W. A. CRAIG, INC.

Environmental Consulting and Contracting
P. O. Box 448
Napa, California 94559-0448
Contractor and Hazardous Substances License #455752
Cal/OSHA Statewide Annual Excavation Permit #559351
(800) 522-7244
Phone: (510) 525-2780 Berkeley **Napa (707) 252-3353**
Fax: (707) 252-33852

December 18, 1995

Mr. Dennis Buran
Glascock Street Properties
436 14th Street, Room 305
Oakland, CA 94612
(510) 444-1391
(510) 444-1394 FAX

PROJECT NO: 3406D

SUBJECT: FOURTH QUARTER GROUNDWATER SAMPLING RESULTS FOR 2901 GLASCOCK STREET, OAKLAND, CALIFORNIA.

Dear Mr. Buran:

Enclosed is a copy of the fourth quarter groundwater monitoring results from the December 6, 1995 sampling event located at 2901 Glascock Street, Oakland, California. Seven wells were sampled and analyzed for TPH-d, TPH-g, and BTEX. The laboratory results revealed elevated levels of TPH-d (57 to 39,000 ppb) in MW-1, MW-2, MW-3, MW-4, MW-5, and MW-6. MW-7 results were non-detect. Elevated levels of TPH-g (250 to 320 ppb) were found in MW-1, MW-2, and MW-6. Low levels of benzene (2.9 to 6.1 ppb) were found in MW-1, MW-2, and MW-6.

The next quarterly sampling is scheduled for March 6, 1996.

If you have any questions in regard to this report, please call me at 707-252-3353.

Sincerely,

W. A. CRAIG, INC.

Rafael L. Gallardo
Project Geologist/Manager

W. A. CRAIG, INC.

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Phone: (510) 525-2780 Berkeley **Napa (707) 252-3353**
Fax: (707) 252-3385

FOURTH QUARTERLY MONITORING REPORT

Located at:
2893 GASCOCK AVENUE
OAKLAND, CALIFORNIA

Prepared for:
MR. DENNIS BURAN
GLASCOCK STREET PROPERTIES
436 14TH STREET, ROOM 305
OAKLAND, CA 94612

By:
RAFAEL L. GALLARDO

W. A. Craig II, R.E.A. 01414

Frank Goldman, R.G. 5557

Rafael L. Gallardo, Project Geologist

W. A. Craig, Inc. Job No. 3406
DECEMBER 18, 1995

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1.0 INTRODUCTION

1.1 Site location and description

Glascock Street Properties is located on the southside of Glascock Street, Oakland, California (See attached **Figure 1**). The site is relatively flat and contains a large building that covers most of the property. The Oakland Estuary is adjacent to the south side of the property. The western half of the existing building is currently leased to the Stan Flowers Company (See attached **Figure 2**).

1.2 Site History

The warehouse was built in the 1920's. The property was used by Oliver United Filters for the manufacturing of water filters for oil field applications.

In February of 1993, two underground fuel oil storage tanks were removed from the warehouse. The tanks had been out of operation for approximately thirty years.

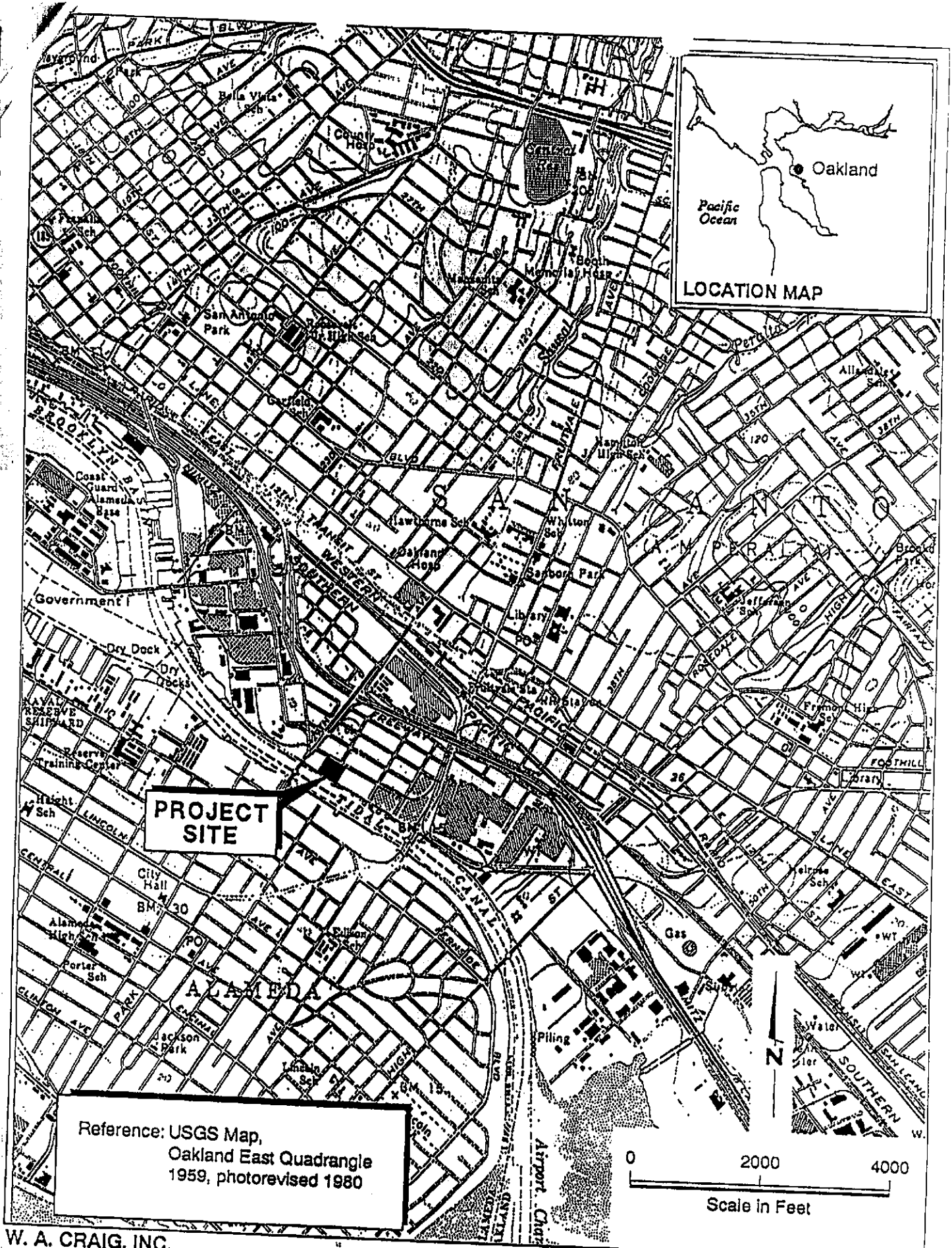
On February 23, 1993, Pacific Rim Environmental removed and disposed of a 4,000 gallon underground fuel tank (Tank No. 1). The tank showed signs of corrosion but was free of punctures. A soil sample was collected from each end of the excavation at a depth of eighteen inches below the bottom of the tank excavation. The analytical results revealed 1,400 ppm of total petroleum hydrocabons as diesel (TPH-D) and 1 ppm of total petroleum hydrocabons as gasoline (TPH-G).

On February 26, 1993, Pacific Rim Environmental removed and disposed of a 20,000 gallon underground fuel tank (Tank No. 2). The tank showed signs of corrosion but was intact. Four soil samples were collected from the excavation pit and tested for Oil and Grease (O&G), TPH-D, TPH-G, and BTEX. The analytical results revealed O&G levels between 390 and 1,900 ppm, TPH-D levels between 1,200 to 3,800 ppm, and minor amounts of Ethylbenzene and Xylenes.

Pacific Rim Environmental subsequently performed overexcavation remediation at both tank site locations. However, the extent of the contamination was never defined.

On July 17, 1995, W. A. Craig, Inc.'s Consulting Division submitted a second quarter groundwater monitoring report.

On October 2, 1995, W. A. Craig, Inc.'s Consulting Division submitted a third quarter groundwater monitoring report.



W. A. CRAIG, INC.

INDUSTRIAL AND ENVIRONMENTAL CONTRACTOR

Site Location Map
2901 Glascock Street
Oakland, California

PLATE **1**

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
3406	JRD	8/94	

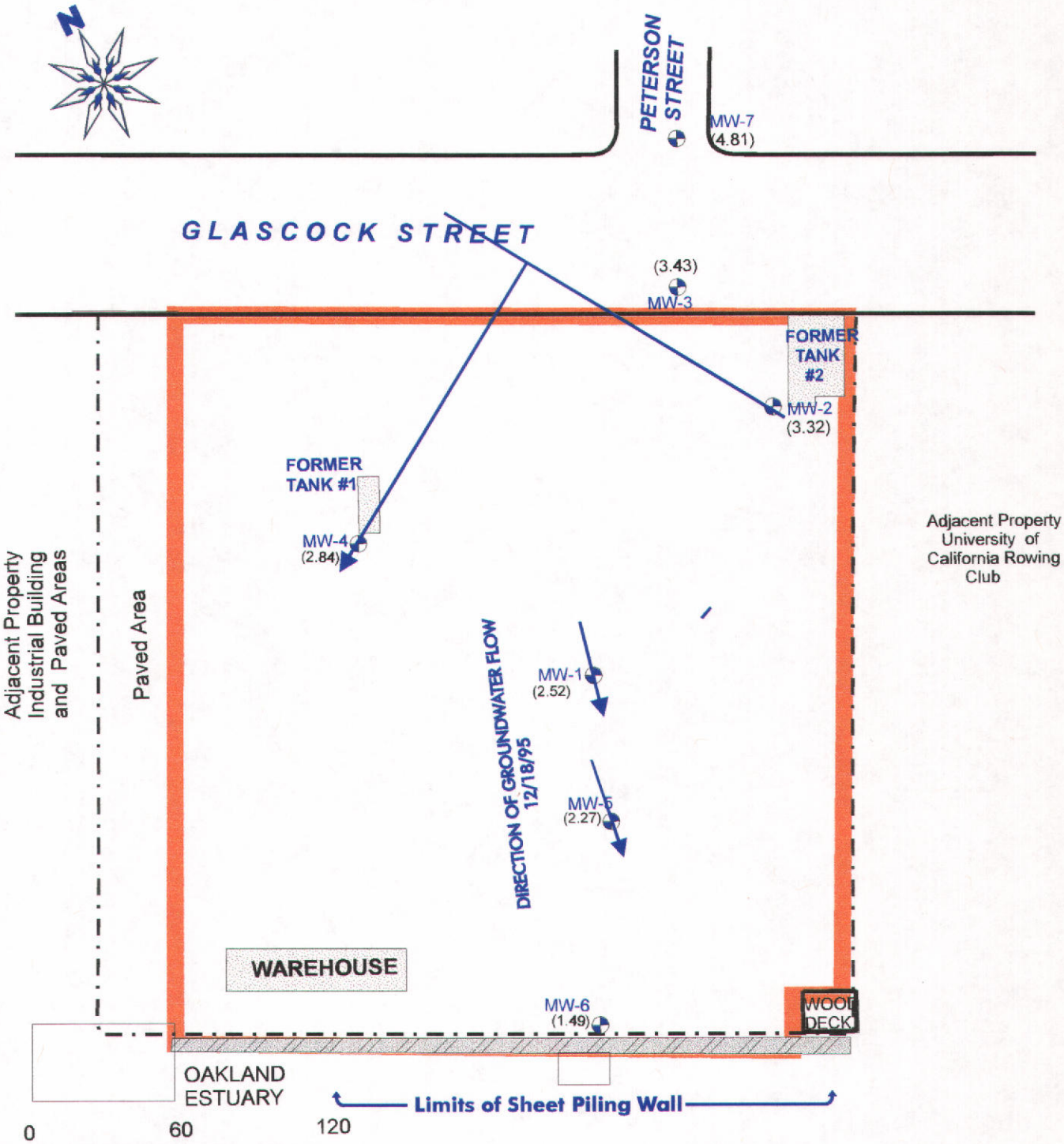


FIGURE 2

LEGEND

⊗ GROUNDWATER MONITORING WELL

W.A. CRAIG, INC.

P.O. BOX 448, NAPA, CALIFORNIA 94559-0448

2901 GLASCOCK STREET
OAKLAND, CALIFORNIA
JOB # 3518

GROUNDWATER GRADIENT MAP

DECEMBER 18, 1995

1.3 GEOLOGY AND HYDROGEOLOGY

Geology

The site is located on the East Bay Plain adjacent to the Tidal Canal and across from Alameda and the San Francisco Bay. The property is relatively flat.

The site is underlain by Undivided Quaternary Deposits (Qu). The predominant formation is the Temescal Formation consisting of contemporaneous alluvial units of different origin, lithology, and physical properties. The material ranges from irregularly bedded clay, silt, sand and gravel to lenses of clay, silt, sand, and gravel with Claremont Chart.

The Hayward Fault is approximately 3.25 miles northeast of the site and is an active historic Fault. The Hayward Fault is the only active fault in the Oakland East Quadrangle.

Hydrogeology

The site is located within the East Bay Plain which makes up the ground water reservoir in the area. The water bearing capacity varies within the area due to the juxtaposed positions of the various types of soils and strata encountered underneath the East Bay Plain.

In general the water bearing capacities of the Younger Alluvium range from moderately permeable to low permeable soils. Below the Younger Alluvium at a depth of approximately 70 feet lies the Older Alluvium, which yields large to small quantities of water.

References:

Radbruch, Dorothy H., Areal and Engineering Geology of the Oakland West Quadrangle, California, Map I-239, 1957.

Bulletin No. 118 California's Ground water.
State of California. Department of Water Resources, September 1975.

Bulletin 118-80, Ground Water Basins in California.
State of California. Department of Water Resources, January 1980.

2.0 GROUNDWATER SAMPLING

2.1 GROUNDWATER ELEVATION MEASUREMENTS

The groundwater elevation was measured for monitoring wells MW-1 through MW-7 on December 6, 1995. The static groundwater elevations were recorded on a Sample Event Data Sheets for the December quarterly sampling and are presented in **Appendix A**.

The groundwater flow direction was calculated from the December 6, 1995 reading. Groundwater elevation data is shown on **Figure 2**. The groundwater flow direction is towards the southwest. The hydraulic gradient was 0.004 ft/ft. The water level rose approximately 0.44 feet since the last measurement taken in August of 1995.

Table 1 contains the monitor well elevation, static water level and groundwater surface elevation.

2.2 MONITORING WELL SAMPLING

Monitoring Wells MW-1 through MW-7 were sampled on December 6, 1995. Each well was sampled after purging at least three casing volumes and allowing the water level to recover to at least 80% of the original, static level. Temperature, turbidity, electrical conductivity, and pH were monitored during each purging. The data was used to verify that water had been removed from well casing storage and that well water was representative of the aquifer. The sampling event data sheets are presented in **Appendix A**.

Water samples were collected using disposable Teflon bailers. Each water sample was contained in three 40-milliliter VOA vials and a 1-liter amber bottle. The samples were labeled and stored on ice until delivered, under chain-of-custody procedures, to McCampbell Analytical, Inc. of Pacheco, California, a State-Certified analytical laboratory. The Samples were analyzed for total petroleum hydrocarbons in the diesel range (TPH-d) using GCFID 3550/EPA modified Method 8015, total petroleum hydrocarbons in the gasoline range (TPH-g) and benzene, toluene, ethylbenzene, and xylenes (BTEX) using GCFID 5030/EPA Method 8015/8020.

TABLE 1
Groundwater Elevation Data
December 6, 1995
2901 Glascock Street, Oakland, California

WELL	WELL DIAMETER (Inches)	TOP OF CASING *(Feet)	DEPTH TO WATER (Feet)	STATIC WATER LEVEL (Feet)
MW-1	2	10.76	8.24	2.52
MW-2	2	10.62	7.30	3.32
MW-3	2	9.87	6.44	3.43
MW-4	2	10.64	7.80	2.84
MW-5	2	10.61	8.34	2.27
MW-6	2	10.27	8.78	1.49
MW-7	2	9.85	5.04	4.81

* Datum point, corner of Glascock and Peterson Streets, city of Oakland = 10.296 Mean Sea Level, (MSL).

3.0 ANALYTICAL RESULTS

3.1 MONITORING WELL SAMPLING ANALYTICAL RESULTS

The analytical results of the December 1995 sampling and historical results of previous sampling rounds can be found in **Table 2**. The laboratory analytical data sheets and chain-of-custody records for the December sampling are included as **Appendix A**. The detection limits for the TPH-g and TPH-d analyses are 50 ug/L and for the BTEX analysis 0.5 ug/L.

The analytical results revealed elevated concentrations of TPH-d (39,000, 17,000, 1,000, 57, 250, and 38,000 ppb) in monitoring wells MW-1, MW-2, MW-3, MW-4, MW-5, and MW-6, respectively. MW-7 was non-detect. Elevated concentrations of TPH-g (250, 320, and 140 ppb) were found in MW-1, MW-2, and MW-6, respectively. MW-3, MW-4, MW-5, and MW-7 were non-detect. Low levels of Benzene (5.4, 2.9, and 6.1 ppb) were found in MW-1, MW-2, and MW-6, respectively. MW-3, MW-4, MW-5, and MW-7 were non-detect.

TABLE 2
Historical and Current sampling results for Glascock Site

WELL NUMBER	SAMPLE DATE	TPH-Diesel ug/L	TPH-Gas ug/L	Benzene ug/L	Toluene ug/L	Ethyl Benzene ug/L	Xylenes ug/L
MW-1	10/06/94	NT	NT	NT	NT	NT	NT
	01/20/95	1,900	670	5.3	ND	ND	1.1
	05/15/95	3,400	290	7.9	ND	ND	1.4
	08/28/95	1,800	250	5.4	ND	ND	1.1
	12/06/95	**39,000**	**770**	**4.8**	**ND**	**ND**	**1.3**
MW-2	10/06/94	NT	NT	NT	NT	NT	NT
	01/20/95	4,000	520	2.2	1.9	ND	1.3
	05/15/95	5,100	310	2.3	1.9	ND	1.4
	08/28/95	4,100	320	2.9	2.9	ND	2.6
	12/06/95	**17,000**	**210**	**2.0**	**2.2**	**ND**	**0.57**
MW-3	10/06/94	320	NT	ND	ND	ND	ND
	01/20/95	460	86	ND	ND	ND	ND
	05/15/95	310	60	ND	ND	ND	ND
	08/28/95	310	ND	ND	ND	ND	ND
	12/06/95	**1,000**	**ND**	**ND**	**ND**	**ND**	**ND**
MW-4	10/06/94	ND	NT	ND	ND	ND	ND
	01/20/95	ND	ND	ND	ND	ND	ND
	05/15/95	ND	ND	ND	ND	ND	ND
	08/28/95	ND	ND	ND	ND	ND	ND
	12/06/95	**57**	**ND**	**ND**	**ND**	**ND**	**ND**
MW-5	**05/15/95**	**90**	ND	**ND**	**ND**	**ND**	**ND**
	08/28/95	**170**	ND	**ND**	**ND**	**ND**	**ND**
	12/06/95	**250**	**ND**	**ND**	**ND**	**ND**	**ND**
MW-6	05/15/95	1,100	**120**	**5.6**	**0.88**	**ND**	**2.1**
	08/28/95	2,100	**140**	**6.1**	**0.77**	**ND**	**2.3**
	12/06/95	**38,000**	**140**	**4.6**	**0.89**	**ND**	**1.7**
MW-7	05/15/95	**ND**	**110**	**ND**	**ND**	**ND**	**ND**
	08/28/95	ND	**ND**	**ND**	**ND**	**ND**	**ND**
	12/06/95	**ND**	**62**	**ND**	**ND**	**ND**	**ND**
*California Department of Health Services primary maximum contamination level for drinking water.		None Listed	None Listed	1.0	150	700	1750

* Drinking Water Standards and Health Advisories Table, EPA document dated August 1995. California MCL's.

4.0 CONCLUSIONS

Analytical results for monitoring wells MW-1 through MW-6 revealed increasing concentrations of TPH-d. MW-7 results were non-detect. Monitoring wells MW-1 and MW-7 revealed increasing concentrations of TPH-g and decreasing to non-detectable concentrations for Benzene, respectively. MW-4 and MW-5 results were nondetectable for TPH-d, TPH-g, and BTEX. The diesel and gasoline groundwater plumes appear to be meandering towards the Oakland Estuary via MW-3, MW-2, MW-1, and MW-6. This could indicate the possibility of an old buried slough running through the property.

5.0 RECOMMENDATIONS

W.A. Craig, Inc. recommends continued monitoring for another quarter.

6.0 SCHEDULE OF ACTIVITIES FOR NEXT QUARTER

6.1 GROUNDWATER ELEVATION MEASUREMENT

The on-site wells will be sounded and the groundwater level will be measured for each quarter. Water samples will again be collected along with water level measurements. The direction of groundwater flow and the hydraulic gradient will be calculated.

6.2 QUARTERLY SAMPLING

The next quarterly sampling event will occur the first week in March 1996. The quarterly report will present the results of the March sampling.

7.0 LIMITATIONS

This report has been prepared in accordance with generally accepted environmental, geological and engineering practices. No warranty, either expressed or implied, is made as to the professional advice presented herein. The analysis, conclusions and recommendations contained in this report are based upon site conditions as they existed at the time of the investigation and they are subject to change.

The conclusions presented in this report are professional opinions based solely upon visual observations of the site and vicinity, and interpretation of available information as described in this report. W.A. Craig, Inc., recognizes that the limited scope of services performed in execution of this investigation may not be appropriate to satisfy the needs, or requirements of other state agencies, or of other users. Any use or reuse of this document or its findings, conclusions or recommendations presented herein is at the sole risk of said user.

APPENDIX A

ANALYTICAL DATA SHEETS
AND
CHAIN-OF-CUSTODY RECORD
FOR MONITORING WELL SAMPLING
December 6, 1995

W. A. CRAIG, INC.

CHAIN-OF-CUSTODY RECORD

5391AWACX:506

PROJECT NO.	PROJECT NAME
3406	Glascock
PURCHASE ORDER NO.	SIGNATURE OF SAMPLER
	Russell Craig

DATE 1995	TIME	W. A. CRAIG, INC.'S SAMPLE IDENTIFICATION	MATRIX: Soil, Water, Air, Sludge, Other	ANALYSIS: TPHgasoline (8015)	BTEX (602/8020)	TPHdiesel (8015)	TPHg & BTEX	Preserved? HCl ICE	REMARKS	LABORATORY I. D. NUMBER
12/6	09:57	MW-7 (1 Ltr, 2 VOA)	W			✓	✓	✓		[redacted]
"	10:45	MW-3 "	"			"	"	"		
	12:24	MW-1								
	13:05	MW-5								
	13:40	MW-6								
	14:25	MW-4								
↓	14:44	MW-2	↓		↓	↓	↓	↓		
12/6	14:30	Trip Blank (1 VOA)	W				✓	✓		

	VOAS	O&G	METALS	OTHER
PRESERVATIVE APPROPRIATE	✓			
CONTAINERS	✓			

ICE/T° ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓

RELINQUISHED BY (Signature):	DATE/TIME	RECEIVED BY (Signature):
Russell Craig	12/6/95 15:22	Heidi Ruca
RELINQUISHED BY (Signature):	DATE/TIME	RECEIVED BY (Signature):
RELINQUISHED BY (Signature):	DATE/TIME	RECEIVED BY (Signature):

LABORATORY: McCampbell Analytical

TURNAROUND TIME:

PLEASE SEND RESULTS TO:
W. A. CRAIG, INC.
P.O. BOX 448
NAPA, CA 94559-0448
(707) 252-3353

ATTN:

McCAMPBELL ANALYTICAL INC.
110 2nd Avenue South, #D7, Pacheco, CA 94553
Tele: 510-798-1620 Fax: 510-798-1622

W.A. Craig, Inc. P.O. Box 448 Napa, CA 94559-0448	Client Project ID: # 3406; Glascock	Date Sampled: 12/06/95
		Date Received: 12/06/95
	Client Contact: Bill Craig	Date Extracted: 12/06-12/07/95
	Client P.O:	Date Analyzed: 12/06-12/07/95

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with BTEX*

EPA methods 5030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030)

Lab ID	Client ID	Matrix	TPH(g)+	Benzene	Toluene	Ethylben-zene	Xylenes	% Rec. Surrogate
59206	MW-7	W	62,j	ND	ND	ND	ND	96
59207	MW-3	W	120,f,g	ND	ND	ND	ND	113#
59208	MW-1	W	770,g,d,h	4.8	ND	ND	1.3	90
59209	MW-5	W	ND	ND	ND	ND	ND	98
59210	MW-6	W	140,g,d,h	4.6	0.89	ND	1.7	98
59211	MW-4	W	ND	ND	ND	ND	ND	103
59212	MW-2	W	210,g,d,h	2.0	2.2	ND	0.57	90
59213	Trip Blank	W	ND	ND	ND	ND	ND	103
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		W	50 ug/L	0.5	0.5	0.5	0.5	
		S	1.0 mg/kg	0.005	0.005	0.005	0.005	

* water and vapor samples are reported in ug/L, soil samples in mg/kg, and all TCLP extracts in mg/L

cluttered chromatogram; sample peak coelutes with surrogate peak

+ The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~ 5 vol. % sediment; j) no recognizable pattern.

DHS Certification No. 1644

Edward Hamilton, Lab Director

McCAMPBELL ANALYTICAL INC. | 110 2nd Avenue South, #D7, Pacheco, CA 94553
Tele: 510-798-1620 Fax: 510-798-1622

W.A. Craig, Inc. P.O. Box 448 Napa, CA 94559-0448	Client Project ID: # 3406; Glascock	Date Sampled: 12/06/95
		Date Received: 12/06/95
	Client Contact: Bill Craig	Date Extracted: 12/08/95
	Client P.O:	Date Analyzed: 12/08-12/09/95

Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel *

EPA methods modified 8015, and 3550 or 3510; California RWQCB (SF Bay Region) method GCFID(3550) or GCFID(3510)

Lab ID	Client ID	Matrix	TPH(d)+	% Recovery Surrogate
59206	MW-7	W	ND	104
59207	MW-3	W	1000,a	101
59208	MW-1	W	39,000,a,h	100
59209	MW-5	W	250,a	100
59210	MW-6	W	38,000,a,h	99
59211	MW-4	W	57,b	103
59212	MW-2	W	17,000,a,h	97
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		W	50 ug/L	
		S	1.0 mg/kg	

* water samples are reported in ug/L, soil samples in mg/kg, and all TCLP and STLC extracts in mg/L

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

+ The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant); d) gasoline range compounds are significant; e) medium boiling point pattern that does not match diesel (?); f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~ 5 vol. % sediment.

DHS Certification No. 1644

Edward Hamilton, Lab Director

McCAMPBELL ANALYTICAL INC.
110 2nd Avenue South, #D7, Pacheco, CA 94553
Tele: 510-798-1620 Fax: 510-798-1622

QC REPORT FOR HYDROCARBON ANALYSES

Date: 12/06/95 Matrix: Water

Analyte	Concentration (ug/L)			Amount Spiked	% Recovery		RPD
	Sample	MS	MSD		MS	MSD	
TPH (gas)	0.0	108.2	106.5	100	108	106	1.6
Benzene	0	9.5	9.6	10	95	96	1.0
Toluene	0	9.3	9.2	10	93	92	1.1
Ethyl Benzene	0	9.7	9.6	10	97	96	1.0
Xylenes	0	30.6	30.4	30	102	101	0.7
TPH (diesel)	0	151	150	150	101	100	0.5
TRPH (oil & grease)	0	23900	24100	23700	101	102	0.8

% Rec. = (MS - Sample) / amount spiked x 100

RPD = (MS - MSD) / (MS + MSD) x 2 x 100

McCAMPBELL ANALYTICAL INC.
110 2nd Avenue South, #D7, Pacheco, CA 94553
Tele: 510-798-1620 Fax: 510-798-1622

QC REPORT FOR HYDROCARBON ANALYSES

Date: 12/08/95-12/09/95 Matrix: Water

Analyte	Concentration (ug/L)			Amount Spiked	% Recovery		RPD
	Sample	MS	MSD		MS	MSD	
TPH (gas)	0.0	97.4	90.2	100	97	90	7.6
Benzene	0	10.2	10.1	10	102	101	1.0
Toluene	0	10.5	10.3	10	105	103	1.9
Ethyl Benzene	0	10.3	10.2	10	103	102	1.0
Xylenes	0	30.4	30.1	30	101	100	1.0
TPH (diesel)	0	149	154	150	99	103	3.4
TRPH (oil & grease)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

% Rec. = (MS - Sample) / amount spiked x 100

RPD = (MS - MSD) / (MS + MSD) x 2 x 100

GROUNDWATER SAMPLING
WELL DEVELOPMENT LOG

WELL NUMBER: MW-1 FIELD PERSON(S): Russ Gantz

DATE STARTED: 12/6/95

TIME STARTED: 11:55 JOB NUMBER: 3406

DATE COMPLETED: 12/6/95 JOB NAME: Glascock

TIME COMPLETED: 12:30

DEPTH TO BOTTOM OR CASING LENGTH		WELL INSIDE DIAMETER
TOTAL DEPTH TO BOTTOM: 19.50 − DEPTH TO WATER: 8.24 = Δ(FT): 11.26		VOLUME FACTOR V.F.= GAL/FT: 1"=0.041, 1-1/2"=0.092, 2"=0.163, 3"=0.367, 4"=0.653, 6"=1.469, 8"=2.611, 12"=5.875
ΔH (FT): 11.26 X (V.F.) = 0.163 = WELL CASING VOLUME (GAL): 1.84		
DATE(S) PURGED: —		WELL DEWATERED [ ] YES [X] NO
PURGE METHOD: Disp. Hand Bailer		DATE SAMPLED: 12/6/95
INITIAL DEPTH TO WATER:		TIME SAMPLED: 12:24
TOTAL VOLUME REMOVED (GAL): 5.50		SAMPLING METHOD: Bailer
CASING VOLUMES REMOVED: 3		WEATHER CONDITIONS: Sun, Warm, (inside)
PURGE RATE (GPM):		PURGES/SAMPLED BY: R Gantz
DEPTH TO WATER AFTER RECOVERY 9.00 (FT) = 93 % RECOVERED PRIOR TO SAMPLING		

FIELD PARAMETERS:

TIME (24 HR CLOCK)	VOLUME REMOVED (GAL)	TEMPERATURE	X1000 ELECTRICAL CONDUCTIVITY	PH	TURBIDITY (NTU)
12:07	2.00	66.4	1.32	7.14	Slight
12:12	3.75	66.2	1.31	7.03	Med.
12:17	5.50	66.3	1.31	7.02	Med/heavy

COMMENTS: Medium sheen (not covering whole surface of the water in the bailer) Med - Strong odor. Very strong odor

GROUNDWATER SAMPLING
WELL DEVELOPMENT LOG

WELL NUMBER: MW-2 FIELD PERSON(S): Russ Gentry

DATE STARTED: 12/6/95

TIME STARTED: 11:24 JOB NUMBER: 3406

DATE COMPLETED: 12/6/95 JOB NAME: Glascock

TIME COMPLETED: 14:55

DEPTH TO BOTTOM OR CASING LENGTH

TOTAL DEPTH TO BOTTOM 20.00 - DEPTH TO WATER = 2.30 = Δ(FT) 12.20

ΔH (FT) 12.10 X (V.F.) = 0.163 = WELL CASING VOLUME (GAL) 2.07

WELL INSIDE DIAMETER

VOLUME FACTOR V.F.= GAL/FT		
	1"=0.041	4"=0.653
	1-1/2"=0.092	6"=1.469
	2"=0.163	8"=2.611
	3"=0.367	12"=5.875

DATE(S) PURGED: 12/6/95

PURGE METHOD: Disp' Hand Bailer

INITIAL DEPTH TO WATER: 7.30

TOTAL VOLUME REMOVED (GAL): 6.00

CASING VOLUMES REMOVED: 3

PURGE RATE (GPM):

WELL DEWATERED [ ] YES [X] NO

DATE SAMPLED: 12/6/95

TIME SAMPLED: 14:44

SAMPLING METHOD: Bailer

WEATHER CONDITIONS: Sun, warm (inside)

PURGES/SAMPLED BY: R. Gentry

DEPTH TO WATER AFTER RECOVERY _____ (FT) = 80+ % RECOVERED PRIOR TO SAMPLING

FIELD PARAMETERS:

TIME (24 HR CLOCK)	VOLUME REMOVED (GAL)	TEMPERATURE	X1000 ELECTRICAL CONDUCTIVITY	PH	TURBIDITY (NTU)
11:34	2.00	66.4	2.39	6.72	Slight
11:39	4.00	66.0	2.60	6.80	Slight/med.
11:45	6.00	66.0	2.67	6.80	med.

COMMENTS: Sheen and strong odor detected. Some floating product began to show in the bailer at the end of the second well volume. Very strong odor in 3rd well volume.

GROUNDWATER SAMPLING
WELL DEVELOPMENT LOG

WELL NUMBER: MW-3 FIELD PERSON(S): Russell Gentry

DATE STARTED: 12/6/95

TIME STARTED: 10:12 JOB NUMBER: 3406

DATE COMPLETED: 12/6/95 JOB NAME: Glascock

TIME COMPLETED: 10:55

DEPTH TO BOTTOM OR CASING LENGTH

TOTAL DEPTH TO BOTTOM: 20.00 - DEPTH TO WATER: 6.44 = Δ(FT): 13.56

ΔH (FT): 13.56 X (V.F.): 0.163 = WELL CASING VOLUME (GAL): 2.21

WELL INSIDE DIAMETER

VOLUME FACTOR V.F.= GAL/FT

1"=0.041	4"=0.653	
1-1/2"=0.092	6"=1.469	
2"=0.163	8"=2.611	
3"=0.367	12"=5.875	

DATE(S) PURGED: 12/6/95

PURGE METHOD: Disp. bailer

INITIAL DEPTH TO WATER: 6.44

TOTAL VOLUME REMOVED (GAL): 6.75

CASING VOLUMES REMOVED: 3

PURGE RATE (GPM):

WELL DEWATERED [ ] YES [✓] NO

DATE SAMPLED: 12/6/95

TIME SAMPLED: 10:45

SAMPLING METHOD: Bailer

WEATHER CONDITIONS: Overcast, cool, slight breeze

PURGES/SAMPLED BY: R Gentry

DEPTH TO WATER AFTER RECOVERY 10.00 (FT) = 80+ % RECOVERED PRIOR TO SAMPLING

FIELD PARAMETERS:

TIME (24 HR CLOCK)	VOLUME REMOVED (GAL)	TEMPERATURE	X100 ELECTRICAL CONDUCTIVITY	PH	TURBIDITY (NTU)
10:22	2.25	64.6	12.14	7.13	Clear
10:31	4.50	65.1	12.27	7.23	Slight
10:36	6.75	65.2	11.41	7.19	"

COMMENTS: No sheen, ~~possible~~ slight odor

GROUNDWATER SAMPLING
WELL DEVELOPMENT LOG

WELL NUMBER: MW-4 FIELD PERSON(S): Russell Gentry

DATE STARTED: 12/6/95

TIME STARTED: 13:55 JOB NUMBER: 3406

DATE COMPLETED: 12/6/95 JOB NAME: Glascock

TIME COMPLETED: 14:30

DEPTH TO BOTTOM OR CASING LENGTH							WELL INSIDE DIAMETER		
TOTAL DEPTH TO BOTTOM	20.00	- DEPTH TO WATER =	7.80	= Δ(FT)	12.20		VOLUME FACTOR V.F.= GAL/FT	1"=0.041 1-1/2"=0.092 2"=0.163 3"=0.367	4"=0.653 6"=1.469 8"=2.611 12"=5.875
Δ (FT)	12.20	X (V.F.) =	0.163	= WELL CASING VOLUME (GAL)	1.99				
DATE(S) PURGED:							WELL DEWATERED	[ ] YES	[X] NO
PURGE METHOD:	Disp. Hand Bailer						DATE SAMPLED:	12/6/95	
INITIAL DEPTH TO WATER:							TIME SAMPLED:	14:25	
TOTAL VOLUME REMOVED (GAL):	6.00						SAMPLING METHOD:	Bailer	
CASING VOLUMES REMOVED:	3+						WEATHER CONDITIONS:	Overcast, warm, (inside)	
PURGE RATE (GPM):							PURGES/SAMPLED BY:	R. Gentry	

DEPTH TO WATER AFTER RECOVERY 8.20 (FT) = 96+ % RECOVERED PRIOR TO SAMPLING

FIELD PARAMETERS;

TIME (24 HR CLOCK)	VOLUME REMOVED (GAL)	TEMPERATURE	X 100 ELECTRICAL CONDUCTIVITY	PH	TURBIDITY (NTU)
14:05	2.00	65.4	8.94	7.82	Med/heavy
14:09	4.00	65.2	8.82	7.25	heavy
14:14	6.00	65.1	8.77	7.23	heavy

COMMENTS: No sheen or odor detected.

GROUNDWATER SAMPLING
WELL DEVELOPMENT LOG

WELL NUMBER: MW-5 FIELD PERSON(S): Russell Gentry

DATE STARTED: 12/6/95

TIME STARTED: 12:45 JOB NUMBER: 3406

DATE COMPLETED: 12/6/95 JOB NAME: Glascock

TIME COMPLETED: 13:10

DEPTH TO BOTTOM OR CASING LENGTH

TOTAL DEPTH TO BOTTOM 20.00 - DEPTH TO WATER = 8.34 = Δ(FT) 11.66

ΔH (FT) 11.66 X (V.F.) = 0.163 = WELL CASING VOLUME (GAL) 1.90

WELL INSIDE DIAMETER

VOLUME FACTOR V.F.= GAL/FT

1"=0.041	1-1/2"=0.092	2"=0.163
3"=0.367	4"=0.653	6"=1.469
8"=2.611	12"=5.875	

DATE(S) PURGED: —

PURGE METHOD: Disp. Hand Bailer

INITIAL DEPTH TO WATER:

TOTAL VOLUME REMOVED (GAL): 6.00

CASING VOLUMES REMOVED: 3+

PURGE RATE (GPM):

WELL DEWATERED [ ] YES [✓] NO

DATE SAMPLED: 12/6/95

TIME SAMPLED: 13:05

SAMPLING METHOD: Bailer

WEATHER CONDITIONS: Sun / Warm (inside)

PURGES/SAMPLED BY: R. Gentry

DEPTH TO WATER AFTER RECOVERY 8.66 (FT) = 97 % RECOVERED PRIOR TO SAMPLING

FIELD PARAMETERS;

TIME (24 HR CLOCK)	VOLUME REMOVED (GAL)	TEMPERATURE	X1000 ELECTRICAL CONDUCTIVITY	PH	TURBIDITY (NTU)
12:51	2.00	66.1	1.15	7.29	Slight/med.
12:55	4.00	65.9	1.20	7.15	med.
13:00	6.00	65.8	1.22	7.20	med/heavy

COMMENTS: No sheen or odor detected.

GROUNDWATER SAMPLING
WELL DEVELOPMENT LOG

WELL NUMBER: MW-6 FIELD PERSON(S): Russell Gentry

DATE STARTED: 12/6/95

TIME STARTED: 13:20 JOB NUMBER: 3406

DATE COMPLETED: 12/6/95 JOB NAME: Glascock

TIME COMPLETED: 13:50

DEPTH TO BOTTOM OR CASING LENGTH								WELL INSIDE DIAMETER		
TOTAL DEPTH TO BOTTOM	20.00	DEPTH TO WATER	8.78	= Δ(FT)	11.22			VOLUME FACTOR V.F.= GAL/FT	1"=0.041	4"=0.653
									1-1/2"=0.092	6"=1.469
Δ H (FT)	11.22	X (V.F.)	0.163	WELL CASING = VOLUME (GAL)	1.82				2"=0.163	8"=2.611
									3"=0.367	12"=5.875
DATE(S) PURGED:	—							WELL DEWATERED	[ ] YES	[X] NO
PURGE METHOD:	Disp. Hand Bailer							DATE SAMPLED:	12/6/95	
INITIAL DEPTH TO WATER:	—							TIME SAMPLED:	13:40	
TOTAL VOLUME REMOVED (GAL):	5.50							SAMPLING METHOD:	Bailer	
CASING VOLUMES REMOVED:	3+							WEATHER CONDITIONS:	Overcast, warm (inside)	
PURGE RATE (GPM):								PURGES/SAMPLED BY:	R. Gentry	

DEPTH TO WATER AFTER RECOVERY 10.40 (FT) = 85+ % RECOVERED PRIOR TO SAMPLING

FIELD PARAMETERS;

TIME (24 HR CLOCK)	VOLUME REMOVED (GAL)	TEMPERATURE	x1000 ELECTRICAL CONDUCTIVITY	PH	TURBIDITY (NTU)
13:25	2.00	65.0	1.36	7.00	med/heavy
13:29	3.25	64.7	1.48	6.94	heavy
13:35	5.50	64.4	1.49	6.93	11

COMMENTS: Heavy sheen and odor. Splochy floating product (oily).

GROUNDWATER SAMPLING
WELL DEVELOPMENT LOG

WELL NUMBER: MW-7 FIELD PERSON(S): Russell Gentry

DATE STARTED: 12/6/95

TIME STARTED: 8:58 JOB NUMBER: 3406

DATE COMPLETED: 12/6/95 JOB NAME: Glascock

TIME COMPLETED: 10:00

DEPTH TO BOTTOM OR CASING LENGTH		WELL INSIDE DIAMETER	
TOTAL DEPTH TO BOTTOM: 17.70 − DEPTH TO WATER: 5.04 = Δ(FT): 12.66		VOLUME FACTOR V.F.= GAL/FT	1"=0.041, 1-1/2"=0.092, 2"=0.163, 3"=0.367, 4"=0.653, 6"=1.469, 8"=2.611, 12"=5.875
ΔH (FT): 12.66 X (V.F.) = 0.163 = WELL CASING VOLUME (GAL): 2.06			
DATE(S) PURGED: 12/6/95		WELL DEWATERED	[ ] YES [X] NO
PURGE METHOD: Disp. Hand Bailer		DATE SAMPLED:	12/6/95
INITIAL DEPTH TO WATER: 5.04		TIME SAMPLED:	09:52
TOTAL VOLUME REMOVED (GAL): 6.00		SAMPLING METHOD:	Bailer
CASING VOLUMES REMOVED: 3		WEATHER CONDITIONS:	Overcast, cool, Nowind.
PURGE RATE (GPM):		PURGES/SAMPLED BY:	R. Gentry

DEPTH TO WATER AFTER RECOVERY 5.45 (FT) = 96+ % RECOVERED PRIOR TO SAMPLING

FIELD PARAMETERS:

TIME (24 HR CLOCK)	VOLUME REMOVED (GAL)	TEMPERATURE	ELECTRICAL CONDUCTIVITY (X 100)	PH	TURBIDITY (NTU)
09:40	2.00	65.2	13.81	6.91	Medium
09:45	4.00	65.3	13.81	7.14	"
09:52	6.00	65.3	13.85	7.15	"

COMMENTS: No sheen or odor detected.