



LUST # 1491
Chevron Station #9-4511

entered on
5-19-99/SEK

IT Corporation

555 South Renton Village Place, Suite 700
Renton, WA 98055-3295
Tel. 425.228.9645
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A Member of The IT Group

1491

February 16, 1999

Mr. Garrick Jauregui
Chevron Products Company
P.O. Box 6004
San Ramon, California 94583-0804

RECEIVED
APR 30 1999
DEPT. OF ECOLOGY

Re: Monitoring Activities
Chevron Service Station No. 9-4511
617 NW Richmond Beach Road
Seattle, Washington

Dear Mr. Jauregui:

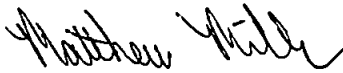
At the request of Chevron, Pacific Environmental Group Inc. (PEG) monitored the groundwater monitoring wells at the site referenced above on January 27, 1999. Seven groundwater monitoring wells were gauged to determine the depth to groundwater and to check for the presence of separate-phase hydrocarbons (SPH). SPH was previously observed in Well MW-4 at a measured thickness of 0.80 feet on September 23, 1998. SPH was not observed in any wells on January 27, 1999. Well MW-2 could not be gauged as it was filled with pea gravel. Well MW-7 appears to have been properly abandoned in place. Well MW-11 could not be opened on January 27, 1999.

A groundwater elevation contour map is presented as Figure 1. Groundwater elevations and historical analytical results are presented in Table 1. Groundwater monitoring protocol is presented in Attachment A.

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

Sincerely,

Pacific Environmental Group, Inc.



Matthew Miller
Project Geologist



Eric Larsen
Project Manager

Attachments: Table 1 - Groundwater Elevations and Analytical Results
Figure 1 - Site Map
Attachment A - Groundwater Monitoring Protocol

Independent Action Report Update

Site Name: Chevron 9-4511
Inc. #: 1491 Date of Report: 2-16-99
County: King Date Report Rec'd: 4-30-99
Reviewed by: Ben Amoah-Forson 5-15-99
Comments (e.g. free product, off site migration, Conc. Trend)
No free product has observed
in mw-4 this quarter
interim

TABLE 1
GROUNDWATER ELEVATIONS AND ANALYTICAL RESULTS

Chevron Service Station 9-4511
617 N.W. Richmond Beach Road
Seattle, Washington

Sample I.D. TOC	Sample Date	Benzene (ppb)	Toluene (ppb)	Ethyl- benzene (ppb)	Xylenes (ppb)	MTBE (ppb)	TPH- Gasoline (ppb)	TPH- Diesel (ppb)	TPH-Oil (ppb)	TPH- 418.1 (ppb)	Total Lead (ppb)	DTW (feet)	SPH (feet)	WTE (feet)
MW-1	01/03/91	24	64	67	580	--	202,000	ND *	56,000	166,000	--	--	--	93.18
98.13	05/15/91	--	--	--	--	--	--	-- *	--	--	--	--	--	93.13
	05/22/92	--	--	--	--	--	--	--	--	--	--	--	--	93.38
	02/23/93	26	15	51	410	--	6,800	ND	--	77,000	--	4.75	--	93.38
	05/14/93	10.2	2	4	286	--	6,770	--	--	110,000	--	4.11	--	94.02
	08/04/93	17.2	17	16	221	--	6,780	--	--	280,000	--	4.65	--	93.48
	11/11/93	10.1	16	50	347	--	7,930	29	65	1,490,000	--	6.00	0.02	92.15
	02/14/94	27.8	10	61	423	--	9,680	20,000	39,300	--	--	5.36	--	92.77
	05/23/94	32.4	9	71	399	--	7,790	17,400	34,300	--	--	4.90	0.01	93.24
	08/08/94	--	--	--	--	--	--	--	--	--	--	5.65	0.06	92.53
	11/29/94	25.3	20	50	313	--	6,400	11,800	5,890	--	--	5.22	--	92.91
Dilution	02/07/95	21	11	41	200	--	5,600	17,000	31,000	--	ND	4.58	--	93.55
Dilution	05/19/95	22	1.4	50	220	--	4,700	10,000	180,000	--	4.4	4.35	--	93.78
	12/22/95	--	--	--	--	--	--	--	--	--	--	2.89	--	95.24
	06/26/96	--	--	--	--	--	--	--	--	--	--	3.00	--	95.13
	06/03/97	4.03	ND	3.49	33.7	--	2,040	2,040	ND	--	--	3.00	--	95.13
	09/23/98	--	--	--	--	--	--	--	--	--	--	--	--	--
	01/27/99	--	--	--	--	--	--	--	--	--	--	3.35	--	94.78

TABLE 1
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Chevron Service Station 9-4511
617 N.W. Richmond Beach Road
Seattle, Washington

Sample I.D. TOC	Sample Date	Benzene (ppb)	Toluene (ppb)	Ethyl- benzene (ppb)	Xylenes (ppb)	MTBE (ppb)	TPH- Gasoline (ppb)	TPH- Diesel (ppb)	TPH-Oil (ppb)	TPH- 418.1 (ppb)	Total Lead (ppb)	DTW (feet)	SPH (feet)	WTE (feet)
MW-2	01/03/91	240	4,400	2,080	16,400	--	44,400	ND *	4,190	7,000	--	--	--	91.53
97.53	05/15/91	401	2,510	1,370	8,660	--	47,000	ND *	ND	9,000	--	--	--	92.36
	05/22/92	280	260	500	4,100	--	33,000	--	--	--	--	--	--	91.82
	02/23/93	--	--	--	--	--	--	--	--	--	--	--	--	--
	05/14/93	--	--	--	--	--	--	--	--	--	--	--	--	--
	08/04/93	49.8	28	145	739	--	4,790	--	--	900	--	6.39	--	91.14
	11/11/93	81	ND	38	25	--	480	--	--	ND	--	8.80	--	88.73
	02/14/94	152	ND	63	85	--	1,190	420	900	--	--	7.55	--	89.98
	05/23/94	224	3	248	332	--	5,890	1,080	ND	--	--	7.67	--	89.86
	08/08/94	65.0	ND	8	ND	--	90	280	ND	--	--	8.85	--	88.68
	11/29/94	339	1,300	232	1,510	--	12,500	1,290	1,510	--	--	7.10	--	90.43
	02/07/95	--	--	--	--	--	--	--	--	--	--	7.67	--	89.86
	05/19/95	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/22/95	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/26/96	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/03/97	--	--	--	--	--	--	--	--	--	--	--	--	--
	09/23/98	--	--	--	--	--	--	--	--	--	--	--	--	--
Abandoned	01/27/99	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 1
GROUNDWATER ELEVATIONS AND ANALYTICAL RESULTS

Chevron Service Station 9-4511
 617 N.W. Richmond Beach Road
 Seattle, Washington

Sample I.D. TOC	Sample Date	Benzene (ppb)	Toluene (ppb)	Ethyl- benzene (ppb)	Xylenes (ppb)	MTBE (ppb)	TPH- Gasoline (ppb)	TPH- Diesel (ppb)	TPH-Oil (ppb)	TPH- 418.1 (ppb)	Total Lead (ppb)	DTW (feet)	SPH (feet)	WTE (feet)
MW-4	01/03/91	--	--	--	--	--	46,700	ND *	ND	--	--	--	--	91.33
97.99	05/15/91	535	59	293	1,340	--	11,000	ND *	ND	22,000	--	--	--	90.68
	05/22/92	--	--	--	--	--	--	--	--	--	--	--	--	90.65
	02/23/93	--	--	--	--	--	--	--	--	--	--	6.95	0.05	91.08
	05/14/93	89.8	9	63	1,020	--	25,000	--	--	290,000	--	6.27	--	91.72
	08/04/93	147	22	152	2,090	--	17,800	--	--	1,400,000	--	7.18	--	90.81
	11/11/93	70.5	7	98	720	--	12,500	ND	ND	2,270,000	--	8.96	0.10	89.11
	02/14/94	79.5	7	78	704	--	12,700	16,700	20,100	--	--	7.65	--	90.34
	05/23/94	--	--	--	--	--	--	--	--	--	--	7.21	0.15	90.90
	08/08/94	--	--	--	--	--	--	--	--	--	--	8.74	0.28	89.47
	11/29/94	41.7	25	228	1,710	--	14,000	123,000	183,000	--	--	8.40	--	89.59
Dilution	02/07/95	73	11	92	850	--	42,000	13,000	10,000	--	56	7.04	--	90.95
Dilution	05/19/95	110	9.9	73	690	--	15,000	2,800	7,000	--	24	6.17	--	91.82
	12/22/95	42	34	490	1,700	--	12,000,000	46,000	66,000	--	39	4.00	--	93.99
	06/26/96	--	--	--	--	--	--	--	--	--	--	5.88	Sheen	92.11
	06/03/97	22.2	3.41	22.2	292	--	11,400	3,370	818	--	--	5.38	--	92.61
	09/23/98	--	--	--	--	--	--	--	--	--	--	9.24	0.80	89.39
	01/27/99	--	--	--	--	--	--	--	--	--	--	5.43	--	92.56

TABLE 1
GROUNDWATER ELEVATIONS AND ANALYTICAL RESULTS

Chevron Service Station 9-4511
617 N.W. Richmond Beach Road
Seattle, Washington

Sample I.D. TOC	Sample Date	Benzene (ppb)	Toluene (ppb)	Ethyl- benzene (ppb)	Xylenes (ppb)	MTBE (ppb)	TPH- Gasoline (ppb)	TPH- Diesel (ppb)	TPH-Oil (ppb)	TPH- 418.1 (ppb)	Total Lead (ppb)	DTW (feet)	SPH (feet)	WTE (feet)
MW-5	01/03/91	1,100	1,740	1,990	13,300	--	35,000	ND *	5,520	6,000	--	--	--	91.69
97.90	05/15/91	787	309	1,540	6,020	--	25,000	ND *	ND	7,000	--	--	--	91.48
	05/22/92	600	86	1,300	5,400	--	38,000	--	--	--	--	--	--	91.64
	02/23/93	183	35	368	1,810	--	8,870	--	--	2,100	--	6.18	--	91.72
	05/14/93	45.6	2	3	981	--	5,690	--	--	2,700	--	6.00	--	91.90
	08/04/93	559	75	1,120	3,260	--	17,900	--	--	3,500	--	6.99	--	90.91
	11/11/93	718	99	1,680	5,800	--	35,000	0.5	ND	6,400	--	7.64	--	90.26
	02/14/94	255	42	754	1,790	--	17,100	920	1,350	--	--	6.92	--	90.98
	05/23/94	284	62	924	1,740	--	14,600	2,120	970	--	--	6.56	--	91.34
	08/08/94	426	119	1,550	3,490	--	20,800	1,750	770	--	--	7.75	--	90.15
	11/29/94	17.5	2	49	39	--	470	2,980	13,200	--	--	6.84	--	91.06
	02/07/95	12	2.1	25	18	--	380	150	700	--	ND	6.76	--	91.14
	05/19/95	54	4.3	ND	ND	--	1,100	1,300	2,400	--	4.0	6.13	--	91.77
	12/22/95	32	7.0	190	150	--	1,900	1,000	1,700	--	17	3.47	--	94.43
	06/26/96	11.8	ND	49.8	85.8	--	674	718	863	--	--	5.56	--	92.34
	06/03/97	ND	ND	ND	ND	--	ND	368	ND	--	--	4.35	--	93.55
	09/23/98	--	--	--	--	--	--	--	--	--	--	--	--	--
	01/27/99	--	--	--	--	--	--	--	--	--	--	4.50	--	93.40

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Chevron Service Station 9-4511
617 N.W. Richmond Beach Road
Seattle, Washington

Sample I.D. TOC	Sample Date	Benzene (ppb)	Toluene (ppb)	Ethyl- benzene (ppb)	Xylenes (ppb)	MTBE (ppb)	TPH- Gasoline (ppb)	TPH- Diesel (ppb)	TPH-Oil (ppb)	TPH- 418.1 (ppb)	Total Lead (ppb)	DTW (feet)	SPH (feet)	WTE (feet)
MW-6	01/03/91	439	73	35	1,970	--	7,040	ND *	1,500	ND	--	--	--	93.06
97.51	05/15/91	498	27	417	1,340	--	8,000	ND *	ND	2,000	--	--	--	93.12
	05/22/92	580	30	570	1,700	--	15,000	--	--	--	--	--	--	93.41
	02/23/93	202	7	134	177	--	2,570	--	--	ND	--	3.70	--	93.81
	05/14/93	230	9	177	128	--	2,040	--	--	900	--	4.62	--	92.89
	08/04/93	240	8	238	103	--	2,400	--	--	800	--	3.99	--	93.52
	11/11/93	114	14	289	493	--	4,910	ND	ND	1,200	--	4.96	--	92.55
	02/14/94	232	7	144	146	--	2,630	370	ND	--	--	4.80	--	92.71
	05/23/94	260	8	204	144	--	2,460	2,310	ND	--	--	4.32	--	93.19
	08/08/94	345	14	393	459	--	4,590	1,720	ND	--	--	5.05	--	92.46
	11/29/94	35.1	ND	23	7	--	360	840	ND	--	--	4.44	--	93.07
	02/07/95	27	1.0	19	16	--	270	370	660	--	ND	4.34	--	93.17
	05/19/95	96	2.3	74	21	--	790	2,000	ND	--	11	3.95	--	93.56
	12/22/95	190	6.7	120	7.1	--	1,600	2,400	ND	--	16	3.00	--	94.51
	06/26/96	26.5	ND	7.31	ND	--	95.8	770	ND	--	--	3.36	--	94.15
	06/03/97	ND	ND	ND	ND	--	ND	ND	ND	--	--	2.70	--	94.81
	09/23/98	135	5.68	203	107	--	1,430	2,460	1,040	--	--	5.04	--	92.47
	01/27/99	--	--	--	--	--	--	--	--	--	--	3.25	--	94.26

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Sample I.D. TOC	Sample Date	Benzene (ppb)	Toluene (ppb)	Ethyl- benzene (ppb)	Xylenes (ppb)	MTBE (ppb)	TPH- Gasoline (ppb)	TPH- Diesel (ppb)	TPH-Oil (ppb)	TPH- 418.1 (ppb)	Total Lead (ppb)	DTW (feet)	SPH (feet)	WTE (feet)
MW-7 97.87	01/03/91	4	ND	ND	1	--	ND	370 *	2,240	ND	--	--	--	93.05
	05/15/91	1	ND	ND	ND	--	ND	ND *	ND	ND	--	--	--	93.02
	05/22/92	1	ND	ND	ND	--	ND	--	--	--	--	--	--	93.09
	02/23/93	--	--	--	--	--	--	--	--	ND	--	4.20	--	93.67
	05/14/93	--	--	--	--	--	--	--	--	600	--	4.35	--	93.52
	08/04/93	ND	ND	ND	1	--	90	--	--	1,200	--	4.38	--	93.49
	11/11/93	--	--	--	--	--	--	--	--	ND	--	5.51	--	92.36
	02/14/94	ND	ND	2	4	--	60	ND	ND	--	--	5.05	--	92.82
	05/23/94	ND	ND	ND	ND	--	ND	ND	ND	--	--	4.71	--	93.16
	08/08/94	ND	ND	ND	ND	--	ND	ND	ND	--	--	4.94	--	92.93
	11/29/94	ND	ND	ND	ND	--	ND	ND	ND	--	--	4.84	--	93.03
	02/07/95	ND	ND	ND	ND	--	ND	170	200	--	ND	4.55	--	93.32
	05/19/95	--	--	--	--	--	--	--	--	--	--	4.17	--	93.70
	12/22/95	ND	ND	ND	ND	--	ND	ND	ND	--	ND	3.91	--	93.96
Abandoned	06/26/96	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/03/97	--	--	--	--	--	--	--	--	--	--	--	--	--
	09/23/98	--	--	--	--	--	--	--	--	--	--	--	--	--

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Sample I.D. TOC	Sample Date	Benzene (ppb)	Toluene (ppb)	Ethyl- benzene (ppb)	Xylenes (ppb)	MTBE (ppb)	TPH- Gasoline (ppb)	TPH- Diesel (ppb)	TPH-Oil (ppb)	TPH- 418.1 (ppb)	Total Lead (ppb)	DTW (feet)	SPH (feet)	WTE (feet)
MW-8	01/03/91	ND	ND	ND	ND	--	ND	ND *	2,900	ND	--	--	--	90.81
98.24	05/15/91	ND	ND	ND	ND	--	ND	ND *	ND	ND	--	--	--	90.03
	05/22/92	ND	ND	ND	ND	--	ND	--	--	--	--	--	--	89.84
	02/23/93	--	--	--	--	--	--	--	--	ND	--	8.00	--	90.24
	05/14/93	--	--	--	--	--	--	--	--	ND	--	6.85	--	91.39
	08/04/93	ND	ND	ND	1	--	ND	--	--	ND	--	8.19	--	90.05
	11/11/93	--	--	--	--	--	--	--	--	ND	--	9.85	--	88.39
	02/14/94	ND	ND	ND	ND	--	ND	ND	ND	--	--	8.50	--	89.74
	05/23/94	ND	ND	ND	ND	--	ND	ND	ND	--	--	7.95	--	90.29
	08/08/94	ND	ND	ND	ND	--	ND	ND	ND	--	--	9.50	--	88.74
	11/29/94	ND	ND	ND	ND	--	ND	ND	ND	--	--	9.40	--	88.84
	02/07/95	ND	ND	ND	ND	--	ND	140	ND	--	ND	7.63	--	90.61
	05/19/95	--	--	--	--	--	--	--	--	--	--	7.12	--	91.12
	12/22/95	ND	ND	ND	ND	--	ND	ND	ND	--	4.9	5.84	--	92.40
	06/26/96	--	--	--	--	--	--	--	--	--	--	6.86	--	91.38
	06/03/97	--	--	--	--	--	--	--	--	--	--	6.25	--	91.99
	09/23/98	--	--	--	--	--	--	--	--	--	--	--	--	--
	01/27/99	--	--	--	--	--	--	--	--	--	--	6.50	--	91.74

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Seattle, Washington

Sample I.D. TOC	Sample Date	Benzene (ppb)	Toluene (ppb)	Ethyl- benzene (ppb)	Xylenes (ppb)	MTBE (ppb)	TPH- Gasoline (ppb)	TPH- Diesel (ppb)	TPH-Oil (ppb)	TPH- 418.1 (ppb)	Total Lead (ppb)	DTW (feet)	SPH (feet)	WTE (feet)
MW-9	01/03/91	3,350	134	2,170	6,480	--	21,500	ND *	ND	5,000	--	--	--	90.06
97.72	05/15/91	1,740	100	1,920	5,350	--	34,000	ND *	ND	9,000	--	--	--	89.25
	05/22/92	2,300	120	2,700	5,600	--	61,000	--	--	--	--	--	--	89.06
	02/23/93	1,750	72	1,980	4,100	--	34,000	--	--	--	--	8.10	--	89.62
	05/14/93	1,360	85	737	4,300	--	34,000	--	--	--	--	7.43	--	90.29
	08/04/93	2,070	120	2,700	6,900	--	47,000	--	--	--	--	8.31	--	89.41
	11/11/93	1,650	92	2,430	4,850	--	48,300	--	--	--	--	9.92	--	87.80
	02/14/94	1,660	62	2,380	4,540	--	32,000	2,960	ND	--	--	8.75	--	88.97
	05/23/94	515	17	746	1,370	--	16,900	6,760	840	--	--	8.37	--	89.35
	08/08/94	1,400	49	1,730	3,640	--	30,000	3,370	ND	--	--	10.00	--	87.72
	11/29/94	274	10	211	452	--	4,040	5,990	860	--	--	9.81	--	87.91
Dilution	02/07/95	880	75	1,100	2,400	--	24,000	5,400	600	--	ND	8.08	--	89.64
	05/19/95	820	42	1,300	2,200	--	25,000	4,600	850	--	4.6	7.65	--	90.07
	12/22/95	450	40	1,200	2,400	--	25,000	2,800	ND	--	7.2	5.75	--	91.97
	06/26/96	807	60.0	1,880	3,850	--	34,100	3,590	ND	--	--	7.13	--	90.59
	06/03/97	67.6	ND	128	178	--	3,450	1,330	ND	--	--	6.84	--	90.88
	09/23/98	399	44.5	1,240	2,350	--	22,800	5,510	ND	--	--	10.49	--	87.23
	01/27/99	--	--	--	--	--	--	--	--	--	--	6.77	--	90.95

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Chevron Service Station 9-4511
617 N.W. Richmond Beach Road
Seattle, Washington

Sample I.D. TOC	Sample Date	Benzene (ppb)	Toluene (ppb)	Ethyl- benzene (ppb)	Xylenes (ppb)	MTBE (ppb)	TPH- Gasoline (ppb)	TPH- Diesel (ppb)	TPH-Oil (ppb)	TPH- 418.1 (ppb)	Total Lead (ppb)	DTW (feet)	SPH (feet)	WTE (feet)
MW-10	01/03/91	17	2	40	60	--	140	ND *	ND	ND	--	--	--	90.07
97.78	05/15/91	96	12	118	454	--	2,000	ND *	ND	ND	--	--	--	89.37
	05/22/92	83	6	250	190	--	3,000	--	--	--	--	--	--	88.99
	02/23/93	5.9	ND	20	21	--	265	--	--	--	--	8.30	--	89.48
	05/14/93	7.6	ND	11	9	--	110	--	--	--	--	7.50	--	90.28
	08/04/93	18.3	2	30	35	--	620	--	--	--	--	8.39	--	89.39
	11/11/93	156	10	443	397	--	4,590	--	--	--	--	10.31	--	87.47
	02/14/94	104	7	326	600	--	6,220	610	ND	--	--	9.07	--	88.71
	05/23/94	6.5	ND	17	5	--	140	ND	ND	--	--	8.42	--	89.36
	08/08/94	127	7	402	291	--	3,320	540	ND	--	--	10.50	--	87.28
	11/29/94	19.2	ND	52	12	--	260	780	ND	--	--	10.39	--	87.39
	02/07/95	ND	ND	ND	ND	--	ND	120	300	--	ND	8.10	--	89.68
	05/19/95	9.0	ND	0.84	4.5	--	240	1,600	ND	--	63	7.80	--	89.98
	12/22/95	1.6	0.91	1.9	32	--	120	330	820	--	ND	5.82	--	91.96
	06/26/96	21.2	ND	16.2	26.1	--	231	341	ND	--	ND	7.21	--	90.57
	06/03/97	22.3	ND	3.20	3.75	ND	ND	396	ND	--	--	6.91	--	90.87
	09/23/98	30.7	2.40	173	5.95	ND	840	767	860	--	--	11.18	--	86.60
	01/27/99	--	--	--	--	--	--	--	--	--	--	6.90	--	90.88

TABLE 1
GROUNDWATER ELEVATIONS AND ANALYTICAL RESULTS

Chevron Service Station 9-4511
617 N.W. Richmond Beach Road
Seattle, Washington

Sample I.D. TOC	Sample Date	Benzene (ppb)	Toluene (ppb)	Ethyl- benzene (ppb)	Xylenes (ppb)	MTBE (ppb)	TPH- Gasoline (ppb)	TPH- Diesel (ppb)	TPH-Oil (ppb)	TPH- 418.1 (ppb)	Total Lead (ppb)	DTW (feet)	SPH (feet)	WTE (feet)
MW-11	01/03/91	353	30	331	1,520	--	10,100	ND *	ND	ND	--	--	--	92.01
97.16	05/15/91	513	15	355	679	--	8,000	ND *	ND	2,000	--	--	--	91.90
	05/22/92	330	7	140	200	--	5,200	-- *	--	--	--	--	--	92.07
	02/23/93	212	7	102	169	--	3,850	--	--	--	--	4.72	--	92.44
	05/14/93	124	4	51	61	--	1,760	--	--	--	--	4.50	--	92.66
	08/04/93	58.9	1	25	28	--	980	--	--	--	--	4.94	--	92.22
	11/11/93	39	2	40	61	--	2,280	--	--	--	--	5.62	--	91.54
	02/14/94	36.4	2	21	31	--	1,610	1,450	ND	--	--	5.40	--	91.76
	05/23/94	36.3	2	24	26	--	2,180	3,900	1,400	--	--	5.09	--	92.07
	08/08/94	104	2	23	35	--	1,350	2,820	ND	--	--	5.60	--	91.56
	11/29/94	26.4	ND	1	2	--	240	2,830	1,380	--	--	5.03	--	92.13
	02/07/95	18	0.8	1.6	4.3	--	350	1,600	470	--	ND	4.94	--	92.22
	05/19/95	20	0.64	2.7	2.3	--	540	3,000	1,300	--	ND	4.77	--	92.39
	12/22/95	22	0.84	2.7	ND	--	470	2,300	1,500	--	16	3.93	--	93.23
	06/26/96	0.745	ND	ND	ND	--	ND	464	ND	--	16	3.96	--	93.20
	06/03/97	ND	ND	ND	ND	--	ND	ND	ND	--	--	3.80	--	93.36
	09/23/98	0.851	ND	ND	ND	15.9	ND	446	ND	--	--	5.41	--	91.75
	01/27/99	--	--	--	--	--	--	--	--	--	--	--	--	--

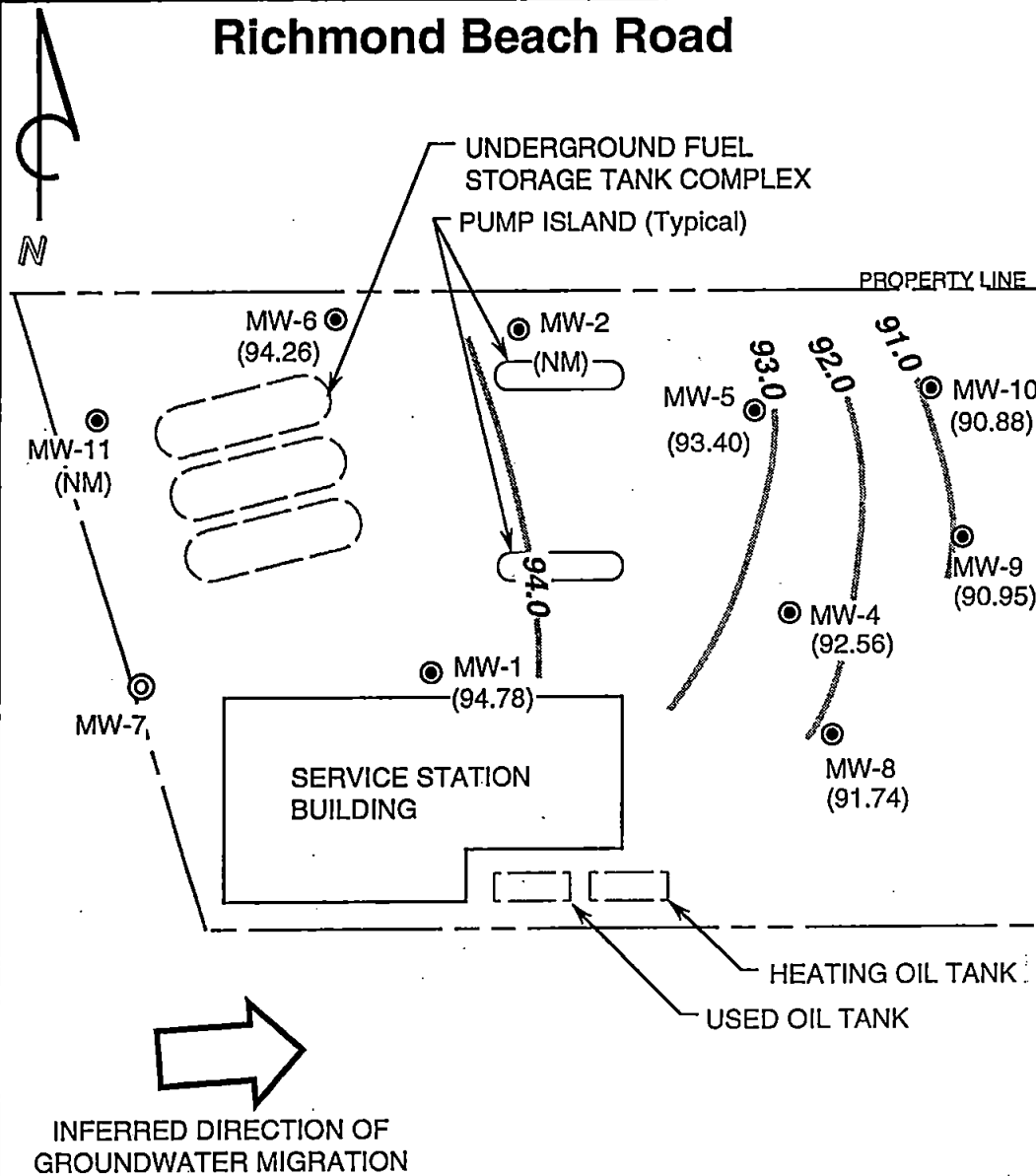
TABLE 1
GROUNDWATER ELEVATIONS AND ANALYTICAL RESULTS

Chevron Service Station 9-4511
617 N.W. Richmond Beach Road
Seattle, Washington

Sample I.D. TOC	Sample Date	Benzene (ppb)	Toluene (ppb)	Ethyl- benzene (ppb)	Xylenes (ppb)	MTBE (ppb)	TPH- Gasoline (ppb)	TPH- Diesel (ppb)	TPH-Oil (ppb)	TPH- 418.1 (ppb)	Total Lead (ppb)
MTCA Method A Cleanup Levels:		5	40	30	20	--	1,000	1,000	1,000	5	5
Laboratory Reporting Limits:		0.5	0.50	0.5	1.0	12.5	50	250	750	500	2.0
ppb - Parts per billion TOC = Top of casing and groundwater elevations expressed as feet relative to an arbitrary datum DTW = Depth to water SPH = Separate-phase hydrocarbon thickness NM - Not measured WTE = Water table elevation ND = Not detected at the laboratory reporting limits -- = Not sampled, not measured, or not analyzed * = Analysis by TPH-3510/8015 Dilution = Sample was diluted, higher detection limits Water table elevation corrected for separate-phase hydrocarbons TPH as Gasoline - Analysis by Washington Method WTPH-G TPH as Diesel and Oil - Analysis by Washington Method WTPH-D + Extended TPH as 418.1 - Analysis by EPA Method 418.1 BTEX Compounds - Analysis by EPA Method 8021B MTBE - Methyl Tert-Butyl Ether - Analysis by EPA Method 8021B with confirmation by EPA Method 8260B (MW-11 only =15.9) Total Lead - Analysis by EPA Method 7421											

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

Richmond Beach Road



LEGEND

MW-1 ● GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION

MW-7 ⊙ ABANDONED GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION

92.0 — GROUNDWATER ELEVATION CONTOUR IN FEET, ARBITRARY SITE DATUM, 1-27-99

(93.40) GROUNDWATER ELEVATION IN FEET, ARBITRARY SITE DATUM, 1-27-99

(NM) NOT MEASURED

NOTE: Base Map Provided by AGI TECHNOLOGIES, INC.

CHEVRON SERVICE STATION #9-4511
617 Northwest Richmond Beach Road
Seattle, Washington

SITE MAP



PACIFIC
ENVIRONMENTAL
GROUP, INC.

SCALE IN FEET

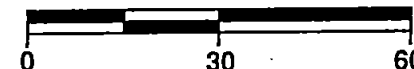


FIGURE:
1
PROJECT:
520-083.2B

ATTACHMENT A
GROUNDWATER MONITORING PROTOCOL

ATTACHMENT A

Groundwater Monitoring

The groundwater monitoring 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:

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



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541.383.9310 fax 541.382.7588

30 November, 1999

Matt Miller
Delta Environmental
1200 112th NE Ave. NE C146
Bellevue, WA 98004

RE: Chevron #9-4511

Enclosed are the results of analyses for samples received by the laboratory on 11/29/99 16:53. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Steve Davis
Project Manager

RECEIVED

NOV 20 2000

DEPT OF ECOLOGY

North Creek Analytical, Inc.
Environmental Laboratory Network



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Delta Environmental
1200 112th NE Ave. NE C146
Bellevue WA, 98004

Project: Chevron #9-4511
Project Number: M 098-342
Project Manager: Matt Miller

Reported:
11/30/99 13:30

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BT-2	B9K0516-01	Water	11/29/99 16:00	11/29/99 16:53

North Creek Analytical - Bothell

Steve Davis, Project Manager

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Project: Chevron #9-4511
Project Number: M 098-342
Project Manager: Matt Miller

Reported:
11/30/99 13:30

BTEX by EPA Method 8021B
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BT-2 (B9K0516-01) Water Sampled: 11/29/99 16:00 Received: 11/29/99 16:53									
Benzene	655	10.0	ug/l	20	9K29002	11/29/99	11/30/99	EPA 8021B	
Toluene	184	2.50	"	5	"	"	11/29/99	"	
Ethylbenzene	279	2.50	"	"	"	"	"	"	
Xylenes (total)	1150	5.00	"	"	"	"	"	"	
Surrogate: 4-BFB (PID)		115 %	50-150		"	"	"	"	

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Project: Chevron #9-4511
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Reported:
11/30/99 13:30

Conventional Chemistry Parameters by APHA/EPA Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BT-2 (B9K0516-01) Water Sampled: 11/29/99 16:00 Received: 11/29/99 16:53									
Fats, Oil & Grease (total)	1.89	1.00	mg/l	1	9K29024	11/29/99	11/30/99	EPA	
Fats, Oil & Grease (non-polar)	1.21	1.00	"	"	"	"	"	418.1/413.2	
Fats, Oil & Grease (polar)	ND	1.00	"	"	"	"	"	"	
Settleable Solids	ND	0.10	ml/l	"	9K29034	11/29/99	11/29/99	EPA 160.5	

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Project: Chevron #9-4511
Project Number: M 098-342
Project Manager: Matt Miller

Reported:
11/30/99 13:30

BTEX by EPA Method 8021B - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 9K29002: Prepared 11/29/99 Using EPA 5030B (P/T)

Blank (9K29002-BLK1)

Benzene	ND	0.500	ug/l							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	1.00	"							
Surrogate: 4-BFB (PID)	43.4		"	48.0		90.4	50-150			

LCS (9K29002-BS2)

Benzene	9.75	0.500	ug/l	10.0		97.5	70-130			
Toluene	10.1	0.500	"	10.0		101	70-130			
Ethylbenzene	10.0	0.500	"	10.0		100	70-130			
Xylenes (total)	29.5	1.00	"	30.0		98.3	70-130			
Surrogate: 4-BFB (PID)	48.2		"	48.0		100	50-150			

Matrix Spike (9K29002-MS1)

Source: B9K0498-14

Benzene	9.95	0.500	ug/l	10.0	0.397	95.5	70-130			
Toluene	12.1	0.500	"	10.0	2.80	93.0	70-130			
Ethylbenzene	10.2	0.500	"	10.0	ND	102	70-130			
Xylenes (total)	30.2	1.00	"	30.0	1.48	95.7	70-130			
Surrogate: 4-BFB (PID)	49.7		"	48.0		104	50-150			

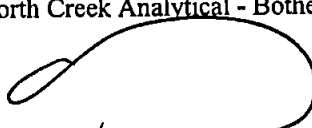
Matrix Spike Dup (9K29002-MSD1)

Source: B9K0498-14

Benzene	10.4	0.500	ug/l	10.0	0.397	100	70-130	4.42	15	
Toluene	12.5	0.500	"	10.0	2.80	97.0	70-130	3.25	15	
Ethylbenzene	10.6	0.500	"	10.0	ND	106	70-130	3.85	15	
Xylenes (total)	31.2	1.00	"	30.0	1.48	99.1	70-130	3.26	15	
Surrogate: 4-BFB (PID)	48.7		"	48.0		101	50-150			

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Delta Environmental
1200 112th NE Ave. NE C146
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Project: Chevron #9-4511
Project Number: M 098-342
Project Manager: Matt Miller

Reported:
11/30/99 13:30

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 9K29024: Prepared 11/29/99 Using EPA 3510C/600 Series

Blank (9K29024-BLK1)

Fats, Oil & Grease (total)	ND	1.00	mg/l							
Fats, Oil & Grease (non-polar)	ND	1.00	"							
Fats, Oil & Grease (polar)	ND	1.00	"							

LCS (9K29024-BS1)

Fats, Oil & Grease (total)	2.84	1.00	mg/l	2.36		120	65.8-123			
Fats, Oil & Grease (non-polar)	2.63	1.00	"	2.36		111	65.8-123			

LCS Dup (9K29024-BSD1)

Fats, Oil & Grease (total)	2.84	1.00	mg/l	2.36		120	65.8-123	0	60	
Fats, Oil & Grease (non-polar)	2.63	1.00	"	2.36		111	65.8-123	0	60	

Batch 9K29034: Prepared 11/29/99 Using General Preparation

Blank (9K29034-BLK1)

Settleable Solids	ND	0.10	ml/l							
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Blank (9K29034-BLK2)

Settleable Solids	ND	0.10	ml/l							
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Reported:
11/30/99 13:30

Notes and Definitions

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

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