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May 2, 2005

3347.01

Humboldt County Department of Health and Human Services
Division of Environmental Health
100 H Street, Suite 100
Eureka, California 95501

Attention: Mr. Bob Stone

Subject: Groundwater Monitoring Report; First Quarter 2005
Haberstock Construction Site (Former Eel River Disposal)
3651 Rohnerville Road, Fortuna, California
LOP No. 12219

Dear Mr. Stone:

LACO ASSOCIATES (LACO) presents the results of groundwater monitoring for the first quarter of 2005 at the Haberstock Construction Site. Please call or email if you have any questions or concerns.

Sincerely,
LACO ASSOCIATES

Todd B. Becker
Junior Geologist

Timothy D. Nelson
PG 7579, Exp. 5/31/05

PROFESSIONAL GEOLOGIST
TIMOTHY DOUGLAS NELSON
No. 7579
Exp. 05/31/05
STATE OF CALIFORNIA

TBB:lnm

Attachments

cc: Ray Haberstock, Haberstock Construction

P:\3000\3347 Haberstock Construction\Submittals\GMR\2005\3347.01_1q2005GMR.doc

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GROUNDWATER MONITORING REPORT FIRST QUARTER 2005

Haberstock Construction Site; Former Eel River Disposal; LOP No. 12219
3651 Rohnerville Road, Fortuna, California
LACO ASSOCIATES (LACO) Project No. 3347.01

Introduction

Field activities were conducted on March 18, 2005, in accordance with generally accepted practices. Please refer to Table A for the current groundwater monitoring regime and to the *Standard Operating Procedures* on file at your office for details. A location map and site map are included as Figure 1 and 2, respectively.

Site Chronology

- 1989: One 1000-gallon underground storage tank (UST) containing diesel fuel and one 1000-gallon UST containing gasoline were removed.
- 1993: Monitoring wells MW1 through MW3 were constructed.
- 1999: A Corrective Action Plan was submitted.
- 2001: Approximately 3000 cubic yards of contaminated soil were excavated
- 2001: Monitoring well MW1A was installed to replace monitoring well MW1 that was destroyed during overexcavation activities.

Table A: Sampling Event for March 18, 2005

MONITORING WELL ID	SCREENED INTERVAL (feet)	DTW (feet)	PURGE METHOD	WATER QUALITY PARAMETER	ANALYTICALS		SAMPLING SCHEDULE
					ORGANICS	INORGANICS	
MW1A	15-20	9.80	DHP	pH, T, ECw, ORP, DO	TPHg, TPHd, BTEX, MTBE, DIPE, ETBE, TAME, TBA	---	Quarterly
MW2	5-20	4.51					
MW3	5-15	5.79					

The Key to abbreviations is included as Attachment 1, and the field sampling data sheets are included as Attachment 2.

Hydraulic Gradient and Hydrogeology

The hydraulic gradient was calculated with the hydraulic head data from March 18, 2005, using the three-point method. The hydraulic gradient, as determined by the area defined by monitoring wells MW1A, MW2, and MW3, was S36°W at 4.9 percent. The hydraulic gradient at this site, in general, fluctuates according to seasonal changes in groundwater elevations. The wet-season hydraulic gradients have a greater slope with flow directed toward the southwest, while the dry-

season hydraulic gradients have a lesser slope with flow directed toward the northwest. The hydraulic gradient calculated for March 18, 2005, is consistent with historical wet-season hydraulic gradients calculated for this site. The hydraulic gradient and potentiometric surface for the March 18, 2005, quarterly sampling event are presented as Figure 3. Historical depth-to-water measurements are included in Table 1, and historical hydraulic gradients are presented in Table 2.

Laboratory Results

Laboratory analytical results from the current sampling event are summarized in Table B, included below. Historical laboratory analytical results are summarized in Table 1, and the current laboratory report is included as Attachment 3. Figure 4 presents analyte concentrations in groundwater for the current sampling event.

Table B: Laboratory Analytical Results for March 18, 2005

Well	TPHg (µg/L)	TPHd (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW1A	ND<50	ND<50	**0.83**	ND<0.50	ND<0.50	ND<0.50	ND<1.0
MW2	ND <50	ND <50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <1.0
MW3	ND <50	ND <50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	**2.0**

Discussion of Quarterly Results

Analyte concentrations reported for the current sampling event generally fall within the range of analyte concentrations reported for recent sampling events. All analyte concentrations in samples from monitoring well MW2 have been reported below the standard laboratory detection limits since the first quarter of 2004. Monitoring well MW3 continues to be reported below standard detection limits for all analytes tested excluding methyl tertiary butyl ether (MTBE) since August 1997; however, MTBE concentrations have been reported below the water quality objective (WQO) of 13 µg/L for all these sampling events. Monitoring well MW1A has been reported below standard detection limits for all analytes tested excluding benzene for the last two quarterly sampling events. Benzene concentrations reported for monitoring well MW1A during the last two sampling events are below the WQO of 1.0 µg/L.

Recommendations

- LACO recommends discontinuing the sampling of monitoring wells MW2 and MW3; however, depth-to-water measurements will be collected during quarterly monitoring.
- The next quarterly sampling event is scheduled for June 2005.

List of Figures, Tables, and Attachments

Figure 1: Location Map

Figure 2: Site Map

Figure 3: Hydraulic Gradient Map (March 18, 2005)

Figure 4: Analyte Concentrations in Groundwater (March 18, 2005)

Table 1: Well Data and Groundwater Analytical Results

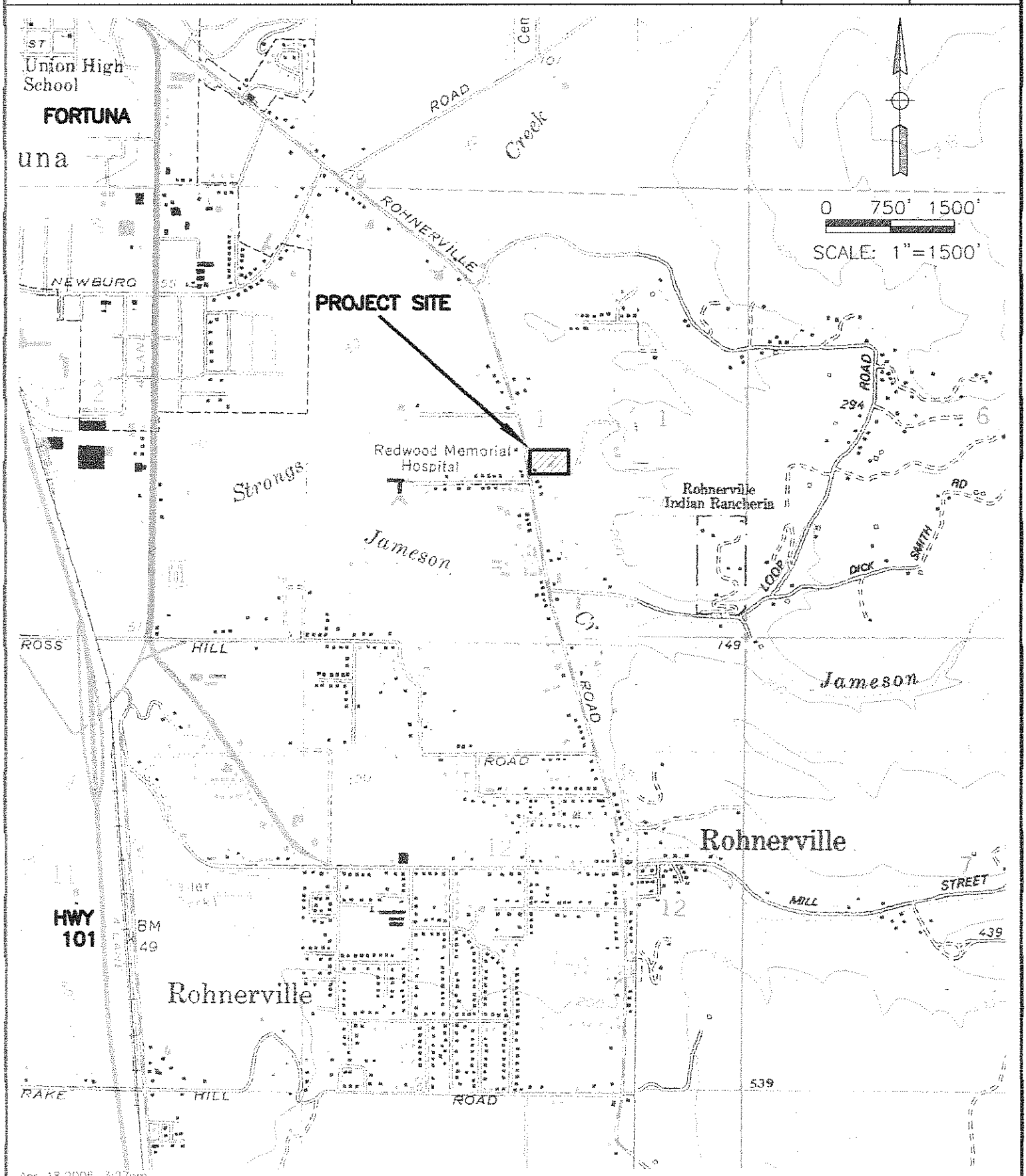
Table 2: Historical Hydraulic Gradient Data

Attachment 1: Key to Abbreviations

Attachment 2: Groundwater Sampling: Field Data Sheets

Attachment 3: Laboratory Analytical Reports

LACO ASSOCIATES CONSULTING ENGINEERS 21 W 4TH ST. EUREKA, CA 95501 (707)443-5054	PROJECT GROUNDWATER MONITORING REPORT	BY BAB	FIGURE 1
	CLIENT HABERSTOCK CONSTRUCTION	DATE 4/18/05	
	LOCATION ROHNERVILLE ROAD, FORTUNA, CA	CHECK	JOB NO. 3347.01
	LOCATION MAP	SCALE 1"=1500'	



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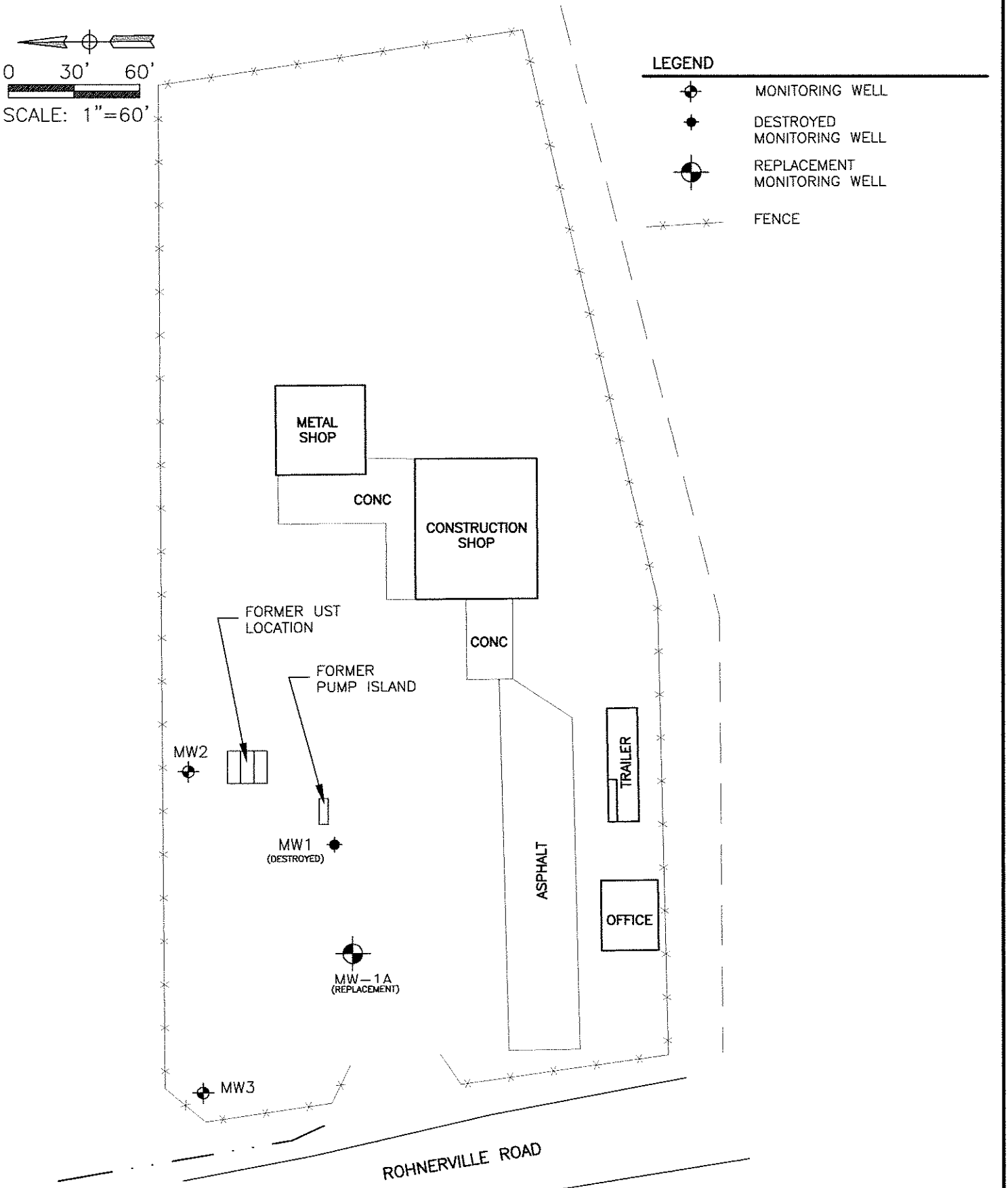
LACO ASSOCIATES CONSULTING ENGINEERS 21 W 4TH ST. EUREKA, CA 95501 (707)443-5054	PROJECT GROUNDWATER MONITORING REPORT	BY RJM	FIGURE 2
	CLIENT HABERSTOCK CONSTRUCTION	DATE 4/18/05	
	LOCATION ROHNERVILLE ROAD, FORTUNA	CHECK	JOB NO. 3347.01
	SITE MAP	SCALE 1"=60'	



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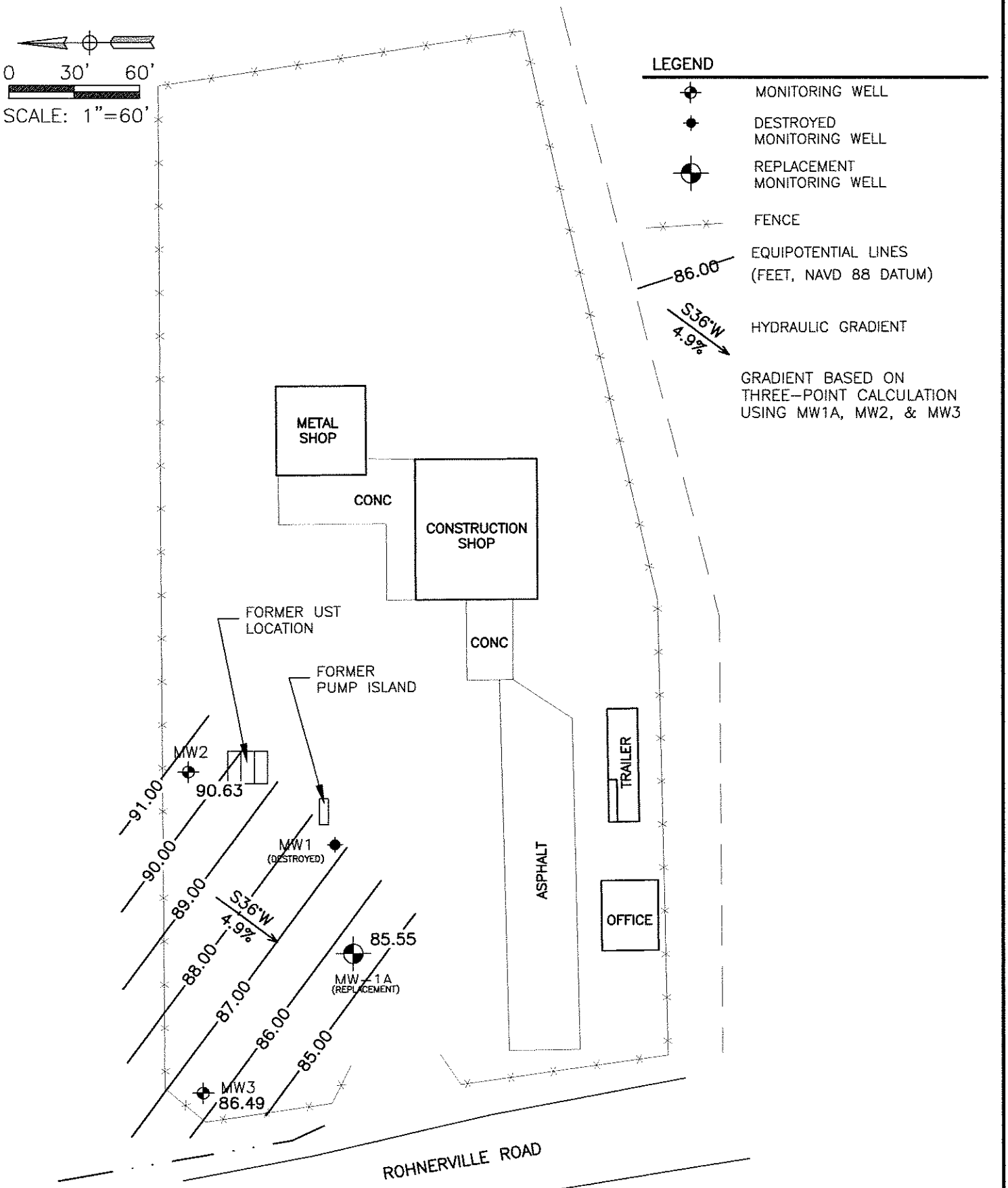
LACO ASSOCIATES CONSULTING ENGINEERS 21 W 4TH ST. EUREKA, CA 95501 (707)443-5054	PROJECT GROUNDWATER MONITORING REPORT	BY RJM	FIGURE 3
	CLIENT HABERSTOCK CONSTRUCTION	DATE 4/18/05	
	LOCATION ROHNERVILLE ROAD, FORTUNA	CHECK	JOB NO. 3347.01
	HYDRAULIC GRADIENT MAP (3/18/05)	SCALE 1"=60'	



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LACO ASSOCIATES CONSULTING ENGINEERS 21 W 4TH ST. EUREKA, CA 95501 (707)443-5054	PROJECT GROUNDWATER MONITORING REPORT	BY RJM	FIGURE 4
	CLIENT HABERSTOCK CONSTRUCTION	DATE 3/17/05	
	LOCATION ROHNERVILLE ROAD, FORTUNA	CHECK	JOB NO. 3347.01
	ANALYTE CONCENTRATIONS IN GROUNDWATER (3/18/05)	SCALE 1"=60'	

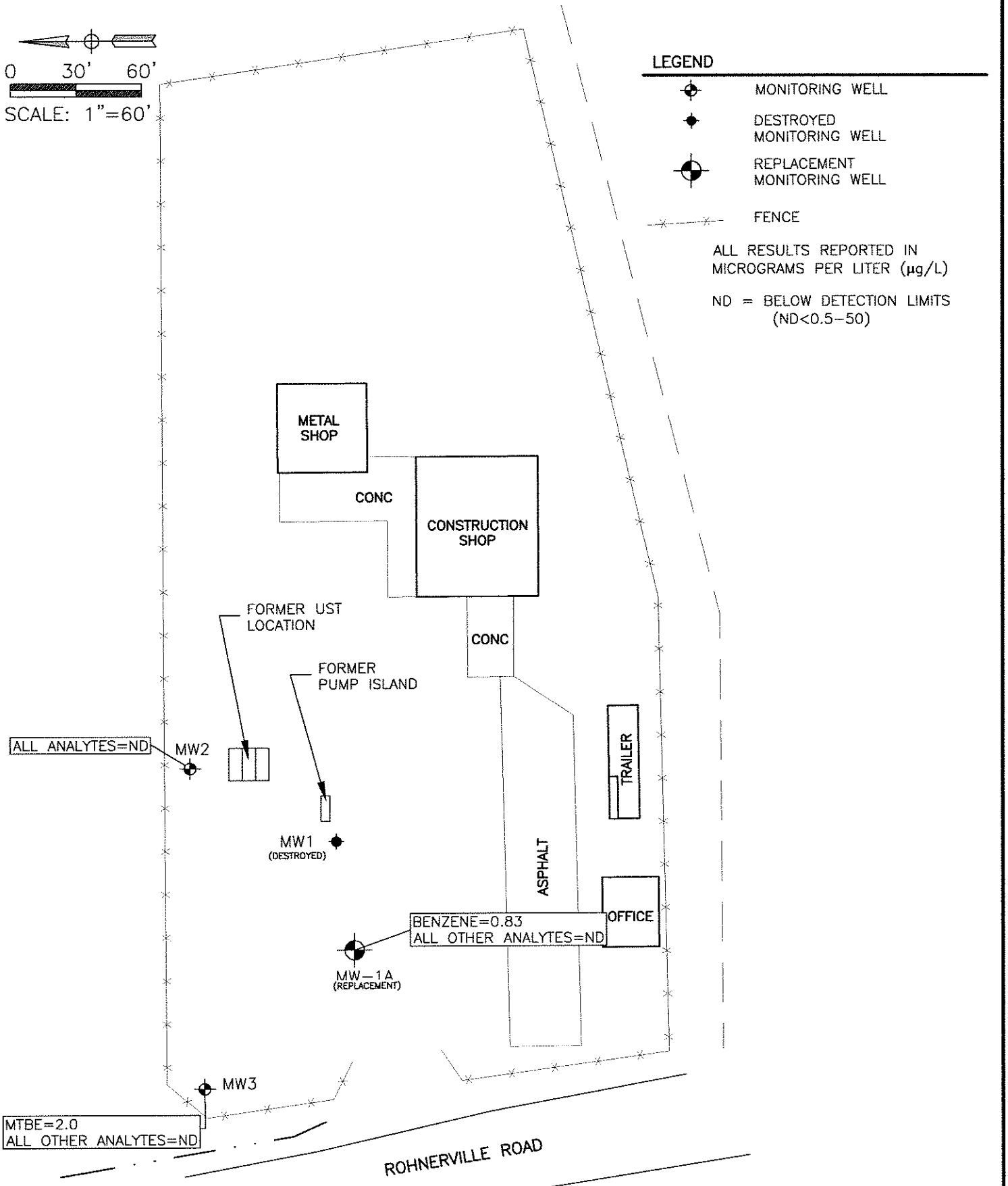

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TABLE 1: WELL DATA AND GROUNDWATER ANALYTICAL RESULTS
Haberstock Construction; LOP No. 12219
3661 Rhonerville Road, Fortuna
LACO Project No. 3347.01

Well/ Sample Date	Well Head Elevation (feet msl)	Groundwater Measurements: Groundwater Elevation	Depth to Water (feet)	Free Product Thickness (feet)	Analytical Results: TPHg (µg/L)	TPHd (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Other Analytes (µg/L)
MW1												
9/17/1993	95.35	83.51	11.84	----	9,900	ND <50	1,200	1,400	170	1,070	----	----
10/13/1993		83.22	12.13	----	----	----	----	----	----	----	----	----
11/11/1993		82.61	12.74	----	----	----	----	----	----	----	----	----
12/21/1993		84.33	11.02	----	12,000	92	2,000	2,300	160	1,160	----	----
1/12/1994		85.02	10.33	----	----	----	----	----	----	----	----	----
2/24/1994		86.77	8.58	----	----	----	----	----	----	----	----	----
3/28/1994		86.56	8.79	----	16,000	230	3,000	3,000	320	1,790	----	----
11/30/1994		83.99	11.36	----	----	----	----	----	----	----	----	----
11/29/1995		83.85	11.50	----	12,000	120	1,600	1,300	290	1,380	ND <1,000	----
12/27/1995		84.67	10.68	----	----	----	----	----	----	----	----	----
1/19/1996		86.63	8.72	----	----	----	----	----	----	----	----	----
3/1/1996		87.62	7.73	----	14,000	250	1,500	1,100	370	1,560	ND <250	----
3/27/1996		87.07	8.28	----	----	----	----	----	----	----	----	----
5/7/1996		87.35	8.00	----	----	----	----	----	----	----	----	----
6/10/1996		86.23	9.12	----	21,000	1,100	2,900	2,300	730	2,840	ND <2,500	----
8/1/1996		84.50	10.85	----	----	----	----	----	----	----	----	----
8/20/1996		83.41	11.94	----	20,000	710	2,700	2,200	390	1,860	ND <500	----
9/30/1996		83.41	11.94	----	----	----	----	----	----	----	----	----
10/10/1996		82.95	12.40	0.06	----	----	----	----	----	----	----	----
3/28/1997		87.26	8.09	0.02	----	----	----	----	----	----	----	----
4/23/1997		87.24	8.11	0.11	----	----	----	----	----	----	----	----
5/9/1997		86.91	8.44	0.26	----	----	----	----	----	----	----	----
6/23/1997		84.61	10.74	0.64	----	----	----	----	----	----	----	----
7/17/1997		82.78	12.57	1.03	----	----	----	----	----	----	----	----
8/21/1997		82.75	12.60	1.32			Free product, well not sampled					----
12/11/1997		84.75	10.60	1.10			Free product, well not sampled					----
2/23/1998		88.25	7.10	0.57			Free product, well not sampled					----
5/26/1998		86.52	8.83	1.26			Free product, well not sampled					----
8/25/1998		82.32	13.03	2.99			Free product, well not sampled					----
10/22/1998		80.65	14.70	3.35	----	----	----	----	----	----	----	----
2/4/1999		87.15	8.20	----	39,000	6,000	1,700	2,900	710	4,500	ND <500	----
7/29/1999		----	----	----			Well inaccessible, not sampled					----
2/29/2000		86.71	8.64	1.47			Free product, well not sampled					----
7/19/2000		82.77	12.58	2.35			Free product, well not sampled					----
11/20/2000				**Monitoring Well MW-1 Destroyed, Over-Excavation of UST Cavity**								
MW1A												
5/22/2001		87.41	7.94	----	4,100	590	460	150	42	490	ND<30	----
				Well inaccessible, no samples from June 2001 to April 2003								
5/15/2003		90.56	4.79	----	590	120	160	1.8	10	4.55	4.9	----
9/9/2003		NA	NA	----	330	63	37	0.72	3.9	3.49	ND<3.0	ND<1.0-20
12/15/2003		88.07	7.28	----	150	86	11	ND<0.50	2.0	2.2	ND<1.0	ND<1.0-20
3/19/2004		88.34	7.01	----	ND<50	ND<50	4.9	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<1.0-10
6/25/2004		86.16	9.19	----	85	ND<50	4.6	ND<0.50	0.99	1.1	ND<1.0	ND<1.0-10
9/7/2004		83.99	11.36	----	ND<50	ND<50	2.1	ND<0.50	0.55	0.87	ND<1.0	ND<1.0-10
12/22/2004		84.74	10.61	----	ND<50	ND<50	0.71	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<1.0-10
3/18/2005		85.55	9.80	----	ND<50	ND<50	0.83	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<1.0-10

TABLE 1: WELL DATA AND GROUNDWATER ANALYTICAL RESULTS
Haberstock Construction; LOP No. 12219
3661 Rhonerville Road, Fortuna
LACO Project No. 3347.01

		Groundwater Measurements			Analytical Results							
Well/ Sample Date	Well Head Elevation (feet msl)	Groundwater Elevation	Depth to Water (feet)	Free Product Thickness (feet)	TPHg (µg/L)	TPHd (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Other Analytes (µg/L)
MW2												
9/17/1993	95.14	84.27	10.87	0.01	230,000	27,000	230	920	2,200	11,700	----	----
10/13/1993		83.83	11.31	0.09	----	----	----	----	----	----	----	----
11/11/1993		83.35	11.79	0.11	----	----	----	----	----	----	----	----
12/21/1993		89.11	6.03	----	140,000	6,500	ND <500	ND <500	1700	7900	----	----
1/12/1994		89.86	5.28	----	----	----	----	----	----	----	----	----
2/24/1994		91.93	3.21	----	----	----	----	----	----	----	----	----
3/28/1994		90.49	4.65	----	16,000	2,800	96	190	190	950	----	----
11/30/1994		88.06	7.08	----	----	----	----	----	----	----	----	----
11/29/1995		83.81	11.33	----	5,900	990	28	47	52	200	ND <100	----
12/27/1995		87.74	7.40	----	----	----	----	----	----	----	----	----
1/19/1996		94.70	0.44	----	----	----	----	----	----	----	----	----
3/1/1996		93.46	1.68	----	ND <50	ND <50	ND <0.5	0.52	ND <0.5	ND <0.5	ND <5.0	----
3/27/1996		91.72	3.42	----	----	----	----	----	----	----	----	----
5/7/1996		88.36	6.78	----	----	----	----	----	----	----	----	----
6/10/1996		87.10	8.04	----	180	160	ND <0.5	ND <0.5	0.60	1.22	ND <5.0	----
8/1/1996		85.20	9.94	----	----	----	----	----	----	----	----	----
8/20/1996		84.70	10.44	----	370	720	1.4	4.3	2.8	11.1	ND <5.0	----
9/30/1996		84.16	10.98	----	----	----	----	----	----	----	----	----
10/10/1996		83.66	11.48	----	----	----	----	----	----	----	----	----
3/28/1997		88.19	6.95	----	----	----	----	----	----	----	----	----
4/23/1997		92.74	2.40	----	----	----	----	----	----	----	----	----
5/9/1997		88.28	6.86	----	----	----	----	----	----	----	----	----
6/23/1997		86.10	9.04	----	----	----	----	----	----	----	----	----
7/17/1997		85.43	9.71	----	----	----	----	----	----	----	----	----
8/21/1997		84.49	10.65	----	1,100	530	ND <0.5	ND <1.8	0.64	34.7	ND <5.0	----
12/11/1997		92.26	2.88	----	900	870	ND <0.5	ND <2.0	0.91	19.0	ND <5.0	----
2/23/1998		94.00	1.14	----	ND <50	660	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <5.0	----
5/26/1998		91.23	3.91	----	210	220	ND <0.5	ND <0.5	ND <0.5	3.6	ND <5.0	----
8/25/1998		85.34	9.80	----	160	100	ND <0.5	ND <0.5	ND <0.5	2.0	ND <5.0	----
10/22/1998		----	----	----	----	----	----	----	----	----	----	----
2/4/1999		91.59	3.55	----	140	110	ND <0.5	ND <0.5	ND <0.5	1.3	ND <5.0	----
7/29/1999		85.37	9.77	----	66	ND <50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND<3.0	----
2/29/2000		94.32	0.82	----	ND <50	ND <50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND<3.0	----
7/19/2000		85.38	9.76	----	ND <50	66	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND<3.0	----
11/20/2000					**Over-Excavation of UST Cavity**							
5/22/2001		89.62	5.52	----	130	ND <50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND<3.0	----
					Well inaccessible, no samples from June 2001 to April 2003							
5/15/2003		90.99	4.15	----	ND <50	ND <50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <1.0	----
9/9/2003		85.30	9.84	----	80	ND <50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <1.0	ND<1.0-20
12/15/2003		93.08	2.06	----	ND <50	54	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <1.0	ND<1.0-20
3/19/2004		90.38	4.76	----	ND <50	ND <50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <1.0	ND<1.0-10
6/25/2004		86.65	8.49	----	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND<1.0-10
9/7/2004		84.46	10.68	----	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND<1.0-10
12/22/2004		90.19	4.95	----	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND<1.0-10
3/18/2005		90.63	4.51	----	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND<1.0-10

TABLE 1: WELL DATA AND GROUNDWATER ANALYTICAL RESULTS
Haberstock Construction; LOP No. 12219
3661 Rhonerville Road, Fortuna
LACO Project No. 3347.01

		Groundwater Measurements			Analytical Results							
Well/ Sample Date	Well Head Elevation (feet msl)	Groundwater Elevation	Depth to Water (feet)	Free Product Thickness (feet)	TPHg (µg/L)	TPHd (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Other Analytes (µg/L)
MW3												
9/17/1993	**92.28**	**83.45**	**8.83**	----	ND <50	ND <50	**0.9**	**4.9**	**0.6**	**4.1**	----	----
10/13/1993		**83.30**	**8.98**	----	----	----	----	----	----	----	----	----
11/11/1993		**82.73**	**9.55**	----	----	----	----	----	----	----	----	----
12/21/1993		**84.59**	**7.69**	----	ND <50	ND <50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	----	----
1/12/1994		**85.06**	**7.22**	----	----	----	----	----	----	----	----	----
2/24/1994		**86.25**	**6.03**	----	----	----	----	----	----	----	----	----
3/28/1994		**86.17**	**6.11**	----	ND <50	ND <50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	----	----
11/30/1994		**84.26**	**8.02**	----	----	----	----	----	----	----	----	----
11/29/1995		**83.10**	**9.18**	----	ND <50	ND <50	ND <0.5	ND <0.5	ND <0.5	**0.53**	ND <5.0	----
12/27/1995		**84.72**	**7.56**	----	----	----	----	----	----	----	----	----
1/19/1996		**86.42**	**5.86**	----	----	----	----	----	----	----	----	----
3/1/1996		**87.02**	**5.26**	----	ND <50	ND <50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <5.0	----
3/27/1996		**86.28**	**6.00**	----	----	----	----	----	----	----	----	----
5/7/1996		**86.38**	**5.90**	----	----	----	----	----	----	----	----	----
6/10/1996		**85.56**	**6.72**	----	ND <50	ND <50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <5.0	----
8/1/1996		**84.24**	**8.04**	----	----	----	----	----	----	----	----	----
8/20/1996		**83.36**	**8.92**	----	ND <50	ND <50	ND <0.5	ND <0.5	ND <0.5	**0.58**	ND <5.0	----
9/30/1996		**83.46**	**8.82**	----	----	----	----	----	----	----	----	----
10/10/1996		**83.02**	**9.26**	----	----	----	----	----	----	----	----	----
3/28/1997		**86.32**	**5.96**	----	----	----	----	----	----	----	----	----
4/23/1997		**86.63**	**5.65**	----	----	----	----	----	----	----	----	----
5/9/1997		**86.31**	**5.97**	----	----	----	----	----	----	----	----	----
6/23/1997		**84.85**	**7.43**	----	----	----	----	----	----	----	----	----
7/17/1997		**84.39**	**7.89**	----	----	----	----	----	----	----	----	----
8/21/1997		**83.73**	**8.55**	----	ND <50	ND <50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <5.0	----
12/11/1997		**85.59**	**6.69**	----	ND <50	ND <50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	**5.4**	----
2/23/1998		**86.87**	**5.41**	----	ND <50	ND <50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <5.0	----
5/26/1998		**86.37**	**5.91**	----	ND <50	ND <50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <5.0	----
8/25/1998		**84.38**	**7.90**	----	ND <50	ND <50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <5.0	----
10/22/1998		----	----	----	----	----	----	----	----	----	----	----
2/4/1999		**85.48**	**6.80**	----	ND <50	ND <50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <5.0	----
7/29/1999		**84.39**	**7.89**	----	ND <50	ND <50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND<3.0	----
2/29/2000		**87.25**	**5.03**	----	ND <50	ND <50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND<3.0	----
7/19/2000		**84.60**	**7.68**	----	ND <50	ND <50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND<3.0	----
11/20/2000					**Over-Excavation of UST Cavity**							
5/22/2001		**85.74**	**6.54**	----	ND <50	ND <50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	**8.4**	----
					Well inaccessible, no samples from June 2001 to April 2003							
5/15/2003		**87.62**	**4.66**	----	ND <50	ND <50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	**1.3**	----
9/9/2003		**84.51**	**7.77**	----	ND <50	ND <50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	**1.9**	ND<1.0-20
12/15/2003		**86.49**	**5.79**	----	ND <50	ND <50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	**4.9**	ND<1.0-20
3/19/2004		**86.80**	**5.48**	----	ND <50	ND <50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	**1.1**	ND<1.0-10
6/25/2004		**85.11**	**7.17**	----	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	**1.5**	ND<1.0-10
9/7/2004		**83.65**	**8.63**	----	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	**2.0**	ND<1.0-10
12/22/2004		**85.04**	**7.24**	----	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	**1.4**	ND<1.0-10
3/18/2005		**86.49**	**5.79**	----	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	**2.0**	ND<1.0-10

TABLE 1: WELL DATA AND GROUNDWATER ANALYTICAL RESULTS
Haberstock Construction; LOP No. 12219
3661 Rhonerville Road, Fortuna
LACO Project No. 3347.01

	Groundwater Measurements				Analytical Results							
Well/ Sample Date	Well Head Elevation (feet msl)	Groundwater Elevation	Depth to Water (feet)	Free Product Thickness (feet)	TPHg (µg/L)	TPHd (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Other Analytes (µg/L)

NOTES:

All results reported in µg/L = micrograms per liter
TPHg = total petroleum hydrocarbons as gasoline
TPHd - total petroleum hydrocarbons as diesel
TPHmo - total petroleum hydrocarbons as motor oil
The reported xylenes concentration is a total of m,p-xylene and o-xylene
Other Anlaytes include the Fuel Oxyenates:
MTBE = methyl tertiary butyl ether
DIPE = di-isopropyl ether
ETBE = ethyl tertiary butyl ether
TBA = tertiary butyl alcohol
TAME = tertiary amyl methyl ether
ND<50 = non-detect at the reporting limits shown
Bold results indicate analyte detection

Elevations set 4/16/2003. Reference B.M. - NGS - Cal-Trans HPGN monument "D CA 01 PA" State Hwy 211 @ mile post 74.26 (easterly side of Ferndale City limits).
Elevation Datum - NAVD 88
Groundwater Elevation = Well Head Elevation - Depth to water
All samples submitted for a silica gel sleanup were initailly analyzed for diesel/motor oil.
The samples showing no detectable levels of the analytes were not subfectd to the cleanup procedure.
All gasoline results reported represent the amount of material in the gasoline range of molecular weights only.

TABLE 2: HISTORICAL HYDRAULIC GRADIENTS
Haberstock Construction; LOP No. 12219
3651 Rohnerville Road, Fortuna
LACO No. 3347.01

Year	Month	Bearing	Gradient Slope
1996	AUGUST	N40°W	1.50%
1996	AUGUST	N60°W	1.20%
1996	SEPTEMBER	N35°W	1.30%
1996	OCTOBER	N30°W	1.40%
1997	MARCH	N55°W	1.90%
1997	APRIL	S45°W	5.20%
1997	MAY	N60°W	1.70%
1997	JUNE	N50°W	1.40%
1997	JULY	S85°W	0.70%
1997	AUGUST	N35°W	1.40%
1997	DECEMBER	S40°W	6.30%
1998	FEBRUARY	N27°W	5.70%
1998	FEBRUARY	N02°W	0.80%
1998	MAY	N99°W	3.56%
1998	AUGUST	N37°W	1.50%
1999	FEBRUARY	S60°W	4.62%
1999	JULY	N/A	N/A
2000	FEBRUARY	N50°W	5.94%
2000	JULY	N26°E	1.10%
2001	MAY	N53°W	4.00%
2003	MAY	N49°W	3.14%
2003	SEPTEMBER	N/A	N/A
2003	DECEMBER	S65°W	4.51%
2004	MARCH	S89°W	2.40%
2004	JUNE	N61°W	1.20%
2004	SEPTEMBER	N90°W	0.55%
2004	DECEMBER	S47°W	4.60%
2005	MARCH	S36°W	4.9%

Attachment 1

KEY TO ABBREVIATIONS
Haberstock Construction; LOP No. 12219
361 Rohnerville Road, Fortuna
LACO Project No. 3347.01

KEY TO ABBREVIATIONS	
Alk	-- Alkalinity
As	-- Arsenic
BTEX	-- Benzene; Toluene; Ethylbenzene; m,p- and o- Xylenes
Cl	-- Chloride
CO_2	-- Carbon dioxide
COC	-- Chain of custody
Cr	-- Chromium
DHP	-- Down-hole-pump (submersible pump)
DIPE	-- Di-isopropyl Ether
Dis	-- Dissolved
DO	-- Dissolved Oxygen; accuracy range of the DO meter is ± 0.3 mg/L
DTW	-- Depth-to-Water
ECw	-- Electrical Conductivity in water; accuracy range of the ECw meter is ± 20 µmohs
ETBE	-- Ethyl Tertiary Butyl Ether
Fe	-- Iron
FP	-- Free Product
Mn	-- Manganese
MTBE	-- Methyl Tertiary Butyl Ether
N	-- Nitrogen
ND<50	-- non-detect at reporting limits shown
NO_3	-- Nitrate
NOT ACTIVE	-- Sample not analyzed for parameter during current sampling event
ORP	-- Oxidation Reduction Potential; accuracy range of the ORP meter is ± 2 mV
P	-- Phosphorous
PCP/TCP	-- penta- tetra- tri- chlorophenols
pH	-- Potential of hydrogen; accuracy range of the pH meter is ± 0.2 pH
SGC	-- Silica gel cleanup
SO_4	-- Sulfate
T	-- Temperature; accuracy range of the temperature meter is ± 0.5 °C
T&P	-- Tape and Paste
TAME	-- Tertiary Amyl Methyl Ether
TBA	-- Tetiary Butyl Alcohol
TBF	-- Tertiary Butyl Formate
TIC	-- Total Inorganic Carbon
TOC	-- Total Organic Carbon
Tot	-- Total
TPHd	-- Total Petroluem Hydrocarbons as Diesel
TPHg	-- Total Petroluem Hydrocarbons as Gasoline
TPHk	-- Total Petroluem Hydrocarbons as Kerosene
TPHmo	-- Total Petroluem Hydrocarbons as Motor Oil
TPHs	-- Total Petroluem Hydrocarbons as Solvent
µg/L	-- Micro grams per liter (parts per billion)
---	-- Not Analyzed for parameter

Attachment 2

LACO ASSOCIATES
CONSULTING ENGINEERS
21 West Fourth Street, Eureka, CA 95501
TEL 707.443.5054
FAX 707.443.0553

Project Name: Haberstock
Project No.: 3347.01
Date: 3-18-05
Golbal ID No.: T0602300163
PM: TDN/VTS

Tech: SJD
Mob/Demob time: .25/.25
Travel time: .75
Time on site: 8:40 / 10:55
Time off site: 8:55 / 1:35
Mileage: 22

WELL No.:	MW1A		MW2		MW3					
DIAMETER (in)	2.00		4.00		4.00					
SCREENED INTERVAL (ft)	15-20		5-20		5-15					
DEPTH TO WATER (ft)	9.80		4.51		5.79					
	INITIAL	FINAL	INITIAL	FINAL	INITIAL	FINAL	INITIAL	FINAL	INITIAL	FINAL
DEPTH MEASUREMENTS ARE REFERENCED TO TOP OF CASING — FIELD INTRINSICS: pH	6.7	6.4	5.8	5.5	6.3	6.2				
TEMP (°C)	17.0	17.0	16.4	16.1	17.5	15.6				
Ecw (µmohs)	240	234	193	194	225	233				
ORP (mV)	118	61	131	150	143	109				
DO (mg/L)	1.14	0.54	1.92	0.46	2.84	1.51				
OTHER (units)	—		—		—					
PURGE: TIME	11:01	11:11	11:55	12:03	12:31	12:41				
METHOD (DHP/CB/B)	DHP		DHP		DHP					
RATE (Lpm)	0.19		0.19		0.19					
VOLUME (L)	1.90		1.50		1.90					
COLOR	CLEAR	CLOUDY	CLEAR	CLOUDY	CLEAR	CLEAR				
ODOR	SLIGHT SULFUR / RUBBER		NONE		NONE					
INTAKE DEPTH (FEET)	17.0		13.0		10.0					
SAMPLE: TIME	11:12		12:04		12:42					
METHOD (DHP/CB/B)	DHP		DHP		DHP					
ANALYTES	8260 List 1; TPHd w/SGC		8260 List 1; TPHd w/SGC		8260 List 1; TPHd w/SGC					
TOTAL DRAWDOWN (FEET)	3.16		0.26		0.33					
REMARKS	—		—		—					
WELL CONDITION	good		good		good					
WASTE DRUMS										

DHP=DOWN HOLE PUMP CB=CHECK BALL B=BAILER FD=FIELD DUPLICATE MB=METHOD BLANK FF=FIELD FILTERED

CONSULTING ENGINEERS
TEL 707.443.5054
FAX 707.443.0553

Project Name: HABERSTOCK
Project No.: 3347.01

Tech: SJD
Date: 3-18-05

METER ACCURACY RANGE

	+/- 0.2 pH	+/- 0.5 °C	+/- 20 µmohs	+/- 2 mv	+/- 0.3 mg/L

WELL ID: MW2

TIME	pH	TEMP (°C)	Ecw (µmohs)	ORP (mV)	DO (mg/L)
11:57	5.6	16.6	193	137	0.87
11:59	5.5	16.6	193	146	0.61
12:01	5.5	16.4	194	149	0.52
12:03	5.5	16.1	194	150	0.46

WELL ID: MW3

TIME	pH	TEMP (°C)	Ecw (µmohs)	ORP (mV)	DO (mg/L)
12:33	6.2	16.6	234	125	2.27
12:35	6.2	15.7	236	116	1.87
12:37	6.2	15.6	233	111	1.76
12:39	6.2	15.6	233	109	1.57
12:41	6.2	15.6	233	109	1.51

WELL ID: MW1A

TIME	pH	TEMP (°C)	Ecw (µmohs)	ORP (mV)	DO (mg/L)
:03	6.4	17.1	237	74	0.95
:05	6.4	17.2	236	58	0.71
:07	6.4	17.0	236	60	0.59
:09	6.4	16.8	236	62	0.50
:11	6.4	17.0	234	61	0.54

WELL ID:

TIME	pH	TEMP (°C)	Ecw (µmohs)	ORP (mV)	DO (mg/L)

WELL ID:

TIME	pH	TEMP (°C)	Ecw (µmohs)	ORP (mV)	DO (mg/L)

WELL ID:

TIME	pH	TEMP (°C)	Ecw (µmohs)	ORP (mV)	DO (mg/L)

LACO ASSOCIATES
CONSULTING.ENGINEERS
21 West Fourth Street, Eureka, CA 95501
TEL 707.443.5054
FAX 707.443.0553

Project Name: HABERSTOCK
Project No.: 3347.01
Tech: SJD
Date: 3-15-05

WELL ID: MW1A		WELL ID: MW2		WELL ID: MW3		WELL ID:		WELL ID:		WELL ID:	
TIME	DTW (ft)	TIME	DTW (ft)	TIME	DTW (ft)	TIME	DTW (ft)	TIME	DTW (ft)	TIME	DTW (ft)
1:00	10.57	11:06	4.46	11:03	5.91						
:10	10.45	11:16	4.48	11:13	5.85						
:20	10.31	11:26	4.50	11:23	5.82						
:30	10.19	11:36	4.51	11:33	5.79						
.40	10.07	11:46	4.51	11:43	5.79						
:50	10.01										
:14	9.83										
:24	9.80										
2:55	9.80										

ELL ID:		WELL ID:		WELL ID:		WELL ID:		WELL ID:		WELL ID:	
TIME	DTW (ft)	TIME	DTW (ft)	TIME	DTW (ft)	TIME	DTW (ft)	TIME	DTW (ft)	TIME	DTW (ft)

LL ID:		WELL ID:		WELL ID:		WELL ID:		WELL ID:		WELL ID:	
IME	DTW (ft)	TIME	DTW (ft)	TIME	DTW (ft)	TIME	DTW (ft)	TIME	DTW (ft)	TIME	DTW (ft)

NORTH COAST LABORATORIES LTD.
5680 West End Road • Arcata • CA 95521-9202
707-822-4649 Fax 707-822-6831

Chain of Custody

LABORATORY NUMBER:

Attention: Ray Haberstock
Results & Invoice to: Haberstock Const.
Address: 3651 Rohnerville Rd., Fortuna 95540

Phone: 707-725-6138
Copies of Report to: Tim Nelson-LACO

Sampler (Sign & Print): SJD

TAT: ✔ 24 Hr ☐ 48 Hr ☐ 5 Day ☐ 5–7 Day
☐ STD (2–3 Wk) ☐ Other:
PRIOR AUTHORIZATION IS REQUIRED FOR RUSHES

REPORTING REQUIREMENTS: State Forms ☐
Preliminary: FAX ✔ Verbal ☐ By:
Final Report: FAX ☐ Verbal ☐ By:

CONTAINER CODES: 1—½ gal. pl; 2—250 ml pl; 3—500 ml pl; 4—1 L Nalgene; 5—250 ml BG; 6—500 ml BG; 7—1 L BG; 8—1 L cg; 9—40 ml VOA; 10—125 ml VOA; 11—4 oz glass jar; 12—8 oz glass jar; 13—brass tube; 14—other

PRESERVATIVE CODES: a—HNO_3; b—HCl; c—H_2SO_4; d—$Na_2S_2O_3$; e—NaOH; f—$C_2H_3O_2Cl$; g—other

PROJECT INFORMATION

Project Number: 3347.01
Project Name: Haberstock
Purchase Order Number: TASK 3020

LAB ID	SAMPLE ID	DATE	TIME	MATRIX*	ANALYSIS: 8260 List 1 (CONTAINER 9, PRESERVATIVE b)	ANALYSIS: TPHd w/SGC (CONTAINER 7, PRESERVATIVE 1)	SAMPLE CONDITION/SPECIAL INSTRUCTIONS
	3347-MW1A-W	3-18-05	pm	GW	3	1	GEOTRACKER
	3347-MW2-W	↓	↓	↓	3	1	
	3347-MW3-W				3	1	
	3347-QCTB-W				1		

RELINQUISHED BY (Sign & Print)	DATE/TIME	RECEIVED BY (Sign)	DATE/TIME

SAMPLE DISPOSAL
☐ NCL Disposal of Non-Contaminated
☐ Return ☐ Pickup

CHAIN OF CUSTODY SEALS Y/N/NA
SHIPPED VIA: UPS Air-Ex Fed-Ex Bus Hand

***MATRIX:** DW=Drinking Water; Eff=Effluent; Inf=Influent; SW=Surface Water; GW=Ground Water; S=Soil; O=Other.

ALL CONTAMINATED NON-AQUEOUS SAMPLES WILL BE RETURNED TO CLIENT

Attachment 3

NORTH COAST LABORATORIES LTD.

April 04, 2005

Haberstock Construction
3651 Rohnerville Road
Fortuna, CA 95540

Attn: Ray Haberstock

RE: 3347.01, Haberstock

Order No.: 0503445
Invoice No.: 49142
PO No.: TASK 3020
ELAP No. 1247-Expires July 2006

SAMPLE IDENTIFICATION

Fraction	Client Sample Description
01A	3347-MW1A-W
01D	3347-MW1A-W
02A	3347-MW2-W
02D	3347-MW2-W
03A	3347-MW3-W
03D	3347-MW3-W

ND = Not Detected at the Reporting Limit

Limit = Reporting Limit

All solid results are expressed on a wet-weight basis unless otherwise noted.

RECEIVED
LACO ASSOCIATES
APR - 6 2005
BY:

DRG
TDN 4-7-05
VTS

REPORT CERTIFIED BY

Laboratory Supervisor(s) | QA Unit | Jesse G. Chaney, Jr. Laboratory Director

5680 West End Road • Arcata California 95521-9202 • 707-822-4649 • FAX 707-822-6831

Printed on Recycled Paper

North Coast Laboratories, Ltd. Date: *05-Apr-05*

CLIENT: Haberstock Construction
Project: 3347.01, Haberstock
Lab Order: 0503445

CASE NARRATIVE

All samples submitted for a silica gel cleanup were initially analyzed for diesel. The samples showing no detectable levels of the analyte were not subjected to the cleanup procedure.

TPH as Diesel:
The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) recoveries were above the upper acceptance limit for the surrogate. The LCS/LCSD recoveries for diesel were within the acceptance limits; therefore, the data were accepted.

NORTH COAST LABORATORIES
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Date: 04-Apr-05
WorkOrder: 0503445

ANALYTICAL REPORT

Client Sample ID: 3347-MW1A-W **Received:** 3/18/05 **Collected:** 3/18/05 0:00
Lab ID: 0503445-01A

Test Name: Gasoline Components/Additives **Reference:** LUFT/EPA 8260B Modified

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Methyl tert-butyl ether (MTBE)	ND	1.0	µg/L	1.0		3/28/05
Tert-butyl alcohol (TBA)	ND	10	µg/L	1.0		3/28/05
Di-Isopropyl ether (DIPE)	ND	1.0	µg/L	1.0		3/28/05
Ethyl tert-butyl ether (ETBE)	ND	1.0	µg/L	1.0		3/28/05
Benzene	0.83	0.50	µg/L	1.0		3/28/05
Tert-amyl methyl ether (TAME)	ND	1.0	µg/L	1.0		3/28/05
Toluene	ND	0.50	µg/L	1.0		3/28/05
Ethylbenzene	ND	0.50	µg/L	1.0		3/28/05
m,p-Xylene	ND	0.50	µg/L	1.0		3/28/05
o-Xylene	ND	0.50	µg/L	1.0		3/28/05
Surrogate: 1,4-Dichlorobenzene-d4	93.9	80.8-139	% Rec	1.0		3/28/05

Test Name: TPH as Gasoline **Reference:** LUFT/EPA 8260B Modified

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Gasoline	ND	50	µg/L	1.0		3/28/05

Client Sample ID: 3347-MW1A-W **Received:** 3/18/05 **Collected:** 3/18/05 0:00
Lab ID: 0503445-01D

Test Name: TPH as Diesel with Silica Gel Cleanup **Reference:** EPA 3510/3630/GCFID(LUFT)/8015B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Diesel (C12-C22)	ND	50	µg/L	1.0	3/24/05	3/31/05
Surrogate: N-Tricosane	98.6	34-145	% Rec	1.0	3/24/05	3/31/05

NORTH COAST LABORATORIES
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Date: 04-Apr-05
WorkOrder: 0503445

ANALYTICAL REPORT

Client Sample ID: 3347-MW2-W **Received:** 3/18/05 **Collected:** 3/18/05 0:00
Lab ID: 0503445-02A

Test Name: Gasoline Components/Additives **Reference:** LUFT/EPA 8260B Modified

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Methyl tert-butyl ether (MTBE)	ND	1.0	µg/L	1.0		3/28/05
Tert-butyl alcohol (TBA)	ND	10	µg/L	1.0		3/28/05
Di-isopropyl ether (DIPE)	ND	1.0	µg/L	1.0		3/28/05
Ethyl tert-butyl ether (ETBE)	ND	1.0	µg/L	1.0		3/28/05
Benzene	ND	0.50	µg/L	1.0		3/28/05
Tert-amyl methyl ether (TAME)	ND	1.0	µg/L	1.0		3/28/05
Toluene	ND	0.50	µg/L	1.0		3/28/05
Ethylbenzene	ND	0.50	µg/L	1.0		3/28/05
m,p-Xylene	ND	0.50	µg/L	1.0		3/28/05
o-Xylene	ND	0.50	µg/L	1.0		3/28/05
Surrogate: 1,4-Dichlorobenzene-d4	93.2	80.8-139	% Rec	1.0		3/28/05

Test Name: TPH as Gasoline **Reference:** LUFT/EPA 8260B Modified

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Gasoline	ND	50	µg/L	1.0		3/28/05

Client Sample ID: 3347-MW2-W **Received:** 3/18/05 **Collected:** 3/18/05 0:00
Lab ID: 0503445-02D

Test Name: TPH as Diesel **Reference:** EPA 3510/GCFID(LUFT)/EPA 8015B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Diesel (C12-C22)	ND	50	µg/L	1.0	3/21/05	3/22/05
Surrogate: N-Tricosane	105	27.6-107	% Rec	1.0	3/21/05	3/22/05

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Date: 04-Apr-05
WorkOrder: 0503445

ANALYTICAL REPORT

Client Sample ID: 3347-MW3-W **Received:** 3/18/05 **Collected:** 3/18/05 0:00
Lab ID: 0503445-03A

Test Name: Gasoline Components/Additives **Reference:** LUFT/EPA 8260B Modified

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Methyl tert-butyl ether (MTBE)	2.0	1.0	µg/L	1.0		3/28/05
Tert-butyl alcohol (TBA)	ND	10	µg/L	1.0		3/28/05
Di-isopropyl ether (DIPE)	ND	1.0	µg/L	1.0		3/28/05
Ethyl tert-butyl ether (ETBE)	ND	1.0	µg/L	1.0		3/28/05
Benzene	ND	0.50	µg/L	1.0		3/28/05
Tert-amyl methyl ether (TAME)	ND	1.0	µg/L	1.0		3/28/05
Toluene	ND	0.50	µg/L	1.0		3/28/05
Ethylbenzene	ND	0.50	µg/L	1.0		3/28/05
m,p-Xylene	ND	0.50	µg/L	1.0		3/28/05
o-Xylene	ND	0.50	µg/L	1.0		3/28/05
Surrogate: 1,4-Dichlorobenzene-d4	93.1	80.8-139	% Rec	1.0		3/28/05

Test Name: TPH as Gasoline **Reference:** LUFT/EPA 8260B Modified

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Gasoline	ND	50	µg/L	1.0		3/28/05

Client Sample ID: 3347-MW3-W **Received:** 3/18/05 **Collected:** 3/18/05 0:00
Lab ID: 0503445-03D

Test Name: TPH as Diesel **Reference:** EPA 3510/GCFID(LUFT)/EPA 8015B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Diesel (C12-C22)	ND	50	µg/L	1.0	3/21/05	3/22/05
Surrogate: N-Tricosane	104	27.6-107	% Rec	1.0	3/21/05	3/22/05

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North Coast Laboratories, Ltd.

Date: 04-Apr-05

CLIENT: Haberstock Construction
Work Order: 0503445
Project: 3347.01, Haberstock

QC SUMMARY REPORT

Method Blank

Sample ID **MB-3/28/05** Batch ID: **R34096** Test Code: **8260OXYW** Units: **µg/L** Analysis Date **3/28/05 3:46:00 AM** Prep Date
Client ID: Run ID: **ORGCMS3_050328B** SeqNo: **493334**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	1.0									
Tert-butyl alcohol (TBA)	ND	10									
Di-isopropyl ether (DIPE)	ND	1.0									
Ethyl tert-butyl ether (ETBE)	ND	1.0									
Benzene	ND	0.50									
Tert-amyl methyl ether (TAME)	ND	1.0									
Toluene	0.1662	0.50									J
Ethylbenzene	0.1377	0.50									J
m,p-Xylene	0.2622	0.50									J
o-Xylene	0.1653	0.50									J
1,4-Dichlorobenzene-d4	0.933	0.10	1.00	0	93.3%	81	139	0			

Sample ID **MB-3/28/05** Batch ID: **R34094** Test Code: **GASW-MS** Units: **µg/L** Analysis Date **3/28/05 3:46:00 AM** Prep Date
Client ID: Run ID: **ORGCMS3_050328A** SeqNo: **493299**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Gasoline	ND	50									

Sample ID **MB-13215** Batch ID: **13215** Test Code: **SGTPHDW** Units: **µg/L** Analysis Date **3/31/05 7:42:47 PM** Prep Date **3/24/05**
Client ID: Run ID: **ORGC5_050331A** SeqNo: **494446**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Diesel (C12-C22)	41.18	50									J
N-Tricosane	48.7	0.10	50.0	0	97.4%	34	145	0			

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Haberstock Construction
Work Order: 0503445
Project: 3347.01, Haberstock

QC SUMMARY REPORT

Method Blank

Sample ID **MB-13196** Batch ID: **13196** Test Code: **TPHDIW** Units: **µg/L** Analysis Date **3/22/05 8:54:35 PM** Prep Date **3/21/05**
Client ID: Run ID: **ORGC7_050322A** SeqNo: **491702**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Diesel (C12-C22)	ND	50									
N-Tricosane	50.0	0.10	50.0	0	100%	28	107	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

North Coast Laboratories, Ltd.

Date: 04-Apr-05

CLIENT: Haberstock Construction
Work Order: 0503445
Project: 3347.01, Haberstock

QC SUMMARY REPORT

Laboratory Control Spike

Sample ID **LCS-05204** Batch ID: **R34096** Test Code: **8260OXYW** Units: **µg/L** Analysis Date **3/28/05 12:23:00 PM** Prep Date

Client ID: Run ID: **ORGCMS3_050328B** SeqNo: **493331**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	19.55	1.0	20.0	0	97.8%	80	120	0			
Tert-butyl alcohol (TBA)	364.7	10	400	0	91.2%	25	162	0			
Di-isopropyl ether (DIPE)	19.78	1.0	20.0	0	98.9%	80	120	0			
Ethyl tert-butyl ether (ETBE)	20.84	1.0	20.0	0	104%	77	120	0			
Benzene	19.32	0.50	20.0	0	96.6%	78	117	0			
Tert-amyl methyl ether (TAME)	21.92	1.0	20.0	0	110%	64	136	0			
Toluene	19.14	0.50	20.0	0	95.7%	80	120	0			
Ethylbenzene	20.41	0.50	20.0	0	102%	80	120	0			
m,p-Xylene	40.93	0.50	40.0	0	102%	80	120	0			
o-Xylene	21.43	0.50	20.0	0	107%	80	120	0			
1,4-Dichlorobenzene-d4	0.962	0.10	1.00	0	96.2%	81	139	0			

Sample ID **LCSD-05204** Batch ID: **R34096** Test Code: **8260OXYW** Units: **µg/L** Analysis Date **3/28/05 12:48:00 PM** Prep Date

Client ID: Run ID: **ORGCMS3_050328B** SeqNo: **493332**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	19.71	1.0	20.0	0	98.5%	80	120	19.6	0.803%	20	
Tert-butyl alcohol (TBA)	368.4	10	400	0	92.1%	25	162	365	1.01%	20	
Di-isopropyl ether (DIPE)	19.75	1.0	20.0	0	98.7%	80	120	19.8	0.184%	20	
Ethyl tert-butyl ether (ETBE)	20.91	1.0	20.0	0	105%	77	120	20.8	0.361%	20	
Benzene	19.28	0.50	20.0	0	96.4%	78	117	19.3	0.199%	20	
Tert-amyl methyl ether (TAME)	21.91	1.0	20.0	0	110%	64	136	21.9	0.0441%	20	
Toluene	19.17	0.50	20.0	0	95.8%	80	120	19.1	0.165%	20	
Ethylbenzene	20.59	0.50	20.0	0	103%	80	120	20.4	0.856%	20	
m,p-Xylene	40.80	0.50	40.0	0	102%	80	120	40.9	0.311%	20	
o-Xylene	21.90	0.50	20.0	0	109%	80	120	21.4	2.18%	20	
1,4-Dichlorobenzene-d4	0.971	0.10	1.00	0	97.1%	81	139	0.962	0.894%	20	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: Haberstock Construction
Work Order: 0503445
Project: 3347.01, Haberstock

QC SUMMARY REPORT

Laboratory Control Spike

Sample ID **LCS-05205** Batch ID: **R34094** Test Code: **GASW-MS** Units: **µg/L** Analysis Date **3/28/05 2:05:00 AM** Prep Date
Client ID: Run ID: **ORGCMS3_050328A** SeqNo: **493296**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Gasoline	969.5	50	1,000	0	96.9%	80	120	0			

Sample ID **LCSD-05205** Batch ID: **R34094** Test Code: **GASW-MS** Units: **µg/L** Analysis Date **3/28/05 2:30:00 AM** Prep Date
Client ID: Run ID: **ORGCMS3_050328A** SeqNo: **493297**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Gasoline	969.3	50	1,000	0	96.9%	80	120	970	0.0160%	20	

Sample ID **LCS-13215** Batch ID: **13215** Test Code: **SGTPHDW** Units: **µg/L** Analysis Date **3/31/05 5:46:36 PM** Prep Date **3/24/05**
Client ID: Run ID: **ORGC5_050331A** SeqNo: **494444**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Diesel (C12-C22)	421.1	50	500	0	84.2%	33	92	0			
N-Tricosane	62.3	0.10	50.0	0	125%	34	145	0			

Sample ID **LCSD-13215** Batch ID: **13215** Test Code: **SGTPHDW** Units: **µg/L** Analysis Date **3/31/05 6:15:39 PM** Prep Date **3/24/05**
Client ID: Run ID: **ORGC5_050331A** SeqNo: **494445**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Diesel (C12-C22)	449.6	50	500	0	89.9%	33	92	421	6.53%	15	
N-Tricosane	64.8	0.10	50.0	0	130%	34	145	62.3	3.86%	15	

Sample ID **LCS-13196** Batch ID: **13196** Test Code: **TPHDIW** Units: **µg/L** Analysis Date **3/22/05 7:21:07 PM** Prep Date **3/21/05**
Client ID: Run ID: **ORGC7_050322A** SeqNo: **491699**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Diesel (C12-C22)	494.4	50	500	0	98.9%	80	120	0			
N-Tricosane	55.9	0.10	50.0	0	112%	28	107	0			S

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Haberstock Construction
Work Order: 0503445
Project: 3347.01, Haberstock

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

Sample ID **LCSD-13196** Batch ID: **13196** Test Code: **TPHDIW** Units: **µg/L** Analysis Date **3/22/05 7:39:49 PM** Prep Date **3/21/05**

Client ID: Run ID: **ORGC7_050322A** SeqNo: **491700**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Diesel (C12-C22)	506.7	50	500	0	101%	80	120	494	2.45%	15	
N-Tricosane	58.7	0.10	50.0	0	117%	28	107	55.9	4.91%	15	S

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

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Chain of Custody

LABORATORY NUMBER: 0503445

Attention: Ray Haberstock
Results & Invoice to: Haberstock Const.
Address: 3651 Rohnerville Rd., Fortuna 95540

Phone: 707-725-6138
Copies of Report to: Tim Nelson-LACO

Sampler (Sign & Print): SJD

TAT: ☑ 24 Hr ☐ 48 Hr ☐ 5 Day ☐ 5–7 Day
☐ STD (2–3 Wk) ☐ Other:
PRIOR AUTHORIZATION IS REQUIRED FOR RUSHES

REPORTING REQUIREMENTS: State Forms ☐
Preliminary: FAX ☑ Verbal ☐ By:
Final Report: FAX ☐ Verbal ☐ By:

CONTAINER CODES: 1—½ gal. pl; 2—250 ml pl; 3—500 ml pl; 4—1 L Nalgene; 5—250 ml BG; 6—500 ml BG; 7—1 L BG; 8—1 L cg; 9—40 ml VOA; 10—125 ml VOA; 11—4 oz glass jar; 12—8 oz glass jar; 13—brass tube; 14—other

PRESERVATIVE CODES: a—HNO_3; b—HCl; c—H_2SO_4; d—$Na_2S_2O_3$; e—NaOH; f—$C_2H_3O_2Cl$; g—other

PROJECT INFORMATION

Project Number: 3347.01
Project Name: Haberstock
Purchase Order Number: TASK 3020

LAB ID	SAMPLE ID	DATE	TIME	MATRIX*	ANALYSIS: 8260 List 1 (CONTAINER 9, PRESERVATIVE b)	ANALYSIS: TPHd w/SGC (CONTAINER 7, PRESERVATIVE 1)
	3347-MW1A-W	3-18-05	pm	GW	3	1
	3347-MW2-W	↓	↓	↓	3	1
	3347-MW3-W				3	1
	~~3347-QCTB-W~~				1	
	did not receive - notified client to					

SAMPLE CONDITION/SPECIAL INSTRUCTIONS
GEOTRACKER
Cold, intact

RELINQUISHED BY (Sign & Print)	DATE/TIME	RECEIVED BY (Sign)	DATE/TIME
STEVE DAVIS	4:30 pm 3-18-05		3/18/05

SAMPLE DISPOSAL
☐ NCL Disposal of Non-Contaminated
☐ Return ☐ Pickup

CHAIN OF CUSTODY SEALS Y/N/NA
SHIPPED VIA: UPS Air-Ex Fed-Ex Bus Hand

*MATRIX: DW=Drinking Water; Eff=Effluent; Inf=Influent; SW=Surface Water; GW=Ground Water; S=Soil; O=Other.

ALL CONTAMINATED NON-AQUEOUS SAMPLES WILL BE RETURNED TO CLIENT