

UST site # 5726



GETTLER-RYAN INC.

March 19, 1999

Job #386657

RECEIVED

APR 15 1999

DEPT OF ECOLOGY

Mr. Garrick Jauregui
Chevron Products Company
P.O. Box 6004
San Ramon, CA 94583

Re: Semi-Annual Quarter 1999 Groundwater Monitoring & Sampling Report
Former Chevron Service Station No. 9-7502
124 Ferry Street
Sedro Woolley, Washington

Dear Mr. Jauregui:

This report documents the semi-annual groundwater monitoring and sampling event performed by Gettler-Ryan Inc. (G-R). On January 19, 1999, field personnel were on-site to monitor five wells (MW-5 through MW-9) and sample three wells (MW-6, MW-7 and MW-8) at the above referenced site. A Site Vicinity Map is included as Figure 1.

Static groundwater levels were measured and the wells were checked for the presence of separate-phase hydrocarbons. Separate-phase hydrocarbons were not present in the wells. Static water level data and groundwater elevations are presented in Table 1. A Potentiometric Map is included as Figure 2. Purge water was treated by filtering the water through granular activated carbon and was subsequently discharged.

Groundwater samples were collected from the monitoring wells as specified by G-R Standard Operating Procedure - Groundwater Sampling (attached). The field data sheets for this event are attached. The samples were analyzed by North Creek Analytical. Analytical results are presented in Table 1 and a Concentration Map is included as Figure 3. The chain of custody document and laboratory analytical reports are attached.

Thank you for allowing Gettler-Ryan Inc. to provide environmental services to Chevron. Please call if you have any questions or comments regarding this report.

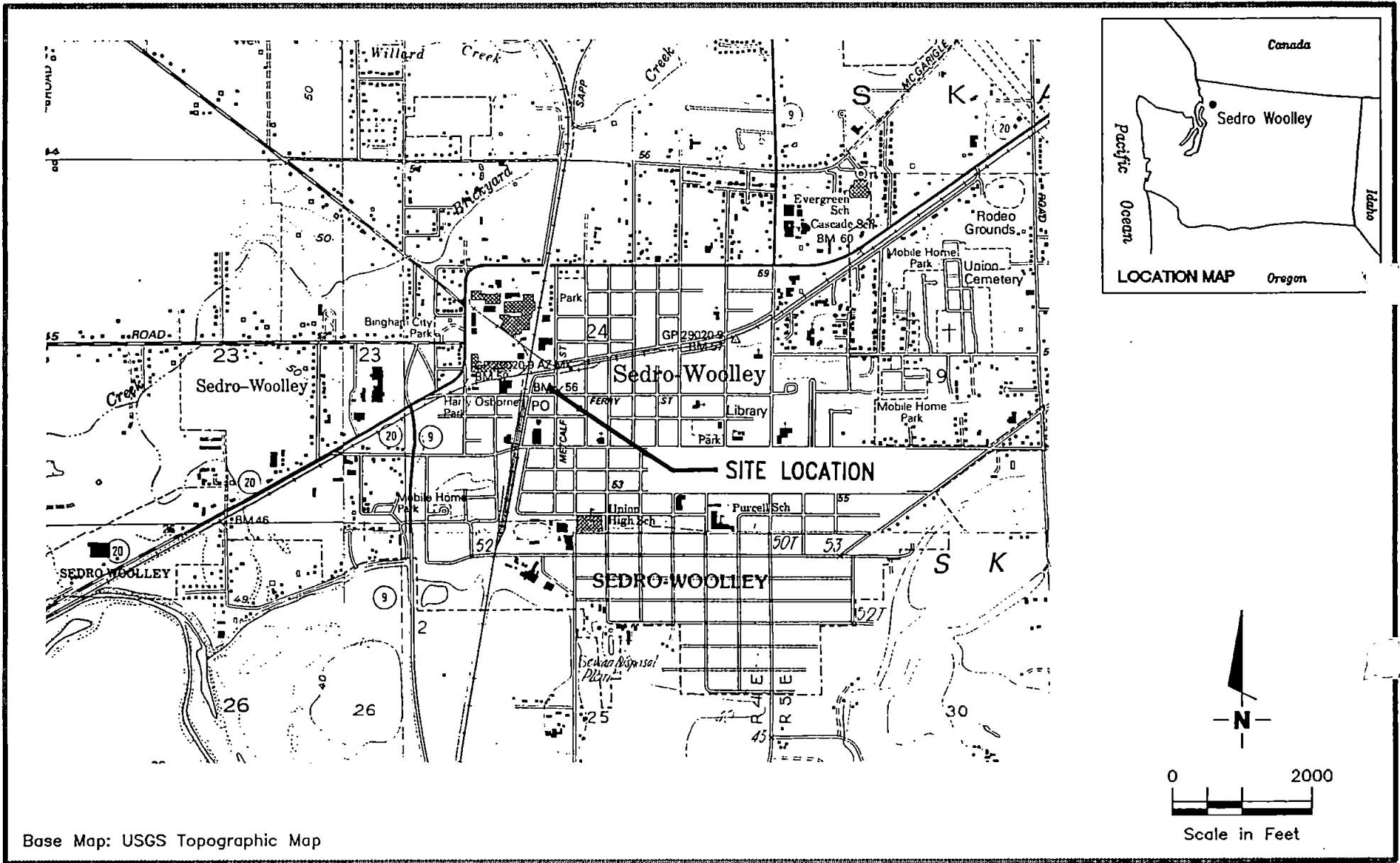
Sincerely,

Deanna L. Harding
Project Coordinator

Stephen J. Carter
Senior Geologist

- Figure 1: Site Vicinity Map
- Figure 2: Potentiometric Map
- Figure 3: Concentration Map
- Table 1: Groundwater Monitoring Data and Analytical Results
- Attachments: Standard Operating Procedure - Groundwater Sampling
Field Data Sheets
Chain of Custody Document and Laboratory Analytical Reports

cc: Mr. Ben Forson, Washington Dept. Of Ecology, Northwest Region, 3190 160th Avenue SE, Bellevue, WA 98008-5452
Mr. and Mrs. Fredlund, Property Owners,
City of Sedro Woolley, City Clerk,



Base Map: USGS Topographic Map



Gettler - Ryan Inc.

6747 Sierra Ct., Suite J (925) 551-7555
Dublin, CA 94568

VICINITY MAP

Former Chevron Service Station No. 9-7502
124 Ferry Street
Sedro Woolley, Washington

FIGURE

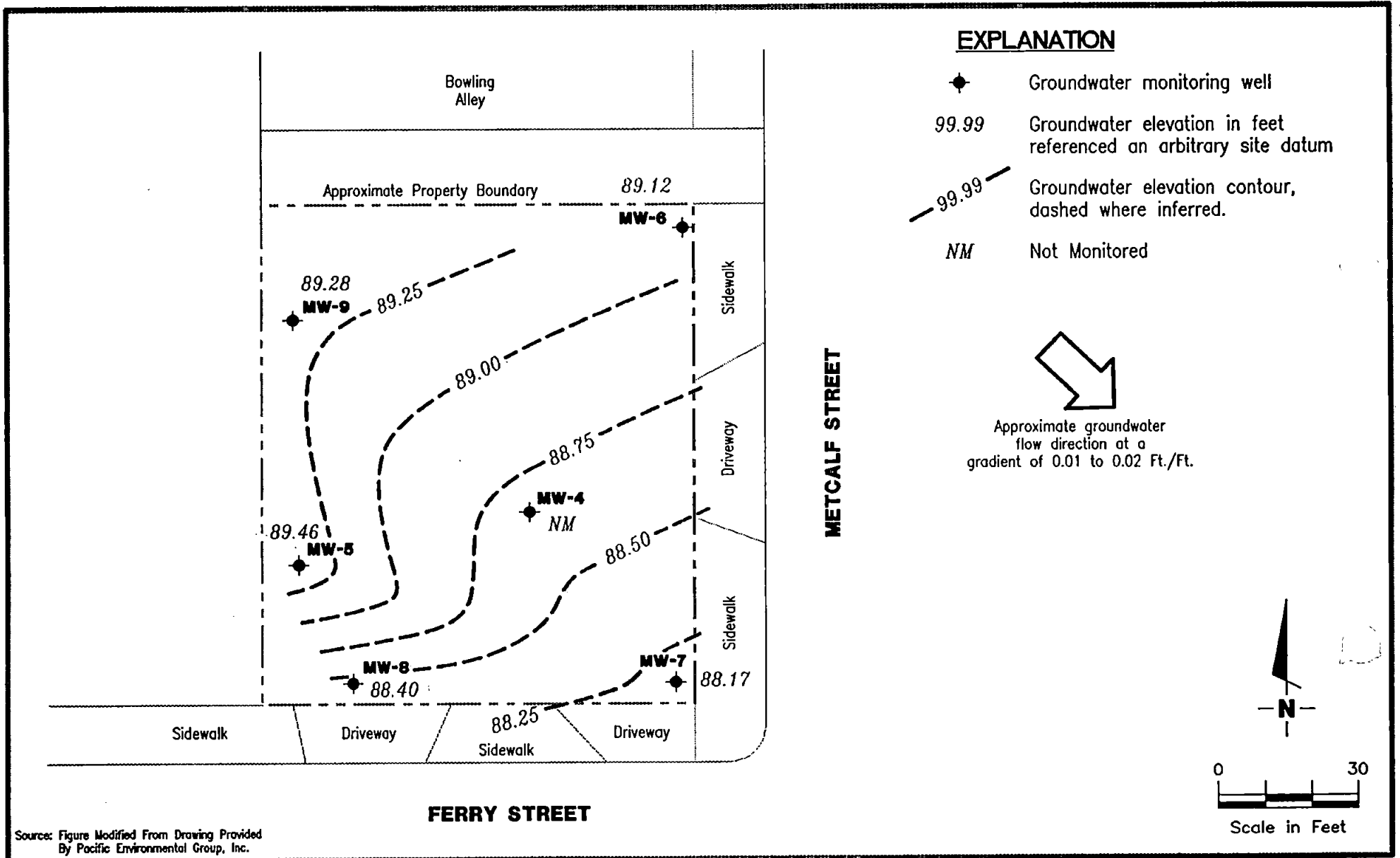
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DATE
January, 1999

REVISED DATE



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POTENTIOMETRIC MAP
 Former Chevron Service Station No. 9-7502
 124 Ferry Street
 Sedro Woolley, Washington

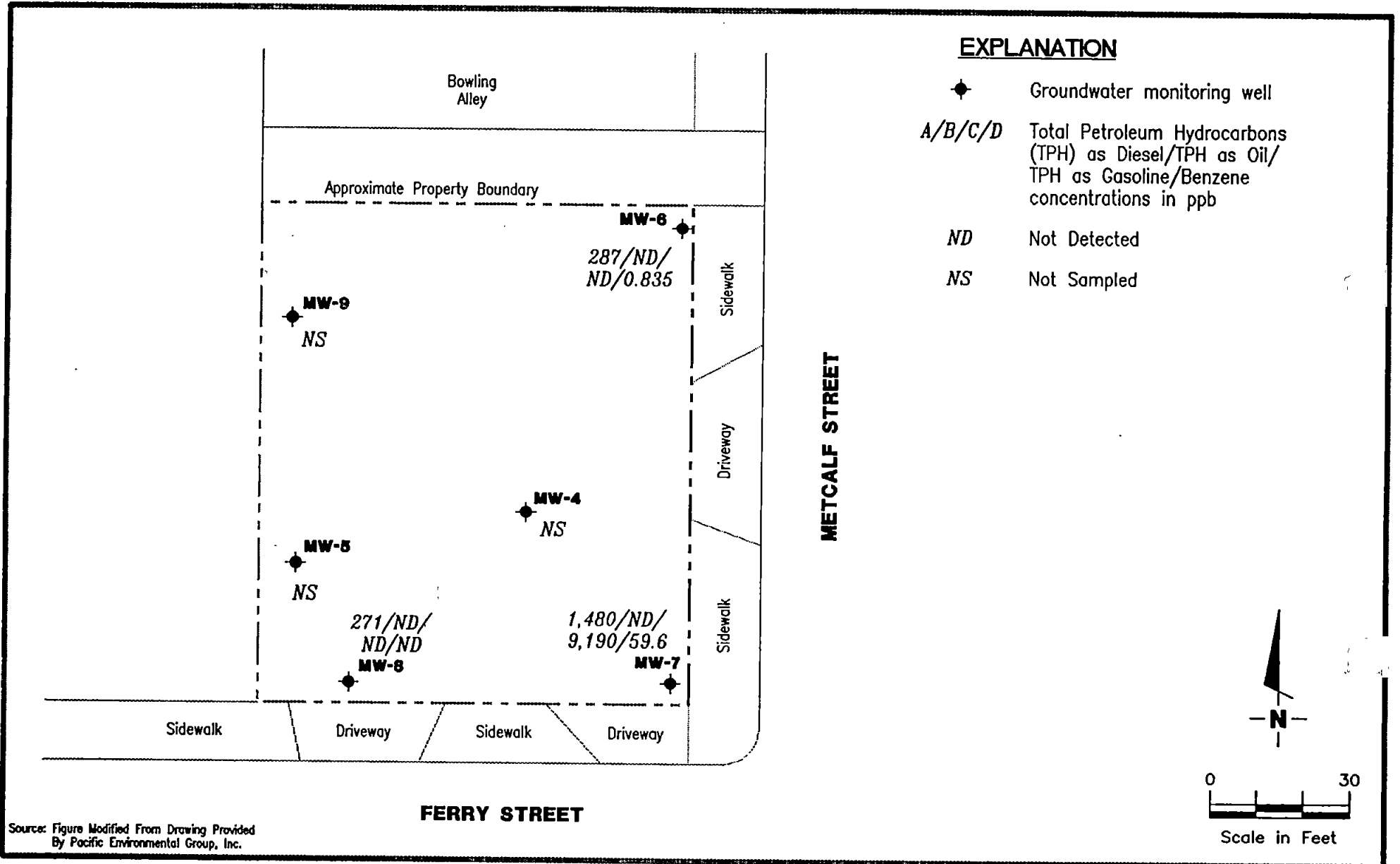
FIGURE
2

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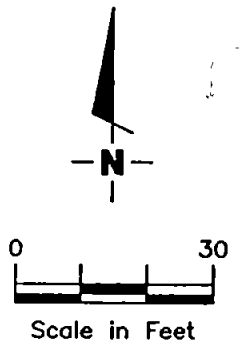
REVIEWED BY

DATE
 January 19, 1999

REVISED DATE



Source: Figure Modified From Drawing Provided
By Pacific Environmental Group, Inc.



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6747 Sierrro Ct., Suite J (925) 551-7555
Dublin, CA 94568

CONCENTRATION MAP
Former Chevron Service Station No. 9-7502
124 Ferry Street
Sedro Woolley, Washington

FIGURE
3

Table 1
Groundwater Monitoring Data and Analytical Results
Former Chevron Service Station No. 9-7502
124 Ferry Street
Sedro Woolley, Washington

WELL ID/ TOC*	DATE	DTW (ft.)	GWE (ft.)	SPHT (ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)
MW-4 98.17	01/29/92	--	--	--	ND	ND	14,000	4,400	340	2,000	1,600
	09/25/92	--	--	--	5,060	ND	25,000	2,800	830	4,600	4,000
	02/24/93	10.42	87.75	--	3,460	ND	7,970	352	2.0	418	1,360
	05/17/93	10.20	87.97	--	2,630	ND	9,180	314	281	981	1,610
	08/02/93	10.44	87.73	--	1,390	ND	--	--	--	--	--
	08/24/93	--	--	--	--	--	14,900	152	614	499	2,880
	11/03/93	11.67	86.50	--	1,092	ND	16,100	114	605	79	1,980
	02/15/94	11.54	86.63	--	1,070	ND	16,300	203	552	210	1,810
	05/20/94	11.00	87.17	--	1,230	ND	11,400	92.2	357	20	612
	08/23/94	11.84	86.33	--	830	ND	12,400	67.1	489	77	1,740
	11/16/94	--	--	--	--	--	--	--	--	--	--
	02/10/95 ¹	11.23	86.94	--	1,700	ND	11,000	95	160	310	890
	05/12/95 ¹	10.80	87.37	--	1,600	ND	12,000	55	34	380	890
	08/11/95 ¹	11.40	86.77	--	1,000	ND	11,000	27	33	340	980
	11/02/95 ¹	11.73	86.44	--	1,400	940	12,000	24	24	220	430
	01/31/96	9.62	88.55	--	900	ND	6,200	17	6.4	250	410
	05/09/96	9.88	88.29	--	253	ND	97.7	1.7	0.975	7.01	78.0
	02/03/97	8.83	89.34	--	ND	ND	ND	ND	ND	2.10	1.98
	08/05/97	10.10	88.07	--	ND	ND	172	0.876	0.635	7.36	17.3
	02/11/98	9.97	88.20	--	ND	ND	ND	1.15	0.975	0.997	2.66
08/27/98	--	--	--	--	--	--	--	--	--	--	--
MW-5 97.77	01/29/92	--	--	--	2,000	ND	2,000	345	32	213	95
	09/25/92	--	--	--	4,100	ND	2,740	833	80	491	172
	02/24/93	9.35	88.42	--	6,620	ND	509	254	ND	7.0	6.0
	05/17/93	9.21	88.56	--	410	ND	ND	15.5	ND	2.0	2.0
	08/02/93	9.59	88.18	--	ND	ND	--	--	--	--	--
	08/24/93	--	--	--	--	--	260	62.0	8.0	ND	9.0
	11/03/93	11.00	86.77	--	1,800	ND	1,780	243	1.0	38	27
	02/15/94	10.76	87.01	--	1,610	ND	950	914	165	49	148
	05/20/94	10.15	87.62	--	2,200	ND	3,180	599	108	22	129
	08/23/94	10.95	86.82	--	2,160	ND	3,310	701	140	45	207
	11/16/94	11.22	86.55	--	1,620	ND	1,090	258	54	15	135
	02/10/95 ¹	10.36	87.41	--	2,000	310	4,200	560	24	140	180
	05/12/95 ¹	9.86	87.91	--	2,200	ND	1,200	480	13	110	120
	08/11/95 ¹	10.68	87.09	--	1,700	ND	4,400	400	14	140	180

Table 1
Groundwater Monitoring Data and Analytical Results
Former Chevron Service Station No. 9-7502
124 Ferry Street
Sedro Woolley, Washington

WELL ID/ TOC*	DATE	DTW (ft.)	GWE (ft.)	SPHT (ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)
MW-5	11/02/95 ¹	10.89	86.88	--	1,800	ND	4,600	500	16	110	160
(cont)	01/31/96	8.40	89.37	--	--	--	--	--	--	--	--
	05/09/96	8.73	89.04	--	--	--	--	--	--	--	--
	02/03/97	7.20	90.57	--	--	--	--	--	--	--	--
	08/05/97	9.36	88.41	--	--	--	--	--	--	--	--
	02/11/98	--	--	--	--	--	--	--	--	--	--
	08/27/98	10.14	87.63	--	--	--	--	--	--	--	--
	01/19/99	8.31	89.46	0.00	--	--	--	--	--	--	--
MW-6	01/29/92	--	--	--	ND	ND	ND	39	3.0	2.0	8.0
97.40	09/25/92	--	--	--	ND	ND	ND	5.5	ND	ND	ND
	02/24/93	9.33	88.07	--	360	ND	ND	8.6	ND	ND	1.0
	05/17/93	9.03	88.37	--	930	ND	ND	19.0	ND	ND	1.0
	08/02/93	9.99	87.41	--	290	ND	--	--	--	--	--
	08/24/93	--	--	--	--	--	ND	5.0	ND	ND	ND
	11/03/93	10.35	87.05	--	ND	ND	ND	ND	ND	ND	ND
	02/15/94	10.14	87.26	--	ND	ND	ND	ND	ND	ND	ND
	05/20/94	9.79	87.61	--	270	ND	ND	7.7	ND	ND	ND
	08/23/94	10.49	86.91	--	ND	ND	ND	ND	ND	ND	ND
	11/16/94	10.47	86.93	--	440	ND	ND	ND	ND	ND	ND
	02/10/95 ¹	9.84	87.56	--	240	240	ND	ND	ND	ND	ND
	05/12/95 ¹	9.64	87.76	--	270	ND	ND	ND	ND	ND	ND
	08/11/95 ¹	10.13	87.27	--	ND	ND	ND	ND	ND	ND	ND
	11/02/95 ¹	10.27	87.13	--	390	ND	ND	ND	ND	ND	ND
	01/31/96	8.48	88.92	--	270	ND	59	ND	ND	ND	ND
	05/09/96	8.78	88.62	--	494	ND	ND	0.587	ND	ND	ND
	02/03/97	7.75	89.65	--	280	1,100	ND	ND	ND	ND	ND
	08/05/97	9.00	88.40	--	ND	ND	54.6	ND	ND	ND	ND
	02/11/98	9.48	87.92	--	269	ND	ND	0.917	ND	ND	ND
	08/27/98 ²	9.81	87.59	--	ND	ND	ND	ND	ND	ND	ND
	01/19/99	8.28	89.12	0.00	287	ND	ND	0.835	ND	ND	ND

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Groundwater Monitoring Data and Analytical Results
Former Chevron Service Station No. 9-7502
124 Ferry Street
Sedro Woolley, Washington

WELL ID/ TOC*	DATE	DTW (ft.)	GWE (ft.)	SPHT (ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)
MW-7 97.61	01/29/92	--	--	--	ND	ND	30,000	3,400	870	2,900	4,500
	09/25/92	--	--	--	ND	ND	2,770	863	81	509	168
	02/24/93	9.99	87.62 ⁷	0.15	--	--	--	--	--	--	--
	05/17/93	9.90	87.71 ⁷	0.15	--	--	--	--	--	--	--
	08/02/93	9.99	87.62	--	13,800	ND	--	--	--	--	--
	08/24/93	--	--	--	--	--	88,000	1,100	620	2,200	13,000
	11/03/93	11.01	86.60	--	59,000	ND	100,000	2,500	898	6,300	6,470
	02/15/94	10.85	86.76	--	1,340	ND	31,000	1,210	751	2,910	3,960
	05/20/94	10.34	87.27	--	4,950	ND	47,000	1,200	700	2,000	4,200
	08/23/94	11.13	86.48	--	11,200	800	25,400	1,070	844	2,200	4,130
	11/16/94	11.70	85.91	--	52,700	3,150	56,000	380	917	2,500	8,100
	02/10/95 ³	10.62	86.99	--	69,000	ND	93,000	1,200	3,700	1,300	8,100
	05/12/95 ⁴	10.14	87.47	Sheen	19,000	2,800	37,000	1,300	2,800	1,100	6,400
	08/11/95 ⁵	10.79	86.82	Sheen	1,600	ND	61,000	440	2,000	1,300	6,100
	11/02/95 ⁶	11.12	86.49	Sheen	57,000	ND	94,000	360	1,300	1,000	5,500
	01/31/96	9.20	88.41	--	3,700	ND	27,000	250	1,100	650	3,800
	05/09/96	9.40	88.21	Sheen	11,600	ND	163,000	638	2,390	1,850	10,600
	02/03/97	8.85	88.76	--	961	ND	10,600	11.1	10.6	32.3	185
	08/05/97	9.56	88.05	Sheen	--	--	--	--	--	--	--
	02/11/98	9.52	88.09	Sheen	--	--	--	--	--	--	--
08/27/98 ²	10.30	87.31 ⁷	0.01	2,600	ND	62,000	1,600	7,440	1,340	9,210	
01/19/99	9.44	88.17	0.00	1,480	ND	9,190	59.6	2,070	251	935	
MW-8 97.52 (D)	01/29/92	--	--	--	2,000	ND	37,000	4,600	320	8,900	1,600
	09/25/92	--	--	--	5,350	ND	24,000	6,100	378	8,000	1,600
	09/25/92	--	--	--	--	--	25,000	6,400	376	8,200	1,700
	02/24/93	9.90	87.62	--	590	ND	28,000	520	200	8,300	950
	05/17/93	9.63	87.89	--	540	ND	34,000	2,000	180	11,000	770
	08/02/93	10.19	87.33	--	970	ND	--	--	--	--	--
	08/24/93	--	--	--	--	--	68,000	1,050	220	16,000	1,660
	11/03/93	11.28	86.24	--	1,340	ND	2,100	18.9	ND	ND	200
	02/15/94	11.15	86.37	--	1,630	ND	2,860	942	140	377	286
	05/20/94	10.56	86.96	--	910	ND	14,000	740	130	3,600	410
	08/23/94	11.41	86.11	--	1,830	ND	7,990	2,060	298	1,160	1,160
	11/16/94	11.70	85.82	--	2,160	ND	17,600	1,130	207	2,700	892
	02/10/95 ⁸	10.87	86.65	--	1,600	500	10,000	1,100	1,300	180	820

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Former Chevron Service Station No. 9-7502
124 Ferry Street
Sedro Woolley, Washington

WELL ID/ TOC*	DATE	DTW (ft.)	GWE (ft.)	SPHT (ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)
MW-8	05/12/95 ¹	10.37	87.15	--	870	ND	19,000	1,200	5,700	240	1,000
(cont)	08/11/95 ¹	10.98	86.54	--	990	ND	9,000	470	860	320	1,300
	11/02/95 ¹	11.35	86.17	--	1,700	1,100	11,000	820	710	300	1,200
	01/31/96	9.03	88.49	--	510	ND	15,000	370	4,600	170	710
	05/09/96	9.37	88.15	--	300	ND	17,000	421	6,200	198	807
	02/03/97	8.27	89.25	--	360	ND	11,600	258	3,750	225	910
	08/05/97	9.46	88.06	--	ND	ND	9,160	ND	1,810	167	615
	02/11/98	9.97	87.55	--	ND	ND	6,310	476	680	158	585
	08/27/98 ²	10.50	87.02	--	ND	ND	2,810	ND	425	113	448
	01/19/99	9.12	88.40	0.00	271	ND	ND ¹⁰	ND ¹⁰	249	27.4	96.1
MW-9	01/29/92	--	--	--	1,000	ND	ND	1.0	1.0	ND	4.0
98.15	09/25/92	--	--	--	1,970	ND	370	1.2	ND	1.0	2.0
	02/24/93	10.07	88.08	--	2,340	ND	439	27	ND	ND	1.0
	05/17/93	9.75	88.40	--	770	ND	330	5.9	1.0	ND	2.0
	08/02/93	10.20	87.95	--	1,560	ND	--	--	--	--	--
	08/24/93	--	--	--	--	--	5,590	4.0	14	12	409
	11/03/93	11.43	86.72	--	990	ND	1,070	1.9	1.0	ND	2.0
	02/15/94	11.27	86.88	--	750	ND	853	2.1	ND	ND	2.0
	05/20/94	10.75	87.40	--	1,610	ND	740	0.6	ND	ND	ND
	08/23/94	11.69	86.46	--	1,220	ND	640	0.7	ND	ND	ND
	11/16/94	10.88	87.27	--	300	ND	ND	ND	ND	ND	ND
	02/10/95 ¹	10.94	87.21	--	890	400	950	ND	ND	1.5	6.0
	05/12/95 ¹	10.49	87.66	--	740	ND	910	ND	ND	ND	ND
	08/11/95 ¹	11.14	87.01	--	1,800	ND	1,200	0.63	ND	ND	1.2
	11/02/95 ⁹	11.49	86.66	--	980	ND	990	0.68	ND	ND	ND
	01/31/96	8.98	89.17	--	710	ND	740	2.6	ND	ND	ND
	05/09/96	9.31	88.84	--	477	ND	128	ND	0.740	ND	ND
	02/03/97	7.70	90.45	--	355	ND	190	ND	ND	ND	ND
	08/05/97	9.85	88.30	--	447	ND	236	ND	ND	ND	ND
	02/11/98	--	--	--	--	--	--	--	--	--	--
	08/27/98	10.72	87.43	--	--	--	--	--	--	--	--
	01/19/99	8.87	89.28	0.00	--	--	--	--	--	--	--

Table 1
Groundwater Monitoring Data and Analytical Results
Former Chevron Service Station No. 9-7502
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Sedro Woolley, Washington

WELL ID/ TOC*	DATE	DTW (ft.)	GWE (ft.)	SPHT (ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)
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Trip Blank

TB-LB	08/27/98	--	--	--	--	--	ND	ND	ND	ND	ND
	01/19/99	--	--	--	--	--	ND	ND	ND	ND	ND

	TPH-D	TPH-O	TPH-G	B	T	E	X
Current Laboratory Reporting Limits:	250	750	50.0	0.500	0.500	0.500	1.00
MITCA Method A Cleanup Levels:	1,000	1,000	1,000	5.0	40	30	20
Current Method:	WTPH-D + Extended		WTPH-G and BTEX by EPA 8021B				

Table 1
Explanations
Former Chevron Service Station No. 9-7502
124 Ferry Street
Sedro Woolley, Washington

Groundwater monitoring data and laboratory analytical results prior to January 19, 1999, were compiled from reports prepared by PEG, Inc.

TOC = Top of Casing elevation

DTW = Depth to Water

(ft.) = Feet

GWE = Groundwater Elevation

SPHT = Separate Phase Hydrocarbon Thickness

TPH-O = Total Petroleum Hydrocarbons as Oil (Heavy Range Oil Hydrocarbons)

TPH-D = Total Petroleum Hydrocarbons as Diesel (Diesel Range Hydrocarbons)

TPH-G = Total Petroleum Hydrocarbons as Gasoline (Gasoline Range Hydrocarbons)

B = Benzene

T = Toluene

E = Ethylbenzene

X = Xylenes

ppb = Parts per billion

ND = Not Detected

-- = Not Measured/Not Analyzed

(D) = Duplicate

MTCA = Model Toxics Control Act Cleanup Regulations
[WAC 173-340-720(2)(a)(I), as amended 12/93].

* TOC elevations

- ¹ Total Lead by EPA Method 7421 was ND.
- ² Methyl tertiary butyl ether (MTBE) was ND.
- ³ Total Lead by EPA Method 7421 was 24 ppb.
- ⁴ Total Lead by EPA Method 7421 was 8.2 ppb.
- ⁵ Total Lead by EPA Method 7421 was 5.8 ppb.
- ⁶ Total Lead by EPA Method 7421 was 5.5 ppb.
- ⁷ GWE was not corrected for the presence of free product.
- ⁸ Total Lead by EPA Method 7421 was 17 ppb.
- ⁹ Total Lead by EPA Method 7421 was 3.5 ppb.
- ¹⁰ Detection limit raised. Refer to analytical results.

STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

Gettler-Ryan Inc. field personnel adhere to the following procedures for the collection and handling of groundwater samples prior to analysis by the analytical laboratory. Prior to sample collection, the type of analysis to be performed is determined. Loss prevention of volatile compounds is controlled and sample preservation for subsequent analysis is maintained.

Prior to sampling, the presence or absence of free-phase hydrocarbons is determined using a MMC flexi-dip interface probe. Product thickness, if present, is measured to the nearest 0.01 foot and is noted in the field notes. In addition, static water level measurements are collected with the interface probe and are also recorded in the field notes.

After water levels are collected and prior to sampling, each well is purged a minimum of three well casing volumes of water using pre-cleaned pumps (stack, suction, Grundfos), or polyvinyl chloride bailers. Temperature, pH and electrical conductivity are measured a minimum of three times during the purging. Purging continues until these parameters stabilize. Purge water is treated by filtering the water through granular activated carbon and is subsequently discharged to the ground surface at the site.

Groundwater samples are collected using disposable bailers. The water samples are transferred from the bailer into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used when possible. When pre-preserved containers are not available, the laboratory is instructed to preserve the sample as appropriate. Duplicate samples are collected for the laboratory to use in maintaining quality assurance/quality control standards. The samples are labeled to include the job number, sample identification, collection date and time, analysis, preservation (if any), and the sample collector's initials. The water samples are placed in a cooler, maintained at 4°C for transport to the laboratory. Once collected in the field, all samples are maintained under chain of custody until delivered to the laboratory.

The chain of custody document includes the job number, type of preservation, if any, analysis requested, sample identification, date and time collected, and the sample collector's name. The chain of custody is signed and dated (including time of transfer) by each person who receives or surrenders the samples, beginning with the field personnel and ending with the laboratory personnel.

A laboratory supplied trip blank accompanies each sampling set. For sampling sets greater than 20 samples, 5% trip blanks are included. The trip blank is analyzed for some or all of the same compounds as the groundwater samples.

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/
Facility # Chevron # 9-2002
Address: 124 Ferry Rd
City: Sevco. Woolley WA

Job#: 386607
Date: 1-19-99
Sampler: ERK

Well ID MW-5
Well Diameter 2" in.
Total Depth 1612 ft.
Depth to Water 8.31 ft.

Well Condition: okay

Hydrocarbon Thickness: 0 in. Amount Bailed 0 (gal)

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

0.17 X VF = 0.17 X 3 (case volume) = Estimated Purge Volume: _____ (gal)

Purge Equipment: Disposable Bailer
Bailer
Stack
Suction
Grundfos
Other: _____

Sampling Equipment: Disposable Bailer
Bailer
Pressure Bailer
Grab Sample
Other: _____

Starting Time: _____
Sampling Time: _____
Purging Flow Rate: _____ gpm.
Did well de-water? No

Weather Conditions: cloudy cool Rainy
Water Color: _____ Odor: _____
Sediment Description: _____
If yes; Time: _____ Volume: _____ (gal)

Time	Volume (gal)	pH	Conductivity μ mhos/cm	Temperature $^{\circ}$ F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>Water level only</u>							

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-</u>	<u>2x VOA</u>	<u>Y</u>	<u>HCL</u>	<u>SEVCOA NCA</u>	<u>TH Gas BP</u>
	<u>1x H₂O</u>	<u>Y</u>	<u>None</u>	<u>NCA</u>	<u>TH Desol 467</u>

COMMENTS: MONITOR ONLY

****WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/
Facility # Chevron # 9-2002

Job#: 386607

Address: 124 Ferry Rd

Date: 1-19-99

City: Seavo. Woolley WA

Sampler: EMC

Well ID MW-6

Well Condition: okay

Well Diameter 2'' in.

Hydrocarbon Thickness: 0 in. Amount Bailed (product/water): 0 (gal.)

Total Depth 201 ft.

Volume	2" = 0.17	3" = 0.38	4" = 0.66
Factor (VF)	6" = 1.50	12" = 5.80	

Depth to Water 8.28 ft.

11.82 X VF 0.17 = 2 X 3 (case volume) = Estimated Purge Volume: 6 (gal.)

Purge Equipment: Disposable Bailer
Bailer
Stack
Suction
Grundfos
Other: _____

Sampling Equipment: Disposable Bailer
Bailer
Pressure Bailer
Grab Sample
Other: _____

Starting Time: 1126

Weather Conditions: cloudy cool Rainy

Sampling Time: 1138

Water Color: Reddish Odor: None

Purging Flow Rate: N/A gpm.

Sediment Description: None

Did well de-water? NO

If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity μ hos/cm	Temperature $^{\circ}$ C	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>1130</u>	<u>2</u>	<u>5.87</u>	<u>149</u>	<u>12.1</u>			
<u>1134</u>	<u>4</u>	<u>5.82</u>	<u>192</u>	<u>12.7</u>			
<u>1138</u>	<u>6</u>	<u>5.91</u>	<u>200</u>	<u>12.6</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-6</u>	<u>2x VOA</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA NCA</u>	<u>TH Gas BTX</u>
	<u>1x filter</u>	<u>Y</u>	<u>None</u>	<u>NCA</u>	<u>TH Diesel ext</u>

COMMENTS: _____

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/
Facility # Chevron # 9-2002

Job#: 386657

Address: 124 Ferry Rd

Date: 1-19-99

City: Seavo Woolley WA

Sampler: EM

Well ID MW-7

Well Condition: okay

Well Diameter 2' in.

Hydrocarbon Thickness: Ø in. Amount Bailed (product/water): Ø (gal.)

Total Depth 19.81 ft.

Depth to Water 9.94 ft.

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

10.67 X VF 0.17 = 1.8 X 3 (case volume) = Estimated Purge Volume: 5.4 (gal.)

Purge Equipment: Disposable Bailer
Bailer
Stack
Suction
Grundfos
Other: _____

Sampling Equipment: Disposable Bailer
Bailer
Pressure Bailer
Grab Sample
Other: _____

Starting Time: 1153

Weather Conditions: cloudy cool RAINY

Sampling Time: 1203

Water Color: grey Odor: Mild

Purging Flow Rate: N/A gpm.

Sediment Description: Baravia

Did well de-water? NO

If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity μ mhos/cm	Temperature $^{\circ}$ F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>1156</u>	<u>2</u>	<u>6.26</u>	<u>753</u>	<u>12.2</u>			
<u>1159</u>	<u>4</u>	<u>6.50</u>	<u>655</u>	<u>12.8</u>			
<u>1200</u>	<u>6</u>	<u>6.28</u>	<u>652</u>	<u>12.7</u>			
_____	_____	_____	_____	_____	_____	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-7</u>	<u>2x VOA</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA NCA</u>	<u>TPH Gas BTPE</u>
	<u>1x filter</u>	<u>Y</u>	<u>None</u>	<u>NCA</u>	<u>TPH Desol ext</u>

COMMENTS: _____

(4)

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/Facility # Chevron # 9-2002
 Address: 124 Ferry Rd
 City: Seavo. Woolley WA

Job#: 386657
 Date: 1-19-99
 Sampler: EM

Well ID MW-8
 Well Diameter 2" in.
 Total Depth 17.62 ft.
 Depth to Water 9.12 ft.
8.50

Well Condition: okay

Hydrocarbon Thickness: <u>0</u> in.	Amount Bailed (product/water): <u>0</u> (gal.)
Volume Factor (VF)	
2" = 0.17	3" = 0.38
6" = 1.50	12" = 5.90

X VF 0.17 = 1.4 X 3 (case volume) = Estimated Purge Volume: 4.3 (gal.)

Purge Equipment: Disposable Bailer
 Bailer
 Stack
 Suction
 Grundfos
 Other: _____

Sampling Equipment: Disposable Bailer
 Bailer
 Pressure Bailer
 Grab Sample
 Other: _____

Starting Time: 1141
 Sampling Time: 1150
 Purging Flow Rate: _____ gpm.
 Did well de-water? NO

Weather Conditions: cloudy cool Rainy
 Water Color: Grey Odor: None
 Sediment Description: slity
 If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity μ hos/cm	Temperature $^{\circ}$ C	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>1144</u>	<u>1.5</u>	<u>5.96</u>	<u>436</u>	<u>12.0</u>	_____	_____	_____
<u>1148</u>	<u>3.0</u>	<u>6.08</u>	<u>458</u>	<u>12.1</u>	_____	_____	_____
<u>1150</u>	<u>4.5</u>	<u>6.10</u>	<u>459</u>	<u>12.0</u>	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-8</u>	<u>2x VOA</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA NCA</u>	<u>THGus BTPE</u>
	<u>1x filter</u>	<u>Y</u>	<u>None</u>	<u>NCA</u>	<u>THA Desol exp</u>
_____	_____	_____	_____	_____	_____

COMMENTS: _____

47

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/
Facility # Chevron # 9-2002
Address: 124 Ferry Rd
City: Sevco Woolley WA

Job#: 386657
Date: 1-19-99
Sampler: EM

Well ID MW-9
Well Diameter 2" in.
Total Depth 14.9 ft.
Depth to Water 8.87 ft.

Well Condition: okay
Hydrocarbon Thickness: 0 in. Amount Bailed (product/water): 0 (gal.)

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

0.17 X VF = 0.17 X 3 (case volume) = Estimated Purge Volume: _____ (gal.)

Purge Equipment: Disposable Bailer
Bailer
Stack
Suction
Grundfos
Other: _____

Sampling Equipment: Disposable Bailer
Bailer
Pressure Bailer
Grab Sample
Other: _____

Starting Time: _____
Sampling Time: _____
Purging Flow Rate: _____ gpm.
Did well de-water? NO

Weather Conditions: cloudy cool RAINY
Water Color: _____ Odor: _____
Sediment Description: _____
If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity μ mhos/cm	Temperature $^{\circ}$ C	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>Water level only</u>							

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-</u>	<u>2x VOA</u>	<u>Y</u>	<u>HEC</u>	<u>SEVCOA NCA</u>	<u>THA Dosec 0107</u>
	<u>1x H₂O</u>	<u>Y</u>	<u>None</u>	<u>NCA</u>	<u>THA Dosec 0107</u>

COMMENTS: MONITOR ONLY



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Gettler-Ryan Inc. - Dublin 6747 Sierra Court Suite G Dublin, Ca 94568	Project: Chevron Facility #9-7502 Project Number: 386657 Project Manager: Deanna Harding	Sampled: 1/19/99 Received: 1/19/99 Reported: 1/26/99 15:08
-----------------------------------------------------------------------------	------------------------------------------------------------------------------------------------	------------------------------------------------------------------


ANALYTICAL REPORT FOR SAMPLES:

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
TB-LB	B901289-01	Water	1/19/99
MW-6	B901289-02	Water	1/19/99
MW-8	B901289-03	Water	1/19/99
MW-7	B901289-04	Water	1/19/99

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document.

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Steve Davis, Project Manager

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Gettler-Ryan Inc. - Dublin 6747 Sierra Court Suite G Dublin, Ca 94568	Project: Chevron Facility #9-7502 Project Number: 386657 Project Manager: Deanna Harding	Sampled: 1/19/99 Received: 1/19/99 Reported: 1/26/99 15:08
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**Gasoline Hydrocarbons (Toluene to Dodecane) and BTEX by WTPH-G and EPA 8021B
 North Creek Analytical - Bothell**

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
				B901289-01				
TB-LB							Water	
Gasoline Range Hydrocarbons	0190456	1/20/99	1/20/99		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		83.5	%	
Surrogate: 4-BFB (PID)	"	"	"	50.0-150		93.1	"	
				B901289-02				
MW-6							Water	
Gasoline Range Hydrocarbons	0190456	1/20/99	1/20/99		50.0	ND	ug/l	
Benzene	"	"	"		0.500	0.835	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		1.00	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	50.0-150		89.0	%	
Surrogate: 4-BFB (PID)	"	"	"	50.0-150		96.3	"	
				B901289-03				
MW-8							Water	
Gasoline Range Hydrocarbons	0190456	1/20/99	1/21/99		2500	ND	ug/l	
Benzene	"	"	"		25.0	ND	"	
Toluene	"	"	"		25.0	249	"	
Ethylbenzene	"	"	"		25.0	27.4	"	
Xylenes (total)	"	"	"		50.0	96.1	"	
Surrogate: 4-BFB (FID)	"	"	"	50.0-150		90.6	%	
Surrogate: 4-BFB (PID)	"	"	"	50.0-150		98.8	"	
				B901289-04				
MW-7							Water	
Gasoline Range Hydrocarbons	0190456	1/20/99	1/20/99		5000	9190	ug/l	
Benzene	"	"	"		50.0	59.6	"	
Toluene	"	"	"		50.0	2070	"	
Ethylbenzene	"	"	"		50.0	251	"	
Xylenes (total)	"	"	"		100	935	"	
Surrogate: 4-BFB (FID)	"	"	"	50.0-150		97.9	%	
Surrogate: 4-BFB (PID)	"	"	"	50.0-150		100	"	

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

Steve Davis, Project Manager

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Page 2 of 6



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Gettler-Ryan Inc. - Dublin 6747 Sierra Court Suite G Dublin, Ca 94568	Project: Chevron Facility #9-7502 Project Number: 386657 Project Manager: Deanna Harding	Sampled: 1/19/99 Received: 1/19/99 Reported: 1/26/99 15:08
-----------------------------------------------------------------------------	------------------------------------------------------------------------------------------------	------------------------------------------------------------------

**Diesel Hydrocarbons (C12-C24) and Heavy Oil (C24-C40) by WTPH-D (extended)
 North Creek Analytical - Bothell**

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
MW-6				B901289-02				Water
Diesel Range Hydrocarbons	0190511	1/22/99	1/25/99		0.250	0.287	mg/l	
Heavy Oil Range Hydrocarbons	"	"	"		0.750	ND	"	
Surrogate: 2-FBP	"	"	"	50.0-150		75.6	%	
MW-8				B901289-03				Water
Diesel Range Hydrocarbons	0190511	1/22/99	1/25/99		0.250	0.271	mg/l	
Heavy Oil Range Hydrocarbons	"	"	"		0.750	ND	"	
Surrogate: 2-FBP	"	"	"	50.0-150		79.8	%	
MW-7				B901289-04				Water
Diesel Range Hydrocarbons	0190511	1/22/99	1/25/99		0.250	1.48	mg/l	
Heavy Oil Range Hydrocarbons	"	"	"		0.750	ND	"	
Surrogate: 2-FBP	"	"	"	50.0-150		89.5	%	

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Gettler-Ryan Inc. - Dublin 6747 Sierra Court Suite G Dublin, Ca 94568	Project: Chevron Facility #9-7502 Project Number: 386657 Project Manager: Deanna Harding	Sampled: 1/19/99 Received: 1/19/99 Reported: 1/26/99 15:08
-----------------------------------------------------------------------------	------------------------------------------------------------------------------------------------	------------------------------------------------------------------

**Gasoline Hydrocarbons (Toluene to Dodecane) and BTEX by WTPH-G and EPA 8021B/Quality Control
 North Creek Analytical - Bothell**

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Reporting Limit Units	Recov. %	RPD Limit	RPD %	Notes*
Batch: 0190456			Date Prepared: 1/20/99		Extraction Method: EPA 5030B (P/T)				
Blank			0190456-BLK1						
Gasoline Range Hydrocarbons	1/20/99			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)	"	48.0		44.5	"	50.0-150	92.7		
Surrogate: 4-BFB (PID)	"	48.0		47.5	"	50.0-150	99.0		
LCS			0190456-BS1						
Gasoline Range Hydrocarbons	1/20/99	500		482	ug/l	70.0-130	96.4		
Surrogate: 4-BFB (FID)	"	48.0		52.6	"	50.0-150	110		
Duplicate			0190456-DUP1 B901287-02						
Gasoline Range Hydrocarbons	1/20/99		ND	ND	ug/l			25.0	
Surrogate: 4-BFB (FID)	"	48.0		44.6	"	50.0-150	92.9		
Duplicate			0190456-DUP2 B901288-04						
Gasoline Range Hydrocarbons	1/20/99		424	425	ug/l			25.0	0.236
Surrogate: 4-BFB (FID)	"	48.0		59.8	"	50.0-150	125		
Matrix Spike			0190456-MS1 B901287-01						
Benzene	1/20/99	10.0	ND	9.53	ug/l	70.0-130	95.3		
Toluene	"	10.0	ND	9.75	"	70.0-130	97.5		
Ethylbenzene	"	10.0	ND	9.70	"	70.0-130	97.0		
Xylenes (total)	"	30.0	ND	28.2	"	70.0-130	94.0		
Surrogate: 4-BFB (PID)	"	48.0		48.6	"	50.0-150	101		
Matrix Spike Dup			0190456-MSD1 B901287-01						
Benzene	1/20/99	10.0	ND	9.62	ug/l	70.0-130	96.2	15.0	0.940
Toluene	"	10.0	ND	9.92	"	70.0-130	99.2	15.0	1.73
Ethylbenzene	"	10.0	ND	9.93	"	70.0-130	99.3	15.0	2.34
Xylenes (total)	"	30.0	ND	29.0	"	70.0-130	96.7	15.0	2.83
Surrogate: 4-BFB (PID)	"	48.0		50.2	"	50.0-150	105		

North Creek Analytical - Bothell

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Gettler-Ryan Inc. - Dublin 6747 Sierra Court Suite G Dublin, Ca 94568	Project: Chevron Facility #9-7502 Project Number: 386657 Project Manager: Deanna Harding	Sampled: 1/19/99 Received: 1/19/99 Reported: 1/26/99 15:08
-----------------------------------------------------------------------------	------------------------------------------------------------------------------------------------	------------------------------------------------------------------

**Diesel Hydrocarbons (C12-C24) and Heavy Oil (C24-C40) by WTPH-D (extended)/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: 0190511	Date Prepared: 1/22/99			Extraction Method: EPA 3520C/600 Series						
Blank	0190511-BLK1									
Diesel Range Hydrocarbons	1/25/99			ND	mg/l	0.250				
Heavy Oil Range Hydrocarbons	"			ND	"	0.750				
Surrogate: 2-FBP	"	0.332		0.254	"	50.0-150	76.5			
LCS	0190511-BS1									
Diesel Range Hydrocarbons	1/25/99	2.00		1.62	mg/l	60.0-140	81.0			
Surrogate: 2-FBP	"	0.332		0.240	"	50.0-150	72.3			
Duplicate	0190511-DUP1		B901287-02							
Diesel Range Hydrocarbons	1/25/99		ND	ND	mg/l			44.0		
Heavy Oil Range Hydrocarbons	"		ND	ND	"			44.0		
Surrogate: 2-FBP	"	0.664		0.517	"	50.0-150	77.9			
Duplicate	0190511-DUP2		B901307-01							
Diesel Range Hydrocarbons	1/25/99		1.14	1.14	mg/l			44.0	0	
Heavy Oil Range Hydrocarbons	"		ND	ND	"			44.0		
Surrogate: 2-FBP	"	0.664		0.559	"	50.0-150	84.2			

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Steve Davis, Project Manager

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Gettler-Ryan Inc. - Dublin 6747 Sierra Court Suite G Dublin, Ca 94568	Project: Chevron Facility #9-7502 Project Number: 386657 Project Manager: Deanna Harding	Sampled: 1/19/99 Received: 1/19/99 Reported: 1/26/99 15:08
-----------------------------------------------------------------------------	------------------------------------------------------------------------------------------------	------------------------------------------------------------------

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
- Recov. Recovery
- RPD Relative Percent Difference

North Creek Analytical - Bothell

Steve Davis, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network



GETTLER-RYAN INC.

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April 13, 1999

G-R #:386657

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1962

TO: Mr. Ben Forson
Washington Department of Ecology
Northwest Region
3190 160th Avenue, SE
Bellevue, Washington 98008-5452

FROM: Deanna L. Harding
Project Coordinator
Gettler-Ryan Inc.
6747 Sierra Court, Suite J
Dublin, California 94568

RE: Former Chevron SS No. 9-7502
124 Ferry Street
Sedro Woolley, Washington

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
2	March 19, 1999	Groundwater Monitoring and Sampling Report Semi-Annual 1999 - Event of January 19, 1999

COMMENTS:

At the request of Chevron Products Company, we are providing you a copy of the above referenced report. The site is monitored and sampled on a quarterly basis. If you have questions please contact Mr. Garrick Jauregui, Chevron Project Manager, at (925) 842-8699.

Enclosure

cc: Mr. and Mrs. Fredlund, Property Owners, 1815 Gina Marie Lane, Burlington, WA 98233
City of Sedro Woolley, City Clerk, 720 Murdock Street, Sedro Woolley, WA 98284

agency/9-7502.gj