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February 10, 2005
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Mr. Leland Smith
Pipeline Excavators
P.O. Box 1755
Sebastopol, California 95473-1755

Subject: **4th Quarter 2004 Monitoring Report**
Pipeline Excavators, 5715 Sebastopol Road, Sebastopol, California
SCDHS-EHD Site #00001115; NCRWQCB Site #1TSO641

Dear Mr. Smith:

This report presents the results of the 4th Quarter 2005 groundwater monitoring and sampling event performed at the subject site. In addition, this sampling event represents the first post-remediation sampling at the subject site. The site is approximately located as shown on the attached Site Location Map, Plate 1. This work was performed in accordance with recommendations from Mr. Dale Radford of the Sonoma County Department of Health Services Environmental Health Division (SCDHS-EHD).

Monitoring and Domestic Well Sampling

On December 9, 2004, groundwater samples were collected from monitoring wells MW-1, MW-2, MW-4, and MW-6 and domestic well DW-6100. Monitoring wells MW-5, MW-7, and domestic well DW-6140 were not sampled this quarter due to accessability constraints and monitoring well MW-3 was removed under permit during the October 2004 remediation activities. The approximate well locations and general site features are shown on the attached Site Plan/Groundwater Elevation Contour Map, Plate 2. Prior to sampling, static water levels were measured and each monitoring well was checked for the presence of free product using an oil/water interface probe. No free product was reported during this monitoring event. The monitoring wells were then purged of approximately three well casing volumes using a submersible pump. To produce representative groundwater samples from the monitoring wells, indicator parameters such as the temperature, pH, and conductivity were measured during purging and recorded on the attached Groundwater Field Sampling Forms, Appendix A. The water level in each monitoring well was then allowed to sufficiently recover prior to sampling. Groundwater samples were collected using a new disposable bailer for each well and transferred into the appropriate containers supplied by the laboratory. The domestic well at 6100 Sebastopol Road (DW-6100) was sampled through the hose bib located on top of the well casing. Water was allowed to run for approximately five minutes before samples were obtained. Groundwater removed from the monitoring wells during purging was stored onsite in 55-gallon DOT-approved drums pending disposal. The groundwater samples collected were labeled, stored on ice, and then transported under chain-of-custody documentation to Alpha Analytical Laboratories, Inc. of Ukiah, California for chemical analysis.

Water Level Measurements

Monitoring well top-of-casing (TOC) elevations, depths-to-groundwater, the calculated water level elevations, and the calculated groundwater flow direction and gradient for the December 9, 2004 sampling event are presented on Table 1. Elevations are expressed in feet relative to mean sea level (msl), depths are expressed in feet, and the gradient is expressed in feet per foot. Historical groundwater flow directions and gradient data is presented in Appendix B.

Table 1: Groundwater Flow Direction and Gradient

Sample Date	Monitoring Well ID	TOC Elevation (feet - msl)	Water Level Depth (feet)	Water Level Elevation (feet -msl)	Groundwater Flow Direction/Gradient (i)
12/09/04	MW-1	70.83	4.20	66.63	Southwesterly i = 0.007
	MW-2	70.95	3.77	67.18	
	MW-3	----removed----			
	MW-4	74.05	6.54	67.51	
	MW-5	74.14	NA	NA	
	MW-6	70.16	3.60	66.56	
	MW-7	70.35	NA	NA	

Groundwater elevation contours based on wells MW-1, MW-2, MW-4, and MW-6 for the December 9, 2004 sampling event are shown on Plate 2.

Laboratory Chemical Analysis

Groundwater samples collected from the monitoring and domestic wells were analyzed for total petroleum hydrocarbons (TPH) as gasoline (g) and TPH as diesel (d) using Environmental Protection Agency (EPA) Test Methods 8260 and 8015, respectively. The volatile organic compounds: benzene, toluene, ethyl benzene, and total xylenes (BTEX), the additional oxygenated fuel additives, including methyl tert- butyl ether (MtBE), and the lead scavengers were analyzed using EPA Test Method 8260B. The laboratory chemical results are presented on page 3, Table 2. TPH-g, TPH-d, BTEX, and MtBE results are expressed in units of micrograms per liter (µg/L). The laboratory analytical reports and chain-of-custody documentation are attached in Appendix C. Historical groundwater analytical results are presented in Appendix D. A Time vs. Concentration Graph that plot concentrations of TPH-g, TPH-d, benzene, and MtBE over time for MW-1 is presented as Appendix E.

Table 2: Groundwater Analytical Results

Sample Date	Sample ID	TPH- g	TPH- d	B	T	E	X	MtBE
		µg/L						
12/09/04	MW-1**	**2,000**	**220***	<1.5	<1.5	<2.5	<2.5	**86**
	MW-2	<50	<50	<0.30	<0.30	<0.50	<0.50	**9.9**
	MW-3	----removed----						
	MW-4***	<250	<50	<1.5	<1.5	<2.5	<2.5	**86**
	MW-5	NS	NS	NS	NS	NS	NS	NS
	MW-6	<50	<50	<0.30	<0.30	<0.50	<0.50	**2.7**
	MW-7	NS	NS	NS	NS	NS	NS	NS
	DW-6140	NS	NS	NS	NS	NS	NS	NS
	DW-6100	<50	<50	<0.30	<0.30	<0.50	<0.50	<0.50

NS = Not sampled.
< = Less than the laboratory test method detection limit.
* = Results in the diesel organics range are primarily due to overlap from a gasoline range product.
** = Elevated detection limit to account for matrix interference.
*** = The reporting limits are elevated due to sample foaming.

Discussion

During this sampling event, TPH-g was detected in the sample collected from MW-1 at a concentration of 2,000 µg/L. TPH-d was detected in the sample collected from MW-1 at a concentration of 89 µg/L. However, the laboratory reported that the results in the diesel range are primarily due to overlap from a gasoline range product. MtBE was detected in monitoring wells MW-1, MW-2, MW-4, and MW-6. The samples collected from DW-6100 are below the reported laboratory detection limits for the analyses requested.

The analytical results from the groundwater samples collected on December 9, 2004 indicate that contaminant concentrations remain relatively consistent with results from the previous sampling events. We recommend continued quarterly sampling to establish post-remediation contaminant trends. Our next sampling event is scheduled for March 2005.

We appreciate the opportunity to be of service to you and trust that this provides the information you require at this time. If you have any questions or require any additional information, please feel free to contact us at (707) 575-8622 or www.transtechconsultants.com.

Sincerely,
TRANS TECH CONSULTANTS

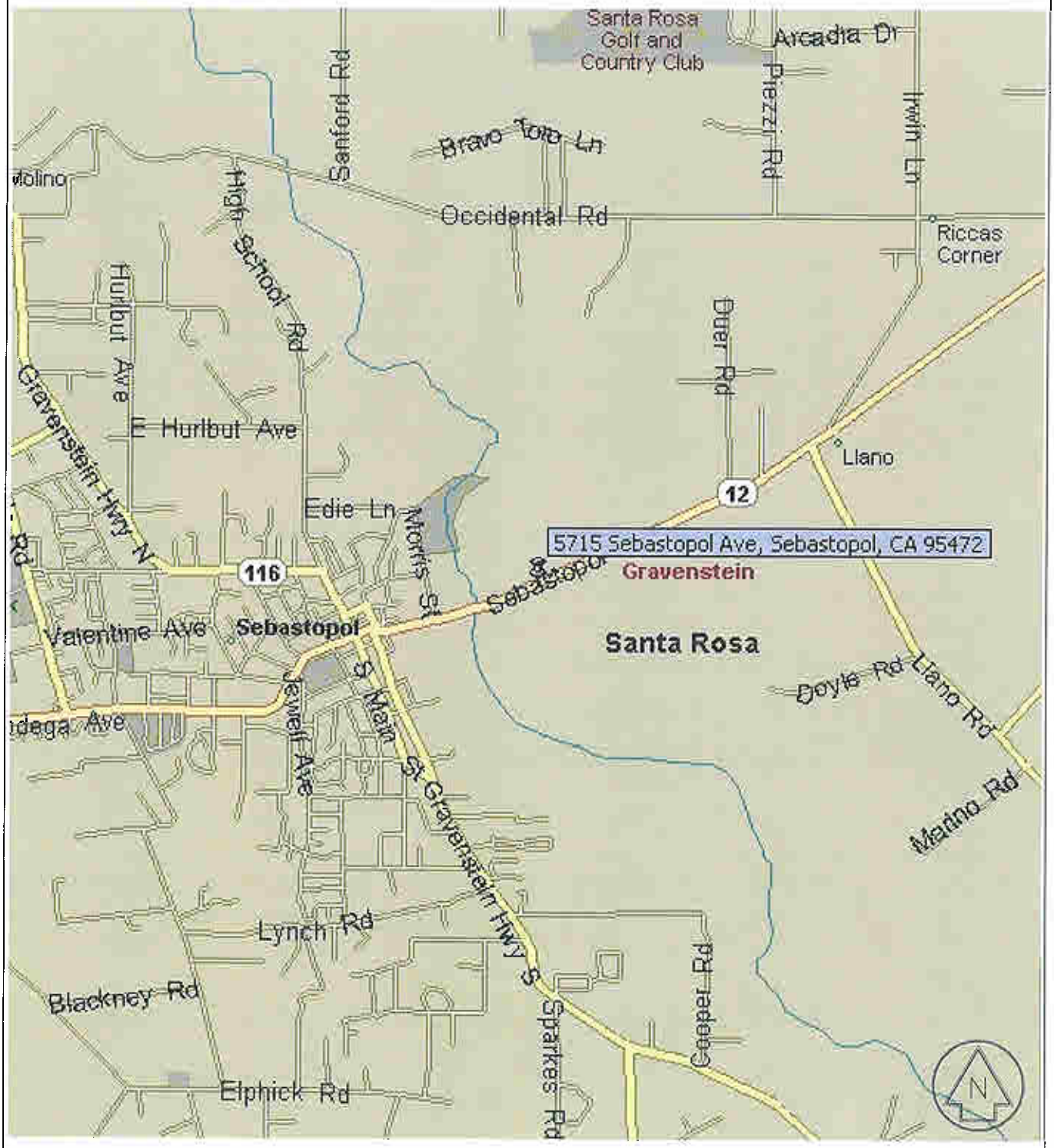
Brian R. Hasik
Staff Geologist

Lee S. Hurvitz, PG 7573
Professional Geologist

QMR_1301_01_021005

Attachments:

- Plate 1, Site Location Map
- Plate 2, Site Plan/Groundwater Elevation Contour Map
- Appendix A, Groundwater Field Sampling Forms
- Appendix B, Historical Groundwater Elevation and Gradient Data
- Appendix C, Alpha Analytical Laboratory Report dated December 28, 2004
- Appendix D, Historical Groundwater Analytical Results
- Appendix E, Time vs. Concentration Graphs for MW-1
- Distribution List



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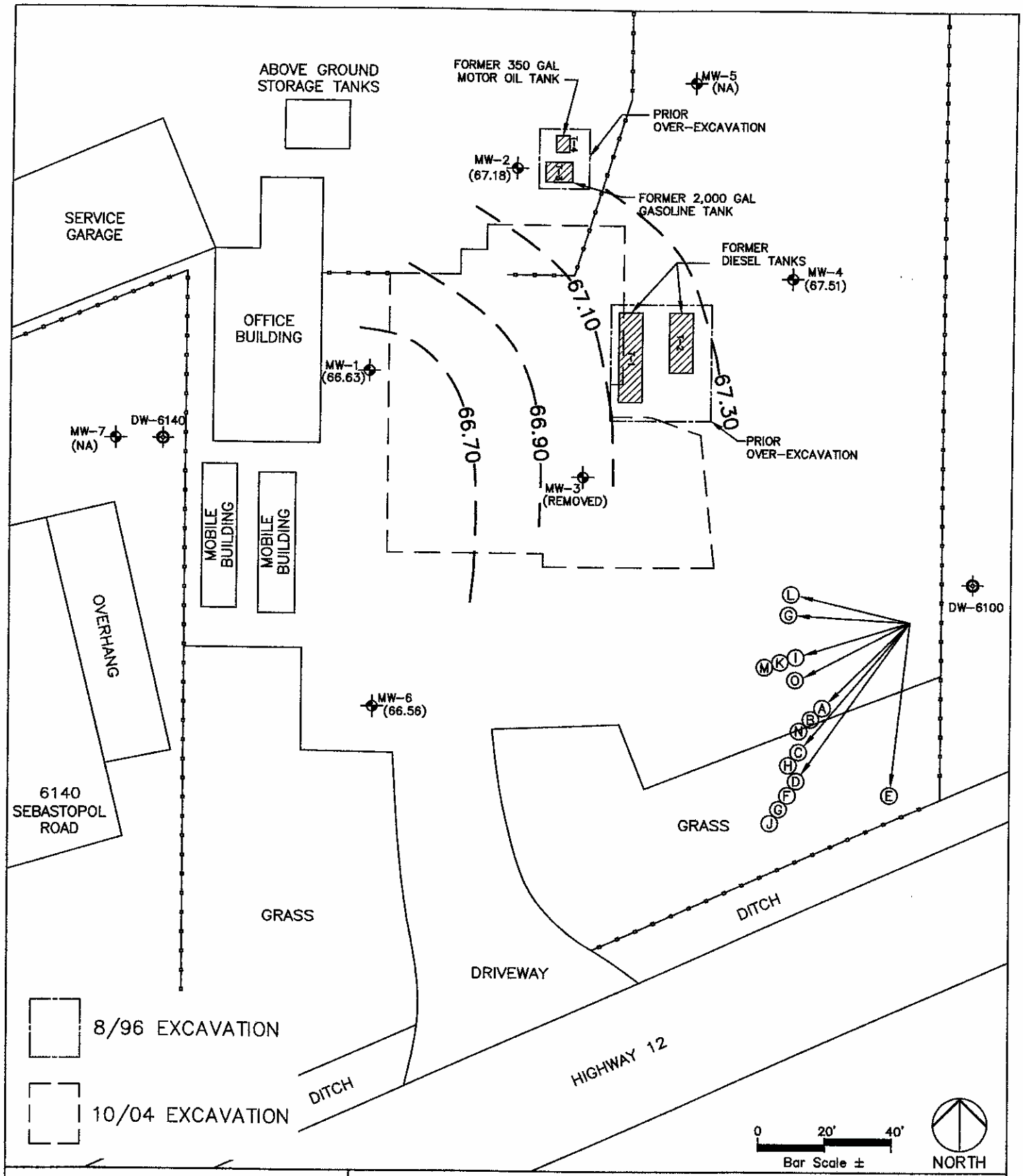
SITE LOCATION MAP

PIPELINE EXCAVATORS
5715 SEBASTOPOL ROAD
SEBASTOPOL, CALIFORNIA

PLATE: 1

DRAWN BY:	DWG NAME:	APPR. BY:	JOB NUMBER:	W.O. NUMBER:	REVISIONS:	DATE:
PSC	1301.01 SLM	BCW	1301.01	A-228		12/23/03



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SITE PLAN/GROUNDWATER ELEVATION CONTOUR MAP FOR 12/9/04

PIPELINE EXCAVATORS
5715 SEBASTOPOL ROAD
SEBASTOPOL, CALIFORNIA

PLATE: 2

SHEET: 1 OF 2

DRAWN BY:	DWG NAME:	APPR. BY:	JOB NUMBER:	W.O. NUMBER:	REVISIONS:	DATE:
JLP	1301.01 GWFP	BRH	1301.01	A-567		12/13/04

GROUNDWATER FLOW LEGEND

Estimated Groundwater Flow Direction → (A)

Gradient Contour (Interval = 0.2 ft)

Identifier Tag	Date	Est. Flow Direction	Gradient Slope
(A)	2/21/02	S45°W	I=0.006
(B)	3/13/02	S45°W	I=0.006
(C)	4/24/02	S40°W	I=0.005
(D)	5/20/02	S35°W	I=0.007
(E)	7/16/02	SOUTHERLY	I=0.008
(F)	9/6/02	S35°W	I=0.005
(G)	12/18/02	W/SW	I=VARIES
(H)	3/19/03	SOUTHWEST	I=0.01
(I)	7/9/03	WESTERLY	I=0.004
(J)	9/18/03	W/SW	I=VARIES
(K)	12/2/03	WESTERLY	I=0.03
(L)	3/31/04	SW/NW	I=0.02
(M)	6/8/04	SOUTHWESTERLY	I=0.014
(N)	9/7/04	S45°W	I=0.005
(O)	12/9/04	SOUTHWESTERLY	I=0.007

Identifier Tag	Date	Est. Flow Direction	Gradient Slope

MW-1 [XX.XX] Monitoring Well Location Groundwater Elevation

NOTE: Ground water elevations are in feet above mean sea level (National Geodetic Vertical Datum, 1929).

Domestic Well

Excavation Limits

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SITE PLAN/GROUNDWATER ELEVATION CONTOUR MAP FOR 12/9/04

PIPELINE EXCAVATORS
5715 SEBASTOPOL ROAD
SEBASTOPOL, CALIFORNIA

PLATE: 2

DRAWN BY:	DWG NAME:	APPR. BY:	JOB NUMBER:	W.O. NUMBER:	REVISIONS:	DATE:
MED	1301.01 GWFP	BRH	1301.01	A-567		12/13/04

SHEET: 2 OF 2

APPENDIX A

GROUNDWATER FIELD SAMPLING FORM

WELL INFORMATION

Project Number/Name: 1301.01 Pipeline Excavators		**Well Number:** MW-1
Project Location: 5715 Sebastopol Rd. Sebastopol, California	**Casing Diameter:** 2"	**Well Depth from TOC (BP):** **Well Depth from TOC (AP):** 8.10
Date: December 9, 2004	**Top of Screen:**	**Initial Well Depth:**
Sampled by (print and sign): Brian Hasik BH	**Product Thickness in inches:** Ø	
	Water Level from TOC: 4.20	**Time:** 11:31
Notes: Slight HC odor 1-2g No noticeable odor @ 3-3.5g	**Water Level pre-purge:** 4.20	**Time:** 12:29
	Well Type: ☑ Monitor ☐ Extraction ☐ Other:	
	Well EL (TOC):	**Well Mat:** PVC

WEATHER

Wind: Yes / No **Rain:** Yes / No	**Clouds:** Yes / No **Fog:** Yes / No	**Sun:** Yes / No	**Precipitation in last 5 days:** Yes / No

VOLUME OF WATER TO BE REMOVER BEFORE SAMPLING

(____ - ____) X (____)2 X 0.0408 = 0.62 gallons in one well volume
TD WL Dia. Inches

1.87 gallons in 3 well volumes (Approx. 0.6 gal/ft) 3.5 total gallons purged

FIELD MEASUREMENTS DURING PURGING

Stable Field Parameters Required Prior to Sample Collection <10% pH and EC change, <0.2°C temp. change

Time	Gallons	pH	TEMP °C	ORP	DO mg/L	EC mS / µS	Turbidity H/M/L
12:32	0.1	6.74	19.3	91		2927	L
12:32	1	6.72	18.8	75		2528	L
12:33	2	6.71	19.0	59		2502	L
12:35	3	6.65	19.5	39		2673	L
12:36	3.5	6.63	20.1	22		3383	L
			dry @	3.5g			

Minimum of 5 gallons or 0.6 gal/ft. Of water in casing - whichever is greater and field parameters must be stable.

Water Level Before Sampling: 4.25 **Time:** 1:30

Appearance of Sample:

Bailer: Disposable **Pump:** 12V Submersible (1-2 gpm)

DECON. METHOD: TSP or Liquinox (phosphate free) Wash / Double Rinse

NUMBER OF DRUMS GENERATED: Water: 1 Soil: Ø Other: Ø

GROUNDWATER FIELD SAMPLING FORM

WELL INFORMATION

Project Number/Name: 1301.01 Pipeline Excavators		**Well Number:** MW-2
Project Location: 5715 Sebastopol Rd. Sebastopol, California	**Casing Diameter:** 2"	**Well Depth from TOC (BP):** **Well Depth from TOC (AP):** 8.10
Date: December 9, 2004	**Top of Screen:**	**Initial Well Depth:**
Sampled by (print and sign): Brian Hasik BH	**Product Thickness in inches:** 0	
	Water Level from TOC: 3.80	**Time:** 11:26
Notes:	**Water Level pre-purge:** 3.77	**Time:** 12:02
	Well Type: ☒ Monitor ☐ Extraction ☐ Other:	
	Well EL (TOC):	**Well Mat:** PVC

WEATHER

Wind: Yes / No **Rain:** Yes / No	**Clouds:** Yes / No **Fog:** Yes / No	**Sun:** Yes / No	**Precipitation in last 5 days:** Yes / No

VOLUME OF WATER TO BE REMOVER BEFORE SAMPLING

(_____ - _____) X (_____)2 X 0.0408 = 0.69 gallons in one well volume
TD WL Dia. Inches

2.08 gallons in 3 well volumes (Approx. 0.6 gal/ft) 5 total gallons purged

FIELD MEASUREMENTS DURING PURGING

Stable Field Parameters Required Prior to Sample Collection <10% pH and EC change, <0.2°C temp. change

Time	Gallons	pH	TEMP °C	ORP	DO mg/L	EC mS / µS	Turbidity H/M/L
12:04	0.1	6.97	19.6	145		2856	L
12:04	1	6.94	19.3	145		2832	L
12:05	1.5	6.94	19.3	145		2833	L
12:05	2	6.94	19.5	144		2825	L
12:06	3	7.09	19.6	141		2824	L
12:08	4	6.91	19.7	143		2836	L
12:09	5	6.94	19.8	141		2834	L

Minimum of 5 gallons or 0.6 gal/ft. Of water in casing - whichever is greater and field parameters must be stable.

Water Level Before Sampling: 3.89 **Time:** 1:05

Appearance of Sample:

Bailer: Disposable **Pump:** 12V Submersible (1-2 gpm)

DECON. METHOD: TSP or Liquinox (phosphate free) Wash / Double Rinse

NUMBER OF DRUMS GENERATED: Water: 1 Soil: 0 Other: 0

GROUNDWATER FIELD SAMPLING FORM

WELL INFORMATION

Project Number/Name: 1301.01 Pipeline Excavators		**Well Number:** MW-4
Project Location: 5715 Sebastopol Rd. Sebastopol, California	**Casing Diameter:** 2"	**Well Depth from TOC (BP):** **Well Depth from TOC (AP):** 10.50
Date: December 9, 2004	**Top of Screen:**	**Initial Well Depth:**
Sampled by (print and sign): Brian Hasik	**Product Thickness in inches:** Ø	
	Water Level from TOC: 6.55	**Time:** 11:29
Notes:	**Water Level pre-purge:** 6.54	**Time:** 12:15
	Well Type: ☑ Monitor ☐ Extraction ☐ Other:	
	Well EL (TOC):	**Well Mat:** PVC

WEATHER

Wind: Yes / No **Rain:** Yes / No	**Clouds:** Yes / No **Fog:** Yes / No	**Sun:** Yes (No)	**Precipitation in last 5 days:** (Yes) / No

VOLUME OF WATER TO BE REMOVER BEFORE SAMPLING

(____ - ____) X (____)2 X 0.0408 = 0.63 gallons in one well volume
TD WL Dia. Inches

1.98 gallons in 3 well volumes (Approx. 0.6 gal/ft) 5 total gallons purged

FIELD MEASUREMENTS DURING PURGING

Stable Field Parameters Required Prior to Sample Collection <10% pH and EC change, <0.2°C temp. change

Time	Gallons	pH	TEMP °C	ORP	DO mg/L	EC mS / µS	Turbidity H/M/L
12:19	0.1	6.85	19.9	138		2315	L
12:19	1	6.74	19.9	141		2223	L
12:20	2	6.72	20.0	141		2248	L
12:21	3	6.72	20.1	139		2242	L
12:23	4	6.68	20.1	141		2237	L
12:24	5	6.68	20.1	140		2246	L

Minimum of 5 gallons or 0.6 gal/ft. Of water in casing - whichever is greater and field parameters must be stable.

Water Level Before Sampling: 6.68 **Time:** 1:20

Appearance of Sample:

Bailer: Disposable **Pump:** 12V Submersible (1-2 gpm)

DECON. METHOD: TSP or Liquinox (phosphate free) Wash / Double Rinse

NUMBER OF DRUMS GENERATED: Water: 1 Soil: Ø Other: Ø

GROUNDWATER FIELD SAMPLING FORM

WELL INFORMATION

Project Number/Name: 1301.01 Pipeline Excavators		**Well Number:** MW-6
Project Location: 5715 Sebastopol Rd. Sebastopol, California	**Casing Diameter:** 2"	**Well Depth from TOC (BP):** 9.10 **Well Depth from TOC (AP):**
Date: December 9, 2004	**Top of Screen:**	**Initial Well Depth:**
Sampled by (print and sign): Brian Hasik BH	**Product Thickness in inches:**	
	Water Level from TOC: 3.64	**Time:** 11:22
Notes:	**Water Level pre-purge:** 3.60	**Time:** 11:35
	Well Type: ☒ Monitor ☐ Extraction ☐ Other:	
	Well EL (TOC):	**Well Mat:** PVC

WEATHER

Wind: Yes / No **Rain:** Yes / No	**Clouds:** Yes / No **Fog:** Yes / No	**Sun:** Yes / No	**Precipitation in last 5 days:** Yes / No

VOLUME OF WATER TO BE REMOVER BEFORE SAMPLING

(____ - ____) X (____)2 X 0.0408 = 0.88 gallons in one well volume
TD WL Dia. Inches

2.64 gallons in 3 well volumes (Approx. 0.6 gal/ft) 4 total gallons purged

FIELD MEASUREMENTS DURING PURGING

Stable Field Parameters Required Prior to Sample Collection <10% pH and EC change, <0.2°C temp. change

Time	Gallons	pH	TEMP °C	ORP	DO mg/L	EC mS / µS	Turbidity H/M/L
11:49	0.1	6.71	20.8	149		4129	L
11:49	1	6.78	19.6	154		2103	L
11:50	2	6.68	19.8	158		1946	L
11:50	2.5	6.69	20.1	159		1955	L
11:51	3	6.61	20.8	164		2946	L
11:53	4	6.59	21.4	168		4397	L
			dry @	4g			

Minimum of 5 gallons or 0.6 gal/ft. Of water in casing - whichever is greater and field parameters must be stable.

Water Level Before Sampling: 3.70 **Time:** 1:00

Appearance of Sample:

Bailer: Disposable **Pump:** 12V Submersible (1-2 gpm)

DECON. METHOD: TSP or Liquinox (phosphate free) Wash / Double Rinse

NUMBER OF DRUMS GENERATED: Water: 1 Soil: 0 Other: 0

APPENDIX B

Appendix B: Historical Groundwater Elevation and Gradient Data
Pipeline Excavators

Sample Date	Monitoring Well ID	TOC Elevation (feet - msl)	Water Level Depth (feet)	Water Level Elevation (feet -msl)	Groundwater Flow Direction/Gradient (i)
06/06/01	MW-1	68.71	3.03	65.68	N 82° E i = 0.023
	MW-2	68.15	3.06	65.09	
	MW-3	68.92	3.85	65.07	
07/23/01	MW-1	68.71	4.22	64.49	N73°E i = 0.013
	MW-2	68.15	4.35	63.80	
	MW-3	68.92	5.12	63.80	
08/29/01	MW-1	68.71	5.03	63.68	N65°E i = 0.01
	MW-2	68.15	5.06	63.09	
	MW-3	68.92	5.72	63.20	
09/13/01	MW-1	68.71	5.21	63.50	NA
	MW-2	68.15	NA	NA	
	MW-3	68.92	5.90	63.02	
10/24/01	MW-1	68.71	5.55	63.16	N58°E i = 0.01
	MW-2	68.15	5.61	62.54	
	MW-3	68.92	6.16	62.76	
12/13/01	MW-1	68.81	2.76	66.05	S30°W i = 0.002
	MW-2	68.93	2.54	66.39	
	MW-3	69.31	3.18	66.13	
1/23/01	MW-1	68.81	2.24	66.57	S40°W i = 0.004
	MW-2	68.93	2.22	66.71	
	MW-3	69.31	2.76	66.55	

Appendix B: continued

Sample Date	Monitoring Well ID	TOC Elevation (feet - msl)	Water Level Depth (feet)	Water Level Elevation (feet -msl)	Groundwater Flow Direction/Gradient (i)
2/21/02	MW-1	68.81	1.24	67.57	S45°W i = 0.006
	MW-2	68.93	1.16	67.77	
	MW-3	69.31	1.75	67.56	
	MW-4	72.04	4.09	67.95	
	MW-5	72.14	3.95	68.19	
	MW-6	68.16	1.05	67.11	
	MW-7	68.37	2.13	66.24	
03/13/02	MW-1	68.81	1.13	67.68	S45°W
	MW-2	68.93	1.18	67.75	
	MW-3	69.31	1.62	67.69	
	MW-4	72.04	4.03	68.01	
	MW-5	72.14	3.93	68.21	
	MW-6	68.16	0.96	67.20	
	MW-7	68.37	2.14	66.23	
04/24/02	MW-1	68.81	2.43	66.38	S40°W
	MW-2	68.93	2.46	66.47	
	MW-3	69.31	3.09	66.22	
	MW-4	72.04	5.73	66.31	
	MW-5	72.14	5.50	66.64	
	MW-6	68.16	2.31	65.85	
	MW-7	68.37	2.92	65.40	

Appendix B: continued

Sample Date	Monitoring Well ID	TOC Elevation (feet - msl)	Water Level Depth (feet)	Water Level Elevation (feet -msl)	Groundwater Flow Direction/Gradient (i)
05/20/02	MW-1	68.81	2.71	66.10	S35°W
	MW-2	68.93	3.61	65.32	
	MW-3	69.31	3.41	65.90	
	MW-4	72.04	6.05	65.99	
	MW-5	72.14	5.82	66.32	
	MW-6	68.16	2.69	65.47	
	MW-7	68.37	3.34	65.03	
07/16/02	MW-1	68.81	3.65	65.16	Southerly i = 0.007
	MW-2	68.93	3.67	65.26	
	MW-3	69.31	4.42	64.89	
	MW-4	72.04	7.11	64.93	
	MW-5	72.14	6.86	65.28	
	MW-6	68.16	3.72	64.44	
	MW-7	68.37	4.34	64.03	
09/06/02	MW-1	68.81	4.36	64.45	S35°W i = 0.005
	MW-2	68.93	4.45	64.48	
	MW-3	69.31	4.98	64.33	
	MW-4	72.04	7.78	64.26	
	MW-5	72.14	7.60	64.54	
	MW-6	68.16	3.97	64.19	
	MW-7	68.37	5.52	62.85	

Appendix B: continued

Sample Date	Monitoring Well ID	TOC Elevation (feet - msl)	Water Level Depth (feet)	Water Level Elevation (feet -msl)	Groundwater Flow Direction/Gradient (i)
12/18/02	MW-1	68.81	2.78	66.03	West / Southwest i = varies
	MW-2	68.93	2.56	66.37	
	MW-3	69.31	3.13	66.18	
	MW-4	72.04	5.31	66.73	
	MW-5	72.14	5.24	66.90	
	MW-6	68.16	2.11	66.05	
	MW-7	68.37	4.18	64.19	
03/19/03	MW-1	68.81	1.14	67.67	Southwest i = 0.01
	MW-2	68.93	1.16	67.77	
	MW-3	69.31	1.69	67.62	
	MW-4	72.04	4.11	67.93	
	MW-5	72.14	3.97	68.17	
	MW-6	68.16	1.06	67.10	
	MW-7	68.37	2.02	66.35	

Appendix B: continued

Sample Date	Monitoring Well ID	TOC Elevation (feet - msl)	Water Level Depth (feet)	Water Level Elevation (feet -msl)	Groundwater Flow Direction/Gradient (i)
07/09/03	MW-1	68.81	3.23	65.58	Westerly i = 0.004
	MW-2	68.93	3.24	65.69	
	MW-3	69.31	4.03	65.28	
	MW-4	72.04	6.71	65.33	
	MW-5	72.14	6.45	65.69	
	MW-6	68.16	3.15	65.01	
	MW-7	68.37	3.77	64.60	
09/16/03	MW-1	68.81	4.24	64.57	West/Southwest i = varies
	MW-2	68.93	4.43	64.50	
	MW-3	69.31	5.02	64.29	
	MW-4	72.04	7.76	64.28	
	MW-5	72.14	7.52	64.62	
	MW-6	68.16	4.16	64.00	
	MW-7	68.37	5.13	63.24	
12/02/03	MW-1	68.81	3.61	65.20	Westerly i = 0.04
	MW-2	68.93	3.40	65.53	
	MW-3	69.31	4.12	65.19	
	MW-4	72.04	6.42	65.62	
	MW-5	72.14	6.25	65.89	
	MW-6	68.16	3.01	65.15	
	MW-7	68.37	5.06	63.31	

Appendix B: continued

Sample Date	Monitoring Well ID	TOC Elevation (feet - msl)	Water Level Depth (feet)	Water Level Elevation (feet -msl)	Groundwater Flow Direction/Gradient, i (feet/foot)
3/31/04*	MW-1	70.83	1.40	69.43	Southwest to Northwest i = 0.02
	MW-2	70.95	1.47	69.48	
	MW-3	71.32	2.00	69.32	
	MW-4	74.05	4.49	69.56	
	MW-5	74.14	4.30	69.84	
	MW-6	70.16	0.45	69.71	
	MW-7	70.35	2.24	68.11	
* = wells were re-surveyed on February 24, 2004					
6/08/04	MW-1	70.83	3.50	67.33	Southwesterly i = 0.014
	MW-2	70.95	3.53	67.42	
	MW-3	71.32	4.28	67.04	
	MW-4	74.05	7.03	67.02	
	MW-5	74.14	6.75	67.39	
	MW-6	70.16	3.40	66.76	
	MW-7	70.35	4.13	66.22	
9/07/04	MW-1	70.83	5.22	65.61	S45°W i = 0.005
	MW-2	70.95	5.32	65.63	
	MW-3	71.32	5.96	65.36	
	MW-4	74.05	8.71	65.34	
	MW-5	74.14	8.55	65.59	
	MW-6	70.16	5.01	65.15	
	MW-7	70.35	6.22	65.13	

Appendix B: continued

Sample Date	Monitoring Well ID	TOC Elevation (feet - msl)	Water Level Depth (feet)	Water Level Elevation (feet -msl)	Groundwater Flow Direction/Gradient, i (feet/foot)
12/09/04	MW-1	70.83	4.20	66.63	Southwesterly i = 0.007
	MW-2	70.95	3.77	67.18	
	MW-3	----removed----			
	MW-4	74.05	6.54	67.51	
	MW-5	74.14	NA	NA	
	MW-6	70.16	3.60	66.56	
	MW-7	70.35	NA	NA	

APPENDIX C

Alpha Analytical Laboratories Inc.
208 Mason Street, Ukiah, California 95482
e-mail: clientservices@alpha-labs.com • Phone: (707) 468-0401 • Fax: (707) 468-5267

28 December 2004

Leland Smith
Attn: Bill Wiggins
P.O. Box 1755
Sebastopol, CA 95472
RE: Pipeline Excavators
Work Order: A412340

Enclosed are the results of analyses for samples received by the laboratory on 12/10/04 13:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Nena M. Burgess For Sheri L. Speaks
Project Manager

Alpha Analytical Laboratories Inc.
208 Mason Street, Ukiah, California 95482
e-mail: clientservices@alpha-labs.com • Phone: (707) 468-0401 • Fax: (707) 468-5267

CHEMICAL EXAMINATION REPORT

Leland Smith
P.O. Box 1755
Sebastopol, CA 95472
Attn: Bill Wiggins

Report Date: 12/28/04 09:39
Project No: 1301.01
Project ID: Pipeline Excavators

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A412340	12/10/2004 13:00	TTCLSM	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	A412340-01	Water	12/09/04 13:30	12/10/04 13:00
MW-2	A412340-02	Water	12/09/04 13:05	12/10/04 13:00
MW-4	A412340-03	Water	12/09/04 13:20	12/10/04 13:00
MW-6	A412340-04	Water	12/09/04 13:00	12/10/04 13:00
DW-6100	A412340-05	Water	12/09/04 12:50	12/10/04 13:00

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Nena M. Burgess For Sheri L. Speaks
Project Manager

12/28/04

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CHEMICAL EXAMINATION REPORT

Leland Smith
P.O. Box 1755
Sebastopol, CA 95472
Attn: Bill Wiggins

Report Date: 12/28/04 09:39
Project No: 1301.01
Project ID: Pipeline Excavators

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A412340	12/10/2004 13:00	TTCLSM	

Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT		PQL	NOTE
MW-1 (A412340-01)			**Sample Type: Water**			**Sampled: 12/09/04 13:30**			
Volatile Organic Compounds by EPA Method 8260B									**R-06**
Benzene	EPA 8260B	AL42011	12/17/04	12/18/04	5	ND ug/l		1.5	
Toluene	"	"	"	"	"	ND "		1.5	
Ethylbenzene	"	"	"	"	"	ND "		2.5	
Xylenes (total)	"	"	"	"	"	ND "		2.5	
Methyl tert-butyl ether	"	"	"	"	"	**86 "**		**2.5**	
Di-isopropyl ether	"	"	"	"	"	ND "		2.5	
Ethyl tert-butyl ether	"	"	"	"	"	ND "		2.5	
Tert-amyl methyl ether	"	"	"	"	"	ND "		2.5	
Tert-butyl alcohol	"	"	"	"	"	ND "		50	
1,2-Dichloroethane	"	"	"	"	"	ND "		2.5	
Chlorobenzene	"	"	"	"	"	ND "		2.5	
1,3-Dichlorobenzene	"	"	"	"	"	ND "		2.5	
1,4-Dichlorobenzene	"	"	"	"	"	ND "		2.5	
1,2-Dichlorobenzene	"	"	"	"	"	ND "		2.5	
1,2-Dibromoethane (EDB)	"	"	"	"	"	ND "		2.5	
Surrogate: Bromofluorobenzene	"	"	"	"		*104 %*	*45-147*		
Surrogate: Toluene-d8	"	"	"	"		*100 %*	*74-137*		
Surrogate: Dibromofluoromethane	"	"	"	"		*84.8 %*	*85-129*		*S-GC*
TPH as Diesel by EPA Method 8015 Modified									
TPH as Diesel	8015DRO	AL42202	12/22/04	12/22/04	1	**220 ug/l**		**50**	D-08
Surrogate: 1,4-Bromofluorobenzene	"	"	"	"		*66.0 %*	*20-152*		

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Nena M. Burgess For Sheri L. Speaks
Project Manager

12/28/04

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208 Mason Street, Ukiah, California 95482
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CHEMICAL EXAMINATION REPORT

Leland Smith
P.O. Box 1755
Sebastopol, CA 95472
Attn: Bill Wiggins

Report Date: 12/28/04 09:39
Project No: 1301.01
Project ID: Pipeline Excavators

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A412340	12/10/2004 13:00	TTCLSM	

Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT		PQL	NOTE
MW-1 (A412340-01)			**Sample Type: Water**			**Sampled: 12/09/04 13:30**			
TPH as Gasoline by GCMS 8260B									
TPH as Gasoline	8260GRO	AL42006	12/17/04	12/18/04	5	**2000 ug/l**		**250**	
Surrogate: Toluene-d8	"	"	"	"		*100 %*	*74-137*		
MW-2 (A412340-02)			**Sample Type: Water**			**Sampled: 12/09/04 13:05**			
Volatile Organic Compounds by EPA Method 8260B									
Benzene	EPA 8260B	AL42011	12/17/04	12/18/04	1	ND ug/l		0.30	
Toluene	"	"	"	"	"	ND "		0.30	
Ethylbenzene	"	"	"	"	"	ND "		0.50	
Xylenes (total)	"	"	"	"	"	ND "		0.50	
Methyl tert-butyl ether	"	"	"	"	"	**9.9 "**		**0.50**	
Di-isopropyl ether	"	"	"	"	"	ND "		0.50	
Ethyl tert-butyl ether	"	"	"	"	"	ND "		0.50	
Tert-amyl methyl ether	"	"	"	"	"	ND "		0.50	
Tert-butyl alcohol	"	"	"	"	"	ND "		10	
1,2-Dichloroethane	"	"	"	"	"	ND "		0.50	
Chlorobenzene	"	"	"	"	"	ND "		0.50	
1,3-Dichlorobenzene	"	"	"	"	"	ND "		0.50	
1,4-Dichlorobenzene	"	"	"	"	"	ND "		0.50	
1,2-Dichlorobenzene	"	"	"	"	"	ND "		0.50	
1,2-Dibromoethane (EDB)	"	"	"	"	"	ND "		0.50	
Surrogate: Bromofluorobenzene	"	"	"	"		*100 %*	*45-147*		
Surrogate: Toluene-d8	"	"	"	"		*99.2 %*	*74-137*		
Surrogate: Dibromofluoromethane	"	"	"	"		*88.0 %*	*85-129*		

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Nena M. Burgess For Sheri L. Speaks
Project Manager

12/28/04

Alpha Analytical Laboratories Inc.
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CHEMICAL EXAMINATION REPORT

Leland Smith
P.O. Box 1755
Sebastopol, CA 95472
Attn: Bill Wiggins

Report Date: 12/28/04 09:39
Project No: 1301.01
Project ID: Pipeline Excavators

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A412340	12/10/2004 13:00	TTCLSM	

Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT		PQL	NOTE
MW-2 (A412340-02)			**Sample Type: Water**			**Sampled: 12/09/04 13:05**			
TPH as Diesel by EPA Method 8015 Modified									
TPH as Diesel	8015DRO	AL42202	12/22/04	12/22/04	1	ND ug/l		50	
Surrogate: 1,4-Bromofluorobenzene	"	"	"	"		*52.9 %*	*20-152*		
TPH as Gasoline by GCMS 8260B									
TPH as Gasoline	8260GRO	AL42006	12/17/04	12/18/04	1	ND ug/l		50	
Surrogate: Toluene-d8	"	"	"	"		*99.2 %*	*74-137*		
MW-4 (A412340-03)			**Sample Type: Water**			**Sampled: 12/09/04 13:20**			
Volatile Organic Compounds by EPA Method 8260B									
Benzene	EPA 8260B	AL42106	12/17/04	12/18/04	5	ND ug/l		1.5	R-04
Toluene	"	"	"	"	"	ND "		1.5	R-04
Ethylbenzene	"	"	"	"	"	ND "		2.5	R-04
Xylenes (total)	"	"	"	"	"	ND "		2.5	R-04
Methyl tert-butyl ether	"	"	"	12/21/04	20	**86 "**		**10**	
Di-isopropyl ether	"	"	"	12/18/04	5	ND "		2.5	R-04
Ethyl tert-butyl ether	"	"	"	"	"	ND "		2.5	R-04
Tert-amyl methyl ether	"	"	"	"	"	ND "		2.5	R-04
Tert-butyl alcohol	"	"	"	"	"	ND "		50	R-04
1,2-Dichloroethane	"	"	"	"	"	ND "		2.5	R-04
Chlorobenzene	"	"	"	"	"	ND "		2.5	R-04
1,3-Dichlorobenzene	"	"	"	"	"	ND "		2.5	R-04
1,4-Dichlorobenzene	"	"	"	"	"	ND "		2.5	R-04
1,2-Dichlorobenzene	"	"	"	"	"	ND "		2.5	R-04
1,2-Dibromoethane (EDB)	"	"	"	"	"	ND "		2.5	R-04
Surrogate: Bromofluorobenzene	"	"	"	*12 21 04*		*91.0 %*	*45-147*		
Surrogate: Toluene-d8	"	"	"	"		*94.6 %*	*74-137*		
Surrogate: Dibromofluoromethane	"	"	"	"		*87.8 %*	*85-129*		

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Nena M. Burgess For Sheri L. Speaks
Project Manager

12/28/04

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CHEMICAL EXAMINATION REPORT

Leland Smith
P.O. Box 1755
Sebastopol, CA 95472
Attn: Bill Wiggins

Report Date: 12/28/04 09:39
Project No: 1301.01
Project ID: Pipeline Excavators

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A412340	12/10/2004 13:00	TTCLSM	

Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT		PQL	NOTE
MW-4 (A412340-03)			**Sample Type: Water**			**Sampled: 12/09/04 13:20**			
TPH as Diesel by EPA Method 8015 Modified									
TPH as Diesel	8015DRO	AL42202	12/22/04	12/22/04	1	ND ug/l		50	
Surrogate: 1,4-Bromofluorobenzene	"	"	"	"		*56.9 %*	*20-152*		
TPH as Gasoline by GCMS 8260B									
TPH as Gasoline	8260GRO	AL42006	12/17/04	12/18/04	5	ND ug/l		250	R-04
Surrogate: Toluene-d8	"	"	"	"		*101 %*	*74-137*		*R-04*
MW-6 (A412340-04)			**Sample Type: Water**			**Sampled: 12/09/04 13:00**			
Volatile Organic Compounds by EPA Method 8260B									
Benzene	EPA 8260B	AL42011	12/17/04	12/18/04	1	ND ug/l		0.30	
Toluene	"	"	"	"	"	ND "		0.30	
Ethylbenzene	"	"	"	"	"	ND "		0.50	
Xylenes (total)	"	"	"	"	"	ND "		0.50	
Methyl tert-butyl ether	"	"	"	"	"	**2.7 "**		**0.50**	
Di-isopropyl ether	"	"	"	"	"	ND "		0.50	
Ethyl tert-butyl ether	"	"	"	"	"	ND "		0.50	
Tert-amyl methyl ether	"	"	"	"	"	ND "		0.50	
Tert-butyl alcohol	"	"	"	"	"	ND "		10	
1,2-Dichloroethane	"	"	"	"	"	ND "		0.50	
Chlorobenzene	"	"	"	"	"	ND "		0.50	
1,3-Dichlorobenzene	"	"	"	"	"	ND "		0.50	
1,4-Dichlorobenzene	"	"	"	"	"	ND "		0.50	
1,2-Dichlorobenzene	"	"	"	"	"	ND "		0.50	
1,2-Dibromoethane (EDB)	"	"	"	"	"	ND "		0.50	
Surrogate: Bromofluorobenzene	"	"	"	"		*103 %*	*45-147*		
Surrogate: Toluene-d8	"	"	"	"		*103 %*	*74-137*		
Surrogate: Dibromofluoromethane	"	"	"	"		*92.0 %*	*85-129*		

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Nena M. Burgess For Sheri L. Speaks
Project Manager

12/28/04

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CHEMICAL EXAMINATION REPORT

Leland Smith
P.O. Box 1755
Sebastopol, CA 95472
Attn: Bill Wiggins

Report Date: 12/28/04 09:39
Project No: 1301.01
Project ID: Pipeline Excavators

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A412340	12/10/2004 13:00	TTCLSM	

Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT		PQL	NOTE
MW-6 (A412340-04)			**Sample Type: Water**			**Sampled: 12/09/04 13:00**			
TPH as Diesel by EPA Method 8015 Modified									
TPH as Diesel	8015DRO	AL42202	12/22/04	12/22/04	1	ND ug/l		50	
Surrogate: 1,4-Bromofluorobenzene	"	"	"	"		*51.1 %*	*20-152*		
TPH as Gasoline by GCMS 8260B									
TPH as Gasoline	8260GRO	AL42006	12/17/04	12/18/04	1	ND ug/l		50	
Surrogate: Toluene-d8	"	"	"	"		*103 %*	*74-137*		
DW-6100 (A412340-05)			**Sample Type: Water**			**Sampled: 12/09/04 12:50**			
Volatile Organic Compounds by EPA Method 8260B									
Benzene	EPA 8260B	AL42011	12/17/04	12/18/04	1	ND ug/l		0.30	
Toluene	"	"	"	"	"	ND "		0.30	
Ethylbenzene	"	"	"	"	"	ND "		0.50	
Xylenes (total)	"	"	"	"	"	ND "		0.50	
Methyl tert-butyl ether	"	"	"	"	"	ND "		0.50	
Di-isopropyl ether	"	"	"	"	"	ND "		0.50	
Ethyl tert-butyl ether	"	"	"	"	"	ND "		0.50	
Tert-amyl methyl ether	"	"	"	"	"	ND "		0.50	
Tert-butyl alcohol	"	"	"	"	"	ND "		10	
1,2-Dichloroethane	"	"	"	"	"	ND "		0.50	
Chlorobenzene	"	"	"	"	"	ND "		0.50	
1,3-Dichlorobenzene	"	"	"	"	"	ND "		0.50	
1,4-Dichlorobenzene	"	"	"	"	"	ND "		0.50	
1,2-Dichlorobenzene	"	"	"	"	"	ND "		0.50	
1,2-Dibromoethane (EDB)	"	"	"	"	"	ND "		0.50	
Surrogate: Bromofluorobenzene	"	"	"	"		*102 %*	*45-147*		
Surrogate: Toluene-d8	"	"	"	"		*100 %*	*74-137*		
Surrogate: Dibromofluoromethane	"	"	"	"		*90.4 %*	*85-129*		

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Nena M. Burgess For Sheri L. Speaks
Project Manager

12/28/04

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CHEMICAL EXAMINATION REPORT

Leland Smith
P.O. Box 1755
Sebastopol, CA 95472
Attn: Bill Wiggins

Report Date: 12/28/04 09:39
Project No: 1301.01
Project ID: Pipeline Excavators

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A412340	12/10/2004 13:00	TTCLSM	

Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT		PQL	NOTE
DW-6100 (A412340-05)			**Sample Type: Water**			**Sampled: 12/09/04 12:50**			
TPH as Diesel by EPA Method 8015 Modified									
TPH as Diesel	8015DRO	AL42202	12/22/04	12/23/04	1	ND ug/l		50	
Surrogate: 1,4-Bromofluorobenzene	"	"	"	"		*62.1 %*	*20-152*		
TPH as Gasoline by GCMS 8260B									
TPH as Gasoline	8260GRO	AL42006	12/17/04	12/18/04	1	ND ug/l		50	
Surrogate: Toluene-d8	"	"	"	"		*100 %*	*74-137*		

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Nena M. Burgess For Sheri L. Speaks
Project Manager

12/28/04

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CHEMICAL EXAMINATION REPORT

Leland Smith
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Sebastopol, CA 95472
Attn: Bill Wiggins

Report Date: 12/28/04 09:39
Project No: 1301.01
Project ID: Pipeline Excavators

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A412340	12/10/2004 13:00	TTCLSM	

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result (SourceResult)	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AL42011 - EPA 5030 Water GCMS										
Blank (AL42011-BLK1)				Prepared & Analyzed: 12/17/04						
Benzene	ND	0.30	ug/l							
Toluene	ND	0.30	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	0.50	"							
Di-isopropyl ether	ND	0.50	"							
Ethyl tert-butyl ether	ND	0.50	"							
Tert-amyl methyl ether	ND	0.50	"							
Tert-butyl alcohol	ND	10	"							
1,2-Dichloroethane	ND	0.50	"							
Chlorobenzene	ND	0.50	"							
1,3-Dichlorobenzene	ND	0.50	"							
1,4-Dichlorobenzene	ND	0.50	"							
1,2-Dichlorobenzene	ND	0.50	"							
1,2-Dibromoethane (EDB)	ND	0.50	"							
Surrogate: Bromofluorobenzene	*25.2*		"	*25.0*		*101*	*45-147*			
Surrogate: Toluene-d8	*25.2*		"	*25.0*		*101*	*74-137*			
Surrogate: Dibromofluoromethane	*22.4*		"	*25.0*		*89.6*	*85-129*			
LCS (AL42011-BS1)				Prepared & Analyzed: 12/17/04						
Benzene	10.9	0.30	ug/l	10.0		109	79-116			
Toluene	11.6	0.30	"	10.0		116	83-120			
Ethylbenzene	11.2	0.50	"	10.0		112	81-119			
Xylenes (total)	33.9	0.50	"	30.0		113	79-121			
Methyl tert-butyl ether	10.1	0.50	"	10.0		101	73-127			
Di-isopropyl ether	11.3	0.50	"	10.1		112	69-96			QL-03

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Nena M. Burgess For Sheri L. Speaks
Project Manager

12/28/04

Alpha Analytical Laboratories Inc.
208 Mason Street, Ukiah, California 95482
e-mail: clientservices@alpha-labs.com • Phone: (707) 468-0401 • Fax: (707) 468-5267

CHEMICAL EXAMINATION REPORT

Leland Smith
P.O. Box 1755
Sebastopol, CA 95472
Attn: Bill Wiggins

Report Date: 12/28/04 09:39
Project No: 1301.01
Project ID: Pipeline Excavators

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A412340	12/10/2004 13:00	TTCLSM	

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AL42011 - EPA 5030 Water GCMS										
LCS (AL42011-BS1)				Prepared & Analyzed: 12/17/04						
Ethyl tert-butyl ether	11.9	0.50	"	10.2		117	76-117			
Tert-amyl methyl ether	10.7	0.50	"	10.3		104	80-122			
Tert-butyl alcohol	212	10	"	196		108	53-132			
1,2-Dichloroethane	9.76	0.50	"	10.0		97.6	78-115			
Chlorobenzene	10.5	0.50	"	10.0		105	82-112			
1,3-Dichlorobenzene	10.7	0.50	"	10.0		107	82-117			
1,4-Dichlorobenzene	10.7	0.50	"	10.0		107	85-113			
1,2-Dichlorobenzene	10.6	0.50	"	10.0		106	83-113			
1,2-Dibromoethane (EDB)	10.4	0.50	"	10.0		104	84-117			
Surrogate: Bromofluorobenzene	*23.6*		"	*25.0*		*94.4*	*45-147*			
Surrogate: Toluene-d8	*22.9*		"	*25.0*		*91.6*	*74-137*			
Surrogate: Dibromofluoromethane	*21.7*		"	*25.0*		*86.8*	*85-129*			
LCS Dup (AL42011-BSD1)				Prepared & Analyzed: 12/17/04						
Benzene	10.8	0.30	ug/l	10.0		108	79-116	0.922	25	
Toluene	11.3	0.30	"	10.0		113	83-120	2.62	25	
Ethylbenzene	11.0	0.50	"	10.0		110	81-119	1.80	25	
Xylenes (total)	33.2	0.50	"	30.0		111	79-121	2.09	25	
Methyl tert-butyl ether	9.83	0.50	"	10.0		98.3	73-127	2.71	25	
Di-isopropyl ether	11.2	0.50	"	10.1		111	69-96	0.889	25	QL-03
Ethyl tert-butyl ether	11.9	0.50	"	10.2		117	76-117	0.00	25	
Tert-amyl methyl ether	10.6	0.50	"	10.3		103	80-122	0.939	25	
Tert-butyl alcohol	219	10	"	196		112	53-132	3.25	25	
1,2-Dichloroethane	9.66	0.50	"	10.0		96.6	78-115	1.03	25	
Chlorobenzene	10.3	0.50	"	10.0		103	82-112	1.92	25	
1,3-Dichlorobenzene	10.4	0.50	"	10.0		104	82-117	2.84	25	
1,4-Dichlorobenzene	10.4	0.50	"	10.0		104	85-113	2.84	25	

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Volatile Organic Compounds by EPA Method 8260B - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AL42011 - EPA 5030 Water GCMS										
LCS Dup (AL42011-BSD1)				Prepared & Analyzed: 12/17/04						
1,2-Dichlorobenzene	10.3	0.50	"	10.0		103	83-113	2.87	25	
1,2-Dibromoethane (EDB)	10.2	0.50	"	10.0		102	84-117	1.94	25	
Surrogate: Bromofluorobenzene	*23.4*		"	*25.0*		*93.6*	*45-147*			
Surrogate: Toluene-d8	*22.7*		"	*25.0*		*90.8*	*74-137*			
Surrogate: Dibromofluoromethane	*21.7*		"	*25.0*		*86.8*	*85-129*			
Matrix Spike (AL42011-MS1)	**Source: A412340-04**			Prepared & Analyzed: 12/17/04						
Benzene	10.9	0.30	ug/l	10.0	ND	109	63-144			
Toluene	11.4	0.30	"	10.0	ND	114	65-145			
Ethylbenzene	11.1	0.50	"	10.0	ND	111	57-155			
Xylenes (total)	33.2	0.50	"	30.0	ND	111	59-149			
Methyl tert-butyl ether	12.7	0.50	"	10.0	2.7	100	62-156			
Di-isopropyl ether	11.1	0.50	"	10.1	ND	110	58-115			
Ethyl tert-butyl ether	11.7	0.50	"	10.2	ND	115	57-147			
Tert-amyl methyl ether	10.6	0.50	"	10.3	ND	103	53-153			
Tert-butyl alcohol	211	10	"	196	ND	108	41-147			
1,2-Dichloroethane	9.61	0.50	"	10.0	ND	96.1	61-134			
Chlorobenzene	10.2	0.50	"	10.0	ND	102	62-139			
1,3-Dichlorobenzene	10.1	0.50	"	10.0	ND	101	59-140			
1,4-Dichlorobenzene	10.2	0.50	"	10.0	ND	102	62-136			
1,2-Dichlorobenzene	10.2	0.50	"	10.0	ND	102	62-137			
1,2-Dibromoethane (EDB)	10.2	0.50	"	10.0	ND	102	58-140			
Surrogate: Bromofluorobenzene	*23.6*		"	*25.0*		*94.4*	*45-147*			
Surrogate: Toluene-d8	*22.9*		"	*25.0*		*91.6*	*74-137*			
Surrogate: Dibromofluoromethane	*21.3*		"	*25.0*		*85.2*	*85-129*			

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Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A412340	12/10/2004 13:00	TTCLSM	

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AL42106 - EPA 5030 Water GCMS										
Blank (AL42106-BLK1)				Prepared & Analyzed: 12/20/04						
Benzene	ND	0.30	ug/l							
Toluene	ND	0.30	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	0.50	"							
Di-isopropyl ether	ND	0.50	"							
Ethyl tert-butyl ether	ND	0.50	"							
Tert-amyl methyl ether	ND	0.50	"							
Tert-butyl alcohol	ND	10	"							
1,2-Dichloroethane	ND	0.50	"							
Chlorobenzene	ND	0.50	"							
1,3-Dichlorobenzene	ND	0.50	"							
1,4-Dichlorobenzene	ND	0.50	"							
1,2-Dichlorobenzene	ND	0.50	"							
1,2-Dibromoethane (EDB)	ND	0.50	"							
Surrogate: Bromofluorobenzene	*25.2*		"	*25.0*		*101*	*45-147*			
Surrogate: Toluene-d8	*26.2*		"	*25.0*		*105*	*74-137*			
Surrogate: Dibromofluoromethane	*24.3*		"	*25.0*		*97.2*	*85-129*			
LCS (AL42106-BS1)				Prepared & Analyzed: 12/20/04						
Benzene	10.8	0.30	ug/l	10.0		108	79-116			
Toluene	11.3	0.30	"	10.0		113	83-120			
Ethylbenzene	11.0	0.50	"	10.0		110	81-119			
Xylenes (total)	33.5	0.50	"	30.0		112	79-121			
Methyl tert-butyl ether	8.82	0.50	"	10.0		88.2	73-127			
Di-isopropyl ether	10.6	0.50	"	10.1		105	69-96			QL-03
Ethyl tert-butyl ether	10.9	0.50	"	10.2		107	76-117			

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Report Date: 12/28/04 09:39
Project No: 1301.01
Project ID: Pipeline Excavators

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A412340	12/10/2004 13:00	TTCLSM	

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AL42106 - EPA 5030 Water GCMS										
LCS (AL42106-BS1)				Prepared & Analyzed: 12/20/04						
Tert-amyl methyl ether	9.66	0.50	"	10.3		93.8	80-122			
Tert-butyl alcohol	190	10	"	196		96.9	53-132			
1,2-Dichloroethane	9.55	0.50	"	10.0		95.5	78-115			
Chlorobenzene	10.1	0.50	"	10.0		101	82-112			
1,3-Dichlorobenzene	10.5	0.50	"	10.0		105	82-117			
1,4-Dichlorobenzene	10.1	0.50	"	10.0		101	85-113			
1,2-Dichlorobenzene	10.2	0.50	"	10.0		102	83-113			
1,2-Dibromoethane (EDB)	9.84	0.50	"	10.0		98.4	84-117			
Surrogate: Bromofluorobenzene	*23.5*		"	*25.0*		*94.0*	*45-147*			
Surrogate: Toluene-d8	*23.9*		"	*25.0*		*95.6*	*74-137*			
Surrogate: Dibromofluoromethane	*22.7*		"	*25.0*		*90.8*	*85-129*			
LCS Dup (AL42106-BSD1)				Prepared & Analyzed: 12/20/04						
Benzene	10.5	0.30	ug/l	10.0		105	79-116	2.82	25	
Toluene	11.1	0.30	"	10.0		111	83-120	1.79	25	
Ethylbenzene	10.8	0.50	"	10.0		108	81-119	1.83	25	
Xylenes (total)	32.8	0.50	"	30.0		109	79-121	2.11	25	
Methyl tert-butyl ether	8.86	0.50	"	10.0		88.6	73-127	0.452	25	
Di-isopropyl ether	10.6	0.50	"	10.1		105	69-96	0.00	25	QL-03
Ethyl tert-butyl ether	10.8	0.50	"	10.2		106	76-117	0.922	25	
Tert-amyl methyl ether	9.74	0.50	"	10.3		94.6	80-122	0.825	25	
Tert-butyl alcohol	200	10	"	196		102	53-132	5.13	25	
1,2-Dichloroethane	9.16	0.50	"	10.0		91.6	78-115	4.17	25	
Chlorobenzene	10.0	0.50	"	10.0		100	82-112	0.995	25	
1,3-Dichlorobenzene	10.0	0.50	"	10.0		100	82-117	4.88	25	
1,4-Dichlorobenzene	10.0	0.50	"	10.0		100	85-113	0.995	25	
1,2-Dichlorobenzene	10.0	0.50	"	10.0		100	83-113	1.98	25	

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Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A412340	12/10/2004 13:00	TTCLSM	

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AL42106 - EPA 5030 Water GCMS										
LCS Dup (AL42106-BSD1)				Prepared & Analyzed: 12/20/04						
1,2-Dibromoethane (EDB)	10.1	0.50	"	10.0		101	84-117	2.61	25	
Surrogate: Bromofluorobenzene	*23.5*		"	*25.0*		*94.0*	*45-147*			
Surrogate: Toluene-d8	*23.9*		"	*25.0*		*95.6*	*74-137*			
Surrogate: Dibromofluoromethane	*22.7*		"	*25.0*		*90.8*	*85-129*			
Matrix Spike (AL42106-MS1)	**Source: A412342-01**			Prepared & Analyzed: 12/20/04						
Benzene	3.02	0.30	ug/l	10.0	ND	30.2	63-144			QM-05
Toluene	3.12	0.30	"	10.0	ND	31.2	65-145			QM-05
Ethylbenzene	2.68	0.50	"	10.0	ND	26.8	57-155			QM-05
Xylenes (total)	8.45	0.50	"	30.0	ND	28.2	59-149			QM-05
Methyl tert-butyl ether	3.33	0.50	"	10.0	1.2	21.3	62-156			QM-05
Di-isopropyl ether	2.39	0.50	"	10.1	ND	23.7	58-115			QM-05
Ethyl tert-butyl ether	2.37	0.50	"	10.2	ND	23.2	57-147			QM-05
Tert-amyl methyl ether	2.47	0.50	"	10.3	ND	24.0	53-153			QM-05
Tert-butyl alcohol	56.8	10	"	196	ND	29.0	41-147			QM-05
1,2-Dichloroethane	2.74	0.50	"	10.0	ND	27.4	61-134			QM-05
Chlorobenzene	2.83	0.50	"	10.0	ND	28.3	62-139			QM-05
1,3-Dichlorobenzene	2.77	0.50	"	10.0	ND	27.7	59-140			QM-05
1,4-Dichlorobenzene	2.70	0.50	"	10.0	ND	27.0	62-136			QM-05
1,2-Dichlorobenzene	2.70	0.50	"	10.0	ND	27.0	62-137			QM-05
1,2-Dibromoethane (EDB)	2.74	0.50	"	10.0	ND	27.4	58-140			QM-05
Surrogate: Bromofluorobenzene	*24.7*		"	*25.0*		*98.8*	*45-147*			
Surrogate: Toluene-d8	*25.0*		"	*25.0*		*100*	*74-137*			
Surrogate: Dibromofluoromethane	*23.0*		"	*25.0*		*92.0*	*85-129*			

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Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A412340	12/10/2004 13:00	TTCLSM	

TPH as Diesel by EPA Method 8015 Modified - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AL42202 - EPA 3510B Water										
Blank (AL42202-BLK1)				Prepared & Analyzed: 12/22/04						
TPH as Diesel	ND	50	ug/l							
Surrogate: 1,4-Bromofluorobenzene	*214*		"	*427*		*50.1*	*20-152*			
LCS (AL42202-BS1)				Prepared & Analyzed: 12/22/04						
TPH as Diesel	1540	50	ug/l	1960		78.6	57-136			
Surrogate: 1,4-Bromofluorobenzene	*243*		"	*427*		*56.9*	*20-152*			
LCS Dup (AL42202-BSD1)				Prepared & Analyzed: 12/22/04						
TPH as Diesel	1550	50	ug/l	1960		79.1	57-136	0.647	25	
Surrogate: 1,4-Bromofluorobenzene	*265*		"	*427*		*62.1*	*20-152*			

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Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A412340	12/10/2004 13:00	TTCLSM	

TPH as Gasoline by GCMS 8260B - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AL42006 - EPA 5030 Water GCMS										
Blank (AL42006-BLK1)				Prepared & Analyzed: 12/17/04						
TPH as Gasoline	ND	50	ug/l							
Surrogate: Toluene-d8	*25.2*		"	*25.0*		*101*	*74-137*			
LCS (AL42006-BS1)				Prepared: 12/17/04 Analyzed: 12/18/04						
TPH as Gasoline	210	50	ug/l	200		105	70-130			
Surrogate: Toluene-d8	*25.4*		"	*25.0*		*102*	*74-137*			
LCS Dup (AL42006-BSD1)				Prepared: 12/17/04 Analyzed: 12/18/04						
TPH as Gasoline	175	50	ug/l	200		87.5	70-130	18.2	25	
Surrogate: Toluene-d8	*25.6*		"	*25.0*		*102*	*74-137*			
Matrix Spike (AL42006-MS1)	**Source: A412340-05**			Prepared: 12/17/04 Analyzed: 12/18/04						
TPH as Gasoline	42.5	50	ug/l	200	ND	21.2	70-130			QM-05
Surrogate: Toluene-d8	*25.7*		"	*25.0*		*103*	*74-137*			

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A412340	12/10/2004 13:00	TTCLSM	

Notes and Definitions

S-GC	Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogates.
R-06	The Reporting Limits for this analysis have been raised to account for matrix interference.
R-04	The Reporting Limits for this analysis are elevated due to sample foaming.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable .
QL-03	Although the LCS/LCSD recovery for this analyte is outside of in-house developed control limits, it is within the EPA recommended range of 70-130%.
D-08	Results in the diesel organics range are primarily due to overlap from a gasoline range product.
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
PQL	Practical Quantitation Limit

WORK ORDER
CHAIN OF CUSTODY RECORD

Alpha Analytical Laboratories Inc. • 208 Mason Street, Ukiah, CA 95482 • (707) 468-0401 • FAX (707) 468-5267

DATE 12/9/04 PAGE 1 OF 1

CLIENT'S NAME: Leland Smith

STREET ADDRESS: PO BOX 1755 CITY: Sebastopol STATE: CA ZIP: 95473

PROJECT NAME: Pipeline Excavators

CONTRACT/PURCHASE ORDER/QUOTE NUMBER: 1301-01

SIGNATURE OF PERSON AUTHORIZING WORK UNDER TERMS STATED ON REVERSE SIDE OF THIS FORM: [signature]

PROJECT MANAGER: Bill Wiggins

PHONE NUMBER: 575-8622

FAX NUMBER:

SITE CONTACT:

SAMPLED BY: Brian Hasik

SAMPLE CONDITION ON RECEIPT: 2.2

COLD/ICED? Yes

BUBBLES OR AIR SPACE? NO

WERE SAMPLES PRESERVED? Void

ANALYSES: TPH-gas, TPH-diesel, BTEX, 5 OXY's, Pb SCAN

SAMPLE NUMBER/IDENTIFICATION	DATE	TIME	LAB SAMPLE NUMBER	SAMPLE TYPE: LIQ	AIR	SOLID	COMP	GRAB	NO. OF CONTS.	TPH-gas	TPH-diesel	BTEX	5 OXY's	Pb SCAN	EXPLAIN IRREGULARITIES BELOW
MW-1	12/9	1:30	A412340-1	X				X	5	X	X	X	X		NO MW-5, 7, or DW-6140
MW-2		1:05	-2	X				X	5	X	X	X	X		
MW-4		1:20	-3	X				X	5	X	X	X	X		
~~MW-5~~				X				X	~~5~~	X	X	X	X		
MW-6		1:00	-4	X				X	5	X	X	X	X		
~~MW-7~~				X				X	~~5~~	X	X	X	X		
DW-6100		12:50	-6	X				X	5	X	X	X	X		
~~DW-6140~~				X				X	5	X	X	X	X		
															GeoTracker
															T0609700457

RELINQUISHED BY: (SIGNATURE) [signature]

RELINQUISHED BY: (SIGNATURE) [signature] (1300)

RELINQUISHED BY: (SIGNATURE)

METHOD OF SHIPMENT

RECEIVED BY: (SIGNATURE) [signature] DATE 12/10/04 TIME [illegible]

RECEIVED BY: (SIGNATURE) Sheri Specks DATE 12/10/04 TIME 13:00

RECEIVED FOR LABORATORY BY:

AUTHORIZED BY:

TURN AROUND TIME REQUESTED

SAMPLE CONTROL OFFICER

SPECIAL INSTRUCTIONS

DRIVING TIME | SITE TIME | TOTAL TIME

SAMPLE DESPOSITION:

1. STORAGE TIME REQUESTED _____ DAYS (SAMPLES WILL BE STORED FOR 30 DAYS WITHOUT ADDITIONAL CHARGES: THEREAFTER STORAGE CHARGES WILL BE BILLED AT THE PUBLISHED RATES.)
2. SAMPLE TO BE RETURNED TO CLIENT? ☐ YES ☐ NO

HAZARDOUS MATERIALS ARE THE PROPERTY OF THE CLIENT. THE CLIENT IS RESPONSIBLE FOR PROPER DISPOSAL OF HAZARDOUS WASTES. CLIENTS NOT PICKING UP HAZARDOUS WASTES MAY BE ASSESSED AN APPROPRIATE FEE.

APPENDIX D

Appendix D: Historical Groundwater Analytical Results

Sample Date	Sample ID	TPH-gasoline	TPH-diesel	TPH-motor oil	B	T	E	X	MtBE
		µg/L							
09/18/00	MW-1	**4,500**	**2,200***	NA	<5.0	<5.0	<5.0	<15	**230**
	MW-2	<50	<50	NA	<0.5	<0.5	<0.5	<1.5	**26**
	MW-3	**69,000**	**35,000***	NA	**8,400**	**20,000**	**1,500**	**6,500**	**500**
06/06/01	MW-1	**1,800**	**360***	NA	<1.0	<1.0	**7.4**	<1.0	**180**
	MW-2	<50	<50	NA	<1.0	<1.0	<1.0	<1.0	**43**
	MW-3	**73,000**	**2,300***	NA	**12,000**	**34,000**	**1,900**	**8,600**	**480**
	DW-6100	<50	<50	NA	<1.0	<1.0	<1.0	<1.0	<1.0
06/07/01	DW-6140	<50	<50	NA	<1.0	<5.0	<5.0	<5.0	**52**
09/13/01	MW-1	**2,000**	**610***	NA	<2.0	<2.0	**3.9**	**2.9**	**96**
	MW-2	<50	<50	NA	<1.0	<1.0	<1.0	<1.0	**10**
	MW-3	**55,000**	**2,400***	NA	**8,300**	**18,000**	**1,000**	**3,800**	**1,100**
	DW-6100	<50	<50	NA	<1.0	<1.0	<1.0	<1.0	<1.0
	DW-6140	<50	<50	NA	<1.0	<1.0	<1.0	<1.0	**22**
12/13/01	MW-1	**3,700**	**1,600***	NA	**59**	**120**	**31**	**59**	**130**
	MW-2	**120**	**<50**	NA	**9.3**	**33**	**3.1**	**13**	**14**
	MW-3	**71,000**	**2,500***	NA	**11,000**	**19,000**	**1,400**	**6,000**	**260**
	DW-6100	<50	<50	NA	<0.5	<0.5	<0.5	<1.5	<1.0
	DW-6140	<50	<50	NA	<0.5	<0.5	<0.5	<1.5	**15**

* = Higher boiling point constituents of gasoline are present.
** = Additional oxygenated fuel additives detected.

Appendix D: continued

Sample Date	Sample ID	TPH-gasoline	TPH-diesel	TPH-motor oil	B	T	E	X	MtBE
		µg/L							
02/21/02	MW-1	**3,700**	**1,300**	<100	**8.5**	**38**	**16**	**13**	**200**
	MW-2	**69**	<50	<100	**2.4**	**14**	**1.1**	**5.1**	**29**
	MW-3	**130,000**	**2,300**	<1,000	**9,200**	**21,000**	**1,800**	**6,900**	**430**
	MW-4	<50	<50	<100	<0.30	<0.30	<0.50	<0.50	**5.0**
	MW-5	<50	<50	<100	<0.30	<0.30	<0.50	<0.50	**45**
	MW-6	**140**	**63**	<100	<0.30	**3.0**	<0.50	<0.50	**120***
	MW-7	<50	<50	<100	**1.2**	**7.6**	**0.70**	**3.5**	**2.9****
05/20/02	MW-1	**3,300**	**1,200**	NA	<30	<30	<50	<50	**210**
	MW-2	<50	<50	NA	<0.30	<0.30	<0.50	<0.50	**21**
	MW-3	**150,000**	**4,800**	NA	**9,500**	**27,000**	**1,900**	**7,900**	**370****
	MW-4	<50	**54**	NA	<0.30	<0.30	<0.50	<0.50	**4.0**
	MW-5	<50	<50	NA	<0.30	<0.30	<0.50	<0.50	**68**
	MW-6	**84**	**55**	NA	<0.30	<0.30	<0.50	<0.50	**49**
	MW-7	<50	<50	NA	<0.30	<0.30	<0.50	<0.50	**37****
	DW-6140	<50	<50	<50	<0.30	<0.30	<0.50	<0.50	**18**
09/06/02	DW-6100	<50	<50	NA	<1.0	<1.0	<1.0	<1.0	<1.0
09/06/02	MW-1	**3,500**	**1,000***	NA	<2.0	<2.0	**2.9**	<2.0	**130**
	MW-2	<50	<50	NA	<1.0	<1.0	<1.0	<1.0	**16**
	MW-3	**85,000**	**6,600***	**NA**	**8,500**	**21,000**	**1,500**	**6,400**	**340**
	MW-4	<50	<50	NA	<1.0	<1.0	<1.0	<1.0	**34**
	MW-5	65	<50	NA	<1.0	<1.0	<1.0	<1.0	**65**
	MW-6	<50	<50	NA	<1.0	<1.0	<1.0	<1.0	**11**
	MW-7	<50	<50	**NA**	**1.5**	**4.3**	<1.0	**4.3**	**5.7**

* = Higher boiling point constituents of gasoline are present.
** = Additional oxygenated fuel additives detected.

Appendix D: continued

Sample Date	Sample ID	TPH-gasoline	TPH-diesel	TPH-motor oil	B	T	E	X	MtBE
		µg/L							
12/18/02	MW-1	**3,500**	**970***	NA	<2.0	<2.0	<2.0	<2.0	**150**
	MW-2	<50	<50	NA	<1.0	<1.0	<1.0	<1.0	**23**
	MW-3	**69,000**	**6,500***	**NA**	**11,000**	**17,000**	**1,100**	**4,700**	**310**
	MW-4	<50	<50	NA	<1.0	<1.0	<1.0	<1.0	**34**
	MW-5	<50	<50	NA	<1.0	<1.0	<1.0	<1.0	**56**
	MW-6	<50	<50	NA	<1.0	<1.0	<1.0	<1.0	**10**
	MW-7	<50	<50	NA	<1.0	<1.0	<1.0	<1.0	**6.8****
	DW-6100	<50	<50	NA	<1.0	<1.0	<1.0	<1.0	<1.0
03/19/03	MW-1	**3,400**	**1,700***	NA	<2.0	<2.0	**3.5**	<2.0	**180**
	MW-2	<50	<50	NA	<1.0	<1.0	<1.0	<1.0	**21**
	MW-3	**59,000**	**12,000***	NA	**10,000**	**19,000**	**1,400**	**5,500**	**450**
	MW-4	<50	<50	NA	<1.0	<1.0	<1.0	<1.0	**5.1**
	MW-5	<50	<50	NA	<1.0	<1.0	<1.0	<1.0	**23**
	MW-6	**61**	<50	NA	<1.0	<1.0	<1.0	<1.0	**19**
	MW-7	<50	<50	NA	<1.0	<1.0	<1.0	<1.0	**12****
	DW-6140	<50	<50	NA	<1.0	<1.0	<1.0	<1.0	<1.0
03/20/03	DW-6100	<50	<50	NA	<1.0	<1.0	<1.0	<1.0	<1.0

* = Higher boiling point constituents of gasoline are present.
** = Additional oxygenated fuel additives detected.

Appendix D: continued

Sample Date	Sample ID	TPH-gasoline	TPH-diesel	TPH-motor oil	B	T	E	X	MtBE
		µg/L							
07/09/03	MW-1	**1,900**	**1,000**	NA	<2.0	<2.0	<2.0	<2.0	**99**
	MW-2	<50	<50	NA	<1.0	<1.0	<1.0	<1.0	**17**
	MW-3	**49,000**	**12,000***	NA	**9,300**	**23,000**	**1,400**	**6,100**	**230****
	MW-4	<50	<50	NA	<1.0	<1.0	<1.0	<1.0	**3.7**
	MW-5	<50	<50	NA	<1.0	<1.0	<1.0	<1.0	**22**
	MW-6	<50	<50	NA	<1.0	<1.0	<1.0	<1.0	**9.4**
	MW-7	<50	<50	NA	<1.0	<1.0	<1.0	<1.0	**10****
	DW-6140	<50	<50	NA	<1.0	<1.0	<1.0	<1.0	**4.0**
07/25/03	DW-6100	<50	<50	NA	<1.0	<1.0	<1.0	<1.0	<1.0
09/18/03	MW-1	**2,200**	**1,100***	NA	<2.0	<2.0	<2.0	<2.0	**140**
	MW-2	<50	<50	NA	<1.0	<1.0	<1.0	<1.0	**14**
	MW-3	**55,000**	**6,800***	NA	**9,400**	**22,000**	**1,500**	**6,400**	**270****
	MW-4	<50	<50	NA	<1.0	<1.0	<1.0	<1.0	**17**
	MW-5	<50	<50	NA	<1.0	<1.0	<1.0	<1.0	**31**
	MW-6	<50	<50	NA	<1.0	<1.0	<1.0	<1.0	**4.8**
	MW-7	<50	<50	NA	<1.0	<1.0	<1.0	<1.0	**4.1****
	DW-6140	<50	<50	NA	<1.0	<1.0	<1.0	<1.0	**17**
	DW-6100	<50	<50	NA	<1.0	<1.0	<1.0	<1.0	<1.0

* = Higher boiling point constituents of gasoline are present.
** = Additional oxygenated fuel additives detected.

Appendix D: continued

Sample Date	Sample ID	TPH-gasoline	TPH-diesel	B	T	E	X	MtBE
		µg/L						
12/02/03	MW-1	**2,000**	**800***	<2.0	<2.0	<2.0	<2.0	**130**
	MW-2	<50	<50	<1.0	<1.0	<1.0	<1.0	**12**
	MW-3	**75,000**	**6,100***	**8,100**	**15,000**	**1,500**	**6,500**	**300****
	MW-4	<50	<50	<1.0	<1.0	<1.0	<1.0	**30**
	MW-5	<50	<50	<1.0	<1.0	<1.0	<1.0	**28**
	MW-6	<50	<50	<1.0	<1.0	<1.0	<1.0	**4.5**
	MW-7	<50	<50	<1.0	<1.0	<1.0	<1.0	**3.5*****
	DW-6140	<50	<50	<1.0	<1.0	<1.0	<1.0	**4.8**
	DW-6100	<50	<50	<1.0	<1.0	<1.0	<1.0	<1.0
3/31/04	MW-1	**3,600**	**890**	<6.0	<6.0	<10	<10	**140**
	MW-2	<50	<50	<1.5	<1.5	<2.5	<2.5	**19**
	MW-3	**68,000**	**7,400**	**8,600**	**19,000**	**3000**	**11,000**	**390**
	MW-4	<50	<50	<0.6	**0.68**	<1.0	<1.0	**2.6**
	MW-5	<50	<50	<0.6	<0.6	<1.0	<1.0	**19**
	MW-6	<50	**54**	**0.96**	**3.5**	<1.0	<1.0	**16**
	MW-7	<50	<50	<0.3	<0.3	<0.5	<0.5	**9.8**
	DW-6140	<50	<50	<0.3	<0.3	<0.5	<0.5	**0.53**
	DW-6100	<50	<50	<0.3	<0.3	<0.5	<0.5	<0.5

< = Less than the laboratory test method detection limit.
* = Higher boiling components of gasoline are present in the early boiling range for diesel.
** = 1,2-Dichloroethane was detected at **130**µg/L.
*** = 1,2-Dichloroethane was detected at **5.9** µg/L.

Appendix D: continued

Sample Date	Sample ID	TPH- g	TPH- d	B	T	E	X	MtBE
		µg/L						
6/08/04	MW-1	**1,700**	**570**	<3.0	<3.0	<5.0	<5.0	**110**
	MW-2	<50	<50	<0.60	<0.60	<1.0	<1.0	**13**
	MW-3	**160,000**	**5,800**	**10,000**	**22,000**	**1,400**	**6,500**	<500**
	MW-4	<50	<50	<1.5	<1.5	<2.5	<2.5	**11**
	MW-5	<50	<50	<1.5	<1.5	<2.5	<2.5	**20**
	MW-6	<50	<50	<0.30	<0.30	<0.50	<0.50	**7.4**
	MW-7	<50	<50	<0.30	<0.30	<0.50	<0.50	**5.4**
	DW-6140	<50	<50	<0.30	<0.30	<0.50	<0.50	**7.9**
	DW-6100	<50	<50	<0.30	<0.30	<0.50	<0.50	<0.50

< = Less than the laboratory test method detection limit.
** = Elevated detection limit to account for matrix interference.

9/07/04	MW-1	**2,300**	**370***	<3.0	<3.0	<5.0	<5.0	**100**
	MW-2	<50	<50	<0.60	<0.60	<1.0	<1.0	**8.6**
	MW-3	**140,000**	**5,300***	**13,000**	**28,000**	**1,800**	**7,300**	**320**
	MW-4	<50	**89**	<0.30	<0.30	<0.50	<0.50	**220**
	MW-5	<50	<50	<0.30	<0.30	<0.50	<0.50	**19**
	MW-6	<50	<50	<0.30	<0.30	<0.50	<0.50	**2.6**
	MW-7	<50	<50	<0.30	<0.30	<0.50	<0.50	**+8.4**
	DW-6140	<50	<50	<0.30	<0.30	<0.50	<0.50	**7.1**
	DW-6100	<50	<50	<0.30	<0.30	<0.50	<0.50	<0.50

< = Less than the laboratory test method detection limit.
+ = 1,2-Dichloroethane (a lead scavenger) was detected at 3.5 µg/L.
* = Results in the diesel organics range are primarily due to overlap from a gasoline range product.
** = Elevated detection limit to account for matrix interference.

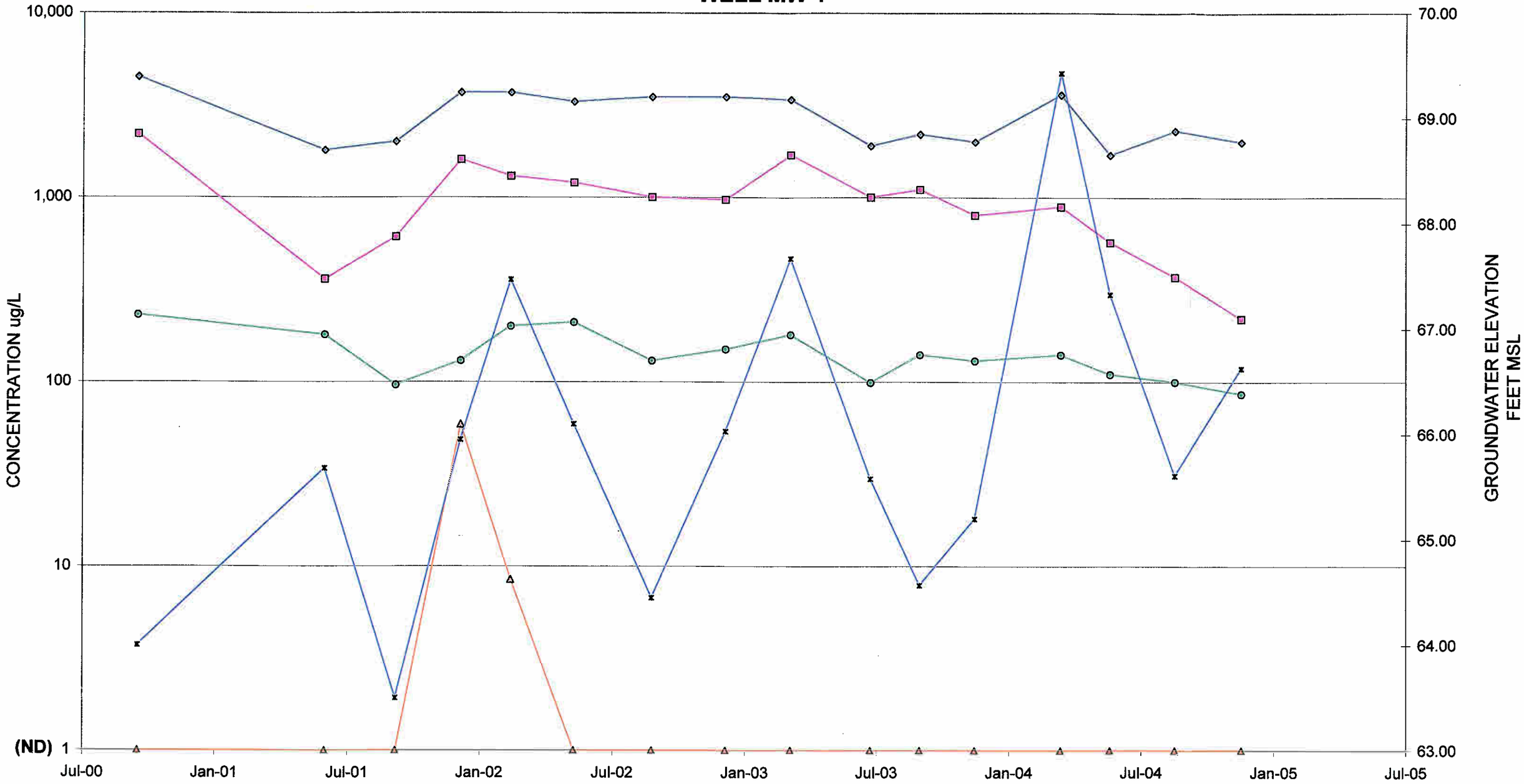
Appendix D: continued

Sample Date	Sample ID	TPH- g	TPH- d	B	T	E	X	MtBE
		µg/L						
12/09/04	MW-1**	**2,000**	**220***	<1.5	<1.5	<2.5	<2.5	**86**
	MW-2	<50	<50	<0.30	<0.30	<0.50	<0.50	**9.9**
	MW-3	----removed----						
	MW-4***	<250	<50	<1.5	<1.5	<2.5	<2.5	**86**
	MW-5	NS	NS	NS	NS	NS	NS	NS
	MW-6	<50	<50	<0.30	<0.30	<0.50	<0.50	**2.7**
	MW-7	NS	NS	NS	NS	NS	NS	NS
	DW-6140	NS	NS	NS	NS	NS	NS	NS
	DW-6100	<50	<50	<0.30	<0.30	<0.50	<0.50	<0.50

NS = not sampled.
< = less than the laboratory test method detection limit.
* = results in the diesel organics range are primarily due to overlap from a gasoline range product.
** = elevated detection limit to account for matrix interference.
*** = the reporting limits are elevated due to sample foaming.

APPENDIX E

TIME vs. CONCENTRATION GRAPH
PIPELINE EXCAVATORS 5715 SEBASTOPOPL ROAD, SEBASTOPOL
TTC Job No. 1301.01
WELL MW-1



ND=LESS THAN REPORTED DETECTION LIMIT
Note: results in the diesel range are primarily due to overlap from a gasoline range product (see laboratory reports).

DISTRIBUTION LIST
FOR
4TH QUARTER 2004 MONITORING REPORT

PIPELINE EXCAVATORS
5715 SEBASTOPOL ROAD
SEBASTOPOL, CALIFORNIA 95473

DATED FEBRUARY 10, 2005
JOB NO. 1301.01

Mr. Dale Radford
Sonoma County Department of Health Services
Environmental Health Division
3273 Airway Drive, Suite D
Santa Rosa, California 95403-2097

North Coast Regional Water
Quality Control Board
5550 Skylane Boulevard, Suite A
Santa Rosa, California 95403