biodegrades in water. Since formaldehyde has not been pervasively detected in the soil or groundwater across the property, the risk appears to be low.

* where is f. soil data?

Although the Method B cleanup level for formaldehyde in groundwater is 1.46 ug/L, the previous and current detection limits achieved (from 1988 to 2004) were between 20 and 30 ug/L. Based on these previous and current labs, we believe that using 20 to 30 ug/L as the cleanup level is appropriate to compare the results to and only "one" groundwater sample out of dozens of groundwater samples collected across the site has ever had a concentration above 30 ug/L.

PQL requires RC

In addition, no significant concentrations of formaldehyde have been detected in soil samples from SB-1 or other borings near SB-1/MW-10.

Nitrate

Over 150 groundwater samples have been collected and analyzed for nitrate from approximately 26 different sample points across the property. The majority of the samples were ND or detected at concentrations less than 1.0 mg/L. Five of the nine water samples that had concentrations of nitrate above 1.6 mg/L (MTCA Method B Cleanup Level) were from the temporary wellpoints advanced in 1987, 1988, and 1991. The only monitoring well that consistently had detections of nitrate above 1.6 mg/L was monitoring well location MW-7. However, the nitrate concentrations in this well have significantly decreased from 300 mg/L in 1988 to 38.9 mg/L in 2000. Since 2000, the well has been sampled from 2002 to November 2004, and the nitrate concentrations have ranged from 1.09 to 48.4 mg/L. The concentration of nitrates in this well has not been over 69 mg/L since 1997. The slight peak of 48.4 mg/L in May 2004 was determined to be caused by application of fertilizer on the adjacent ballfield. The other three sampling events of MW-7 since 2002 have had nitrate concentrations below the MCL 10 mg/L

Based on the results from over 150 groundwater samples from 26 different locations, the elevated concentration of nitrate has been primarily in only one groundwater monitoring well (MW-7). Since the concentration of nitrate in MW-7 has significantly decreased over the past 16 years and nitrate has not been pervasively detected in the groundwater across the property, the risk from nitrate appears to be low.

Methanol

Over 73 groundwater samples have been collected and analyzed for methanol from approximately 18 different sample points across the property. Methanol has only been detected in the groundwater at one location over the years. This location is near the unloading area where a spill was discovered in the early 1990s. Monitoring well MW-10 has shown a significant decrease of methanol from 41,000 mg/L in 1993 to ND the past three sampling events in 2004. The water sample from the temporary wellpoint SB-1 had a concentration of 25,000 mg/L in 1991. This wellpoint is near MW-10 that has been monitored for over 10 years. In addition, groundwater remediation occurred in MW-10 in the 1990s. In addition, methanol is very water soluble and readily biodegrades in water. Based on the other dozens of groundwater samples collected and analyzed on the property, including the recent groundwater sample from MW-10 (near SB-1), the elevated concentrations of methanol in MW-10 and SB-1 indicates that the methanol was isolated in

this area only and is not pervasively detected across the property. Therefore, the risk to human health and the environment appears to be low for methanol.

Arsenic

There were also slight exceedances of arsenic (above the MTCA Method A Cleanup Level of 5 ug/L) in several groundwater samples. Except for two, the samples are below the new federal drinking water standard of 10 ug/L. Most of the arsenic occurrences also occurred in "grab" groundwater samples from geoprobes, which are more turbid than permanently installed groundwater monitoring wells. The neighboring property, Sound Transit, also noted slightly elevated concentrations of arsenic during their investigation work on the garage property (southeast). URS focused on soils across the property to assess whether there were any arsenic impacts. No evidence was identified in their investigations.

Based on that there are no known sources of arsenic on the property, arsenic was not detected at high concentrations in the soil, and that the slight exceedances in the groundwater were few and random, it appears that the detected arsenic in the groundwater samples present a low risk to the property. In addition, David South at the Washington State Department of Ecology responded to a citizen concern to Kathleen Goodman (URS – consultant for the City of Kent) and stated that the arsenic levels were extremely low and pose no risk to citizens or construction workers. A copy of the letter is attached to this memorandum. The subject property is also within an approximate 25-mile radius of the former Asarco plant in Tacoma, where it is common to have slightly elevated concentrations of arsenic in the subsurface media.

Other

One groundwater sample from the BNSF Railroad Spur (Southeast Area) had a concentration of benzene above the MTCA Method A cleanup level. The slight exceedance of the cleanup level for benzene in groundwater occurred in only one of the samples analyzed. Based on the isolated nature of the one exceedance, the lack of benzene detected in other on-site monitoring wells, and that benzene-impacted soil had been removed the site just to the south (upgradient) of this area, it appears that the detected benzene is a low risk to the property and the property is not the source.

Soil Sampling and Analysis Background and Summary

Soil sampling and analysis have been conducted on the property since 1987. EMCON conducted soil and groundwater investigations in 1987 and 1992. EMCON's investigations

have included numerous test pits, installing and sampling 10 monitoring wells, and sampling nineteen temporary wellpoints.

In 1999, Shannon Wilson also conducted soil and groundwater investigations and cleanup in the southeast portion of the subject property (northern part of the former Brutsche property). A slight exceedance of lead was detected in one near-surface soil sample. Low concentrations of petroleum were also detected in two locations on the property. In 2000 and 2001, URS also conducted soil and groundwater investigations on former Borden Chemical property and the BNSF Railroad Spur area (south of the former unloading area and railroad spur that transverses east/west), respectively. They also performed soil cleanup on both areas in 2002). Concentrations of lead and heavy oil were detected above MTCA Method A cleanup levels in shallow soils in the vicinity of the Silvestri equipment yard (southeast corner of the subject property). In total, 560 tons of petroleum-impacted soil were removed and disposed of off site from this area in 2002. — Post excavation soil sample results?

Based on these investigations, several isolated areas of soil cleanup occurred on the property. These areas of cleanup are summarized below. No significant widespread impacts have ever been discovered from the dozens of sampling locations across the entire property. No underground storage tanks (USTs) have ever been known to exist on the property and have never been encountered during the building demolition, investigations, geotechnical studies, or on-site grading and excavation (2003 and 2004). In addition, the geotechnical study in 2003, which included over 35 test pits, no suspect contamination was noted from the physical observations or test pit logs.

Cleanups Conducted on the Subject Property

The following is a summary of the major cleanup areas conducted on the subject property.

Former Methanol Unloading Area (MW-10 Location)

Remediation of a methanol spill at the unloading area began in approximately 1992. It was unclear in the documents reviewed what form of remediation extraction from MW-10 was conducted or the duration of the remediation. Annual groundwater sampling and analysis have been conducted on this well since 1993. Significant reduction in the methanol concentrations has been documented through this 10 years of groundwater monitoring in MW-10. No other monitoring wells had detectable concentrations of methanol, indicating that the release was isolated in unloading area.

Former Borden Plant

The on-site structures of the former Borden plant were removed in 2001. Confirmation soil samples were collected from the soils below the structures and analyzed for a variety of chemical constituents. No elevated concentrations of the analytes were detected in the soil samples for the analytes tested. Detailed results of these samples are presented in the 2002 URS report.

Former Southwest Settlement Pond

In 2002, 950 tons of nitrate-impacted soils were removed and disposed of off site. This area was the location of former dry resin chips (1/2-foot layer) and yellow precipitate overlayed with fill material (1.5- to 2.5-foot layer) consisting of fine sand, gravel, and wood chips. Detailed results of these samples are presented in the 2003 URS report.

BNSF Railroad Spur – Southeast Area

In 2002, 560 tons of petroleum-impacted soil were removed and disposed of off site from this area. Previous investigations had indicated low concentrations of petroleum in the soil in two locations and a slight exceedance of lead was detected in one near-surface soil sample.

Available Environmental Documents

The following table is a list of environmental documents on the subject property. These reports include details on past investigations, cleanups, and monitoring conducted on the property. Relevant excerpts from selected reports are included as attachments to the memorandum for reference of sampling locations and chemicals analysis results.

Title	Consulting firm	Date
Summary Report Hydrogeologic Investigations, Borden Packaging and Industrial Products Facility – Volumes I and II	EMCON Northwest, Inc.	April 1992
Final Report, Borden Chemical Facility Phase II Report	URS Corporation	November 2000
Final Report, BNSF Property Phase II Environmental Site	URS Corporation	July 2001

Title	Consulting firm	Date
Assessment Report		
Borden Chemical Facility Demolition Monitoring Report	URS Corporation	March 2002
Former Pond Fill Characterization. Former Borden Chemical	URS Corporation	September 2002
Borden Chemical Facility Environmental Summary and Closure Report	URS Corporation	June 2003
Preliminary Environmental Assessment (Phase I) – Kent Station Property	Hart Crowser	May 2004
2000 Annual Groundwater Monitoring – Borden Facility	IT Corporation	March 3, 2000
Phase II Environmental Site Assessment – Brutsche Property *(the report covers a portion of the subject property)*	Shannon & Wilson	May 1999
Phase I Environmental Site Assessment – Brutsche Property *(the report covers a portion of the subject property)*	Shannon & Wilson	March 1999

Updated Information since July 2004 (Submittal of VCP Application)

The subject property has been significantly graded and disturbed as part of the construction activities for the planned development. Site work activities have included trenching for utilities (up to 15 feet in some areas), excavating for large stormwater vaults, and grading surfaces. An environmental construction contingency plan was in place and being used by the on-site contractors. Suspect environmental conditions were not encountered over the past 4 months except for one. During excavation activities for utility trench, a creosote odor was noted. The contractor immediately notified the appropriate personnel in accordance with the contingency plan. The environmental professional inspected the suspect area, collected soil samples, and oversaw stockpiling of suspect soil. Confirmation samples were collected from the area of the suspect soil and two stockpiles were also sampled. These samples were submitted to the chemical laboratory for petroleum and semivolatile analyses. The results of the chemical analyses indicated that the impacted soil had been removed from the area and one small stockpile of soil had slightly elevated concentrations of

petroleum as creosote. Based on the field observations of the environmental professional, it appeared that the impacted soil was related to an old piling.

> compliance sample results?

No other suspect areas of soil or groundwater were encountered during construction and excavation activities from August to November 2004. Therefore, based on the previous investigations and cleanups, groundwater monitoring, and recent field observations, the subject property appears to be a low environmental risk to human health and the environment.

Attachments:

Excerpts from Summary Report, Hydrogeological Investigation, Borden Packaging Industrial Products Facility, EMCOM, April 1992.

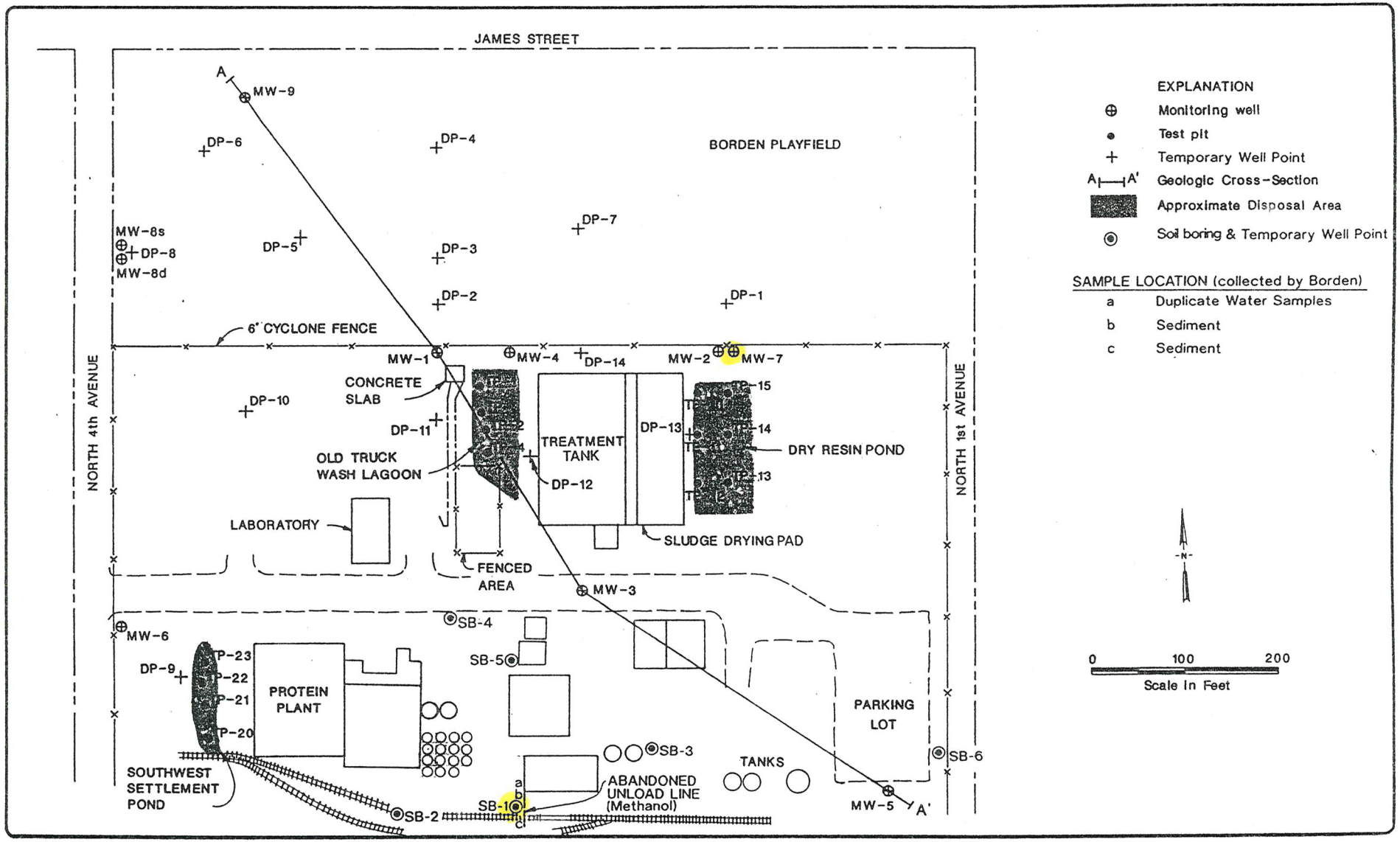
Groundwater Data Excerpt from 2000 Annual Groundwater Monitoring Report, The IT Group, March 3, 2000.

Excerpts from Phase II Report, Borden Chemical Facility, URS, November 2000.

Washington State Department of Ecology Letter, March 18, 2003.

F:\Docs\Jobs\1705700\Summary Memo(rev1).doc

EXCERPTS FROM SUMMARY REPORT
HYDROGEOLOGICAL INVESTIGATION
BORDEN PACKAGING INDUSTRIAL PRODUCTS FACILITY
EMCOM, APRIL 1992

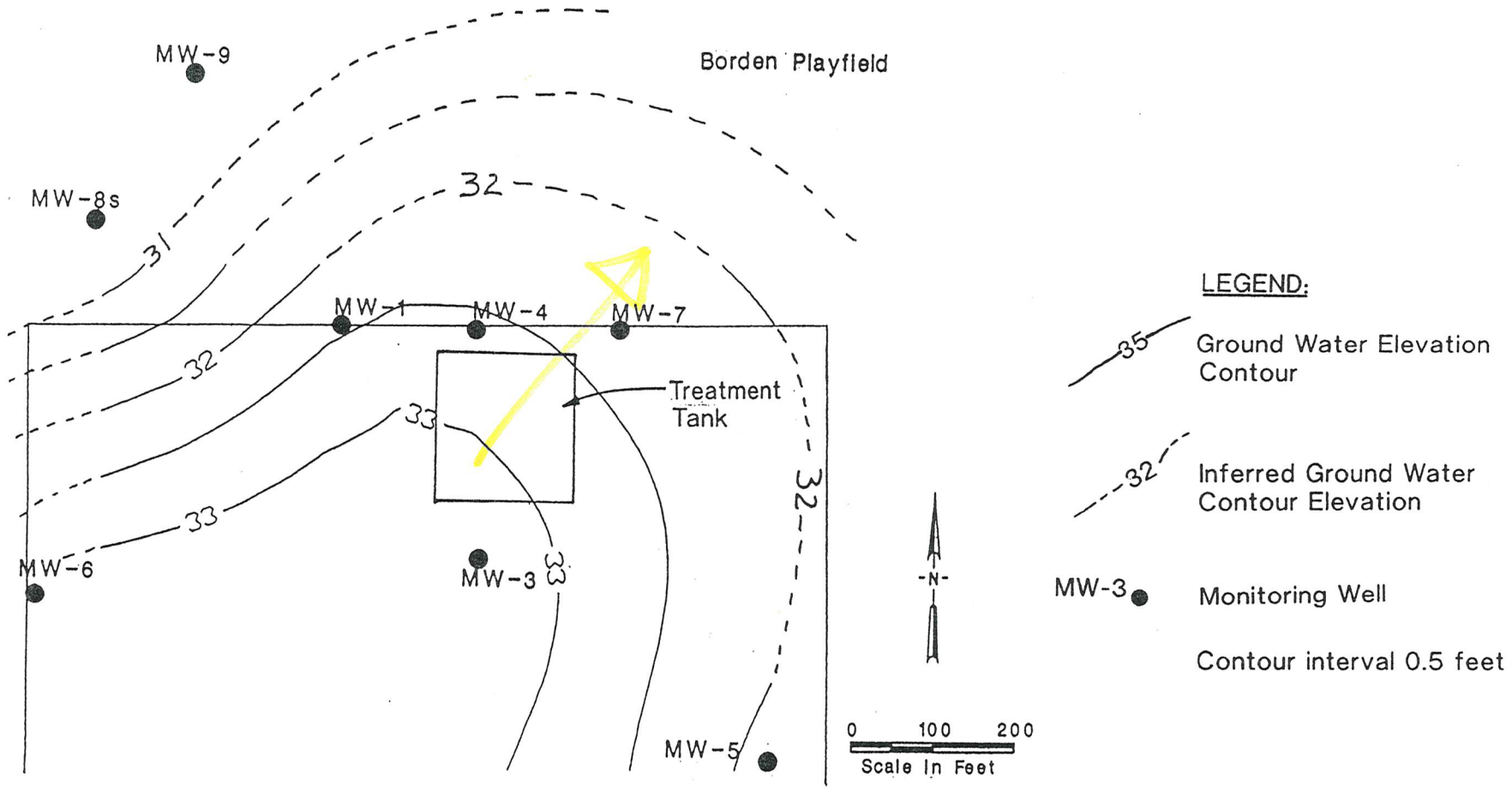


Sweet-Edwards EMCON

KUKER-RANKEN INC./106657

Figure 2-1
BORDEN - KENT, WASHINGTON
SITE LOCATION AND EXPLORATION MAP

DATE 2/88
DWN. / APPR. MC/SM
PROJECT NO. S9301.06



Sweet-Edwards
EMCON

DATE
DWN.
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REVIS.
PROJECT NO.
S9301.06

Figure 4-1
BORDEN - KENT, WASHINGTON

SHALLOW AQUIFER
PIEZOMETRIC MAP - DECEMBER 1991

KUKER-RANKEN,INC./106857

Table 4-1

Borden Site Hydrogeological Investigation
Kent, Washington
Summary of Test Borings and Monitoring Well Installations

Monitoring Well No.	Reference* Elevation (ft)	Drilled Depth (ft)	Screened Interval (ft)	Screened Formation
MW-1	37.5	14.5	4.5 - 14.5	Silty Sand/Sand
MW-2**	38.40	14.5	4.5 - 14.5	Silty Sand/Sand
MW-3	38.59	14.5	4.5 - 14.5	Silty Sand/Sand
MW-4	37.09	49	37 - 47	Silty Sand/Sand
MW-5	39.54	17	7 - 17	Sand
MW-6	39.49	15	4.5 - 14.5	Sand
MW-7	37.93	15	5 - 15	Silty Sand
MW-8s	34.27	50	9 - 19	Sandy Silt/Clayey Silt
MW-8d	34.27	50	40 - 50	Sandy Silt/Clayey Silt
MW-9	35.38	20	10 - 20	Sandy Silt

NOTES: * Reference elevation measured from top of 2-inch PVC casing
** Monitoring well MW-2 abandoned October 14, 1987

Table 4-2

Borden Site Hydrogeological Investigation
Kent, Washington
Hydraulic Conductivity Values for the Water Table Aquifer

Monitoring Well	Hydraulic Conductivity	Screened Formation
MW-4	3x10-2 cm/sec	Silty Sand/Sand
MW-5	1x10-3 cm/sec	Sand
MW-6	2x10-4 cm/sec	Sand
MW-7	6x10-3 cm/sec	Silty Sand

Table 4-3

Borden Site Hydrogeological Investigation
Kent, Washington
Ground Water Elevation Data
Monitoring Wells and Drive Points

Site	Reference Elevation (ft)	Ground Water Elevation (ft)								
		4/01/87	5/27/87	10/14/87	11/19/87	1/7/88	2/88	1/10/91	10/10/91	12/9/91
MW-1	37.53	33.36	31.48	28.22	28.88	32.22	33.78	35.73	29.43	32.86
MW-2	38.40	33.60								
MW-3	38.59	34.21	33.26	31.07	31.82	33.29	33.84	35.49	31.59	33.59
MW-4	37.09			28.29	28.40	29.84	30.66	32.77	28.61	30.35
MW-5	39.54			30.33	30.33	31.45	32.14	34.63	30.63	31.82
MW-6	36.49			28.93	29.48	31.37	29.09	34.49	30.54	33.34
MW-7	37.93			29.95	29.96	31.79	32.75	35.59	30.38	32.30
MW-8s	34.17					29.54	30.66	32.58	27.93	30.72
MW-8D	34.27					28.86	29.77			29.70
MW-9	35.28					29.66	30.84			
DP-1	35.90			29.70						
DP-2	35.60			28.00						
DP-3	35.40			27.91						
DP-4	34.40			29.10						
DP-5	34.50			28.20						
DP-6	33.70			27.50						
DP-7	35.90			28.93						
DP-8	34.50			27.70						
DP-9	36.12					32.12	33.60			
DP-10	37.00					32.00	33.85			
DP-11	39.33					32.38	33.78			
DP-12	42.26					32.82	34.02			
DP-13	40.42					32.42	33.30			
DP-14	38.61					32.31	33.46			

NOTE: Reference elevation measured from top of 2-inch PVC casing

Table 5-1

Borden Site Hydrogeological Investigation
Kent, Washington
Summary of Analyzed Test Pit Soil Samples (1987)

Group	Test Pit No.	Sample No.	Depth	Laboratory I.D. No.
1	BC-TP-4	4A	3.5 - 4.5	BC-3-87-1
	BC-TP-4	5A	5.0 - 6.0	BC-3-87-2
	BC-TP-4	6A	7.5 - 8.5	BC-3-87-3
	BC-TP-2	7A	9.5 - 10.5	BC-3-87-4
2	BC-TP-4	7A	8.5 - 9.5	BC-3-87-5
	BC-TP-11	1A	0.0 - 0.9	BC-3-87-6
3	BC-TP-12	1A	0.0 - 0.9	BC-3-87-7
	BC-TP-15	1A	0.0 - 0.8	BC-3-87-8
	BC-TP-11	3A	2.0 - 3.1	BC-3-87-9
4	BC-TP-15	4A	1.8 - 3.4	BC-3-87-10
	BC-TP-20	2A	1.5 - 2.1	BC-3-87-11
5	BC-TP-22	2A	1.6 - 2.0	BC-3-87-12
	BC-TP-20	3A	2.1 - 3.9	BC-3-87-13
6	BC-TP-22	3A	2.0 - 3.0	BC-3-87-14

NOTES: Group 1. Resinous material — Truck wash lagoon
2. Native soils — Truck wash lagoon
3. Resinous material — Dry resin pond
4. Native soils — Dry resin pond
5. Resinous material — Southwest settlement pond
6. Native soils — Southwest settlement pond

All samples analyzed for formaldehyde, phenol, ammonia, and nitrate
Group 2 samples also tested for priority pollutants, cyanide, and metals

Table 5-2

Borden Site Hydrogeological Investigation
Kent, Washington
Summary of Test Pit Soil Quality Data (1987)

	Range of Concentrations (ppm)			
	Nitrate	Ammonia	Phenol	Formaldehyde
Southwest Settlement Pond				
Resin	1,900 - 5,000	0.3 - 0.4	<.80	<20
Native Soils	150 - 320	0.1	<.80	<20
Dry Resin Pond				
Resin	460 - 980	1.0 - 2.7	0.1 - 2.0	<20
Native Soils	260 - 900	0.2 - 2.0	<.80	<20
Truck Wash Lagoon				
Resin	300 - 1,000	4.4 - 4.9	<.80 - 47	52 - 53
Native Soils	360 - 1,400	7.7 - 10	1.3 - 2.5	20 - 21

NOTE: Formaldehyde detection limit in soil is 20 ppm

MTCA - method B n.a 48000 33,3 mg/kg

Table 5-3

Borden Site Hydrogeological Investigation
Kent, Washington
Summary of Soil Analytical Results (1991)

Site	Date Sampled	Formaldehyde (mg/kg)	Methanol (mg/kg)	Nitrate-N (mg/kg)	Phenolics (mg/kg)	Total Kjeldahl-N (mg/kg)	Boring Depth (ft)	Depth Sampled (ft)
SB-1	12/10/91	0.7	<5	<0.5	<0.5	70	7.5	3.5
SB-2	12/11/91	<0.4	<5	5.6	<0.5	120	8.0	2.0
SB-3	12/11/91	63	<5	2.1	<0.5	6,900	10.0	2.0
SB-4	12/11/91	<0.4	<5	1.7	<0.5	30	8.0	3.5
SB-5	12/11/91	1.3	<5	<0.5	<0.5	100	8.0	3.5
SB-6	12/11/91	1.4	<5	<2	<0.5	<10	2.0	2.0

NOTES: < Not detected at or above the detection limit

meth B 33.3 40,000 8000 48000 mg/kg

Table 5-4

Borden Site Hydrogeological Investigation
Kent, Washington
Summary of Ground Water Analytical Results

Well	Date	Lab Specific Conductance (umhos/cm)	Formal-dehyde (µg/L)	Nitrate-N (mg/L)	Ammonia-N (mg/L)	Phenol (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Total Kjeldahl Nitrogen (mg/L)	Methanol (mg/L)	Method 624 (volatile)			Method 625 (semi-volatile)			
											Toluene (µg/L)	P,M-Xylenes (µg/L)	o-Xylene (µg/L)	Phenol (µg/L)	Bis-(2-ethylhexyl) Pthalate (µg/L)	Di-n-octylphthalate (µg/L)	Naph-thalene (µg/L)
BC-MW-1	04/01/87	2,550	(a)	0.66	70	<0.008											
BC-MW-1	05/27/87	2,500	(a)			<0.008											
BC-MW-1	10/14/87	3,550	(a)	0.65	55	<0.008											
BC-MW-1	11/19/87	2,890	(a)	0.35	21	<0.008	1.90	2.73									
BC-MW-1	01/07/88	3,250	(a)	0.06(b)	91.60	<0.008	<0.2	<0.2									
BC-MW-1	10/05/88	2,800	20	<0.05													
BC-MW-1	01/17/89	2,600	<20	<0.05	65	0.006											
BC-MW-1	01/10/91	1,600	<20	<0.05	82	<0.005											
BC-MW-1	10/10/91	3,000		<0.05	16		120	16	20.0								
BC-MW-1	12/09/91	2,890	30	0.33	50				70.0		<2	<3	<3		80	7	<5
BC-MW-2	04/01/87	2,300		0.18	5.20	<0.008											
BC-MW-2	05/27/87	2,500															
WELL CLOSED - MW-7 REPLACES MW-2																	
BC-MW-3	04/01/87	475	(a)	0.04	8.20	<0.008											
BC-MW-3	05/27/87	320	(a)														
BC-MW-3	10/14/87	433	(a)	0.04	2.40	<0.008											
BC-MW-3	11/19/87	300	(a)	0.05	1.50	<0.008	7.50	45.10									
BC-MW-3	01/07/88	340	(a)	0.22(b)	0.85	<0.008	8.70	52.50									
BC-MW-3	10/05/88	280	<20														
BC-MW-3	01/17/89	250	<20	<0.05	2.60	<0.008											
BC-MW-3	01/10/91	200	<20	<0.05	0.21	<0.005											
BC-MW-3	10/10/91	220		<0.05	0.49		14.00	12.00	0.4								
BC-MW-3	12/09/91	274	<20	0.17	0.49				1.0		<2	<3	<3		<10	<5	<5
BC-MW-4	10/14/87	600	(a)	0.03	5.40	<0.008											
BC-MW-4	11/19/87	600	(a)	0.1	2.70	<0.008	66	<0.2									
BC-MW-4	01/07/88	625	(a)	0.06(b)	4.58	<0.008	63.6	<0.2									
BC-MW-4	10/05/88	550	<20														
BC-MW-4	01/17/89	700	<20	<0.05	6.70	0.006											
BC-MW-4	01/10/91	390	<20	<0.05	2.50	<0.005											
BC-MW-4	10/10/91	560		<0.05	1.90		40	4.0	0.8								
BC-MW-4	12/09/91	606	<20	0.07	5.20				7.4		5	9	4		<10	<5	<5

MTCA - meth B ug/L 1,146 1600 9600 n.a. n.a 4000 ug/L 9600 6.25c 320 160 320 nc nc

Table 5-4

Borden Site Hydrogeological Investigation
Kent, Washington
Summary of Ground Water Analytical Results
(Continued)

Well	Date	Lab Specific Conductance (umhos/cm)	Formal-dehyde (µg/L)	Nitrate-N (mg/L)	Ammonia-N (mg/L)	Phenol (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Total Kjeldahl Nitrogen (mg/L)	Methanol (mg/L)	Method 624 (volatile)				Method 625 (semi-volatile)		
											Toluene (µg/L)	P,M-Xylenes (µg/L)	o-Xylene (µg/L)	Phenol (µg/L)	Bis-(2-ethylhexyl) Pthalate (µg/L)	Di-n-octylphthalate (µg/L)	Naph-thalene (µg/L)
BC-MW-5	10/14/87	290	(a)	0.02	3.93	<0.008											
BC-MW-5	11/19/87	250	(a)	0.16	0.10	<0.008	8.0	42.40									
BC-MW-5	01/07/88	200	(a)	0.08(b)	0.61	<0.008	5.80	22.50									
BC-MW-5	01/17/89	190	<20	<0.05	1.50	<0.008											
BC-MW-5	01/10/91	230	<20	0.31	0.21												
BC-MW-5	10/10/91	240		0.05	0.50		4.0	49.0	0.4								
BC-MW-5	12/09/91	247	<20	0.82	0.17				<1		<2	<3	<3		<10	<5	<5
BC-MW-6	11/19/87	515	(a)	0.07	4.35	0.025	4.20	45.8									
BC-MW-6	01/07/88	380	(a)	24.40(b)	0.83	<0.008	2.40	39.8									
BC-MW-6	10/05/88	312	(a)	3.70													
BC-MW-6	01/17/89	220	<20	8.80	1.60	<0.008											
BC-MW-6	01/10/91	200	<20	<0.05	0.18	<0.005											
BC-MW-6	10/10/91	250		0.06	0.50		12.00	21	0.7								
BC-MW-6	12/09/91	249	<20	1.9	0.40				<1	<5	3	7	3		<10	<5	6
BC-MW-7	10/13/87	1,700	(a)	1.16	35.30	<0.008											
BC-MW-7	11/19/87	1,300	(a)	15.20	21	<0.008	53.80	368									
BC-MW-7	01/07/88	2,650	(a)	262.00(b)	3.78	<0.008	28.40	205									
BC-MW-7	10/05/88	1,400	<20	6.00													
BC-MW-7	01/17/89	2,800	<20	300.00	3.70	0.005											
BC-MW-7	01/10/91	1,800	<20	240.00	2.20	<0.005											
BC-MW-7	10/10/91	1,200		85.00	3.40		31	180	1.0								
BC-MW-7	12/09/91	1,792	<20	180	2.20				2.6		<2	<3	<3		20	<5	<5
BC-MW-8s	01/07/88		(a)	0.29(b)	2.83	<0.008	11.60	25									
BC-MW-8s	01/10/91	140	(a)	<0.05	2.20	<0.005											
BC-MW-8s	10/10/91	220		0.06	2.20		11	15	1.3								
BC-MW-8s	12/10/91	282	<20	0.07	2.20				3.0		<2	<3	<3		<10	<5	<5
BC-MW-8d	01/07/88	650	(a)	0.02(b)	3.51	<0.008	103	<0.2									
BC-MW-8d	12/10/91	590	40	0.07	3.40				5.0		<2	<3	<3		<10	<5	<5
BC-MW-9	01/07/88	265		<0.05(b)	3.13	<0.008	4.80	<0.2									

Table 5-4

Borden Site Hydrogeological Investigation
Kent, Washington
Summary of Ground Water Analytical Results
(Continued)

Well	Date	Lab Specific Conductance (umhos/cm)	Formal-dehyde (µg/L)	Nitrate-N (mg/L)	Ammonia-N (mg/L)	Phenol (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Total Kjeldahl Nitrogen (mg/L)	Methanol (mg/L)	Method 624 (volatile) Toluene (µg/L)	P,M-Xylenes (µg/L)	o-Xylene (µg/L)	Phenol (µg/L)	Method 625 (semi-volatile) Bis-(2-ethylhexyl) Pthalate (µg/L)	Di-n-octylphthalate (µg/L)	Naph-thalene (µg/L)
SB-1	12/10/91	3,660	1,800	<0.05	26				40	25,000	<2	<3	<3	2,800	<10	<5	<5
SB-2	12/11/91	3,270	<20	45	660				710	<5	<2	<3	<3	<0.005	40	<5	<5
SB-3	12/11/91	2,220	30	<0.05	180				200	<5	<2	<3	<3	<0.005	<10	<5	<5
SB-4	12/11/91	809	30	0.46	90				100	<5	<2	<3	<3	<0.005	<10	<5	<5
SB-5	12/11/91	282	20	<0.05	2.4				4	<5	<2	<3	<3	<0.005	<10	<5	<5
Field Blank SB-6	12/11/91		<2	<0.05	0.09				<1	60	<2	<3	<3	<0.005	<10	<5	<5
BC-DP-1	10/14/87	578	(a)	0.76	18.5	<.01											
BC-DP-2	10/14/87	2,590	(a)	0.38	43.1	<.01											
BC-DP-3	10/14/87	1,915	(a)	0.04	2.4	<.01											
BC-DP-4	10/14/87	250	(a)	0.09	5.69	<.01											
BC-DP-5	10/14/87	585	(a)	0.02	3.93	<.01											
BC-DP-6	10/14/87	315	(a)	0.02	1.68	<.01											
BC-DP-7	10/14/87	435	(a)	0.03	13	<.01											
BC-DP-8	10/14/87	300	(a)	0.03	4.72	<.01											
BC-DP-9	01/07/88	535	(a)	34	11.6	<.01	2.4	2.6									
BC-DP-10	01/07/88	735	(a)	76.2	0.23	<.01	2.4	12.4									
BC-DP-11	01/07/88	3,550	(a)	0.15	21.6	<.01	<2	<4									
BC-DP-12	01/07/88	1,650	(a)	0.05	131	<.01	<1	<4									
BC-DP-13	01/07/88	4,000	(a)	118	0.92	<.01	<1	100									
BC-DP-14	01/07/88	2,100	(a)	37.4	32.1	<.01	<1	72.8									

NOTES: Analytes below the Method Reporting Limit in all samples are not reported.
(a) Test results not listed due to probable analytical difficulties and/or sample preservation techniques. See Appendix E for data.
< Not detected at or above the Method Reporting Limit.
(b) Nitrate detected in field rinsate blank on 01/7/88.

6.25 c

1.6 mg/L

GROUNDWATER DATA EXCERPT FROM 2000 ANNUAL GROUNDWATER MONITORING REPORT THE IT GROUP, MARCH 3, 2000

BORDEN CHEMICAL, INC.

March 15, 2000

Washington Department Ecology
Northwest Regional Office
3190 160th Ave., S.E.
Bellevue, WA 98008-5452
Attn: Toxics Cleanup Program

Re: 2000 Annual Groundwater Monitoring

Toxics Cleanup Program Coordinator:

I have enclosed the results of the 2000 annual groundwater monitoring conducted at the Borden Chemical, Inc. facility in Kent, WA (per Special Condition, Metro Minor Discharge Authorization No. 373). Extraction of methanol contaminated groundwater has continued. Sample analyses confirm that methanol remains localized and suggests that concentrations are declining.

Please contact me at (510) 492-0719 if you require any additional information.

Sincerely,

Natalie Woodard

Natalie Woodard
Regional Environmental Engineer

cc:

Al Bunger – Borden
Diane Strayer – Borden

41100 BOYCE ROAD FREMONT, CA 94538 • TELEPHONE: (510) 657-4500 • FACSIMILE: (510) 490-8373

10912 North Creek Parkway
Suite 200
Bothell, WA 98011-8016
Tel. 425.485.5000
Fax. 425.486.9766

March 3, 2000
Project 804425

Mr. Al Bunger
Borden Chemical
421 First Avenue North
Kent, Washington 98032

Re: 2000 Annual Groundwater Monitoring, Borden Facility, Kent, Washington

in SIS as N-17-0068-000

Dear Mr. Bunger:

On February 3, 2000, groundwater samples were collected by IT Corporation (ITC) personnel at the Borden facility located at 421 First Avenue North in Kent, Washington. 98032 Eight monitoring wells were sampled. The wells were purged and sampled using disposable PVC bailers and a peristaltic pump with disposable PVC tubing. Three pore volumes (well casing volumes) were removed from each well before collecting a sample. Groundwater samples were delivered under standard chain-of-custody protocol to Columbia Analytical Services in Kelso, Washington. Requested analyses included ammonia, nitrate, nitrite, and methanol. The Field Sampling Data Sheets and laboratory results are attached. Field measurements are summarized on the attached table.

Monitoring well MW-6 was not located and consequently a groundwater sample was not collected. Well MW-6 is reportedly located in an area of low cut Holly bushes south of the 4th Avenue North entrance.

Monitoring well MW-10 has a dedicated pump which pumps continuously into a 300-gallon chemical tote. The disposable PVC tubing was changed by ITC personnel, and samples were collected.

Sincerely,

IT CORPORATION

William R. Haldeman, R.G.
Senior Project Hydrogeologist

Scott E. Zorn
Staff Geologist

Attachments: Summary Table
Field Sampling Data Sheets
Laboratory Report

\\BOTHFP1\COMMON\Project\final\misfiled\Borden-1.303.doc-00\sm:1

Borden Site Hydrogeological Investigation

Summary of Ground Water Analytical Results

Kent, Washington

Well	Date	Lab Specific Conductance umhos/cm	Nitrate-N mg/L	Ammonia-N mg/L	Methanol mg/L
BC-MW-1	4/1/87	2,550	0.66	70	
BC-MW-1	5/27/87	2,500			
BC-MW-1	10/14/87	3,550	0.65	55	
BC-MW-1	11/19/87	2,890	0.35	21	
BC-MW-1	1/7/88	3,250	0.06[a]	91.60	
BC-MW-1	10/5/88	2,800	<0.05		
BC-MW-1	1/17/89	2,600	<0.05	65	
BC-MW-1	1/10/91	1,600	<0.05	82	
BC-MW-1	10/10/91	3,000	<0.05	16	
BC-MW-1	12/9/91	2,890	0.33	50	
BC-MW-1	1/26/93	3,400	0.70	50	<5
BC-MW-1	2/3/94	3,500	0.20	40	<1
BC-MW-1	1/20/95	3,000	<0.20	21	<1
BC-MW-1	2/13/96	2,300	0.20	7.9	<1
BC-MW-1	1/22/97	2,000	<0.20	11	<1
BC-MW-1	1/30/98	1,800	<1.0	4.2	<1
BC-MW-1	1/22/99	1,345	<0.2	5.0	<5
BC-MW-1	02/17/00	1,104	<0.2	10.0	<0.5
BC-MW-3	4/1/87	475	0.04	8.20	
BC-MW-3	5/27/87	320			
BC-MW-3	10/14/87	433	0.04	2.40	
BC-MW-3	11/19/97	300	0.05	1.50	
BC-MW-3	1/7/88	340	0.22[a]	0.85	
BC-MW-3	10/05/88	280			
BC-MW-3	1/17/89	250	<0.05	2.60	
BC-MW-3	1/10/91	200	<0.05	0.21	
BC-MW-3	10/10/91	220	<0.05	0.49	
BC-MW-3	12/9/91	274	0.17	0.49	
BC-MW-3	1/26/93	190	<0.05	0.32	<5
BC-MW-3	2/3/94	210	0.20	0.16	<1
BC-MW-3	1/20/95	170	<0.20	0.21	<1
BC-MW-3	2/13/96	190	<0.20	0.14	<1*
BC-MW-3	1/22/97	230	<0.20	0.20	<1
BC-MW-3	1/30/98	200	<1.0	0.21	<1
BC-MW-3	1/29/99	188	<0.20	0.20	<5
BC-MW-3	02/17/00	136	<0.20	0.26	<0.5

Well	Date	Lab Specific Conductance umhos/cm	Nitrate-N mg/L	Ammonia-N mg/L	Methanol mg/L
BC-MW-4	10/14/87	600	0.03	5.40	
BC-MW-4	11/19/87	600	0.1	2.70	
BC-MW-4	1/7/88	625	0.06[a]	4.58	
BC-MW-4	10/5/88	550			
BC-MW-4	1/17/89	700	<0.05	6.70	
BC-MW-4	1/10/91	390	<0.05	2.50	
BC-MW-4	10/10/91	560	<0.05	1.90	
BC-MW-4	12/9/91	606	0.07	5.20	
BC-MW-4	1/26/93	390	0.05	2.1	<5
BC-MW-4	2/3/94	440	<0.20	1.7	<1
BC-MW-4	1/20/95	410	<0.20	3.0	<1
BC-MW-4	2/13/96	420	0.20	1.3	<1
BC-MW-4	1/22/97	410	<0.20	1.7	<1
BC-MW-4	1/30/98	410	<1.0	3.3	<1
BC-MW-4	1/22/99	398	<0.20	1.9	<5
BC-MW-4	02/17/00	644	<0.20	5.18	<0.5
BC-MW-5	10/14/87	290	0.02	3.93	
BC-MW-5	11/19/87	250	0.16	0.10	
BC-MW-5	1/7/88	200	0.08[a]	0.61	
BC-MW-5	1/17/89	190	<0.05	1.50	
BC-MW-5	1/10/91	230	0.31	0.21	
BC-MW-5	10/10/91	240	0.05	0.50	
BC-MW-5	12/9/91	247	0.82	0.17	
BC-MW-5	1/26/93	150	0.28	0.07	<5
BC-MW-5	2/3/94	160	2.10	0.13	<1
BC-MW-5	1/20/95	150	0.9	0.19	<1
BC-MW-5	2/13/96	200	0.2	0.12	<1
BC-MW-5	1/22/97	170	<0.2	0.13	<1
BC-MW-5	1/30/98	140	<1.0	0.23	<1
BC-MW-5	1/29/99	164	<0.2	0.07	11**
BC-MW-5	5/25/99				<0.5
BC-MW-5	02/17/00	137	<0.2	0.06	<0.5
BC-MW-6	11/19/87	515	0.07	4.35	
BC-MW-6	1/7/88	380	24.40[a]	0.83	
BC-MW-6	10/5/88	312	3.70		
BC-MW-6	1/17/89	220	8.80	1.60	
BC-MW-6	1/10/91	200	<0.05	0.18	
BC-MW-6	10/10/91	250	0.06	0.50	
BC-MW-6	12/9/91	249	1.9	0.40	
BC-MW-6	1/26/93	240	2.9	0.46	<5
BC-MW-6	2/3/94	200	3.4	0.10	<1
BC-MW-6	1/20/95	150	0.9	0.19	<1
BC-MW-6	2/13/96	150	0.2	0.07	N/A

Well	Date	Lab Specific Conductance umhos/cm	Nitrate-N mg/L	Ammonia-N mg/L	Methanol mg/L
BC-MW-6	1/22/97	N/A	N/A	N/A	N/A
BC-MW-6	1/30/98	N/A	N/A	N/A	N/A
BC-MW-6	1/29/99	N/A	N/A	N/A	N/A
BC-MW-6	02/17/00	N/A	N/A	N/A	N/A
BC-MW-7	10/13/87	1,700	1.16	35.30	
BC-MW-7	11/19/87	1,300	15.20	21	
BC-MW-7	1/7/88	2,650	262.00[a]	3.78	
BC-MW-7	10/5/88	1,400	6.00		
BC-MW-7	1/17/89	2,800	300.00	3.70	
BC-MW-7	1/10/91	1,800	240.00	2.20	
BC-MW-7	10/10/91	1,200	85.00	3.40	
BC-MW-7	12/9/91	1,792	180	2.20	
BC-MW-7	1/26/93	1,800	190	0.74	<5
BC-MW-7	2/3/94	1,800	190	0.64	<1
BC-MW-7	1/20/95	1,200	150	0.16	<1
BC-MW-7	2/13/96	1,100	130	0.07	<1
BC-MW-7	1/22/97	530	69	0.03	<1
BC-MW-7	1/30/98	370	34	0.03	<1
BC-MW-7	1/22/99	508	64	<0.01	<5
BC-MW-7	02/17/00	324	38.9	<0.05	<0.5
BC-MW-8s	1/7/88		0.29[a]	2.83	
BC-MW-8s	1/10/91	140	<0.05	2.20	
BC-MW-8s	10/10/91	220	0.06	2.20	
BC-MW-8s	12/10/91	282	0.07	2.20	
BC-MW-8s	1/26/93	280	<0.05	2.70	<5
BC-MW-8s	2/3/94	340	<0.20	2.60	<1
BC-MW-8s	1/20/95	300	0.40	2.60	<1
BC-MW-8s	2/13/96	330	0.30	1.70	<1
BC-MW-8s	1/22/97	270	0.50	2.90	<1
BC-MW-8s	1/30/98	340	<1.0	3.50	<1
BC-MW-8s	1/29/99	203	3.1	0.20	8.0**
BC-MW-8s	5/25/99				<0.5
BC-MW-8s	02/17/00	303	<0.2	2.87	<0.5
BC-MW-8d	1/7/88	650	0.02[a]	3.51	
BC-MW-8d	12/10/91	590	0.07	3.40	
BC-MW-8d	1/26/93	480	<0.05	3.70	<5
BC-MW-8d	2/3/94	540	<0.20	3.50	<1
BC-MW-8d	1/20/95	440	<0.20	3.40	<1
BC-MW-8d	2/13/96	450	0.20	2.00	<1
BC-MW-8d	1/22/97	440	<0.20	3.30	<1
BC-MW-8d	1/30/98	440	<1.0	3.00	<1
BC-MW-8d	1/29/99	224	0.30	0.49	16**
BC-MW-8d	5/25/99				<0.5
BC-MW-8d	02/17/00	442	<0.2	2.74	<0.5

Well	Date	Lab Specific Conductance umhos/cm	Nitrate-N mg/L	Ammonia-N mg/L	Methanol mg/L
BC-MW-9	1/7/88	265	<0.05[a]	3.13	
BC-MW-9	CLOSED				
BC-MW-10	1/26/93	3,400	<0.3	0.12	41,000
BC-MW-10	2/3/94	2,900	<0.2	9.80	89,000
BC-MW-10	1/20/95	3,500	<6.0	4.00	39,000
BC-MW-10	2/13/96	3,000	<1.0	4.40	26,000
BC-MW-10	1/22/97	2,900	<10.0	5.10	35,000
BC-MW-10	1/30/98	2,700	<1.0	1.40	34,500
BC-MW-10	1/29/99	3,040	<0.20	2.20	14,000
BC-MW-10	1/29/99	3,040	<0.20	2.20	2200

[a] Nitrate was detected in field rinsate blank for 1/7/88 sampling round.
* Result of sample collected on 3/08/96.
** Results suspect; Resampled 5/13/99 and analyzed 5/25/99

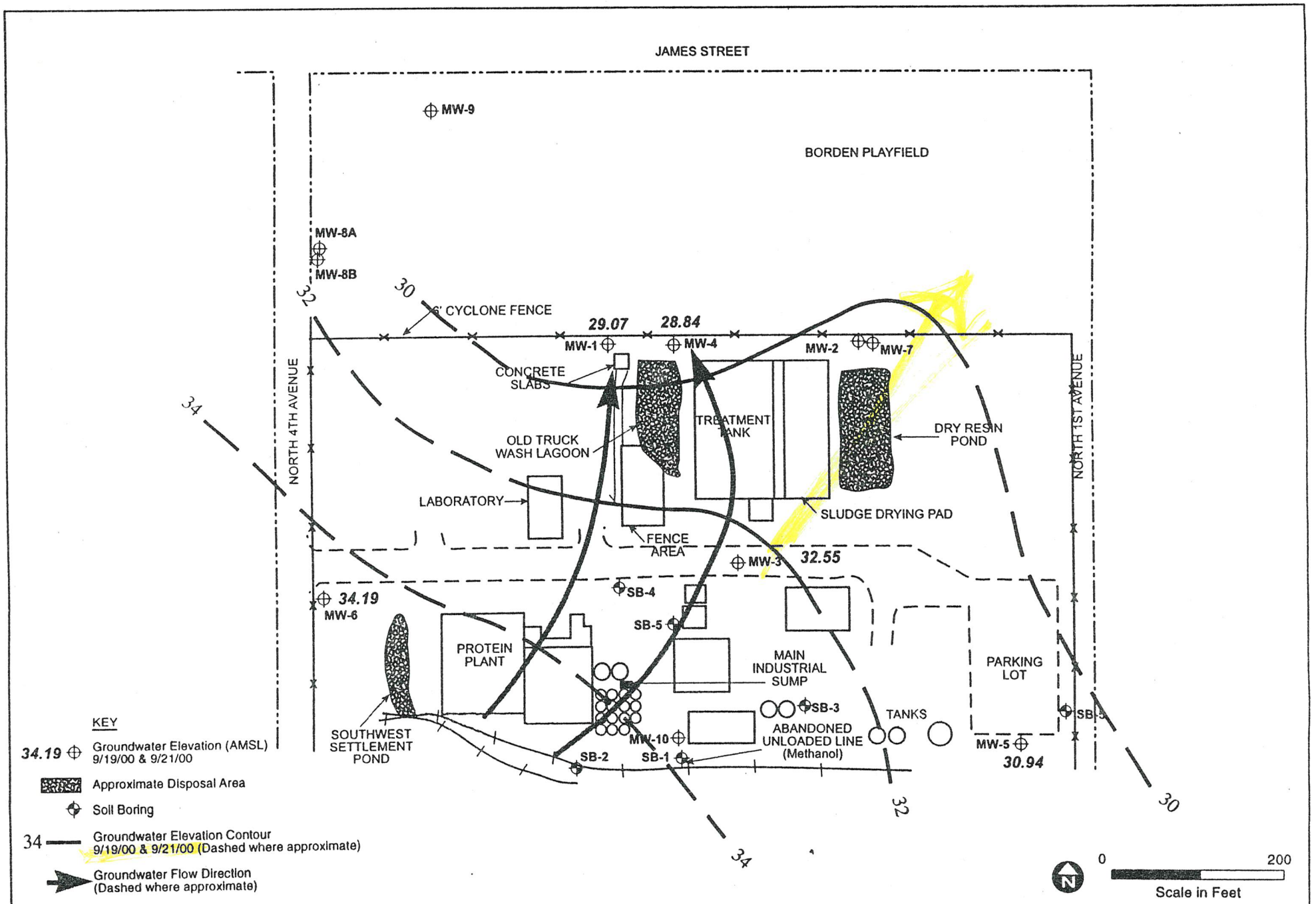
Table 1

Summary of Field Measurements
February 2000
Borden Chemical Facility, Kent, Washington

Well Number	Sample Number	Date Sampled	Depth to Water (ft)	Gallons Purged	pH	Conductivity (µs/cm)	Temp (°C)
MW-1	MW-1-0200	02/03/2000	1.95	6	6.89	1,104	10
MW-3	MW-3-0200	02/03/2000	3.47	6	6.35	136	12
MW-4	MW-4-0200	02/03/2000	4.61	4.8	6.80	644	12
MW-5	MW-5-0200	02/03/2000	4.95	6	5.97	137	12
MW-7	MW-7-0200	02/03/2000	2.42	6	4.07	324	10
MW-8S	MW-8S-0200	02/03/2000	1.23	9	6.59	303	11
MW-8D	MW-8D-0200	02/03/2000	2.91	24	6.46	442	12
MW-10	MW-10-0200	02/03/2000	*	—	6.08	1,440	14

NOTE: * = pump in well.

EXCERPTS FROM
PHASE II REPORT
BORDEN CHEMICAL FACILITY
URS, NOVEMBER 2000



Source: EMCON Northwest, 1992

City of Kent	Project No. 5409900118
URS	

Potentiometric Surface
Borden Facility, Kent, Washington

Figure 3

99/Misc. Jobs/Kent 10/00

Table 3

ANALYTICAL RESULTS FOR GROUNDWATER
VOLATILE ORGANIC COMPOUNDS

Sample ID	MW-1	MW-3	MW-4	MW-5	MW-6	MW-7	MTCA A		MTCA B
Sample Date	9/21/00	9/19/00	9/21/00	9/19/00	9/21/00	9/19/00	Current	Proposed	Formula
Analyte (ug/L)									
Dichlorodifluoromethane	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	
Chloromethane	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	
Vinyl Chloride	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.2	0.2	
Bromomethane	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	
Chloroethane	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	
Trichlorofluoromethane	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	
1,1-Dichloroethene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	
Acetone	10	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	--	--	800
Carbon Disulfide	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	
Methylene Chloride	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5	5	
(trans) 1,2-Dichloroethene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	
1,1-Dichloroethane	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	
Vinyl Acetate	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	--	--	
2,2-Dichloropropane	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	
(cis) 1,2-Dichloroethene	1.3	0.20 U	1.0	0.20 U	0.20 U	0.20 U	--	--	80
2-Butanone	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	--	--	
Chloroform	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	
1,1,1-Trichloroethane	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	200	200	
Carbon Tetrachloride	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	
1,1-Dichloropropene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	
Benzene	2.2	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	5	5	1.5
1,2-Dichloroethane	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	5	5	
Trichloroethene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	
1,2-Dichloropropane	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	
Dibromomethane	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	
Bromodichloromethane	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	
2-Chloroethyl Vinyl Ether	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	--	--	
(cis) 1,3-Dichloropropene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	
Toluene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	40	1,000	
(trans) 1,3-Dichloropropene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	
1,1,2-Trichloroethane	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	
Tetrachloroethene	0.20 U	0.40 U	0.20 U	0.40 U	0.20 U	0.40 U	--	--	
1,3-Dichloropropane	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	
Methyl Isobutyl Ketone	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	--	--	
Dibromochloromethane	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	
1,2-Dibromoethane	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	
Chlorobenzene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	
1,1,1,2-Tetrachloroethane	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	
Ethylbenzene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	30	700	

Table 3

ANALYTICAL RESULTS FOR GROUNDWATER
VOLATILE ORGANIC COMPOUNDS

Sample ID	MW-1	MW-3	MW-4	MW-5	MW-6	MW-7	MTCA A		MTCA B
Sample Date	9/21/00	9/19/00	9/21/00	9/19/00	9/21/00	9/19/00	Current	Proposed	Formula
Analyte (ug/L)									
m,p-Xylene	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	20	1,000	
o-Xylene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	20	1,000	
Styrene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	
Bromoform	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	--	--	
Isopropylbenzene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	
Bromobenzene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	
1,1,2,2-Tetrachloroethane	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	
1,2,3-Trichloropropane	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	
n-Propylbenzene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	
2-Chlorotoluene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	
4-Chlorotoluene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	
1,3,5-Trimethylbenzene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	
tert-Butylbenzene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	
1,2,4-Trimethylbenzene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	
sec-Butylbenzene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	
1,3-Dichlorobenzene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	
p-Isopropyltoluene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	
1,4-Dichlorobenzene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	
1,2-Dichlorobenzene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	
n-Butylbenzene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	
1,2-Dibromo-3-chloropropane	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	--	--	
1,2,4-Trichlorobenzene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	
Hexachlorobutadiene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	
Naphthalene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	--	--	
1,2,3-Trichlorobenzene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	

Notes:

ug/L = micrograms per liter

U = not detected above laboratory practical quantitation limit (PQL)

Volatiles analyzed by EPA 8260B

-- = No MTCA A cleanup level for this analyte

MTCA B Formula Values for groundwater cleanup are listed only for detected analytes

Table 4

ANALYTICAL RESULTS FOR GROUNDWATER
SEMI-VOLATILE ORGANIC COMPOUNDS

Sample ID	MW-1	MW-3	MW-4	MW-5	MW-6	MW-7	MTCA A		MTCA B
Sample Date	9/21/00	9/19/00	9/21/00	9/19/00	9/21/00	9/19/00	Current	Proposed	Formula
Analyte (ug/L)									
Aniline	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	--	--	
bis(2-Chloroethyl)ether	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	
Phenol	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	
2-Chlorophenol	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	
1,3-Dichlorobenzene	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	
1,4-Dichlorobenzene	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	
1,2-Dichlorobenzene	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	
Benzyl alcohol	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	
bis(2-chloroisopropyl)ether	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	
2-Methylphenol	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	
Hexachloroethane	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	
N-Nitroso-di-n-propylamine	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	
4-Methylphenol	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	
Nitrobenzene	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	
Isophorone	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	
2-Nitrophenol	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	--	--	
2,4-Dimethylphenol	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	
bis(2-Chloroethoxy)methane	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	
2,4-Dichlorophenol	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	--	--	
Benzoic acid	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	--	--	
1,2,4-Trichlorobenzene	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	
Naphthalene	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	160	
4-Chloroaniline	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	
Hexachlorobutadiene	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	
4-Chloro-3-methylphenol	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	
2-Methylnaphthalene	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	
Hexachlorocyclopentadiene	13 U	13 U	13 U	13 U	13 U	13 U	--	--	
2,4,6-Trichlorophenol	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	--	--	
2,4,5-Trichlorophenol	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	--	--	
2-Chloronaphthalene	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	
2-Nitroaniline	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	
Acenaphthylene	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	
Dimethylphthalate	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	
2,6-Dinitrotoluene	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	
Acenaphthene	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	
3-Nitroaniline	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	
2,4-Dinitrophenol	13 U	13 U	13 U	13 U	13 U	13 U	--	--	
Dibenzofuran	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	

Table 4

ANALYTICAL RESULTS FOR GROUNDWATER
SEMI-VOLATILE ORGANIC COMPOUNDS

Sample ID	MW-1	MW-3	MW-4	MW-5	MW-6	MW-7	MTCA A		MTCA B
Sample Date	9/21/00	9/19/00	9/21/00	9/19/00	9/21/00	9/19/00	Current	Proposed	Formula
Analyte (ug/L)									
2,4-Dinitrotoluene	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	--	--	
4-Nitrophenol	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	--	--	
Fluorene	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	
4-Chlorophenyl-phenylether	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	
Diethylphthalate	0.50 U	0.50 U	0.50 U	1.1	0.50 U	0.50 U	--	--	
4-Nitroaniline	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	
4,6-Dinitro-2-methylphenol	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	--	--	
n-Nitrosodiphenylamine	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	
4-Bromophenyl-phenylether	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	
Hexachlorobenzene	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	
Pentachlorophenol	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	--	--	
Phenanthrene	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	
Anthracene	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	
Carbazole	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	--	--	
Di-n-butylphthalate	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	
Fluoranthene	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	
Benzidine	13 U	13 U	13 U	13 U	13 U	13 U	--	--	
Pyrene	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	
Butylbenzylphthalate	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	
3,3'-Dichlorobenzidine	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	
Benzo[a]anthracene	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	
Chrysene	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	
bis(2-Ethylhexyl)phthalate	5.5	4.2	2.5 U	2.5 U	2.5 U	2.5 U	--	--	6.25
Di-n-octylphthalate	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	
Benzo[b]fluoranthene	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	
Benzo[k]fluoranthene	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	
Benzo[a]pyrene	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	
Indeno[1,2,3-cd]pyrene	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	
Dibenz[a,h]anthracene	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	
Benzo[g,h,i]perylene	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	--	--	

Notes:

ug/L = micrograms per liter

U = not detected above laboratory practical quantitation limit (PQL)

Semi-volatiles analyzed by EPA 8270C

-- = No MTCA A cleanup level for this analyte

MTCA B Formula Values for groundwater cleanup are listed only for detected analytes

Table 5

ANALYTICAL RESULTS FOR GROUNDWATER
TOTAL METALS

Sample ID	MW-1	MW-3	MW-4	MW-5	MW-6	MW-7	MTCA A		MTCA B
Sample Date	9/21/00	9/19/00	9/21/00	9/19/00	9/21/00	9/19/00	Current	Proposed	Formula
Analyte (ug/L)									
Arsenic	20	3.3 U	5.4	3.3 U	3.6	3.3 U	5	5	4.8
Barium	85	56 U	56 U	56 U	56 U	56 U	--	--	1,120
Cadmium	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	5	5	
Chromium	11 U	11 U	11 U	11 U	11 U	11 U	50	50	
Lead	1.4	1.1 U	1.1 U	1.4	1.1 U	1.1 U	5	5	--
Mercury	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2	2	
Selenium	5.6 U	5.6 U	5.6 U	5.6 U	5.6 U	5.6 U	--	--	
Silver	11 U	11 U	11 U	11 U	11 U	11 U	--	--	

Notes:

ug/L = micrograms per liter

U = not detected above laboratory practical quantitation limit (PQL)

Total metals analyzed by EPA 200.8/7421A/7470A

-- = No MTCA A cleanup level for this analyte

MTCA B Formula Values for groundwater cleanup are listed only for detected analytes

Table 6

ANALYTICAL RESULTS FOR SOIL
VOLATILE ORGANIC COMPOUNDS

Sample ID	TP-1	TP-2	TP-3	TP-4	MTCA A	
Sample Depth (feet below grade)	1.5	1.5	1.5	1.5		
Sample Date	9/21/00	9/21/00	9/21/00	9/21/00	Current	Proposed
Analyte (mg/Kg)						
Dichlorodifluoromethane	0.063 U	0.061 U	0.063 U	0.063 U	--	--
Chloromethane	0.063 U	0.061 U	0.063 U	0.063 U	--	--
Vinyl Chloride	0.063 U	0.061 U	0.063 U	0.063 U	--	--
Bromomethane	0.063 U	0.061 U	0.063 U	0.063 U	--	--
Chloroethane	0.063 U	0.061 U	0.063 U	0.063 U	--	--
Trichlorofluoromethane	0.063 U	0.061 U	0.063 U	0.063 U	--	--
1,1-Dichloroethene	0.063 U	0.061 U	0.063 U	0.063 U	--	--
Acetone	0.32 U	0.3 U	0.32 U	0.31 U	--	--
Carbon Disulfide	0.063 U	0.061 U	0.063 U	0.063 U	--	--
Methylene Chloride	0.32 U	0.3 U	0.32 U	0.31 U	0.5	0.02
(trans) 1,2-Dichloroethene	0.063 U	0.061 U	0.063 U	0.063 U	--	--
1,1-Dichloroethane	0.063 U	0.061 U	0.063 U	0.063 U	--	--
Vinyl Acetate	0.32 U	0.3 U	0.32 U	0.31 U	--	--
2,2-Dichloropropane	0.063 U	0.061 U	0.063 U	0.063 U	--	--
(cis) 1,2-Dichloroethene	0.063 U	0.061 U	0.063 U	0.063 U	--	--
2-Butanone	0.32 U	0.3 U	0.32 U	0.31 U	--	--
Chloroform	0.063 U	0.061 U	0.063 U	0.063 U	--	--
1,1,1-Trichloroethane	0.063 U	0.061 U	0.063 U	0.063 U	20	1
Carbon Tetrachloride	0.063 U	0.061 U	0.063 U	0.063 U	--	--
1,1-Dichloropropene	0.063 U	0.061 U	0.063 U	0.063 U	--	--
Benzene	0.063 U	0.061 U	0.063 U	0.063 U	0.5	0.1
1,2-Dichloroethane	0.063 U	0.061 U	0.063 U	0.063 U	--	--
Trichloroethene	0.063 U	0.061 U	0.063 U	0.063 U	0.5	0.03
1,2-Dichloropropane	0.063 U	0.061 U	0.063 U	0.063 U	--	--
Dibromomethane	0.063 U	0.061 U	0.063 U	0.063 U	--	--
Bromodichloromethane	0.063 U	0.061 U	0.063 U	0.063 U	--	--
2-Chloroethyl Vinyl Ether	0.32 U	0.3 U	0.32 U	0.31 U	--	--
(cis) 1,3-Dichloropropene	0.063 U	0.061 U	0.063 U	0.063 U	--	--
Toluene	0.063 U	0.061 U	0.063 U	0.063 U	40	7
(trans) 1,3-Dichloropropene	0.063 U	0.061 U	0.063 U	0.063 U	--	--
1,1,2-Trichloroethane	0.063 U	0.061 U	0.063 U	0.063 U	--	--
Tetrachloroethene	0.063 U	0.061 U	0.063 U	0.063 U	0.5	0.05
1,3-Dichloropropane	0.063 U	0.061 U	0.063 U	0.063 U	--	--
Methyl Isobutyl Ketone	0.32 U	0.3 U	0.32 U	0.31 U	--	--
Dibromochloromethane	0.063 U	0.061 U	0.063 U	0.063 U	--	--
1,2-Dibromoethane	0.063 U	0.061 U	0.063 U	0.063 U	--	--
Chlorobenzene	0.063 U	0.061 U	0.063 U	0.063 U	--	--

Table 6

ANALYTICAL RESULTS FOR SOIL
VOLATILE ORGANIC COMPOUNDS

Sample ID	TP-1	TP-2	TP-3	TP-4	MTCA A	
Sample Depth (feet below grade)	1.5	1.5	1.5	1.5		
Sample Date	9/21/00	9/21/00	9/21/00	9/21/00	Current	Proposed
Analyte (mg/Kg)						
1,1,1,2-Tetrachloroethane	0.063 U	0.061 U	0.063 U	0.063 U	--	--
Ethylbenzene	0.063 U	0.061 U	0.063 U	0.063 U	20	6
m,p-Xylene	0.13 U	0.12 U	0.13 U	0.13 U	20	9
o-Xylene	0.063 U	0.061 U	0.063 U	0.063 U		
Styrene	0.063 U	0.061 U	0.063 U	0.063 U	--	--
Bromoform	0.063 U	0.061 U	0.063 U	0.063 U	--	--
Isopropylbenzene	0.063 U	0.061 U	0.063 U	0.063 U	--	--
Bromobenzene	0.063 U	0.061 U	0.063 U	0.063 U	--	--
1,1,2,2-Tetrachloroethane	0.063 U	0.061 U	0.063 U	0.063 U	--	--
1,2,3-Trichloropropane	0.063 U	0.061 U	0.063 U	0.063 U	--	--
n-Propylbenzene	0.063 U	0.061 U	0.063 U	0.063 U	--	--
2-Chlorotoluene	0.063 U	0.061 U	0.063 U	0.063 U	--	--
4-Chlorotoluene	0.063 U	0.061 U	0.063 U	0.063 U	--	--
1,3,5-Trimethylbenzene	0.063 U	0.061 U	0.063 U	0.063 U	--	--
tert-Butylbenzene	0.063 U	0.061 U	0.063 U	0.063 U	--	--
1,2,4-Trimethylbenzene	0.063 U	0.061 U	0.063 U	0.063 U	--	--
sec-Butylbenzene	0.063 U	0.061 U	0.063 U	0.063 U	--	--
1,3-Dichlorobenzene	0.063 U	0.061 U	0.063 U	0.063 U	--	--
p-Isopropyltoluene	0.063 U	0.061 U	0.063 U	0.063 U	--	--
1,4-Dichlorobenzene	0.063 U	0.061 U	0.063 U	0.063 U	--	--
1,2-Dichlorobenzene	0.063 U	0.061 U	0.063 U	0.063 U	--	--
n-Butylbenzene	0.063 U	0.061 U	0.063 U	0.063 U	--	--
1,2-Dibromo-3-chloropropane	0.32 U	0.3 U	0.32 U	0.31 U	--	--
1,2,4-Trichlorobenzene	0.063 U	0.061 U	0.063 U	0.063 U	--	--
Hexachlorobutadiene	0.32 U	0.3 U	0.32 U	0.31 U	--	--
Naphthalene	0.063 U	0.061 U	0.063 U	0.063 U	--	--
1,2,3-Trichlorobenzene	0.063 U	0.061 U	0.063 U	0.063 U	--	--

Notes:

mg/Kg = milligrams per kilogram

U = not detected above laboratory practical quantitation limit (PQL)

Volatiles analyzed by EPA 8260B

-- = No MTCA A cleanup level for this analyte

Table 7

ANALYTICAL RESULTS FOR SOIL
SEMI-VOLATILE ORGANIC COMPOUNDS

Sample ID	TP-1	TP-2	TP-3	TP-4	MTCA A		MTCA B
Sample Depth (feet below grade)	1.5	1.5	1.5	1.5			
Sample Date	9/21/00	9/21/00	9/21/00	9/21/00	Current	Proposed	Formula
Analyte (mg/Kg)							
Aniline	1.3 U	1.2 U	1.3 U	0.42 U	--	--	
bis(2-Chloroethyl)ether	0.13 U	0.12 U	0.13 U	0.042 U	--	--	
Phenol	0.13 U	0.12 U	0.13 U	0.042 U	--	--	
2-Chlorophenol	0.13 U	0.12 U	0.13 U	0.042 U	--	--	
1,3-Dichlorobenzene	0.13 U	0.12 U	0.13 U	0.042 U	--	--	
1,4-Dichlorobenzene	0.13 U	0.12 U	0.13 U	0.042 U	--	--	
1,2-Dichlorobenzene	0.13 U	0.12 U	0.13 U	0.042 U	--	--	
Benzyl alcohol	0.13 U	0.12 U	0.13 U	0.042 U	--	--	
bis(2-chloroisopropyl)ether	0.13 U	0.12 U	0.13 U	0.042 U	--	--	
2-Methylphenol	0.13 U	0.12 U	0.13 U	0.042 U	--	--	
Hexachloroethane	0.13 U	0.12 U	0.13 U	0.042 U	--	--	
N-Nitroso-di-n-propylamine	0.13 U	0.12 U	0.13 U	0.042 U	--	--	
4-Methylphenol	0.13 U	0.12 U	0.13 U	0.042 U	--	--	
Nitrobenzene	0.13 U	0.12 U	0.13 U	0.042 U	--	--	
Isophorone	0.13 U	0.12 U	0.13 U	0.042 U	--	--	
2-Nitrophenol	1.3 U	1.2 U	1.3 U	0.42 U	--	--	
2,4-Dimethylphenol	0.13 U	0.12 U	0.13 U	0.042 U	--	--	
bis(2-Chloroethoxy)methane	0.13 U	0.12 U	0.13 U	0.042 U	--	--	
2,4-Dichlorophenol	1.3 U	1.2 U	1.3 U	0.42 U	--	--	
Benzoic acid	1.3 U	1.2 U	1.3 U	0.42 U	--	--	
1,2,4-Trichlorobenzene	0.13 U	0.12 U	0.13 U	0.042 U	--	--	
Naphthalene	0.13 U	0.12 U	0.13 U	0.042 U	--	--	
4-Chloroaniline	0.13 U	0.12 U	0.13 U	0.042 U	--	--	
Hexachlorobutadiene	0.13 U	0.12 U	0.13 U	0.042 U	--	--	
4-Chloro-3-methylphenol	0.13 U	0.12 U	0.13 U	0.042 U	--	--	
2-Methylnaphthalene	0.13 U	0.12 U	0.13 U	0.042 U	--	--	
Hexachlorocyclopentadiene	3.2 U	3.0 U	3.2 U	1.0 U	--	--	
2,4,6-Trichlorophenol	1.3 U	1.2 U	1.3 U	0.42 U	--	--	
2,4,5-Trichlorophenol	1.3 U	1.2 U	1.3 U	0.42 U	--	--	
2-Chloronaphthalene	0.13 U	0.12 U	0.13 U	0.042 U	--	--	
2-Nitroaniline	0.13 U	0.12 U	0.13 U	0.042 U	--	--	
Acenaphthylene	0.13 U	0.12 U	0.13 U	0.042 U	--	--	
Dimethylphthalate	0.13 U	0.12 U	0.13 U	0.042 U	--	--	
2,6-Dinitrotoluene	0.13 U	0.12 U	0.13 U	0.042 U	--	--	
Acenaphthene	0.13 U	0.12 U	0.13 U	0.042 U	--	--	
3-Nitroaniline	0.13 U	0.12 U	0.13 U	0.042 U	--	--	
2,4-Dinitrophenol	3.2 U	3.0 U	3.2 U	1.0 U	--	--	

Table 7

ANALYTICAL RESULTS FOR SOIL
SEMI-VOLATILE ORGANIC COMPOUNDS

Sample ID	TP-1	TP-2	TP-3	TP-4	MTCA A		MTCA B
Sample Depth (feet below grade)	1.5	1.5	1.5	1.5			
Sample Date	9/21/00	9/21/00	9/21/00	9/21/00	Current	Proposed	Formula
Analyte (mg/Kg)							
Dibenzofuran	0.13 U	0.12 U	0.13 U	0.042 U	--	--	
2,4-Dinitrotoluene	1.3 U	1.2 U	1.3 U	0.42 U	--	--	
4-Nitrophenol	1.3 U	1.2 U	1.3 U	0.42 U	--	--	
Fluorene	0.13 U	0.12 U	0.13 U	0.042 U	--	--	
4-Chlorophenyl-phenylether	0.13 U	0.12 U	0.13 U	0.042 U	--	--	
Diethylphthalate	0.13 U	0.12 U	0.13 U	0.042 U	--	--	
4-Nitroaniline	0.13 U	0.12 U	0.13 U	0.042 U	--	--	
4,6-Dinitro-2-methylphenol	1.3 U	1.2 U	1.3 U	0.42 U	--	--	
n-Nitrosodiphenylamine	0.13 U	0.12 U	0.13 U	0.042 U	--	--	
4-Bromophenyl-phenylether	0.13 U	0.12 U	0.13 U	0.042 U	--	--	
Hexachlorobenzene	0.13 U	0.12 U	0.13 U	0.042 U	--	--	
Pentachlorophenol	1.3 U	1.2 U	1.3 U	0.42 U	--	--	
Phenanthrene	0.12 J	10 J	0.13 U	0.042 U	--	--	--
Anthracene	0.13 U	0.12 U	0.13 U	0.042 U	--	--	
Carbazole	1.3 U	1.2 U	1.3 U	0.42 U	--	--	
Di-n-butylphthalate	0.13 U	0.12 U	0.13 U	0.042 U	--	--	
Fluoranthene	0.091 J	0.078 J	0.13 U	0.042 U	--	--	64
Benzidine	3.2 U	3.0 U	3.2 U	1.0 U	--	--	
Pyrene	0.067 J	0.10 J	0.13 U	0.042 U	--	--	48
Butylbenzylphthalate	0.13 U	0.12 U	0.13 U	0.042 U	--	--	
3,3'-Dichlorobenzidine	0.13 U	0.12 U	0.13 U	0.042 U	--	--	
bis(2-Ethylhexyl)phthalate	0.63 U	10 B	0.63 U	0.21 U	--	--	
Di-n-octylphthalate	0.13 U	0.12 U	0.13 U	0.042 U	--	--	
Benzo[g,h,i]perylene	0.13 U	0.12 U	0.13 U	0.042 U	--	--	
Benzo[a]anthracene	0.13 U	0.12 U	0.13 U	0.042 U			
Chrysene	0.13 U	0.12 U	0.13 U	0.042 U			
Benzo[b]fluoranthene	0.13 U	0.12 U	0.13 U	0.042 U			
Benzo[k]fluoranthene	0.13 U	0.12 U	0.13 U	0.042 U	Sum < 1.0	Sum < 2.0	
Benzo[a]pyrene	0.13 U	0.12 U	0.13 U	0.042 U			
Indeno[1,2,3-cd]pyrene	0.13 U	0.12 U	0.13 U	0.042 U			
Dibenz[a,h]anthracene	0.13 U	0.12 U	0.13 U	0.042 U			

Notes:

mg/Kg = milligrams per kilogram

U = not detected above laboratory practical quantitation limit (PQL)

J = The value reported was below the practical quantitation limit. The value is an estimate.

B = The analyte indicated was also found in the blank sample.

Semi-volatiles analyzed by EPA 8270C

-- = No MTCA A cleanup level for this analyte

MTCA B Formula Values for protection of groundwater are listed only for detected analytes

Table 8
ANALYTICAL RESULTS FOR SOIL
TOTAL METALS

Sample ID	TP-1	TP-2	TP-3	TP-4	MTCA A		MTCA B
Sample Depth (feet below grade)	1.5	1.5	1.5	1.5			
Sample Date	9/21/00	9/21/00	9/21/00	9/21/00	Current	Proposed	Formula
Analyte (mg/Kg)							
Arsenic	13 U	12 U	13 U	13 U	20	20	
Barium	76	77	56	62	--	--	112
Cadmium	0.63 U	0.61 U	0.63 U	0.63 U	2	1	
Chromium	12	9.9	21	18	100	Cr III: 2,000	1,600
						Cr VI: 19	8
Lead	67	73	46	10	250	1,000	--
Mercury	0.32 U	0.30 U	0.32 U	0.31 U	1	2	
Selenium	13 U	12 U	13 U	13 U	--	--	
Silver	0.63 U	0.61 U	0.63 U	0.63 U	--	--	

Notes:

mg/Kg = milligrams per kilogram

U = not detected above laboratory practical quantitation limit (PQL)

Total metals analyzed by EPA 200.8/7421A/7470A

-- = No MTCA A cleanup level for this analyte

MTCA B Formula Values for protection of groundwater are listed only for detected analytes

Table 9
ANALYTICAL RESULTS FOR SOIL
PCBs

Sample ID	TP-1	TP-2	TP-3	TP-4	MTCA A	
Sample Depth (feet below grade)	1.5	1.5	1.5	1.5		
Sample Date	9/21/00	9/21/00	9/21/00	9/21/00	Current	Proposed
Analyte (mg/Kg)						
Aroclor 1016	0.063 U	0.061 U	0.063 U	0.063 U	Sum < 1	Sum < 10
Aroclor 1221	0.063 U	0.061 U	0.063 U	0.063 U		
Aroclor 1232	0.063 U	0.061 U	0.063 U	0.063 U		
Aroclor 1242	0.063 U	0.061 U	0.063 U	0.063 U		
Aroclor 1248	0.063 U	0.061 U	0.063 U	0.063 U		
Aroclor 1254	0.29	0.061 U	0.063 U	0.063 U		
Aroclor 1260	0.063 U	0.061 U	0.063 U	0.063 U		

Notes:

mg/Kg = milligrams per kilogram

U = not detected above laboratory practical quantitation limit (PQL)

PCBs analyzed by EPA Method 8082

WASHINGTON STATE DEPARTMENT OF ECOLOGY LETTER
MARCH 18, 2003

RECEIVED
MAR 24 2003
URS CORPORATION
SEATTLE

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Northwest Regional Office • 3190 160th Avenue SE • Bellevue, Washington 98008-5452 • (425) 649-7000

March 18, 2003

Ms. Kathleen Goodman, L.G., L.H.G.
URS Corporation
Century Square
1501 4th Avenue, Suite 1400
Seattle, WA 98101-1616

Dear Ms. Goodman:

RE: Borden Chemical Facility

The Washington State Department of Ecology (Ecology) has reviewed your letter dated March 12, 2003, regarding the Borden Chemical Facility in Kent, Washington. Our understanding is that the City plans to redevelop the property and a concern has arisen regarding the risks to construction workers due to skin exposure to arsenic in ground water at the site. Arsenic concentrations were measured in six site wells on September 21, 2000. Three were less than the detection limit of 3.3 parts per billion [ppb - a part per billion is one microgram per liter (μg/L)] The remaining three were 3.6, 5.4, and 20 ppb, respectively.

Ecology's cleanup level for arsenic is 5 ppb. This concentration is based on protecting human health when drinking water, adjusted to account for general background arsenic concentrations in Washington state.

Ecology understands that the City of Kent supplies water for general consumption from water sources approximately 14 miles east of the City. The concern regarding ground water at the Borden site is skin contact skin by construction workers during construction. The City has calculated that, for this exposure pathway, the cancer risk is one-in-ten million and the hazard quotient is 0.02. These values are less than the cancer risk of one-in-one million and hazard quotient of one (1) at which such risks are regulated. (The hazard quotient is a measure of noncancer risk)

To put the arsenic concentrations in perspective, in 1943 the Public Health Service established an allowable arsenic concentration in drinking water of 50 ppb. Concentrations up to 50 ppb have been allowable in public water supplies for the past sixty years. Although the allowable arsenic concentration in drinking water will be lowered to 10 ppb in the near future, no measurement on the site has exceeded the drinking water standard which has been in place for the past sixty years, and all but one are below the new drinking water standard of 10 ppb. Given that the concern is skin contact by construction workers, not drinking, the risk to the workers is negligible.

This information has been reviewed by Dr. Craig T. McCormack, a toxicologist with Ecology, and by Dr. Jim W. White, an environmental health specialist with the Washington State Department of Health, and they concur that the risk to construction workers of skin contact with ground water with arsenic concentrations of up to 20 ppb is negligible and below levels at which chemical risks are regulated.

Sincerely,

David L. South

David L. South, Ph.D., P.E., L.G.
Senior Engineer
Toxics Cleanup Program

URS

March 12, 2003

Dr. David South
Washington Department of Ecology
3190 160th Avenue SE
Bellevue, Washington 98008-5452

Re: Borden Chemical Facility, Kent, Washington
Summary of Issues
URS Project Number 33749353.06000

Dear Dr. South,

Pursuant to your request, this letter was prepared to summarize contaminant concerns and resolutions that have occurred at the former Borden Chemical facility located at 421 1st Avenue North in Kent, Washington. The site is located on the northern portion of downtown Kent and is situated between the King County Regional Justice Center and the Sound Transit Commuter Rail station. A final report of the recent cleanup actions is in preparation and will be submitted to Ecology upon completion.

Land Use History: Early use of the property was for agriculture purposes up to 1956 when Borden Chemical developed the facility for the manufacture of plywood resins. Resins were either phenol-formaldehyde or urea-formaldehyde based; methanol was used to generate the formaldehyde. Resin pieces that settled out of process water were collected in shallow depressions on the site. A rail spur adjacent to the facility was used to transport and offload chemicals. In the recent past, the southeast portion of the rail spur was used for equipment storage by a neighbor without permission of BNSF. The facility was demolished in 2001 and all equipment from the rail spur was removed. The entire property is in the process of redevelopment for commercial and multifamily residential purposes. A multiplex cinema, grocery store, branch campus of Green River Community College, retail, and restaurants are planned for the site. As planned, the entire surface of the property will be covered with structures or pavement, except where professionally-tended landscaping is contained in controlled areas.

Releases: Documented releases to site soil and groundwater include methanol and formaldehyde, which occurred in the late 1980s due to damage of a pipeline in the loading area, and petroleum hydrocarbons in the surface soils in the southeast portion of the rail spur. Resin particles were left in three onsite depressions, termed the southwest settlement pond, the old truck wash lagoon, and the dry resin pond.

Groundwater: Shallow groundwater on the site and on the adjacent ball fields was monitored in 10 wells from 1987 to 2000 by Borden's consultant, Emcon/IT, to evaluate the degradation of methanol, ammonia, and nitrate. Elevated levels of methanol and nitrate exhibited significant decreases during this time period, although still in exceedence of Method B levels in two of the

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wells as of 2000. However, sampling conducted in December 2002 resulted in concentrations of methanol and nitrate below detection limits or cleanup levels in the remaining affected wells.

A site investigation in 2000 collected one groundwater sample from each of six wells on the Borden facility and analyzed for volatiles, semi-volatiles, and inorganics (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver). Arsenic was found exceeding the MTCA Method A level in two wells at the northern border of the property; other analytes were either not detected or below MTCA cleanup levels. The source of the groundwater arsenic was not found as there were no known historical uses of arsenic at the site and soil samples collected during the investigation were below MTCA A unrestricted cleanup levels. Attached to this letter is a table (Table 1) of the inorganic results from the groundwater well samples collected in 2000, and a map showing the locations of the wells. Shallow wells are generally screened in the 5 to 15 foot range and the groundwater table is at about 4 to 9 feet below ground surface throughout the site. Deeper wells are screened at various intervals. Table 2 (attached) provides a list of the wells, their depths, and screened intervals based on logs provided by Borden's consultant.

Soil Sampling and Recent Cleanup Activities: Soil samples from the site were evaluated during investigations in 2000 and 2001, before and during site demolition. Two locations were found to have soil contaminant concentrations in exceedence of MTCA Method A unrestricted levels (or Method B if Method A levels were not available). A remedial action in 2002 was conducted to remove soils in the southwest settlement pond that contained elevated nitrate levels, and in the southeast portion of the BNSF property to remove soils exceeding MTCA A cleanup levels for TPH oil and lead. All confirmatory soil analytes were below MTCA cleanup levels for unrestricted use.

Citizen Concerns: A citizen of Seattle has expressed concerns on the issue of arsenic in groundwater. Although the City of Kent has reassured this citizen that the site groundwater is not, and will not be used for drinking water purposes (the City receives most of its public water system supply from water sources approximately 14 miles east of the City), the citizen voiced further concern over the risk of dermal contact with the groundwater. He referenced Tacoma newspaper articles concerning arsenic-contaminated soil in the vicinity of the Asarco smelter as being linked to cancer in Tacoma pets. He believes that, if the arsenic in groundwater is not cleaned up, the public will risk exposure.

The City of Kent is confident that the public health and safety will be protected during the construction of this project and afterward. Although the concentrations of arsenic found in the groundwater wells onsite were 1000 times lower than the MTCA soil cleanup level, the City will prevent public exposure to the groundwater by requiring the developer to control groundwater/surface water runoff during construction, and filing a restrictive covenant against the use of the groundwater for potable purposes with the property deed. Therefore, exposure of the public to arsenic-containing groundwater would not be considered a complete exposure pathway. Without a complete exposure pathway, no increased risk of developing cancer or other

deleterious health effects associated with arsenic exposure would be anticipated in the public population. Due to the depth of contaminated groundwater onsite (4 to 9 feet below ground surface), the only human population that might be expected to have limited and transient dermal exposure to the groundwater would be onsite construction workers working below grade. URS calculated the estimated increased risk of developing cancer or other deleterious health effects for construction workers with occupational exposure to arsenic in groundwater in accordance with U.S. Environmental Protection Agency (EPA) guidelines. URS' risk calculations were completed using the maximum detected concentration of arsenic in groundwater at the property (20 µg/l) and EPA's suggested exposure parameters (i.e., 8 hours per day, 250 days per year). These are highly conservative exposure assumptions and are, therefore, protective of the exposed population. Using these exposure assumptions, the increased risk of construction workers developing cancer or other deleterious health effects as a result of occupational exposure to arsenic in groundwater would be below the acceptable risk levels (cancer risk of less than 1 in 1,000,000 and non-cancer hazard quotient of less than 1.0) established by EPA and the State of Washington Department of Ecology.

We appreciate your review of this information. Please let us know if you have further questions concerning this site or the upcoming development.

Sincerely,
URS Corporation

Kathleen Goodman, L.G., L.H.G.
Senior Project Manager

Attachments: Tables 1 and 2, and Figure 1

Cc: Mr. Gary Gill, City of Kent
Mr. Kelly Peterson, City of Kent
Mr. Nathan Torgelson, City of Kent
Mr. Don Wickstrom, City of Kent
Mr. Bill Wolinski, City of Kent

Table 1
ANALYTICAL RESULTS FOR GROUNDWATER
TOTAL METALS
URS, November 2000

Sample ID	MW-1	MW-3	MW-4	MW-5	MW-6	MW-7	MTCA A		MTCA B
Sample Date	9/21/2000	9/19/2000	9/21/2000	9/19/2000	9/21/2000	9/19/2000	Current	Proposed	Formula
Analyte (ug/L)									
Arsenic	20	3.3 U	5.4	3.3 U	3.6	3.3 U	5	5	4.8
Barium	85	56 U	56 U	56 U	56 U	56 U	--	--	1,120
Cadmium	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	5	5	
Chromium	11 U	11 U	11 U	11 U	11 U	11 U	50	50	
Lead	1.4	1.1 U	1.1 U	1.4	1.1 U	1.1 U	5	5	--
Mercury	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2	2	
Selenium	5.6 U	5.6 U	5.6 U	5.6 U	5.6 U	5.6 U	--	--	
Silver	11 U	11 U	11 U	11 U	11 U	11 U	--	--	

Notes:

ug/L = micrograms per liter

U = not detected above laboratory practical quantitation limit (PQL)

Total metals analyzed by EPA 200.8/7421A/7470A

-- = No MTCA A cleanup level for this analyte

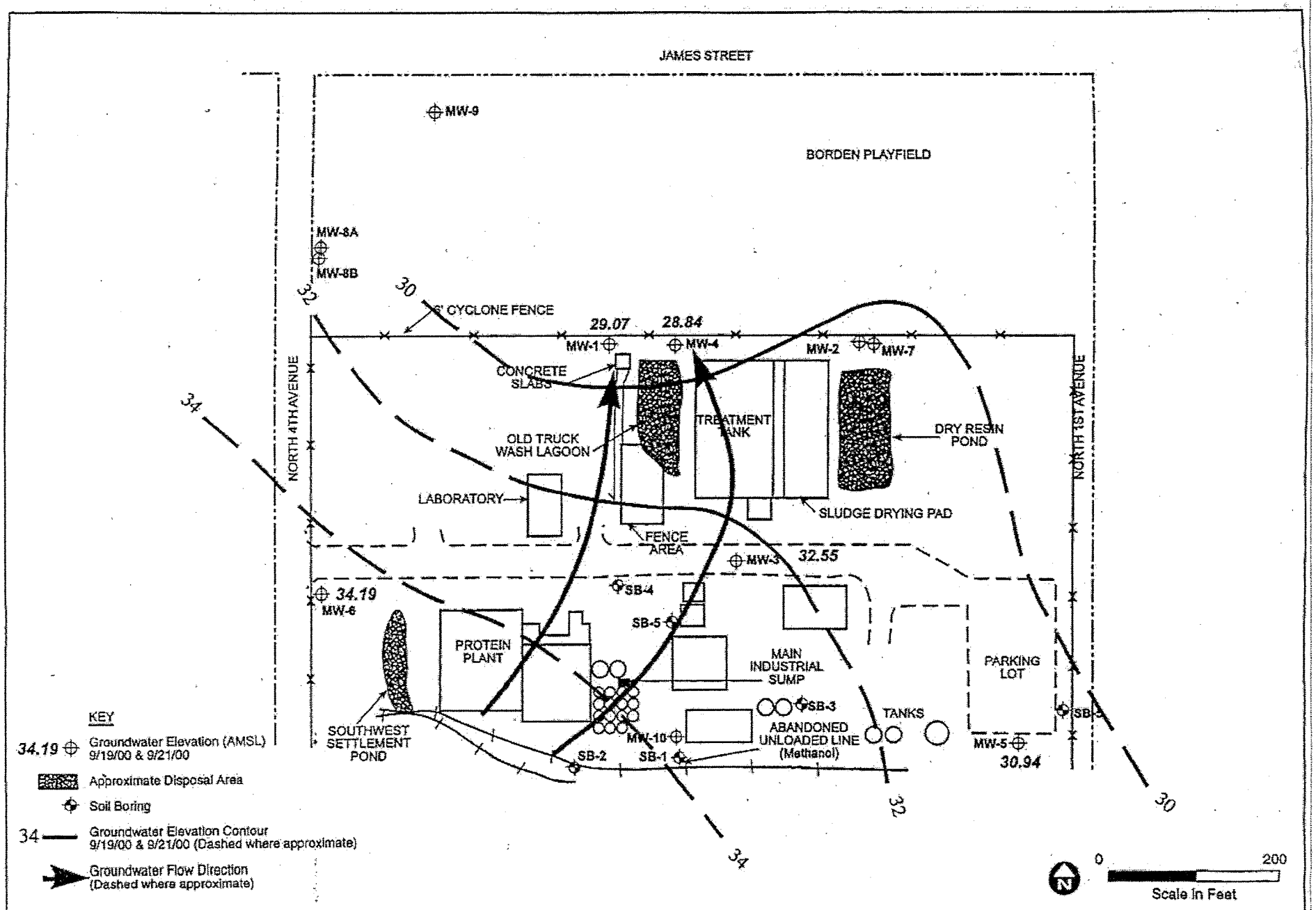
MTCA B Formula Values for groundwater cleanup are listed only for detected analytes

Table 2: Former Borden Chemical Facility Monitoring Well Information
(Information is based on well logs provided in Emcon, 1992)

Well Number	Date Installed by Borden	Casing Diameter	Total Depth (feet)	Screened Interval (feet below ground)	Date Decommissioned
MW-1	March 30, 1987	2" PVC	15	5-15	remains open
MW-2	March 30, 1987	2" PVC	15	5-15	October 14, 1987
MW-3	March 30, 1987	2" PVC	15	5-15	August 2002*
MW-4	October 13,1987	2" PVC	49	37-47	remains open
MW-5	October 12,1987	2" PVC	19	8-18	remains open
MW-6	October 12,1987	2" PVC	15	5-15	remains open
MW-7	October 13,1987	2" PVC	15	5-15	remains open
MW-8s	December 21,1987	2" PVC	20	8-18	remains open
MW-8d	December 22,1987	2" PVC	50	40-50	remains open
MW-9	December 22,1987	2" PVC	20	10-20	December 1991
MW-10	NA; first sampled in 1/93	2" PVC	18.5	NA	remains open

NA = information not available

* URS oversaw decommissioning of MW-3



Source: EMCON Northwest, 1992

City of Kent	Project No. 5409900118	Potentiometric Surface Borden Facility, Kent, Washington	Figure
URS			

99/Misc. Jobs/Kent 10/00