



PACIFIC
ENVIRONMENTAL
GROUP, INC.

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June 4, 1997
Project 520-015.2B



Mr. Dan Barnat
Chevron U.S.A. Products Company
P.O. Box 5004
San Ramon, California 94583-0804

Re: Annual Monitoring and Sampling Activities

Chevron Service Station No. 9-6266

2543

1554 NE 145th Street
Seattle, Washington

Dear Mr. Barnat:

Pacific Environmental Group Inc. (PACIFIC) conducted the annual groundwater monitoring and sampling event on April 11, 1997 at the site referenced above. Three groundwater monitoring wells were gauged to determine the depth to groundwater and to check for the presence of separate-phase hydrocarbons (SPH). There were no SPH observed in any of the wells.

A site location map is included as Figure 1. A groundwater elevation contour map providing benzene/TPH-gasoline concentrations is presented as Figure 2. Groundwater elevations and analytical results are presented in Table 1.

Groundwater monitoring and sample collection protocol and field data sheets are presented in Attachment A. The groundwater samples were analyzed for the following parameters:

Total petroleum hydrocarbons calculated as gasoline (TPH-gasoline) by Washington Method WTPH-G; and

Benzene, toluene, ethylbenzene, and xylene compounds (BTEX) by EPA Method 8020.

Laboratory reports and chain-of-custody records are included in Attachment B.

Purge water was treated on-site by filtering the water through granular activated carbon and was subsequently discharged.

PACIFIC is pleased to assist Chevron on this project. If you have any questions, please call.

Sincerely,

Pacific Environmental Group, Inc.

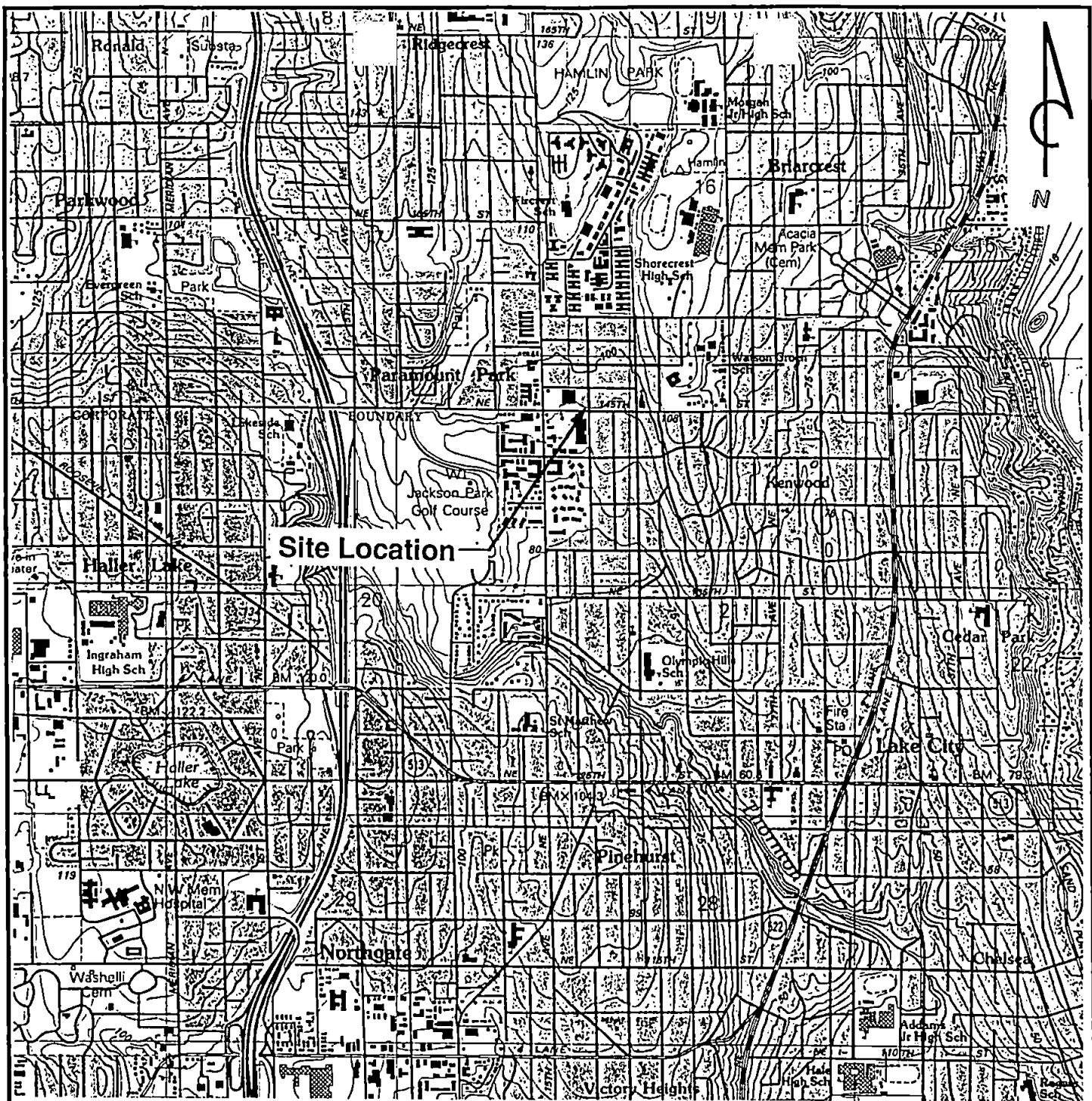


John. J. Blough

Field Services Manager

Attachments: Figure 1 - Site Location Map
Figure 2 - Site Map
Table 1 - Groundwater Elevations and Analytical Results
Attachment A - Groundwater Monitoring and Sample Collection Protocol
Field Data Sheets
Attachment B - Laboratory Analytical Results
Chain-of-Custody Documentation

cc: Mr. Ben Forson, Department of Ecology



REFERENCE:

USGS 7.5 x 15 MIN. TOPOGRAPHIC MAP

TITLED: **Seattle North, Washington**

DATED: 1977 REVISED: 1983

COUNTY: King

SCALE: 1 to 25,000 (1 Inch = Approximately 2083.33 Feet)
(1 Centimeter = 250 Meters)



MAP LOCATION



PACIFIC
ENVIRONMENTAL
GROUP, INC.

CHEVRON SERVICE STATION 9-6266
1554 Northeast 145th Street
Seattle, Washington

SITE LOCATION MAP

FIGURE:
1
PROJECT:
520-015.2B

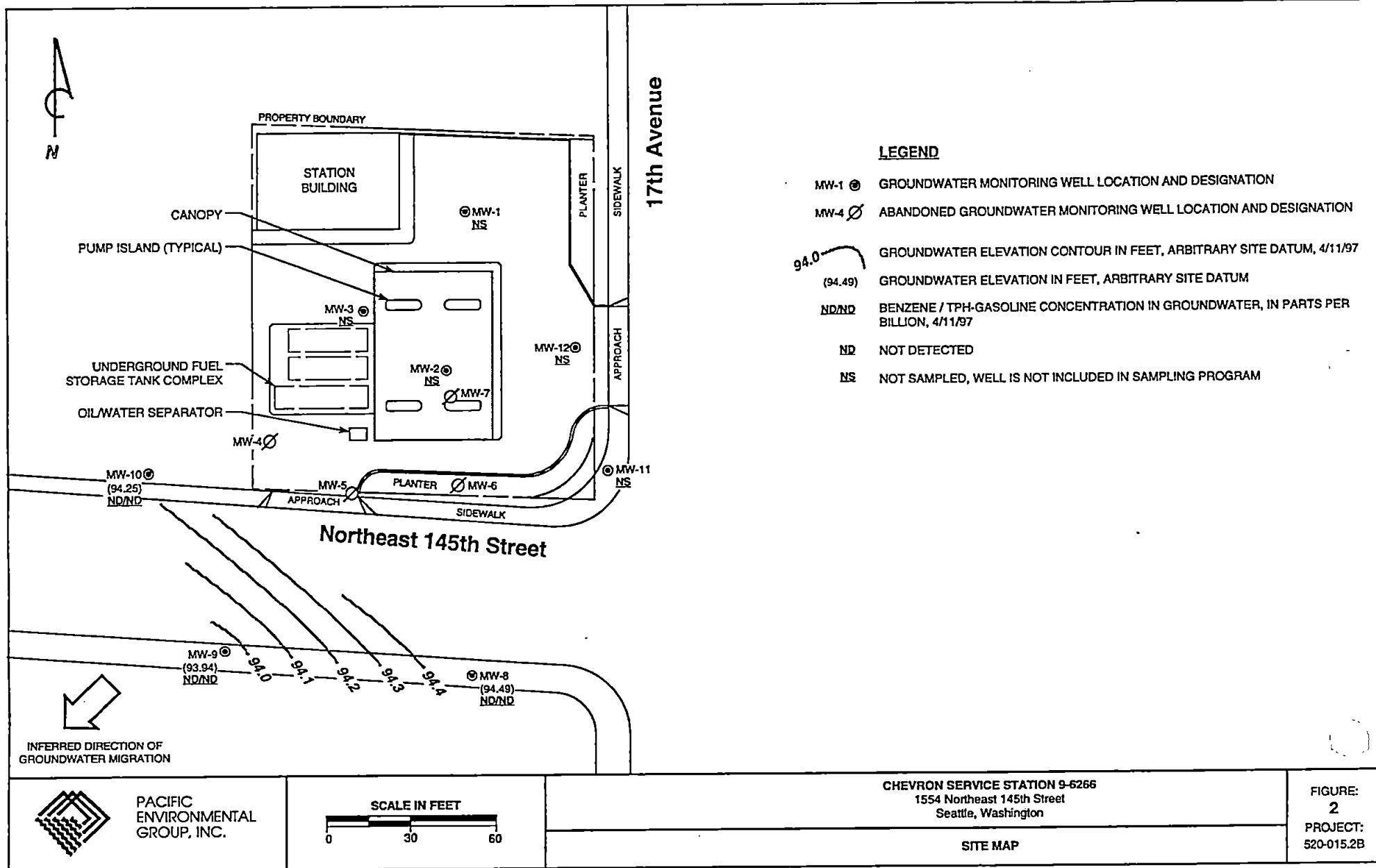


TABLE 1
GROUNDWATER ELEVATIONS AND ANALYTICAL RESULTS

1 of 5

Chevron Service Station 9-6266
1554 NE 145th Street
Seattle, Washington

Sample I.D. TOC	Sample Date	Benzene (ppb)	Toluene (ppb)	Ethyl- benzene (ppb)	Xylenes (ppb)	TPH- Gasoline (ppb)	TPH- Diesel (ppb)	TPH- Oil (ppb)	Total Lead (ppb)	DTW (feet)	SPH (feet)	WTE (feet)
MW-1	01/25/91	ND	0.8	ND	1	66	--	--	--	--	--	98.16
103.19	10/17/91	ND	ND	ND	ND	ND	--	--	--	--	--	93.52
	04/13/92	--	--	--	--	--	--	--	--	--	--	95.69
	07/30/92	--	--	--	--	--	--	--	--	--	--	93.99
	11/25/92	--	--	--	--	--	--	--	--	--	--	93.79
	02/18/93	--	--	--	--	--	--	--	--	8.45	--	94.74
	05/13/93	--	--	--	--	--	--	--	--	6.91	--	96.28
	08/06/93	--	--	--	--	--	--	--	--	--	--	--
	11/15/93	--	--	--	--	--	--	--	--	--	--	--
	01/27/94	--	--	--	--	--	ND	ND	--	7.70	--	95.49
	04/26/94	--	--	--	--	--	ND	ND	--	6.75	--	96.44
	07/26/94	--	--	--	--	--	580	750	--	8.40	--	94.79
	10/25/94	ND	ND	ND	ND	ND	<240	<710	--	10.20	--	92.99
	04/12/95	--	--	--	--	--	--	--	--	--	--	--
	10/04/95	--	--	--	--	--	--	--	--	--	--	--
	04/09/96	--	--	--	--	--	--	--	--	--	--	--
	04/11/97	--	--	--	--	--	--	--	--	--	--	--
MW-2	01/25/91	0.47	1.3	ND	1.4	ND	--	--	--	--	--	95.72
100.33	10/17/91	ND	ND	ND	ND	ND	--	--	--	--	--	93.24
	04/13/92	--	--	--	--	--	--	--	--	--	--	95.15
	07/30/92	--	--	--	--	--	--	--	--	--	--	93.99
	11/25/92	--	--	--	--	--	--	--	--	--	--	93.09
	02/18/93	--	--	--	--	--	--	--	--	6.34	--	93.99
	05/13/93	--	--	--	--	--	--	--	--	5.29	--	95.04
	08/06/93	--	--	--	--	--	--	--	--	--	--	--
	11/15/93	--	--	--	--	--	--	--	--	--	--	--
	01/27/94	--	--	--	--	--	--	--	--	--	--	--
	04/26/94	--	--	--	--	--	--	--	--	--	--	--
	07/26/94	ND	0.8	1.3	8.7	200	--	--	--	6.85	--	93.48
	10/25/94	ND	ND	ND	ND	ND	--	--	--	7.65	--	92.68
	04/12/95	--	--	--	--	--	--	--	--	--	--	--
	10/04/95	--	--	--	--	--	--	--	--	--	--	--
	04/09/96	--	--	--	--	--	--	--	--	--	--	--
	04/11/97	--	--	--	--	--	--	--	--	--	--	--

TABLE 1
GROUNDWATER ELEVATIONS AND ANALYTICAL RESULTS

2 of 5

Chevron Service Station 9-6266
1554 NE 145th Street
Seattle, Washington

Sample I.D.	Sample Date	Benzene (ppb)	Toluene (ppb)	Ethyl- benzene (ppb)	Xylenes (ppb)	TPH- Gasoline (ppb)	TPH- Diesel (ppb)	TPH- Oil (ppb)	Total Lead (ppb)	DTW (feet)	SPH (feet)	WTE (feet)
MW-3	01/25/91	1.4	5.6	1.3	7.8	44	--	--	--	--	--	95.58
100.06	10/17/91	ND	ND	ND	ND	ND	--	--	--	--	--	92.87
	04/13/92	--	--	--	--	--	--	--	--	--	--	94.87
	07/30/92	--	--	--	--	--	--	--	--	--	--	93.99
	11/25/92	--	--	--	--	--	--	--	--	--	--	93.28
	02/18/93	--	--	--	--	--	--	--	--	6.35	--	93.71
	05/13/93	--	--	--	--	--	--	--	--	2.77	--	97.29
	08/06/93	--	--	--	--	--	--	--	--	--	--	--
	11/15/93	--	--	--	--	--	--	--	--	--	--	--
	01/27/94	ND	ND	ND	ND	ND	--	--	--	5.87	--	94.19
	04/26/94	ND	ND	ND	ND	ND	--	--	--	5.05	--	95.01
	07/26/94	ND	ND	ND	ND	ND	--	--	--	8.57	--	91.49
	10/25/94	--	--	--	--	--	--	--	--	--	--	--
	04/12/95	--	--	--	--	--	--	--	--	--	--	--
	10/04/95	--	--	--	--	--	--	--	--	--	--	--
	04/09/96	--	--	--	--	--	--	--	--	--	--	--
	04/11/97	--	--	--	--	--	--	--	--	--	--	--
MW-8	10/17/91	ND	ND	ND	0.51	65	--	--	--	--	--	91.29
98.44	04/13/92	ND	ND	ND	ND	ND	--	--	--	--	--	93.48
	07/30/92	ND	ND	ND	ND	ND	--	--	--	--	--	92.01
	11/25/92	ND	ND	ND	ND	ND	--	--	--	--	--	91.52
	02/18/93	29	1.4	1.8	27	200	--	--	--	5.85	--	92.59
	05/13/93	0.9	ND	ND	ND	ND	--	--	--	4.71	--	93.73
	08/06/93	ND	ND	ND	ND	ND	--	--	--	5.68	--	92.76
	11/15/93	ND	ND	ND	ND	ND	ND	ND	--	7.01	--	91.43
	01/27/94	ND	ND	ND	ND	ND	--	--	--	5.54	--	92.90
	04/26/94	ND	ND	ND	ND	ND	--	--	--	4.87	--	93.57
	07/26/94	ND	ND	ND	ND	ND	--	--	--	6.39	--	92.05
	10/25/94	ND	ND	ND	ND	ND	--	--	--	7.50	--	90.94
	04/12/95	ND	ND	ND	ND	ND	--	--	ND	4.11	--	94.33
	10/04/95	ND	ND	ND	ND	ND	--	--	ND	6.41	--	92.03
	04/09/96	ND	ND	ND	ND	ND	--	--	--	4.26	--	94.18
	04/11/97	ND	ND	ND	ND	ND	--	--	--	3.95	--	94.49

TABLE 1
GROUNDWATER ELEVATIONS AND ANALYTICAL RESULTS

Chevron Service Station 9-6266
1554 NE 145th Street
Seattle, Washington

Sample I.D. TOC	Sample Date	Benzene (ppb)	Toluene (ppb)	Ethyl- benzene (ppb)	Xylenes (ppb)	TPH- Gasoline (ppb)	TPH- Diesel (ppb)	TPH- Oil (ppb)	Total Lead (ppb)	DTW (feet)	SPH (feet)	WTE (feet)
MW-9	10/17/91	620	ND	69	380	4,200	--	--	--	--	--	90.69
98.34	04/13/92	800	59	210	530	4,700	--	--	--	--	--	92.50
	07/30/92	880	22	120	490	3,400	--	--	--	--	--	91.36
	11/25/92	1,100	28	140	680	4,700	--	--	--	--	--	90.82
	02/18/93	670	37	180	390	2,900	--	--	--	6.86	--	91.48
	05/13/93	390	14	96	260	1,900	--	--	--	5.84	--	92.50
	08/06/93	520	8.9	89	290	2,300	--	--	--	6.30	--	92.04
	11/15/93	780	13	63	440	2,900	380	ND	--	7.60	--	90.74
	01/27/94	480	26	100	340	2,700	--	--	--	6.48	--	91.86
	04/26/94	330	12	65	230	4,400	--	--	--	5.73	--	92.61
	07/26/94	500	9.3	46	380	2,000	--	--	--	6.89	--	91.45
	10/25/94	460	10	29	350	3,000	--	--	--	7.91	--	90.43
	04/12/95	55	0.91	3.8	24	510	--	--	ND	4.85	--	93.49
	10/04/95	670	15	87	840	4,900	--	--	ND	6.97	--	91.37
	04/09/96	12	ND	ND	ND	ND	--	--	--	5.00	--	93.34
	04/11/97	ND	ND	ND	ND	ND	--	--	--	4.40	--	93.94
MW-10	10/17/91	ND	ND	ND	ND	93	--	--	--	--	--	91.83
97.80	04/13/92	ND	4.5	ND	ND	ND	--	--	--	--	--	93.25
	07/30/92	ND	ND	ND	ND	ND	--	--	--	--	--	92.47
	11/25/92	ND	1.0	ND	2.1	ND	--	--	--	--	--	91.97
	02/18/93	--	--	--	--	--	--	--	--	5.40	--	92.40
	05/13/93	--	--	--	--	--	--	--	--	4.40	--	93.40
	08/06/93	--	--	--	--	--	--	--	--	--	--	--
	11/15/93	--	--	--	--	--	--	--	--	--	--	--
	01/27/94	--	--	--	--	--	--	--	--	--	--	--
	04/26/94	--	--	--	--	--	--	--	--	--	--	--
	07/26/94	--	--	--	--	--	--	--	--	--	--	--
	10/25/94	--	--	--	--	--	--	--	--	--	--	--
	04/12/95	ND	ND	ND	ND	ND	--	--	ND	3.92	--	93.88
	10/04/95	ND	ND	ND	ND	ND	--	--	ND	5.20	--	92.60
	04/09/96	ND	ND	ND	ND	ND	--	--	--	3.86	--	93.94
	04/11/97	ND	ND	ND	ND	ND	--	--	--	3.55	--	94.25

TABLE 1
GROUNDWATER ELEVATIONS AND ANALYTICAL RESULTS

4 of 5

Chevron Service Station 9-6266
1554 NE 145th Street
Seattle, Washington

Sample I.D. TOC	Sample Date	Benzene (ppb)	Toluene (ppb)	Ethyl- benzene (ppb)	Xylenes (ppb)	TPH- Gasoline (ppb)	TPH- Diesel (ppb)	TPH- Oil (ppb)	Total Lead (ppb)	DTW (feet)	SPH (feet)	WTE (feet)
MW-11	10/17/91	ND	ND	ND	0.67	120	--	--	--	--	--	91.86
100.32	04/13/92	ND	ND	ND	ND	ND	--	--	--	--	--	95.11
	07/30/92	ND	ND	ND	ND	ND	--	--	--	--	--	93.26
	11/25/92	ND	1.3	ND	2	ND	--	--	--	--	--	93.04
	02/18/93	--	--	--	--	--	--	--	--	6.45	--	93.87
	05/13/93	--	--	--	--	--	--	--	--	5.13	--	95.19
	08/06/93	--	--	--	--	--	--	--	--	--	--	--
	11/15/93	--	--	--	--	--	--	--	--	--	--	--
	01/27/94	ND	ND	ND	ND	ND	--	--	--	5.91	--	94.41
	04/26/94	ND	ND	ND	ND	ND	--	--	--	4.97	--	95.35
	07/26/94	ND	ND	ND	ND	ND	--	--	--	7.29	--	93.03
	10/25/94	ND	ND	ND	ND	ND	--	--	--	5.45	--	94.87
	04/12/95	--	--	--	--	--	--	--	--	--	--	--
	10/04/95	--	--	--	--	--	--	--	--	--	--	--
	04/09/96	--	--	--	--	--	--	--	--	--	--	--
	04/11/97	--	--	--	--	--	--	--	--	--	--	--
MW-12	10/17/91	ND	ND	0.65	0.66	120	--	--	--	--	--	92.75
103.19	04/13/92	ND	ND	ND	ND	ND	--	--	--	--	--	95.69
	07/30/92	ND	ND	ND	ND	ND	--	--	--	--	--	93.69
	11/25/92	ND	7.3	ND	ND	ND	--	--	--	--	--	92.99
	02/18/93	--	--	--	--	--	--	--	--	9.12	--	94.07
	05/13/93	--	--	--	--	--	--	--	--	7.84	--	95.35
	08/06/93	--	--	--	--	--	--	--	--	--	--	--
	11/15/93	--	--	--	--	--	--	--	--	--	--	--
	01/27/94	--	--	--	--	--	--	--	--	--	--	--
	04/26/94	--	--	--	--	--	--	--	--	--	--	--
	07/26/94	--	--	--	--	--	--	--	--	--	--	--
	10/25/94	--	--	--	--	--	--	--	--	--	--	--
	04/12/95	--	--	--	--	--	--	--	--	--	--	--
	10/04/95	--	--	--	--	--	--	--	--	--	--	--
	04/09/96	--	--	--	--	--	--	--	--	--	--	--
	04/11/97	--	--	--	--	--	--	--	--	--	--	--

Sample I.D.	Sample TOC	Sample Date	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)	TPH-Gasoline (ppb)	TPH-Diesel (ppb)	TPH-Oil (ppb)	Total Lead (ppb)
Trip Blank	04/11/97	ND	ND	ND	ND	ND	ND	--	--	--
MTCA Method A Cleanup Levels:			5	40	30	20	1,000	1,000	1,000	5
Laboratory Reporting Limits:			0.50	0.50	0.50	1.0	50	100	200	2.0

ppb - Parts per billion (µg/L)

TOC = Top of casing and groundwater elevations expressed as feet relative to an arbitrary datum.

DTW = Depth to water

SPH = Separate-phase hydrocarbon thickness

WTE = Water table elevation

ND = Not detected at the laboratory reporting limits

-- = Not sampled, not measured, or not analyzed

TPH as Gasoline - Analysis by Washington Method WTPH-G

TPH as Diesel and Heavy Oil - Analysis by Washington Method WTPH-D + Extended

BTEX Compounds - Analysis by EPA Method 8020

Total Lead - Analysis by EPA Method 7421

DTW (feet)	SPH (feet)	WTE (feet)

ATTACHMENT A
GROUNDWATER MONITORING AND
SAMPLE COLLECTION PROTOCOL
FIELD DATA SHEETS

ATTACHMENT A

Groundwater Monitoring

The groundwater sampling procedure consisted of measuring the water level in each well using an electronic water level indicator. The monitoring order is based on previous analytical data, moving from lowest to highest concentrations. Wells suspected to contain separate-phase hydrocarbons (SPH) were measured using an oil/water interface probe to measure the product thickness. Wells containing SPH are further checked using a clear bailer to observe viscosity and color of the SPH. Monitoring equipment in contact with groundwater was washed between wells with detergent and triple rinsed with distilled water.

Using existing surface elevation data, static water elevations were calculated for the groundwater elevation contour map. If SPH was measured in the well, an adjusted groundwater elevation was calculated by the following calculation:

$$(\text{Product thickness}) \times (0.8) + (\text{Water elevation}) = \text{Corrected water elevation}$$

Groundwater Sampling

The groundwater monitoring wells were purged of three casing volumes of water or until dry using a centrifugal pump with disposable polyethylene tubing or bailed by hand using disposable bailers. Wells containing SPH greater than 0.02-feet in thickness were not sampled.

After the water level in each well recovered to within at least 60% of the initial measurement, a sample was collected using a disposable bailer and was placed into appropriate EPA-approved containers. Slow recharging wells were allowed to recharge as long as possible before sample collection. Samples requiring filtering were filtered in the laboratory. Information about each well, purge, recovery data and observations were noted on the groundwater sample data sheets which are included in this attachment. The samples were labeled, logged onto a chain-of-custody document, sealed, and transported to a Chevron approved laboratory. A set of trip blanks accompanied the groundwater samples throughout the sampling event.

Duplicate samples and blind samples were not collected unless specifically requested by Chevron.



PACIFIC
ENVIRONMENTAL
GROUP, INC.

T No.: 520-015.213 LOCATION: 1557 N.E. 145 TR WELL ID: YMW-1

STATION No.: 9-6266 FIELD TECHNICIAN: YMW

WELL INFORMATION

to Liquid: _____ TOB _____ TOC _____
to water: _____ TOB _____ TOC _____
depth: _____ TOB _____ TOC _____
Time (2400): _____

Type: ☐ Oil/Water Interface _____
☒ Electronic Indicator _____
☐ Other: _____

CASING DIAMETER

☒	2	_____	0.17
☐	3	_____	0.35
☐	4	_____	0.66
☐	4.5	_____	0.83
☐	5	_____	1.02
☐	6	_____	1.5
☐	8	_____	2.6

GAL/ LINEAR FT.

SAMPLE TYPE

☒ Groundwater:
☐ Duplicate:
☐ Extraction well:
☐ Trip blank:
☐ Field blank:
☐ Equipment blank:
☐ Other: _____

3.45 - DTW = 4.40 Gal/Linear 0.17 x Foot = 1.53 Number of 3 x Casings Calculated = Purge 4.61

DATE PURGED: 4-11-97 START: 1446 END (2400 hr): 1453 PURGED BY: Mike
DATE SAMPLED: 4-11-97 START: 1556 END (2400 hr): 1605 SAMPLED BY: Mike

TIME (2400 hr)	VOLUME (gal.)	pH (units)	EC (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	not required	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

Pumped dry Yes ☒ No ☐

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: _____ TOB/TOC _____

PURGING EQUIPMENT/I.D.#

☒ Bailor: _____ ☐ Airlift: _____
☒ Centrifugal: _____ ☐ Dedicated: _____
☐ Other: _____

SAMPLING EQUIPMENT/I.D.#

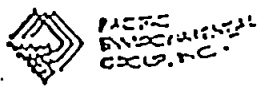
☒ Bailor: _____
☐ Dedicated: _____
☐ Other: _____

SAMPLE I.D.	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PURGE	ANALYTICAL PARAMETER
_____	_____	_____	SEE C.O.C.	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

WELL INTEGRITY: ☒ Good ☐ Fair ☐ Poor

REMARKS: 5 gallon purge, well is in great shape

SIGNATURE: Michael Jones



T No.: 520-015-213 LOCATION: 1251 NW 172 St
STATION No.: 9-6266 FIELD TECHNICIAN: Y

WELL INFORMATION
to Liquid: _____ TOB _____ TOC _____
to water: _____ TOB _____ TOC _____
depth: _____ TOB _____ TOC _____
Time (2400): _____
Type ☐ Oil/Water interface _____
☒ Electronic Indicator _____
☐ Other: _____

CASING DIAMETER
☒ 2 _____ 0.17
☐ 3 _____ 0.38
☐ 4 _____ 0.68
☐ 4.5 _____ 0.83
☐ 5 _____ 1.02
☐ 6 _____ 1.5
☐ 8 _____ 2.6

SAMPLE TYPE
☒ Groundwater:
☐ Duplicate
☐ Extraction well
☐ Trip blank
☐ Field blank
☐ Equipment blank
☐ Other: _____

3.25 - DTW = 3.55 Gal/Linear 0.17 x Foot = 664 Number of 3 Casings Calculated = Purge 4.94

DATE PURGED: 4-11-97 START: 1408 END (2400 hr): 1414 PURGED BY: Mike
DATE SAMPLED: 4-11-97 START: 1508 END (2400 hr): 1521 SAMPLED BY: Mike

TIME (2400 hr)	VOLUME (gal.)	pH (units)	EC (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	not required	_____	_____	_____	_____

Pumped dry Yes / No
FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:
DTW: _____ TOB/TOC _____

PURGING EQUIPMENT/I.D.#
☒ Bailor _____ ☐ Airlift _____
☒ Centrifugal: _____ ☐ Dedicated: _____
☐ Other: _____

SAMPLING EQUIPMENT/I.D.#
☒ Bailor _____
☐ Dedicated: _____
☐ Other: _____

SAMPLE I.D.	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
_____	_____	_____	<u>See C.O.C.</u>	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

WELL INTEGRITY: ☒ Good ☐ Fair ☐ Poor
REMARKS: 5 gallon purge, no odor, vault is in good shape

SIGNATURE: Michael Jones

 PACIFIC ENVIRONMENTAL GROUP, INC.

ATTACHMENT B
LABORATORY ANALYTICAL RESULTS
CHAIN-OF-CUSTODY DOCUMENTATION



NORTH CREEK ANALYTICAL

Environmental Laboratory Services

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SPOKANE ■ (509) 924-9200 ■ FAX 924-9290
PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Pacific Environmental Group
4020 148th Ave NE, Ste B
Redmond, WA 98052

Project: Chevron #9-6266
Project Number: 520-015.2B
Project Manager: John Blough

Sampled: 4/11/97
Received: 4/14/97
Reported: 4/21/97 13:12

Summary Report*

(Please refer to the Analytical Report for a thorough review of the complete data set.)

Method	Analyte	Units	MW-8 Water 4/11/97 B704261-01	MW-9 Water 4/11/97 B704261-02	MW-10 Water 4/11/97 B704261-03	TB Water 4/11/97 B704261-04
WTPH-G/8020	Gasoline Range Hydrocarbons	ug/l	<50.0	<50.0	<50.0	<50.0
"	Benzene	"	<0.500	<0.500	<0.500	<0.500
"	Toluene	"	<0.500	<0.500	<0.500	<0.500
"	Ethylbenzene	"	<0.500	<0.500	<0.500	<0.500
"	Xylenes (total)	"	<1.00	<1.00	<1.00	<1.00

North Creek Analytical, Inc.


Matthew Essig, Project Manager

**The Summary Report is a subset of the final Analytical Report and does not include substantial supportive information such as quality control data; this report accurately summarizes sample results for your convenience only.*

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Pacific Environmental Group
4020 148th Ave NE, Ste B
Redmond, WA 98052

Project: Chevron #9-6266
Project Number: 520-015.2B
Project Manager: John Blough

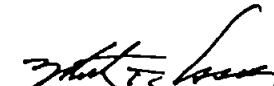
Sampled: 4/11/97
Received: 4/14/97
Reported: 4/21/97 13:10

ANALYTICAL REPORT FOR SAMPLES:

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
MW-8	B704261-01	Water	4/11/97
MW-9	B704261-02	Water	4/11/97
MW-10	B704261-03	Water	4/11/97
TB	B704261-04	Water	4/11/97

North Creek Analytical, Inc.

*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.*


Matthew Essig, Project Manager

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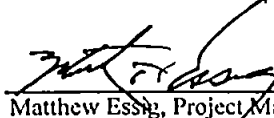
Pacific Environmental Group	Project: Chevron #9-6266	Sampled: 4/11/97
4020 148th Ave NE, Ste B	Project Number: 520-015.2B	Received: 4/14/97
Redmond, WA 98052	Project Manager: John Blough	Reported: 4/21/97 13:10

Gasoline Hydrocarbons (Toluene to Dodecane) and BTEX by WTPH-G and EPA 8020A North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
MW-8				B704261-01			Water	
Gasoline Range Hydrocarbons	0470501	4/18/97	4/18/97		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		1.00	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	50.0-150		113	%	
Surrogate: 4-BFB (PID)	"	"	"	50.0-150		95.0	"	
MW-9				B704261-02			Water	
Gasoline Range Hydrocarbons	0470501	4/18/97	4/18/97		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		1.00	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	50.0-150		107	%	
Surrogate: 4-BFB (PID)	"	"	"	50.0-150		96.9	"	
MW-10				B704261-03			Water	
Gasoline Range Hydrocarbons	0470501	4/18/97	4/18/97		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		1.00	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	50.0-150		119	%	
Surrogate: 4-BFB (PID)	"	"	"	50.0-150		93.8	"	
TB				B704261-04			Water	
Gasoline Range Hydrocarbons	0470501	4/18/97	4/18/97		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		1.00	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	50.0-150		104	%	
Surrogate: 4-BFB (PID)	"	"	"	50.0-150		96.9	"	

North Creek Analytical, Inc.

*Refer to end of report for text of notes and definitions.


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Page 2 of 4



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PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Pacific Environmental Group 4020 148th Ave NE, Ste B Redmond, WA 98052	Project: Chevron #9-6266 Project Number: 520-015.2B Project Manager: John Blough	Sampled: 4/11/97 Received: 4/14/97 Reported: 4/21/97 13:10
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Gasoline Hydrocarbons (Toluene to Dodecane) and BTEX by WTPH-G and EPA 8020A/Quality Control North Creek Analytical - Bothell

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 0470501										
Blank										
0470501-BLK1										
Gasoline Range Hydrocarbons	4/18/97			ND	ug/l	50.0				
Benzene	"			ND	"	0.500				
Toluene	"			ND	"	0.500				
Ethylbenzene	"			ND	"	0.500				
Xylenes (total)	"			ND	"	1.00				
Surrogate: 4-BFB (FID)	"	16.0		19.1	"	50.0-150	119			
Surrogate: 4-BFB (PID)	"	16.0		15.4	"	50.0-150	96.2			
LCS										
0470501-BS1										
Gasoline Range Hydrocarbons	4/18/97	500		456	ug/l	80.0-120	91.2			
Surrogate: 4-BFB (FID)	"	16.0		20.4	"	50.0-150	127			
Duplicate										
0470501-DUP1 B704269-02										
Gasoline Range Hydrocarbons	4/18/97		952	877	ug/l			25.0	8.20	
Surrogate: 4-BFB (FID)	"	16.0		21.4	"	50.0-150	134			
Matrix Spike										
0470501-MS1 B704373-02										
Benzene	4/18/97	10.0	ND	9.09	ug/l	70.0-130	90.9			
Toluene	"	10.0	ND	9.40	"	70.0-130	94.0			
Ethylbenzene	"	10.0	ND	9.45	"	70.0-130	94.5			
Xylenes (total)	"	30.0	ND	27.9	"	70.0-130	93.0			
Surrogate: 4-BFB (PID)	"	16.0		16.2	"	50.0-150	101			
Matrix Spike Dup										
0470501-MSD1 B704373-02										
Benzene	4/18/97	10.0	ND	9.41	ug/l	70.0-130	94.1	15.0	3.46	
Toluene	"	10.0	ND	9.69	"	70.0-130	96.9	15.0	3.04	
Ethylbenzene	"	10.0	ND	9.53	"	70.0-130	95.3	15.0	0.843	
Xylenes (total)	"	30.0	ND	27.8	"	70.0-130	92.7	15.0	0.323	
Surrogate: 4-BFB (PID)	"	16.0		16.0	"	50.0-150	100			

North Creek Analytical, Inc.

*Refer to end of report for text of notes and definitions.


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Project: Chevron #9-6266
Project Number: 520-015.2B
Project Manager: John Blough

Sampled: 4/11/97
Received: 4/14/97
Reported: 4/21/97 13:10

Notes and Definitions

#	Note
---	------

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
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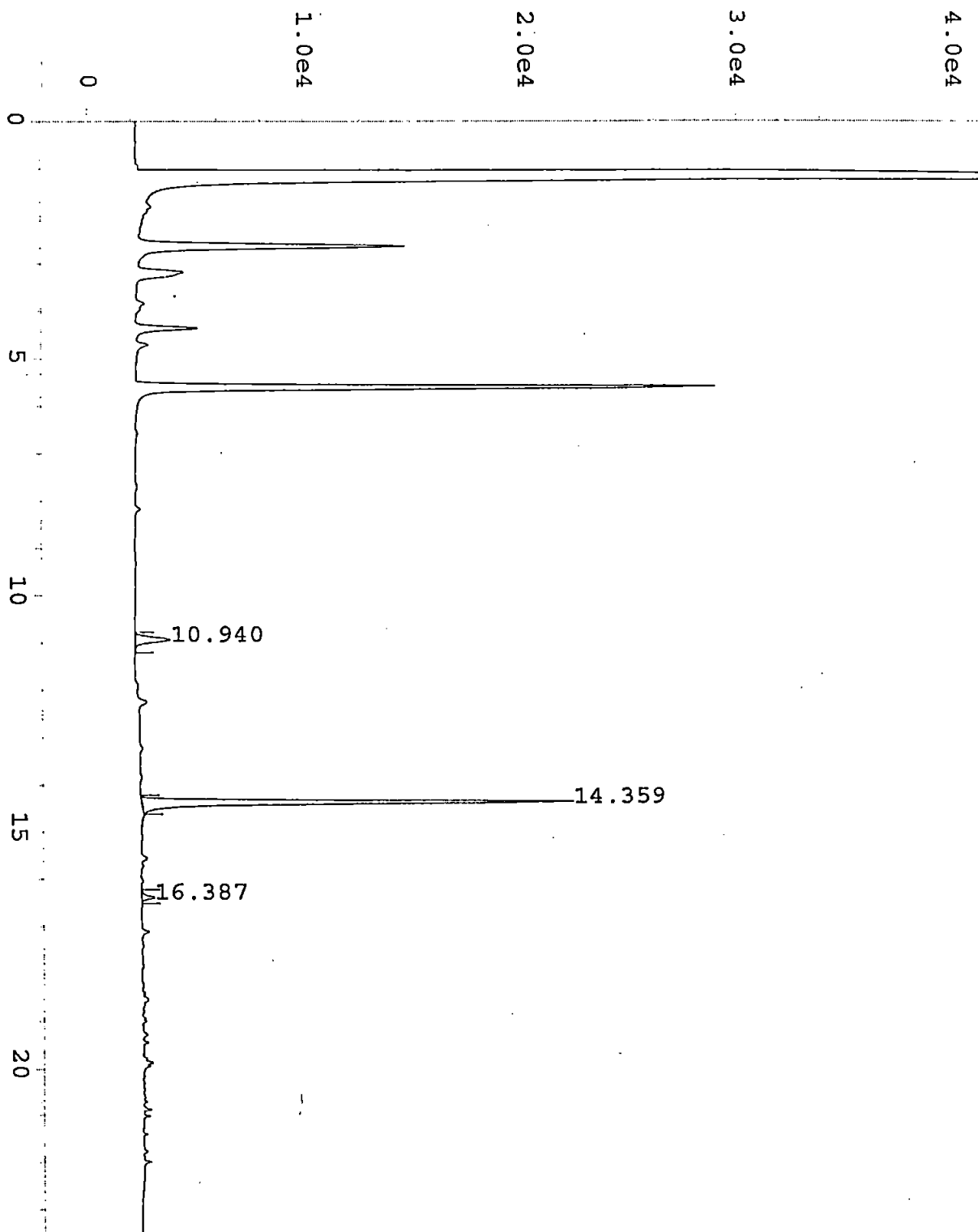
Recov.	Recovery
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RPD	Relative Percent Difference
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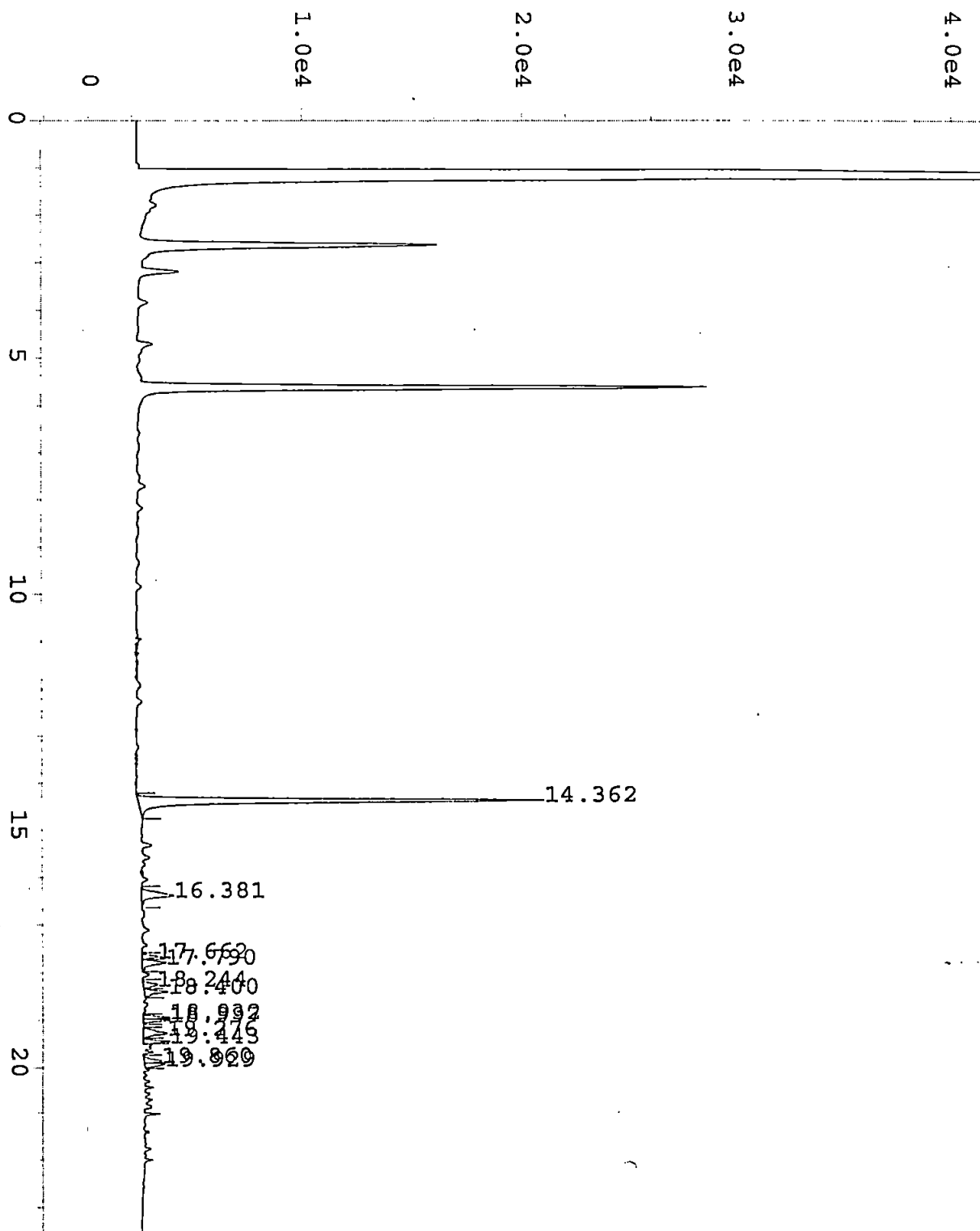
North Creek Analytical, Inc.


Matthew Essig, Project Manager

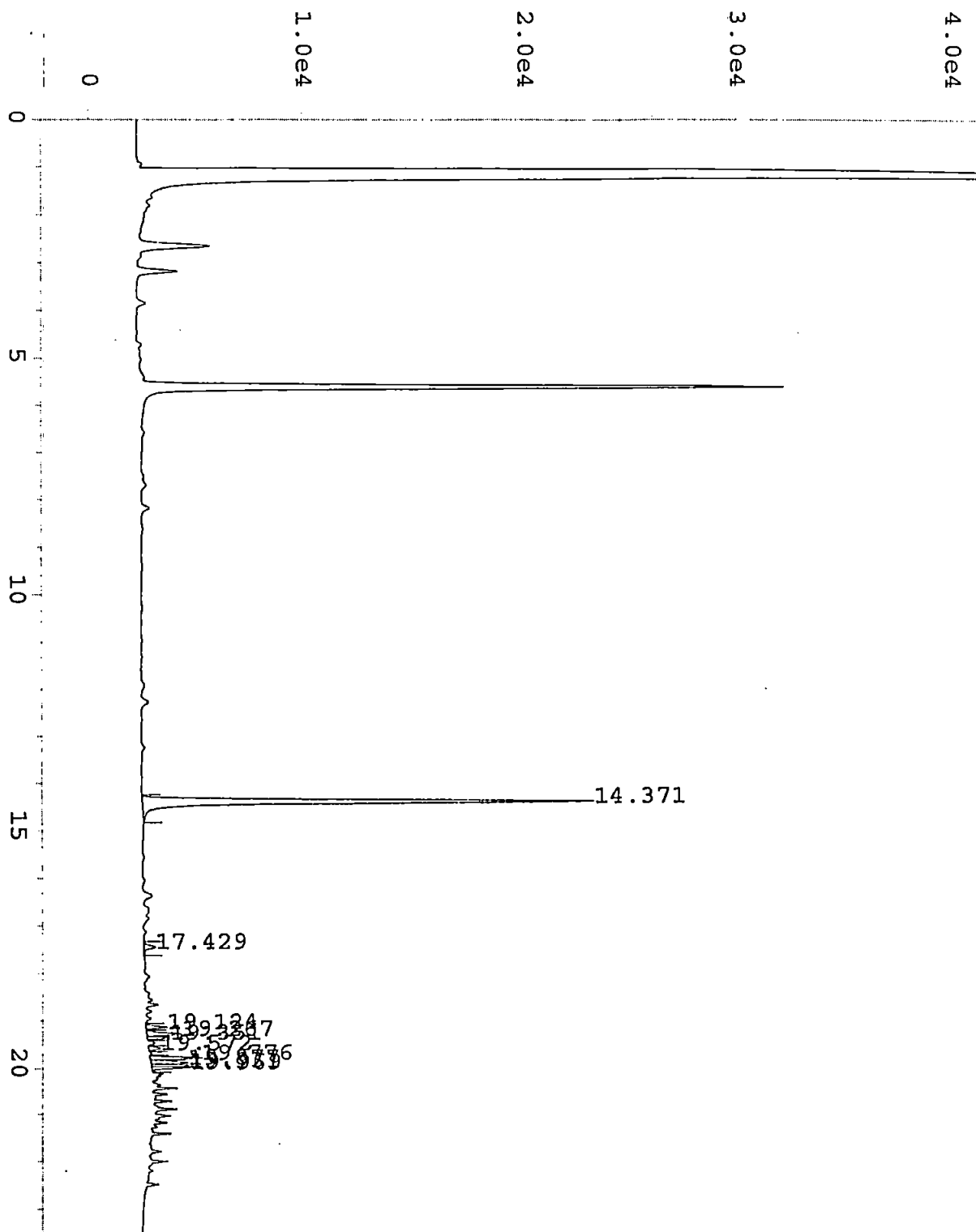
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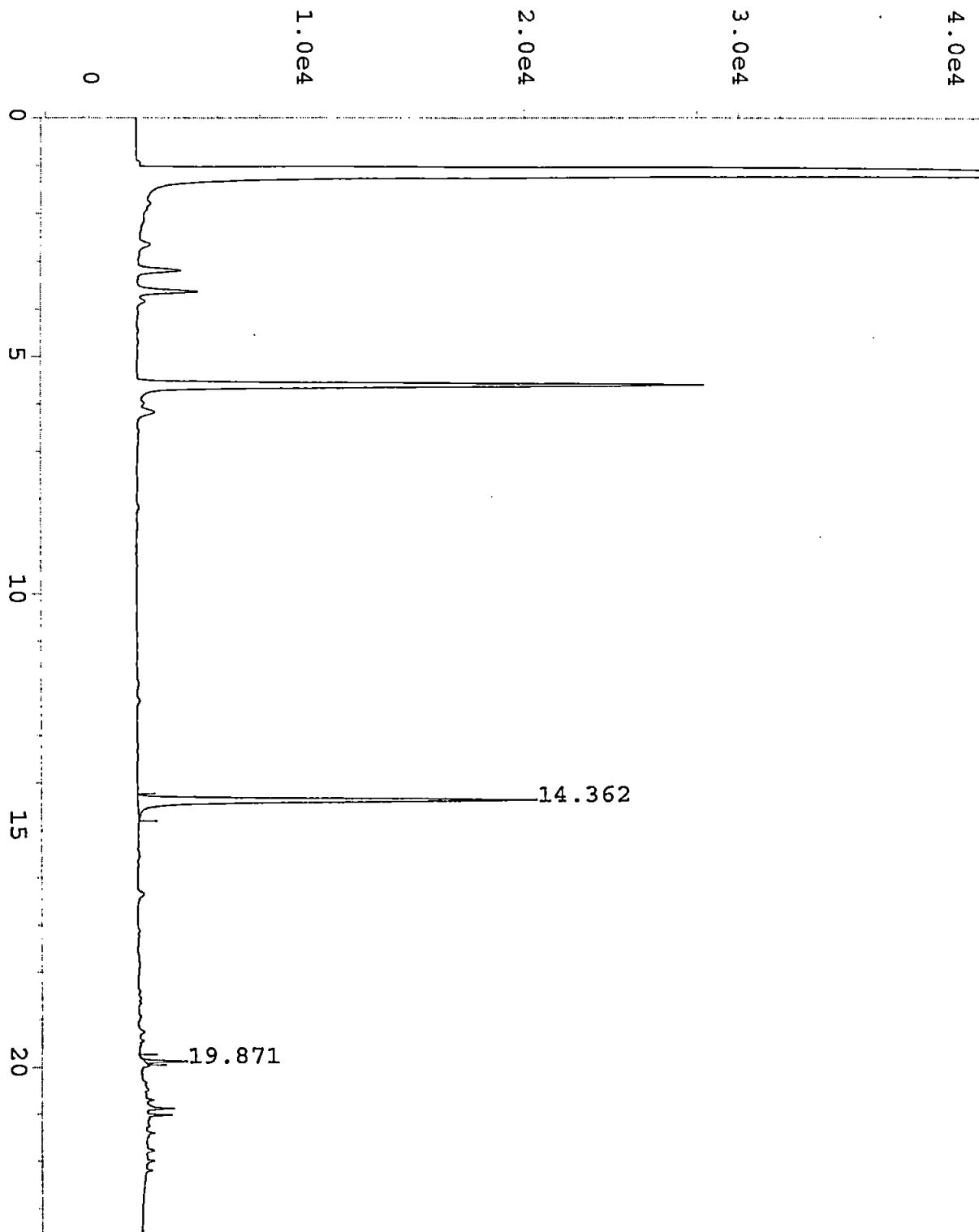
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Operator	: TLC	Vial Number	: 20
Instrument	: GC #2	Injection Number	: 1
Sample Name	: b704261-01	Sequence Line	: 3
Run Time Bar Code:		Instrument Method:	WA-WATER.MTH
Acquired on	: 18 Apr 97 05:20 PM	Analysis Method	: WA-WATER.MTH
Report Created on:	18 Apr 97 05:44 PM		
Sample Info	: 5 ml		



Data File Name	: C:\HPCHEM\1\DATA\041897\021F0301.D	Page Number	: 1
Operator	: TLC	Vial Number	: 21
Instrument	: GC #2	Injection Number	: 1
Sample Name	: b704261-02	Sequence Line	: 3
Run Time Bar Code:		Instrument Method:	WA-WATER.MTH
Acquired on	: 18 Apr 97 05:50 PM	Analysis Method	: WA-WATER.MTH
Report Created on:	18 Apr 97 06:14 PM		
Sample Info	: 5 ml		



Data File Name	: C:\HPCHEM\1\DATA\041897\030F0301.D	Page Number	: 1
Operator	: TLC	Vial Number	: 30
Instrument	: GC #2	Injection Number	: 1
Sample Name	: b704261-03 r1	Sequence Line	: 3
Run Time Bar Code:		Instrument Method:	WA-WATER.MTH
Acquired on	: 18 Apr 97 10:19 PM	Analysis Method	: WA-WATER.MTH
Report Created on:	18 Apr 97 10:43 PM		
Sample Info	: 5 ml		



Data File Name	: C:\HPCHEM\1\DATA\041897\023F0301.D	Page Number	: 1
Operator	: TLC	Vial Number	: 23
Instrument	: GC #2	Injection Number	: 1
Sample Name	: b704261-04 tb	Sequence Line	: 3
Run Time Bar Code:		Instrument Method	: WA-WATER.MTH
Acquired on	: 18 Apr 97 06:50 PM	Analysis Method	: WA-WATER.MTH
Report Created on:	18 Apr 97 07:14 PM		
Sample Info	: 5 ml		

CHEVRON U.S.A., Inc. CHAIN OF CUSTODY REPORT

704261

CHEVRON INFORMATION

CHEVRON Facility #: 9-6266

Facility Address: 1554 NE 145th

City, State, ZIP: Seattle, WA

CHEVRON Contact Name: Don Barnat

CHEVRON Telephone #:

Laboratory Release #: 905511

CONSULTANT INFORMATION

Name: PEG

Consultant Project #: 520-015-2B

Address: 4020 148th Ave NE Suite B
Redmond, WA 98052

Phone: 867-5097 Fax: 867-5639

Project Manager: John Blough Consultant Project #: 520-015-2B

Sample Collection by: M. Jones Airbill #:

Turnaround Times

Standard Analyses (DAYS)

RUSH Analyses (HOURS)

24 48

RUSH Analyses (DAYS)

5

SAMPLE IDENTIFICATION	SAMPLING DATE / TIME	MATRIX (W,S,O,A)	# OF CONTAINERS
1. MW-8	4/11/97 1530	W	2
2. MW-9	1556	W	2
3. MW-10	1508	W	2
4. TB	W	W	2
5.			
6.			
7.			
8.			
9.			
10.			

O Oregon • Washington O Alaska O Other - Hydrocarbon Methods													
TPH-HCID	TPH-Gas	BTEX (EPA 8020 Mod.)	TPH-Gas + BTEX	TPH-Diesel	TPH-Diesel Extended	TPH-418.1	Halogen. Volatiles (EPA 8010)	Aromatic Volatiles (EPA 8020)	Pesticides/PCBs or PCBs Only	GC/MS Volatiles (EPA 8240/8260)	GC/MS SemiVols. (EPA 8270)	PAHs by HPLC (EPA 8310)	Lead: Total or Dissolved TCLP Metals (8)
			✓										
			✓										
			✓										
			✓										

NCA Sample Number	REMARKS
704261-01	
-02	
-03	
-04	

Relinquished by:	Firm:	Date & Time	Received by:	Firm:	Date & Time
1. M. Jones	PEG	4/14/97 1130	[Signature]	NCA	4/14/97 1130
2. [Signature]	NCA	4/14/97 1300			
3.					

REPORTS:

Level 1 ☐ ☒ Yes

Level 2 ☐ ☒ No

Fax Copy of Lab Report & COC to CHEVRON: ☐ Yes ☒ No



RECEIVED
JUN 06 1997
DEPT. OF ECOLOGY

Project: 520-015.2B

We have enclosed:

For your:

☐	Use
☐	Approval
☐	Review
☒	Information



John Blough