

Circle K Station #1461

Release ID: ~~5~~ 1548
Seattle

Circle K Station #1461

2350 24th Avenue East, Seattle, WA

Field Investigations, 2003

**Report prepared by
Roger Nye, Current Project Manager**

11/26/03



Introduction:

The work on the site was funded through an Ecology PPR request. (AFRS Project # 8729). The work was contracted out to Glacier Environmental Services, Inc. Glacier subcontracted the sampling work out to Pinnacle GeoSciences.

Work Performed:

Fourteen monitoring wells were measured or sampled on 6/16/03. (MW1, MWs 4-16). (See attached site map.) Depth to groundwater was 10 – 12 ft. throughout the site. MW2 and MW3 could not be found and are probably beneath a newer addition to the building on site. MW13 was paved over with asphalt but was dug out. MW14 did not have sufficient water to purge and is a grab sample. Purge water from MW15 had a petroleum odor.

Samples were delivered for analyses directly to North Creek Analytical, Inc. in Bothell. Appropriate sample acquisition, handling, storage, and preservation protocols were followed. ~~Soil~~ ground water sample acquisition equipment was decontaminated using standard procedures. (See attached field notes). Purge water from the wells was disposed of in a permitted groundwater treatment system operated by Glacier Environmental.

Samples were analyzed for TPHG (gasoline), BTEX (benzene, toluene, ethylbenzene, and xylenes), and MTBE. Analytical methods included NWTGH-G, EPA 8021B (BTEX and MTBE), and EPA 8260B (confirmation of MTBE). Wells with significant free product were not sampled.

Measurable free product was observed in MW4, MW8, MW9, and MW13. MW15 had dissolved-phase contaminant levels for benzene and TPHG slightly in excess of Method A standards. All the other wells were below standards. (See attached tabulated results). Chromatogram analyses were not done on these samples because the site hasn't been an operating fuel facility for many years.

A current groundwater flow direction was not available for this site and well locations and elevations were surveyed. A consistent groundwater flow direction was still not apparent however, possibly because the many utility corridors in the area are affecting groundwater levels in the wells.

MW1 and MW5 were considered redundant given historical and recent data, and were closed by filling with bentonite and capping with concrete.

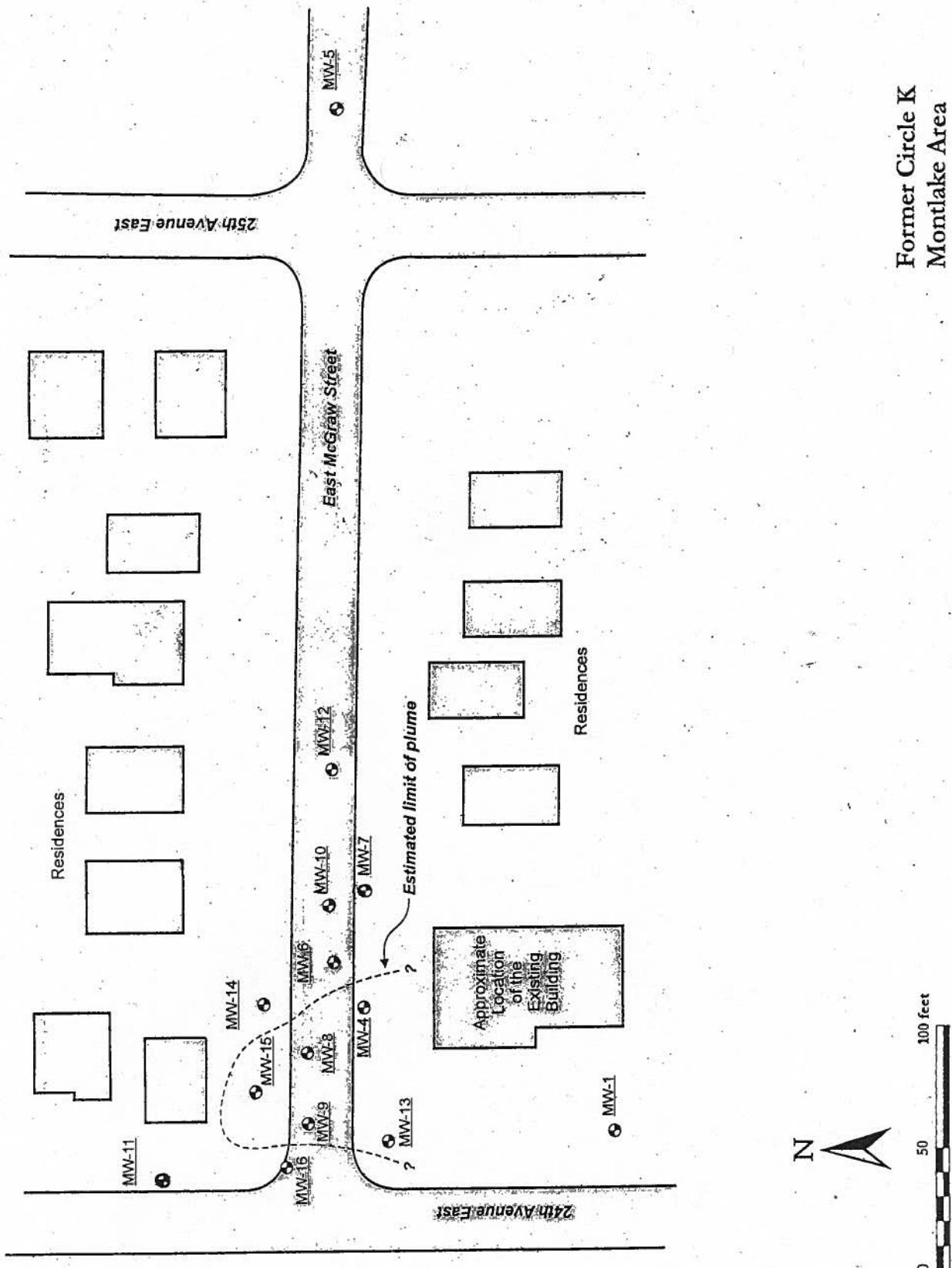
Ten wells (MWs 6-10, MWs 12-16) required repair of the wellheads. Threads were retapped, oversize bolts were installed, and gaskets were cleaned and replaced.

Measurements, field notes, laboratory documentation, and well-closure notification are attached.

Conclusions:

The data indicate a small, well-defined gasoline plume in groundwater extending northwards beneath East McGraw street about 100ft. from the former location of USTs on the property. (See attached site map). Contaminant levels in the plume are very high. Data fourteen years old indicates groundwater flow is towards the north with a shallow gradient. It is possible that groundwater with high dissolved phase could extend beneath the nearest residence to the north. The plume is undefined to the west and could possibly extend that direction an unknown distance beneath 24th Avenue East.

The non-operational soil/groundwater treatment system in place at the site should be evaluated and restarted to determine if appreciable amounts of contamination could still be recovered after its hiatus in operation. If not, the existing remedial system should be modified or replaced to draw contamination back towards the source and recover it. Ultimately, some investigation by geoprobe borings may be required to determine if contaminated soil remains at the site and to define groundwater contamination to the west.



Locations of All Features Shown Are Approximate

TABLE 1 (page 1 of 2)
SUMMARY OF GROUND WATER FIELD DATA
MONTLAKE CIRCLE K
SEATTLE, WASHINGTON

Monitoring Well Number	Date Measured	Casing Rim Elevation ¹ (feet)	Depth to Water ² (feet)	Depth to Product ² (feet)	Ground Water Elevation ¹ (feet)	Corrected Elevation ³ (feet)	Change in Elevation ⁴ (feet)
MW-1	11-Apr-01	100.94	12.62	--	88.32	--	
	16-Jun-03	103.25	12.13	--	91.12		
	11-Jul-03	103.25	12.34	--	90.91		
MW-4	11-Apr-01	98.38	10.23	10.20	88.15	88.18	--
	16-Jun-03	100.73	10.56	10.47	90.17	90.25	
	11-Jul-03	100.73	10.72	10.62	90.01	90.10	
MW-5	11-Apr-01	90.94	9.97	--	80.97	--	
	16-Jun-03	93.34	10.95	--	82.39		
	11-Jul-03	93.34	11.31	--	82.03		
MW-6	11-Apr-01	97.92	11.57	--	86.35	--	
	16-Jun-03	100.25	11.63	--	88.62		
	11-Jul-03	100.25	11.63	--	88.62		
MW-7	11-Apr-01	97.43	8.15	--	89.28	--	
	16-Jun-03	99.75	10.38	--	89.37		
	11-Jul-03	99.75		--	99.75		
MW-8	11-Apr-01	98.36	10.18	10.17	88.18	88.19	--
	16-Jun-03	100.70	10.68	10.67	90.02	90.03	
	11-Jul-03	100.70	10.87	10.86	89.83	89.84	

TABLE 1 (page 2 of 2)
SUMMARY OF GROUND WATER FIELD DATA
MONTLAKE CIRCLE K
SEATTLE, WASHINGTON

Monitoring Well Number	Date Measured	Casing Rim Elevation ¹ (feet)	Depth to Water ² (feet)	Depth to Product ² (feet)	Ground Water Elevation ¹ (feet)	Corrected Elevation ³ (feet)	Change in Elevation ⁴ (feet)
MW-9	11-Apr-01	99.03	10.34	10.33	88.69	88.70	--
	16-Jun-03	101.42	10.97	10.95	90.45	90.47	
	11-Jul-03	101.42	11.22	11.21	90.20	90.21	
MW-10	11-Apr-01	97.55	9.66	--	87.89	--	
	16-Jun-03	99.96	10.53	--	89.43		
	11-Jul-03	99.96	10.86	--	89.10		
MW-11	11-Apr-01	98.62	2.89	--	95.73	--	
	16-Jun-03	100.91	10.07	--	90.84		
	11-Jul-03	100.91	10.80	--	90.11		
MW-12	11-Apr-01	96.56	11.18	--	85.38	--	
	16-Jun-03	98.97	11.27	--	87.70		
	11-Jul-03	98.97	11.23	--	87.74		
MW-13	11-Apr-01	99.95	NM	NM	--	--	
	11-Jul-03	102.19	11.86	11.84	90.33	90.35	
MW-14	11-Apr-01	98.07	8.46	--	89.61	--	
	16-Jun-03	100.45	9.87	--	90.58		
	11-Jul-03	100.41	Dry	--	--		

TABLE 1 (page 3 of 3)
SUMMARY OF GROUND WATER FIELD DATA¹
MONTLAKE CIRCLE K
SEATTLE, WASHINGTON

Monitoring Well Number	Date Measured	Casing Rim Elevation ¹ (feet)	Depth to Water ² (feet)	Product ² (feet)	Ground Water Elevation ¹ (feet)	Corrected Elevation ³ (feet)	Change in Elevation ⁴ (feet)
MW-15	11-Apr-01	99.04	9.11	9.10	89.93	89.94	--
	16-Jun-03	101.34	10.69	--	90.65		
	11-Jul-03	101.31	11.11	--	90.20		
MW-16	11-Apr-01	99.04	9.43	--	89.61	--	
	16-Jun-03	101.25	10.60	--	90.65		
	11-Jul-03	101.16	10.98	--	90.18		

¹ April 2001 elevations are based on GeoEngineers, Inc. *Progress Report No. 1, Remedial Monitoring Program, Circle K Facility 1461; August 23, 1990.*
The June and July 2003 elevations are based on a new survey performed on July 1, 2003 and are relative to a temporary benchmark with an assumed elevation of 100.00 feet, shown in Figure 1.

² Depth to water and product below a fixed spot on the well casing rim.

³ Ground water elevation corrected for the presence of free product, assuming a specific gravity of 0.85 for the product.

⁴ Change in ground water elevation since preceding monitoring event. Positive number indicates rising water level, negative indicates falling water level.

TABLE 2 (page 1 of 3)
SUMMARY OF GROUND WATER SAMPLE ANALYTICAL DATA¹
MONTLAKE CIRCLE K #1461
SEATTLE, WASHINGTON

Monitoring Well Number ²	Date	Benzene ³ ($\mu\text{g}/\text{L}$)	Toluene ³ ($\mu\text{g}/\text{L}$)	Ethybenzene ³ ($\mu\text{g}/\text{L}$)	Xylenes ³ ($\mu\text{g}/\text{L}$)	MTBE ³ ($\mu\text{g}/\text{L}$)	GRO ⁴ (mg/L)	Free Product Present?
MW-1	11-Apr-01	0.500	0.500	0.500	1.00	--	0.0500	No
	16-Jun-03	0.500	0.500	0.500	1.00	1.00	0.0500	No
MW-4	11-Apr-01	7,370	28,000	2,680	17,100	--	117	Yes
	16-Jun-03	--	--	--	--	--	--	Yes
MW-5	11-Apr-01	0.500	0.500	0.500	1.00	--	0.0500	No
	16-Jun-03	0.500	0.500	0.500	1.00	1.00	0.0500	No
MW-6	11-Apr-01	0.500	0.500	0.500	1.00	--	0.0500	No
	16-Jun-03	0.500	0.500	0.500	1.00	1.00	0.0500	No
MW-7	11-Apr-01	0.500	0.500	0.500	1.00	--	0.0500	No
	16-Jun-03	0.500	0.500	0.500	1.00	1.00	0.0500	No
MW-8	11-Apr-01	802	9,770	1,520	7,030	--	46.4	Yes
	16-Jun-03	--	--	--	--	--	--	Yes
MW-9	11-Apr-01	420	2,310	1,500	7,350	--	35.4	Yes
	16-Jun-03	--	--	--	--	--	--	Yes
Cleanup Level ⁵		5	1,000	700	1,000	20	0.8/1.0 ⁶	

TABLE 2 (page 2 of 3)
SUMMARY OF GROUND WATER SAMPLE ANALYTICAL DATA¹
MONTLAKE CIRCLE K #1461
SEATTLE, WASHINGTON

Monitoring Well Number ²	Date	Benzene ³ ($\mu\text{g/L}$) ^D ^Q	Toluene ³ ($\mu\text{g/L}$) ^D ^Q	Ethyleneglycolbenzene ³ ($\mu\text{g/L}$) ^D ^Q	Xylenes ³ ($\mu\text{g/L}$) ^D ^Q	MTBE ³ ($\mu\text{g/L}$) ^D ^Q	GRO ⁴ (mg/L) ^D ^Q	Free Product Present?
MW-10	11-Apr-01	0.500 u	0.500 u	0.500 u	1.00 u	--	0.0500 u	No
	16-Jun-03	0.500 u	0.500 u	0.500 u	1.00 u	1.00 u	0.0500 u	No
MW-11	11-Apr-01	0.500 u	0.500 u	0.500 u	1.00 u	--	0.0500 u	No
	16-Jun-03	0.500 u	0.500 u	0.500 u	1.00 u	1.00 u	0.0500 u	No
MW-12	11-Apr-01	0.500 u	0.500 u	0.500 u	1.00 u	--	0.0500 u	No
	16-Jun-03	0.500 u	0.500 u	0.500 u	1.00 u	1.00 u	0.0500 u	No
MW-13	11-Apr-01	--	--	--	--	--	0.0500 u	No
	16-Jun-03	--	--	--	--	--	0.0500 u	No
MW-14	11-Apr-01	0.500 u	0.500 u	0.500 u	1.00 u	--	0.0500 u	No
	16-Jun-03	0.500 u	0.500 u	0.500 u	1.00 u	--	0.0500 u	No
MW-15	11-Apr-01	58.4	310	526	2,920	--	23.8	No
	16-Jun-03	6.22	83.3	12.6	199	15.5	3.15	No
MW-16	11-Apr-01	0.500 u	0.500 u	0.500 u	1.00 u	--	0.0500 u	No
	16-Jun-03	0.500 u	0.500 u	0.500 u	1.00 u	1.00 u	0.0500 u	No
Cleanup Level ⁵	5	1,000	700	1,000	20	0.8/1.0 ⁶		

TABLE 2 (page 3 of 3)

SUMMARY OF GROUND WATER SAMPLE ANALYTICAL DATA¹

MONTLAKE CIRCLE K #1461

SEATTLE, WASHINGTON

Notes:

¹ Samples analyzed by North Creek Analytical, Inc. of Bothell, Washington.

² Well locations are shown on Figure 2.

³ By EPA Method 8021B.

⁴ Gasoline-range organics by Ecology Method NWTPH-G.

⁵ MTCA Method A Ground Water Cleanup Level.

⁶ The cleanup level for gasolinerange organics is 0.8 mg/L when benzene is present, and 1.0 mg/L when benzene is not present.

DQ = data qualifier

U = not detected at or above the specified concentration

J = estimated concentration outside instrument calibration range

mg/L = milligrams per liter

"—" = not tested

Exceeded detection limits

Pinnacle GeoSciences, Inc.

13620 NE 20th Street, Suite J
Bellevue, Washington 98005-4901
tel: 425.649.7535 fax: 425.649.7537

Field Report

Project:	Ecology Montlake Circle K	File No:	0284-CJ
Owner:	Ecology	Date:	6/1/03
Location:	Seattle	Report No:	
Prepared By:	NJP	Page:	1 of
Purpose of Visit:	Ground water sampling	Arrival Time:	0800
		Departure Time:	1200
		Reviewed By:	
		Weather:	Clear

Visited site to perform ground water sampling. On arrival, I announced myself inside the convenience store. Set up down-

0815 - MW-5. Purge 8 gal. Fairly clear. Monument needs retight & bolts or abandon.

0840 - Sample MW-5. Fairly clear.

0845 - Measure MW-12. Purge 5 gal. A Monument needs retight & bolts

0905 - Sample MW-12.

0910 - Measure MW-10. Purge 6 gal. Fairly clear. Retight.

0925 - Sample MW-10.

0930 - Measure MW-6. Purge 5 gal. Clear. Needs new monument.

0940 - Sample MW-6.

0950 - Measure MW-7. Purge 6 gal. Fairly clear. Needs new monument.

1005 - Sample MW-7.

1010 - Measure MW-14. Only 0.3 ft of water in well. Grab sample only. Cut down casing. This well may be silted in and might benefit by bring down out w/compressed air.

1020 - Sample MW-14.

1030 - Measure MW-16. Purge 5 gal. Fairly clear. Needs casing cut down.

1040 - Sample MW-16.

1050 - Measure MW-11. Purge 5 gal. Fairly clear. Monument OK.

1105 - Sample MW-11.

1115 - Measure MW-1. Purge 5 gal. Moderately silty. Monument OK.

1120 - Sample MW-1.

1145 - Measure MW-15. No product. Purge 5 gal. Petroleum odor.

1200 - Sample MW-15.

1205 - Measure MW-8. 0.09 ft. product.

1210 - Measure MW-9. 0.01 ft. product

1215 - Measure MW-4. 0.09 ft. product.

Attachments:

Distribution:

Signed: _____

Pinnacle GeoSciences, Inc.

13620 NE 20th Street, Suite J
Bellevue, Washington 98005-4901
tel: 425.649.7535 fax: 425.649.7537

Prepared By: MLP
Purpose of Visit: Groundwater sampling

Field Report	
Project: Ecology Mtlake Circle	File No: 0229-001
Owner: Ecology	Date: 6/16/03
Location: Soothill	Report No:
Arrival Time: 0800	Page: 2 of
Departure Time: 1300	Reviewed By:
	Weather: Clear

All purge water transported off site for disposal in permitted ground water treatment system.

Attachments:

Distribution:

Signed: _____

Well Number	Date/Time	Casing Elevation	Tape Top	Tape Water	Product	Depth to Water Elevation	Water Thickness	Product Elevation	Corrected Elevation	Depth of Casing Length	Saturated Vapors	Casing Length	Gallons Bailed	Comments
MW-1			(12.13										
MW-2														
MW-3														
MW-4	1215				10.56	10.47								
MW-5	0830													
MW-6	0935													
MW-7	0935													
MW-8	1205													
MW-9	1205													
MW-10	0945													
MW-11	1055													
MW-12	0850													
MW-13														
MW-14	1055													
MW-15	1050													
MW-16	1035													

Project Ecology Montlake Creek L Location Montlake
 Owner Eco/Logy Job # 0224-001

Location Montlake
 Job # 0224-001

Date 6/16/05
 Sampler Nif

Pinnacle GeoSciences, Inc.

GROUND WATER MONITORING/SAMPLING DATA

PINNACLE GEOSCIENCES, INC.
FIELD PROCEDURES GROUND WATER CHECKLIST

PROJECT NAME: Ecobyg Montlake Creek K
PROJECT LOCATION: Seattle
JOB NUMBER: 0224-001

1.0 GROUND WATER SAMPLING

1.1 SAMPLE POINT DESCRIPTION

- Excavation or testpit
- GeoProbe
- Temporary wellpoint (specify) _____
- Monitoring well, 2-inch
- Monitoring well, 4-inch
- Other (specify) _____

1.2 PURGE METHOD

- None
- Low flow with physical parameter measurement
- Hand bail
- Submersible pump (specify) EnviroTech ES-60
- Suction pump (specify) _____
- Peristaltic pump
- Other (specify) _____

3.2 METHOD

- Power steam cleaner
- Liquinox-solution wash with distilled water rinse
- Other (specify) _____

4.0 SAMPLE HANDLING AND TRANSPORTATION

4.1 TRANSPORTATION AND DELIVERY

- Direct delivery to lab by Pinnacle GeoSciences
- Pickup by lab courier
- Ship to lab (specify shipper) _____
- Stop over at Pinnacle GeoSciences
- Other (specify) _____

4.2 COOLING AND PACKAGING

- Cooler with ice
- Hold over in Pinnacle GeoSciences refrigerator
- Packaging material used (specify) _____
- Other (specify) _____

4.3 CHAIN-OF-CUSTODY PROCEDURE

- Chain-of-custody direct to lab
- Chain-of-custody with intermediary (specify) _____
- Other (specify) _____

Pinnacle GeoSciences, Inc.

13620 NE 20th Street, Suite J
 Bellevue, Washington 98005-4901
 tel: 425.649.7535 fax: 425.649.7537

Prepared By: NLP
 Purpose of Visit: Survey, etc.,

Project:		File No.:
<u>Montlake Circle K</u>		<u>0229-001</u>
Owner:		Date: <u>7/11/03</u>
Location: <u>Seattle</u>		Report No.:
Arrival Time: <u>1000</u>		Page: <u>1</u> of <u>1</u>
Departure Time:		Reviewed By:
		Weather: <u>Broken Clouds</u>

Visit site to survey wells, obtain water levels, sample MW-3, and abandon MW-1, MW-5 and MW-12.

1005 - Check MW-13, which Glacier has uncased. 0.02 ft of product are present, so I will not sample.

1010 - Survey: See attached sheet

Well	Front site Gr.	DTW	DTP	Cut off	Backsight
① MW-1	3.21	10.39	—	—	
② MW-9	9.00	10.71	10.62	—	
① MW-5	8.50	11.31	—	—	
② MW-6	9.68	11.63	—	—	
③ MW-7	2.09	—	—	—	
② MW-8	9.23	10.87	10.86	—	
② MW-9	3.51	11.22	11.21	—	
② MW-10	1.88	10.86	—	—	
② MW-11	4.02	10.80	—	—	
② MW-12	2.87	11.23	—	—	
② MW-13	2.29	11.86	11.87	13 $\frac{1}{2}$ "	
② MW-14	4.52	Dry	—	1/2"	
② MW-15	3.62	11.11	—	3/8"	
② MW-16	3.77	10.98	—	1/8"	
1.84 from setup 1.					

4.73 TBM 1
 from setup 2

9.77 TBM 2
 from setup 3

1000 - Abandoned MW-1, MW-5 and MW-12 by filling well casings w/bentonite chips and filling movements w/concrete.

Attachments:

Distribution:

Signed: _____

Pinnacle GeoSciences, Inc.

SURVEY DATA

Project Ecology Montlake Circle K
 Owner Ecology
 Location Seattle Job # 0224-001
 Date 7/11/03
 Surveyor/Helper NLP

Front Site	Instrument Height	Back Site	Elevation	Description
	101.84	1.84	Assume 100.00	Top of curb on east side of residential "TBMI"
8.50			93.34	MW-5 cr
2.09			99.75	MW-7 cr
1.88			99.96	MW-10 cr
2.87			98.97	MW-12 cr
1.20	104.93	4.93	Assume 100.00	17TBMI
4.20			100.73	MW-4 cr
4.68			100.25	MW-6 cr
4.23			100.70	MW-8 cr
3.51			101.42	MW-9 cr
4.02			100.91	MW-11 cr
2.74			102.19	MW-13 cr
4.52			100.91	MW-14 cr
3.62			101.31	MW-15 cr
3.77			101.16	MW-16 cr
	106.91	4.75		MW-13 cr
3.69			103.25	MW-1 cr



CHAIN OF CUSTODY REPORT

CLIENT: <i>Pinnacle Cos Sciences</i>		INVOICE TO: <i>Glacier Environmental Services Attn Steve Miles</i>		TURNAROUND REQUEST in Business Days *	
REPORT TO: <i>Norm Pur.</i>				Organic & Inorganic Analyses <input checked="" type="checkbox"/> 10 <input type="checkbox"/> 7 <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 <small>STD.</small>	
ADDRESS:				Petroleum Hydrocarbon Analyses <input type="checkbox"/> 5 <input checked="" type="checkbox"/> 4 <input type="checkbox"/> 3 <input checked="" type="checkbox"/> 1 <input type="checkbox"/> <1 <small>STD.</small>	
PHONE:		P.O. NUMBER: <i>Ecology Monthie Circle K</i>		OTHER Specify: • Turnaround Requests less than standard may incur Rush Charges.	
PROJECT NAME: <i>Ecology Monthie Circle K</i>		PRESERVATIVE			
PROJECT NUMBER: <i>024-001</i>		REQUESTED ANALYSES			
SAMPLED BY: <i>NLP</i>					
CLIENT SAMPLE IDENTIFICATION		SAMPLING DATE/TIME		MATRIX (W, S, O) # OF CONT.	
1 MW-1		6/16/03 1130 X X		W 3	
2 MW-5		0900 X X		I	
3 MW-6		0900 X X		I	
4 MW-7		1005 X X		I	
5 MW-10		0925 X X		I	
6 MW-11		1105 X X		I	
7 MW-12		0905 X X		I	
8 MW-14		1020 X X		I	
9 MW-15		1200 X X		I	
10 MW-16		1040 X X		I	
RELEASED BY: <i>Norman L. Pur.</i>		DATE: <i>6/16/03</i>		RECEIVED BY: <i>Glenn J. Walter</i>	
PRINT NAME: <i>Norman L. Pur.</i>		FIRM: <i>Pinneke Bros.</i>		PRINT NAME: <i>Glenn J. Walter</i>	
RELEASED BY: <i>Glenn J. Walter</i>		TIME: <i>13:25</i>		FIRM: <i>ONCA</i>	
PRINT NAME: <i>Glenn J. Walter</i>		DATE: <i>6/16/03</i>		TIME: <i>13:25</i>	
ADDITIONAL REMARKS: <i>Chroms w/ final report</i>		PRINT NAME: <i>Glenn J. Walter</i>		FIRM: <i>ONCA</i>	
COC REV 1/03		PAGE: <i>6</i> OF <i>1</i>		TEMP: <i>/</i>	



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W. International Airport Road, Suite A10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

18 June 2003

Norm Puri
Pinnacle GeoSciences
13620 NE 20th St, Suite J
Bellevue, WA/USA 98005

RE: Ecology Montlake Circle K

Enclosed are the results of analyses for samples received by the laboratory on 06/16/03 13:25. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jeanne Garthwaite".

Jeanne Garthwaite
Project Manager



Seattle 11720 North Creek Pkwy N. Suite 400. Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7558
Anchorage 2000 W. International Airport Road, Suite A10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Pinnacle GeoSciences
13620 NE 20th St, Suite J
Bellevue WA/USA, 98005

Project: Ecology Montlake Circle K
Project Number: 0224-001
Project Manager: Norm Puri

Reported:
06/18/03 17:53

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	B3F0349-01	Water	06/16/03 11:30	06/16/03 13:25
MW-5	B3F0349-02	Water	06/16/03 08:40	06/16/03 13:25
MW-6	B3F0349-03	Water	06/16/03 09:40	06/16/03 13:25
MW-7	B3F0349-04	Water	06/16/03 10:05	06/16/03 13:25
MW-10	B3F0349-05	Water	06/16/03 09:25	06/16/03 13:25
MW-11	B3F0349-06	Water	06/16/03 11:05	06/16/03 13:25
MW-12	B3F0349-07	Water	06/16/03 09:05	06/16/03 13:25
MW-14	B3F0349-08	Water	06/16/03 10:20	06/16/03 13:25
MW-15	B3F0349-09	Water	06/16/03 12:00	06/16/03 13:25
MW-16	B3F0349-10	Water	06/16/03 10:40	06/16/03 13:25

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Jeanne Garthwaite, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 1 of 9



www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-6244
 425.420.9200 fax 425.420.9210
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
 509.924.9200 fax 509.924.9290
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
 503.906.9200 fax 503.906.9210
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
 541.383.9310 fax 541.382.7588
 Anchorage 2000 W. International Airport Road, Suite A10, Anchorage, AK 99502-1119
 907.563.9200 fax 907.563.9210

Pinnacle GeoSciences
13620 NE 20th St, Suite J
Bellevue WA/USA, 98005

Project: Ecology Montlake Circle K
Project Number: 0224-001
Project Manager: Norm Puri

Reported:
06/18/03 17:53

Gasoline Hydrocarbons (Benzene to Naphthalene), BTEX and MTBE by NWTPH-G and EPA 8021B
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (B3F0349-01) Water Sampled: 06/16/03 11:30 Received: 06/16/03 13:25									
Gasoline Range Hydrocarbons	ND	50.0	ug/l	1	3F17010	06/17/03	06/17/03	NWTPH-G/8021B	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	86.9 %	62-127			"	"	"	"	
Surrogate: 4-BFB (PID)	95.8 %	72-127			"	"	"	"	
MW-5 (B3F0349-02) Water Sampled: 06/16/03 08:40 Received: 06/16/03 13:25									
Gasoline Range Hydrocarbons	ND	50.0	ug/l	1	3F17010	06/17/03	06/17/03	NWTPH-G/8021B	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	82.7 %	62-127			"	"	"	"	
Surrogate: 4-BFB (PID)	93.5 %	72-127			"	"	"	"	
MW-6 (B3F0349-03) Water Sampled: 06/16/03 09:40 Received: 06/16/03 13:25									
Gasoline Range Hydrocarbons	ND	50.0	ug/l	1	3F17010	06/17/03	06/17/03	NWTPH-G/8021B	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	85.8 %	62-127			"	"	"	"	
Surrogate: 4-BFB (PID)	94.8 %	72-127			"	"	"	"	

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

North Creek Analytical, Inc.

Environmental Laboratory Network

Page 2 of 9

Seattle 11720 North Creek Pkwy N. Suite 400, Bothell, WA 98011-8244
 425.420.9200 fax 425.420.9210
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
 509.924.9200 fax 509.924.9290
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
 503.906.9200 fax 503.906.9210
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
 541.383.9310 fax 541.382.7588
 Anchorage 2000 W. International Airport Road, Suite A10, Anchorage AK 99502-1119
 907.563.9200 fax 907.563.9210

Pinnacle GeoSciences
 13620 NE 20th St, Suite J
 Bellevue WA/USA, 98005

Project: Ecology Montlake Circle K
 Project Number: 0224-001
 Project Manager: Norm Puri

Reported:
 06/18/03 17:53

Gasoline Hydrocarbons (Benzene to Naphthalene), BTEX and MTBE by NWTPH-G and EPA 8021B
North Creek Analytical - Bothell

Analyte		Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-7 (B3F0349-04) Water Sampled: 06/16/03 10:05 Received: 06/16/03 13:25										
Gasoline Range Hydrocarbons		ND	50.0	ug/l	1	3F17010	06/17/03	06/17/03	NWTPH-G/8021B	
Benzene		ND	0.500	"	"	"	"	"	"	"
Toluene		ND	0.500	"	"	"	"	"	"	"
Ethylbenzene		ND	0.500	"	"	"	"	"	"	"
Xylenes (total)		ND	1.00	"	"	"	"	"	"	"
Methyl tert-butyl ether		ND	1.00	"	"	"	"	"	"	"
<i>Surrogate: 4-BFB (FID)</i>		86.2 %	62-127			"	"	"	"	
<i>Surrogate: 4-BFB (PID)</i>		92.7 %	72-127			"	"	"	"	
MW-10 (B3F0349-05) Water Sampled: 06/16/03 09:25 Received: 06/16/03 13:25										
Gasoline Range Hydrocarbons		ND	50.0	ug/l	1	3F17010	06/17/03	06/17/03	NWTPH-G/8021B	
Benzene		ND	0.500	"	"	"	"	"	"	"
Toluene		ND	0.500	"	"	"	"	"	"	"
Ethylbenzene		ND	0.500	"	"	"	"	"	"	"
Xylenes (total)		ND	1.00	"	"	"	"	"	"	"
Methyl tert-butyl ether		ND	1.00	"	"	"	"	"	"	"
<i>Surrogate: 4-BFB (FID)</i>		84.8 %	62-127			"	"	"	"	
<i>Surrogate: 4-BFB (PID)</i>		94.2 %	72-127			"	"	"	"	
MW-11 (B3F0349-06) Water Sampled: 06/16/03 11:05 Received: 06/16/03 13:25										
Gasoline Range Hydrocarbons		ND	50.0	ug/l	1	3F17012	06/17/03	06/17/03	NWTPH-G/8021B	
Benzene		ND	0.500	"	"	"	"	"	"	"
Toluene		ND	0.500	"	"	"	"	"	"	"
Ethylbenzene		ND	0.500	"	"	"	"	"	"	"
Xylenes (total)		ND	1.00	"	"	"	"	"	"	"
Methyl tert-butyl ether		ND	1.00	"	"	"	"	"	"	"
<i>Surrogate: 4-BFB (FID)</i>		89.2 %	62-127			"	"	"	"	
<i>Surrogate: 4-BFB (PID)</i>		95.2 %	72-127			"	"	"	"	

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

North Creek Analytical, Inc.
 Environmental Laboratory Network

Page 3 of 9



Pinnacle GeoSciences
13620 NE 20th St, Suite J
Bellevue WA/USA, 98005

Project: Ecology Montlake Circle K

Project Number: 0224-001
Project Manager: Norm Puri

Reported:
06/18/03 17:53

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W. International Airport Road, Suite A10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Gasoline Hydrocarbons (Benzene to Naphthalene), BTEX and MTBE by NWTPH-G and EPA 8021B
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-12 (B3F0349-07) Water Sampled: 06/16/03 09:05 Received: 06/16/03 13:25									
Gasoline Range Hydrocarbons	ND	50.0	ug/l	1	3F17012	06/17/03	06/17/03	NWTPH-G/8021B	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.00	"	"	"	"	"	"	
<i>Surrogate: 4-BFB (FID)</i>	91.5 %	62-127			"	"	"	"	
<i>Surrogate: 4-BFB (PID)</i>	94.6 %	72-127			"	"	"	"	
MW-14 (B3F0349-08) Water Sampled: 06/16/03 10:20 Received: 06/16/03 13:25									
Gasoline Range Hydrocarbons	ND	50.0	ug/l	1	3F17012	06/17/03	06/17/03	NWTPH-G/8021B	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.00	"	"	"	"	"	"	
<i>Surrogate: 4-BFB (FID)</i>	89.8 %	62-127			"	"	"	"	
<i>Surrogate: 4-BFB (PID)</i>	94.2 %	72-127			"	"	"	"	
MW-15 (B3F0349-09) Water Sampled: 06/16/03 12:00 Received: 06/16/03 13:25									
Gasoline Range Hydrocarbons	3150	250	ug/l	5	3F17012	06/17/03	06/17/03	NWTPH-G/8021B	I-06
Benzene	6.22	2.50	"	"	"	"	"	"	
Toluene	83.3	2.50	"	"	"	"	"	"	
Ethylbenzene	12.6	2.50	"	"	"	"	"	"	
Xylenes (total)	199	5.00	"	"	"	"	"	"	
Methyl tert-butyl ether	15.5	5.00	"	"	"	"	"	"	
<i>Surrogate: 4-BFB (FID)</i>	104 %	62-127			"	"	"	"	
<i>Surrogate: 4-BFB (PID)</i>	96.2 %	72-127			"	"	"	"	

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 4 of 9

Seattle 11720 North Creek Pkwy N, Suite 400 Bothell, WA 98011-8244
 425.420.9200 fax 425.420.9210
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
 509.924.9200 fax 509.924.9220
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
 503.906.9200 fax 503.906.9210
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
 541.383.9310 fax 541.382.7588
 Anchorage 2000 W. International Airport Road, Suite A10, Anchorage, AK 99502-1119
 907.563.9200 fax 907.563.9210

Pinnacle GeoSciences
 13620 NE 20th St, Suite J
 Bellevue WA/USA, 98005

Project: Ecology Montlake Circle K
 Project Number: 0224-001
 Project Manager: Norm Puri

Reported:
 06/18/03 17:53

Gasoline Hydrocarbons (Benzene to Naphthalene), BTEX and MTBE by NWTPH-G and EPA 8021B
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-16 (B3F0349-10) Water Sampled: 06/16/03 10:40 Received: 06/16/03 13:25									
Gasoline Range Hydrocarbons	ND	50.0	ug/l	1	3F17012	06/17/03	06/17/03	NWTPH-G/8021B	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.00	"	"	"	"	"	"	
<i>Surrogate: 4-BFB (FID)</i>	90.2 %	62-127			"	"	"	"	
<i>Surrogate: 4-BFB (PID)</i>	90.2 %	72-127			"	"	"	"	

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 5 of 9



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
 425.420.9200 fax 425.420.9210
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
 509.924.9200 fax 509.924.9290
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
 503.906.9200 fax 503.906.9210
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
 541.383.9310 fax 541.382.7588
 Anchorage 2000 W. International Airport Road, Suite A10, Anchorage, AK 99502-1119
 907.563.9200 fax 907.563.9210

Pinnacle GeoSciences
 13620 NE 20th St, Suite J
 Bellevue WA/USA, 98005

Project: Ecology Montlake Circle K
 Project Number: 0224-001
 Project Manager: Norm Puri

Reported:
06/18/03 17:53

**Gasoline Hydrocarbons (Benzene to Naphthalene), BTEX and MTBE by NWTPH-G and EPA 8021B -
Quality Control**

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	---------	-----------	-------

Batch 3F17010: Prepared 06/17/03 Using EPA 5030B (P/T)

Blank (3F17010-BLK1)

Gasoline Range Hydrocarbons	ND	50.0	ug/l							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	1.00	"							
Methyl tert-butyl ether	ND	1.00	"							
<i>Surrogate: 4-BFB (FID)</i>	44.0		"	48.0		91.7	62-127			
<i>Surrogate: 4-BFB (PID)</i>	44.3		"	48.0		92.3	72-127			

LCS (3F17010-BS1)

Gasoline Range Hydrocarbons	468	50.0	ug/l	502		93.2	80-120			
Benzene	5.98	0.500	"	7.31		81.8	80-120			
Toluene	33.7	0.500	"	33.9		99.4	80-120			
Ethylbenzene	8.90	0.500	"	7.94		112	80-120			
Xylenes (total)	42.2	1.00	"	38.4		110	80-120			
Methyl tert-butyl ether	11.1	1.00	"	11.3		98.2	74-123			
<i>Surrogate: 4-BFB (FID)</i>	46.6		"	48.0		97.1	62-127			
<i>Surrogate: 4-BFB (PID)</i>	43.6		"	48.0		90.8	72-127			

LCS Dup (3F17010-BSD1)

Gasoline Range Hydrocarbons	467	50.0	ug/l	502		93.0	80-120	0.214	25	
Benzene	6.10	0.500	"	7.31		83.4	80-120	1.99	40	
Toluene	34.3	0.500	"	33.9		101	80-120	1.76	40	
Ethylbenzene	9.04	0.500	"	7.94		114	80-120	1.56	40	
Xylenes (total)	42.8	1.00	"	38.4		111	80-120	1.41	40	
Methyl tert-butyl ether	11.2	1.00	"	11.3		99.1	74-123	0.897	40	
<i>Surrogate: 4-BFB (FID)</i>	45.4		"	48.0		94.6	62-127			
<i>Surrogate: 4-BFB (PID)</i>	43.9		"	48.0		91.5	72-127			

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

North Creek Analytical, Inc.

Environmental Laboratory Network

Page 6 of 9



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
 425.420.9200 fax 425.420.9210
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
 509.924.9200 fax 509.924.9290
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
 503.906.9200 fax 503.906.9210
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
 541.383.9310 fax 541.382.7588
 Anchorage 2000 W. International Airport Road, Suite A10, Anchorage, AK 99502-1119
 907.563.9200 fax 907.563.9210

Pinnacle GeoSciences
 13620 NE 20th St, Suite J
 Bellevue WA/USA, 98005

Project: Ecology Montlake Circle K
 Project Number: 0224-001
 Project Manager: Norm Puri

Reported:
06/18/03 17:53

**Gasoline Hydrocarbons (Benzene to Naphthalene), BTEX and MTBE by NWTPH-G and EPA 8021B -
 Quality Control
 North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 3F17010: Prepared 06/17/03 Using EPA 5030B (P/T)

Matrix Spike (3F17010-MS1)							Source: B3F0307-01			
Gasoline Range Hydrocarbons	460	50.0	ug/l	502	8.88	89.9	72-119			
Benzene	6.30	0.500	"	7.31	ND	86.2	70-129			
Toluene	35.2	0.500	"	33.9	0.150	103	73-114			
Ethylbenzene	9.18	0.500	"	7.94	ND	116	82-120			
Xylenes (total)	44.0	1.00	"	38.4	ND	115	74-118			
Methyl tert-butyl ether	11.7	1.00	"	11.3	ND	104	75-143			
<i>Surrogate: 4-BFB (FID)</i>	46.1		"	48.0		96.0	62-127			
<i>Surrogate: 4-BFB (PID)</i>	43.8		"	48.0		91.2	72-127			

Matrix Spike Dup (3F17010-MSD1)							Source: B3F0307-01			
Gasoline Range Hydrocarbons	446	50.0	ug/l	502	8.88	87.1	72-119	3.09	25	
Benzene	6.18	0.500	"	7.31	ND	84.5	70-129	1.92	40	
Toluene	34.6	0.500	"	33.9	0.150	102	73-114	1.72	40	
Ethylbenzene	8.96	0.500	"	7.94	ND	113	82-120	2.43	40	
Xylenes (total)	43.0	1.00	"	38.4	ND	112	74-118	2.30	40	
Methyl tert-butyl ether	11.5	1.00	"	11.3	ND	102	75-143	1.72	40	
<i>Surrogate: 4-BFB (FID)</i>	46.6		"	48.0		97.1	62-127			
<i>Surrogate: 4-BFB (PID)</i>	43.4		"	48.0		90.4	72-127			

Batch 3F17012: Prepared 06/17/03 Using EPA 5030B (P/T)

Blank (3F17012-BLK1)										
Gasoline Range Hydrocarbons	ND	50.0	ug/l							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	1.00	"							
Methyl tert-butyl ether	ND	1.00	"							
<i>Surrogate: 4-BFB (FID)</i>	43.4		"	48.0		90.4	62-127			
<i>Surrogate: 4-BFB (PID)</i>	46.0		"	48.0		95.8	72-127			

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 7 of 9



Seattle 11720 North Creek Pkwy N. Suite 400, Bothell, WA 98011-8244
 425.420.9200 fax 425.420.9210
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
 509.924.9200 fax 509.924.9290
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
 503.906.9200 fax 503.906.9210
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
 541.383.9310 fax 541.382.7588
 Anchorage 2000 W. International Airport Road, Suite A10, Anchorage, AK 99502-1119
 907.563.9200 fax 907.563.9210

Pinnacle GeoSciences
 13620 NE 20th St, Suite J
 Bellevue WA/USA, 98005

Project: Ecology Montlake Circle K
 Project Number: 0224-001
 Project Manager: Norm Puri

Reported:
06/18/03 17:53

Gasoline Hydrocarbons (Benzene to Naphthalene), BTEX and MTBE by NWTPH-G and EPA 8021B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 3F17012: Prepared 06/17/03 Using EPA 5030B (P/T)

LCS (3F17012-BS1)

Gasoline Range Hydrocarbons	470	50.0	ug/l	502	93.6	80-120
Benzene	6.58	0.500	"	7.31	90.0	80-120
Toluene	34.2	0.500	"	33.9	101	80-120
Ethylbenzene	8.81	0.500	"	7.94	111	80-120
Xylenes (total)	43.0	1.00	"	38.4	112	80-120
Methyl tert-butyl ether	10.9	1.00	"	11.3	96.5	74-123
<i>Surrogate: 4-BFB (FID)</i>	47.6		"	48.0	99.2	62-127
<i>Surrogate: 4-BFB (PID)</i>	45.7		"	48.0	95.2	72-127

LCS Dup (3F17012-BSD1)

Gasoline Range Hydrocarbons	474	50.0	ug/l	502	94.4	80-120	0.847	25
Benzene	6.56	0.500	"	7.31	89.7	80-120	0.304	40
Toluene	34.3	0.500	"	33.9	101	80-120	0.292	40
Ethylbenzene	8.78	0.500	"	7.94	111	80-120	0.341	40
Xylenes (total)	42.9	1.00	"	38.4	112	80-120	0.233	40
Methyl tert-butyl ether	10.8	1.00	"	11.3	95.6	74-123	0.922	40
<i>Surrogate: 4-BFB (FID)</i>	47.4		"	48.0	98.8	62-127		
<i>Surrogate: 4-BFB (PID)</i>	45.5		"	48.0	94.8	72-127		

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 8 of 9

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W. International Airport Road, Suite A10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Pinnacle GeoSciences
13620 NE 20th St, Suite J
Bellevue WA/USA, 98005

Project: Ecology Montlake Circle K
Project Number: 0224-001
Project Manager: Norm Puri

Reported:
06/18/03 17:53

Notes and Definitions

- I-06 The analyte concentration may be artificially elevated due to coeluting compounds or components.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Jeanne Garthwaite, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network



NOTICE OF INTENT TO DECOMMISSION A WELL

A 64401

This form MUST BE RECEIVED by the Department of Ecology 72 HOURS BEFORE you decommission a well.

Submit one form for each job site. Mail this form to the Department of Ecology, Water Resources Program, Well Drilling Unit, PO Box 47600, Olympia WA 98504-7600. Instructions for filling out this form are printed on the back.

NOTE: PLEASE PRINT ALL ANSWERS. PROCESSING YOUR NOTICE OF INTENT MAY BE DELAYED IF ALL FIELDS OUTLINED IN THE BOXES ARE NOT FILLED IN COMPLETELY.

1. Property Owner KuK Jin Choung Phone No. 206-328-8158
 Address (include city, state and zip) 2350 24th Avenue East, Seattle, WA 98112

2. Agent (if different from #1) _____ Phone No. _____
 Address (include city, state and zip) _____

3. Well Location: SW 1/4-1/4 of the NE 1/4 Section 21 Township 75N Range 4E EWM or WWM (circle one)

4. Print COUNTY NAME of well location (DO NOT ABBREVIATE) King

5. Type of well to decommission (please "x" appropriate circle)

Water Well Geotech Soil Boring How many? _____
 Resource Protection How many? 3

Latitude and Longitude (if available) NOTE: 1/4-1/4, 1/4, section, township and range are REQUIRED

Lat Degrees _____ Lat Time _____ Horizontal collection method _____

Long Degrees _____ Long Time _____

6. Well Site Street Address _____

7. Notice of Intent No. of well being decommissioned and Unique Well ID Tag# (if applicable) _____

8. Tax parcel number _____ 9. Approx. decommissioning start date 7/3/03

10. Contractor L & I Registration No. PINNAGI 043D1

11. Well Drilling Company Name Pinnacle GeoSciences Phone No. 425-649-7535

12. Well Driller Name Norman L. Puri License No. 0030314

13. SEND THE ENTIRE FORM. The bottom portion of this notice will be validated in our office and sent back to the name and address contained on the address label. This is the proof of notification. Please fill out the portion below CAREFULLY.

NOTE: Please copy the Notification Number (located in the upper and lower right corner) and keep in a safe place. Please reference this number when communicating with the Department of Ecology.

This notification number must be provided to your well driller:

A 64401

RETURN NAME AND MAILING ADDRESS

Name	<u>Roger Nye - Dept. of Ecology NWRO</u>		
Address	<u>3190 160th Ave. SE (M.S. NB-81)</u>		
City	<u>Bellevue</u>	State	<u>WA</u>
		Zip	<u>98008</u>

Client Name Ecology Tcp-NWRO
RECEIVED
 Agency Validation
OCT 15 2003
 Date 2003 DEPARTMENT OF ECOLOGY
 WELL DRILLING UNIT
 MB
 ECY 040-24 (Rev. 2/01)

INSTRUCTIONS

- Item 1: Property owner's name, daytime phone number and mailing address.
- Item 2: Agent - If the driller, consultant or another person is acting as your agent and is submitting a notification fee, please provide their name, address and daytime phone number.
- Item 3: Please provide the Township, Range, Section, quarter section, and quarter/quarter section where the well is located. This information can be found in your property legal description or the County Assessor's office.
- Item 4: Please print the complete county name. Do not abbreviate. (example: Pend Oreille)
- Item 5: Please indicate the type of well you are decommissioning by placing an "x" in the appropriate box. For resource protection, geotech soil borings and environmental investigation holes, please indicate how many wells are being decommissioned.
- Item 6: If the site street address is available, please fill in the complete address here. Include city, and zip code.
- Item 7: If there is a Notice of Intent already on file for this well, please fill in the number here.
- Item 8: Please enter the tax parcel number if available. NOTE: Include all dashes and zeros.
- Item 9: Enter the approximate decommissioning start date.
- Item 10-12: This information should be available from your well driller.

FOR ASSISTANCE

Contact the Department of Ecology Regional Office where the well is located:

Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, Yakima counties contact:

Central Regional Office (CRO) (509) 575-2490 TDD: (509) 454-7673

Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman counties contact:

Eastern Regional Office (ERO) (509) 456-2926 TDD: (509) 458-2055

Island, King, Kitsap, San Juan, Skagit, Snohomish, Whatcom counties contact:

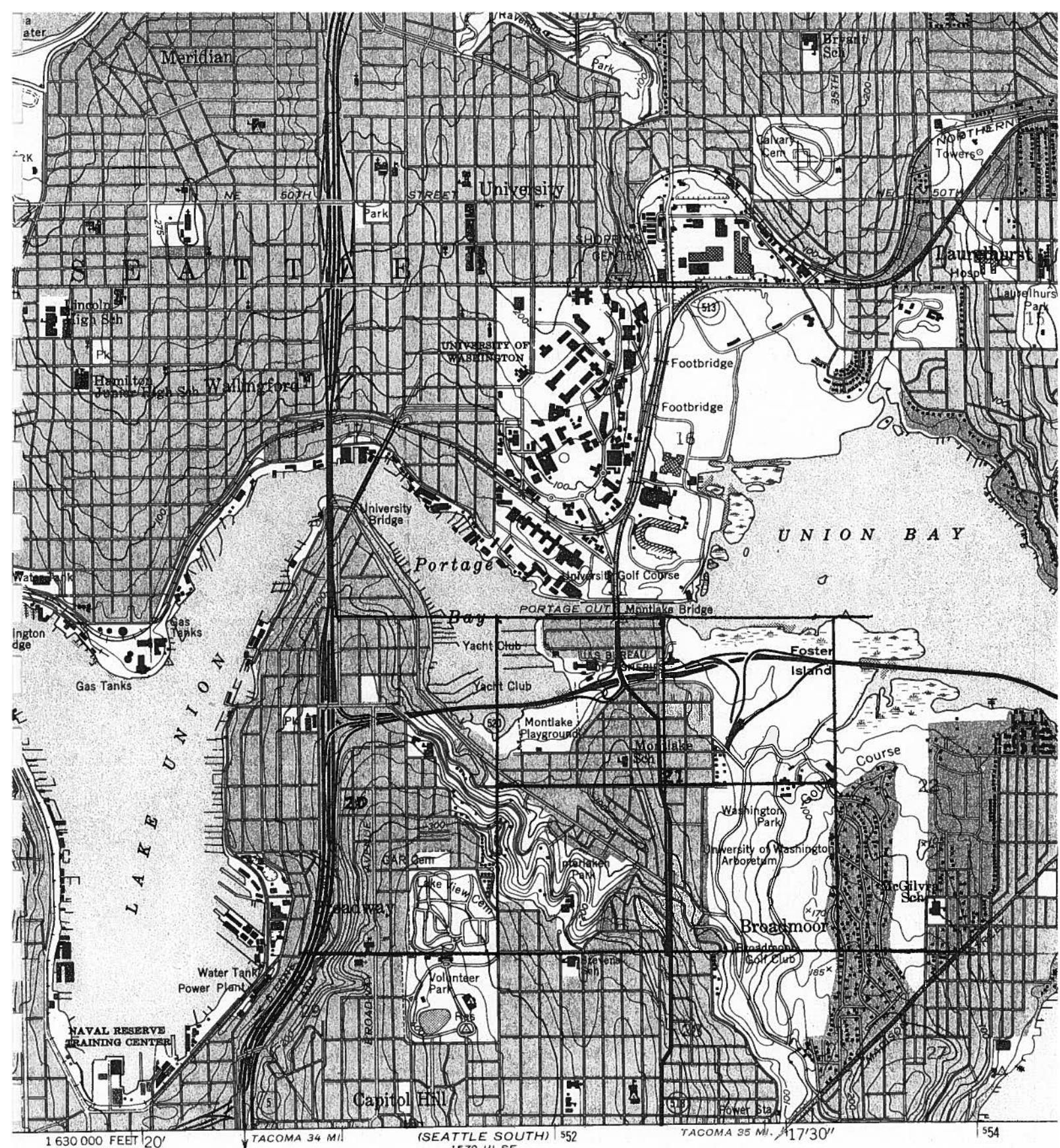
Northwest Regional Office (NWRO) (425) 649-7000 TDD: (425) 649-4259

Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Lewis, Pacific, Pierce, Skamania, Thurston, Wahkiakum counties contact:

Southwest Regional Office (SWRO) (360) 407-6300 TDD: (360) 407-6306

Ecology is an Equal Opportunity Employer.

For special accommodation needs, contact the Water Resources Program at (360) 407-6600. The TDD number is (360) 407-6006.





WASHINGTON STATE
DEPARTMENT OF
ECOLOGY

Preliminary Purchase Request

LINK TO:

SUGGESTED VENDOR

Glacier Environmental Services

ADDRESS

4416 Russell Road
Mukilteo, WA 98275

CITY / STATE / ZIP

5226 Miles

VENDOR CONTACT

PHONE NO. 425-355-2826 FAX NO. 425-220-9186

AUTHORIZATION / CONTRACT NO.

INSTRUCTIONS ON BACK

REQUESTING PERSON: *Mark Hinds*

PURCHASING USE ONLY

PPR NO. *71P470572*

FIELD ORDER NO. *7220*

DATE REQUIRED *AS SOON AS*

PROMISED DELIVERY DATE *AS SOON AS*

TERMS *NET 30*

PRICE F.O.B. *SHIPPING POINT*

SHIP FROM *GLACIER ENVIRONMENTAL SERVICES*

ITEM NO. COMM. CODE PRODUCT NO.

DESCRIPTION

QUANTITY

UNIT

ESTIMATED COST

TOTAL

\$7580.00

ITEM NO. COMM. CODE PRODUCT NO.

DESCRIPTION

QUANTITY

UNIT

ESTIMATED COST

TOTAL

\$7580.00

ITEM NO. COMM. CODE PRODUCT NO.

DESCRIPTION

QUANTITY

UNIT

ESTIMATED COST

TOTAL

\$7580.00

ITEM NO. COMM. CODE PRODUCT NO.

DESCRIPTION

QUANTITY

UNIT

ESTIMATED COST

TOTAL

\$7580.00

ITEM NO. COMM. CODE PRODUCT NO.

DESCRIPTION

QUANTITY

UNIT

ESTIMATED COST

TOTAL

\$7580.00

SPECIFIC PURPOSE / JUSTIFICATION
This purchase request is to request services from the vendor listed above to sample and analyze water samples collected at the site of the proposed construction project. The samples will be analyzed for metals and other pollutants to determine if they are present in the water.

4. *and* **monitoring wells that need to be sampled and recorded area and**
the site ground & Ecology

5. *and* funding agreement and how OIG is handling construction requirements

6. *and* programmatic agreements

7. *and* service authority

8. *and* purchasing

PURCHASING COORDINATOR *Jana Ladd*
SECTION MANAGER / FIELD OFFICE MANAGER *Jana Ladd*

DEPUTY DIRECTOR *John M. Morris*
SERVICE AUTHORITY *JIB39*

DIRECTOR *John M. Morris*
PURCHASING *John M. Morris*

PROGRAM MANAGER / REG. DIRECTOR *John M. Morris*
DATE *5/20/03*

DATE *5/20/03*

DATE *5/20/03*

GRAY AREAS FOR PURCHASING USE ONLY

GLACIER

ENVIRONMENTAL

4416 Russell Road, Suite A

Mukilteo, WA 98275

(425) 355-2826 fax (425) 290-9186

INVOICE

DATE 7/10/2003
 NUMBER 7562
 JOB 03-072

TO:

Attn: Chuck Hinds
 WA State Department of Ecology
 PO Box 47600
 Olympia, WA 98504

JOB SITE:

Circle K Station #1461
 2350 24th Ave East
 Seattle, WA

Item Description	Terms	Quantity	Unit	Unit Price	Amount
Steve Miles Project Manager					
	Upon Receipt			PO #	PPR No. TCP03-2815
Billing for sample and analyses of 15 wells completed on 06/30/03				\$	7,580.00
				Sub-total	\$ 7,580.00
No State and Local Sales Taxes (Service)				\$	-
Total Due This Invoice				\$	7,580.00

COPY!

cc:

Attn: Roger Nye
 Department of Ecology
 3190 160th Ave SE
 Bellevue, WA 98008-5452

RECEIVED

JUL 11 2003

DEPT OF ECOLOGY

sent via first class mail

Date Due: Upon Receipt

Thank You.