



**Crown METAL MFG. CO.**

5925 SOUTH LOWE AVENUE, CHICAGO, ILLINOIS 60621-2896 • TELEPHONE 312/873-3833

August 7, 1990

Alameda County  
Attention: Ms. Pamela Evans  
Health Care Services Agency  
Dept. of Environmental Health  
80 Swan Way Room 200  
Oakland, CA 94621

Dear Ms. Evans:

At the request of our environmental consultant, Exceltech, enclosed please find the May Quarterly Groundwater Sampling and Analysis for Crown Metal Manufacturing Company at 16525 Worthley Drive, San Lorenzo, CA.

This report includes the analysis of the most recent quarterly sampling done on our site and this data is presented for your files.

Should you have any questions on the enclosed please feel free to contact Exceltech at your convenience.

Regards,

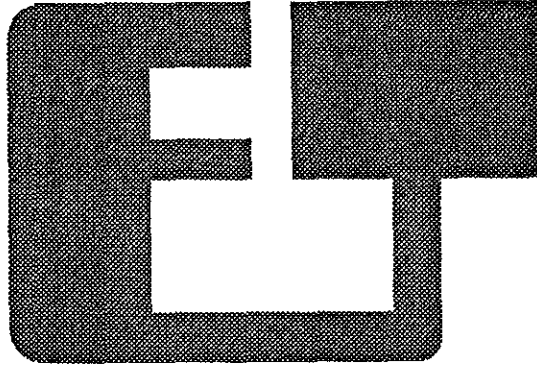
A handwritten signature in cursive script, appearing to read "Richard C. Ernest".

Richard C. Ernest  
President

RCE/meb  
Enc.

cc: Mr. Britt Von Thaden  
Project Geologist  
Exceltech Corporation

90 AUG 10 PM 11:16



**EXCELTECH**

**MAY QUARTERLY  
GROUNDWATER SAMPLING  
AND ANALYSIS**

**FOR**

**CROWN METAL MANUFACTURING  
AT PACIFIC INTERNATIONAL  
STEEL FACILITY  
16525 WORTHLEY DRIVE  
SAN LORENZO, CALIFORNIA**

**Project No. 1587-2G  
July 1990**



July 27, 1990

Crown Metal Manufacturing  
5925 South Lowe Avenue  
Chicago, IL 60621-2896

Attention: Mr. Richard C. Ernest

Subject: May Quarterly Groundwater Sampling and Analysis  
Pacific International Steel Facility  
16525 Worthley Drive, San Lorenzo, California  
Exceltech Project No. 1587-2G

Dear Mr. Ernest:

Exceltech, Inc. has completed the May quarterly groundwater sampling and laboratory analysis at the subject site in the City of San Lorenzo, Alameda County, California (Figure 1). We collected groundwater samples from three of the seven on-site wells on May 17, 1990: monitoring wells MW-2 and MW-7 and recovery well RW-1. Sampling of the four remaining wells; MW-1, MW-4, MW-5, and MW-6; was not conducted because of a reduction in sampling frequency. Past laboratory results for these wells have shown them to be free of petroleum hydrocarbons and their sampling frequency has been reduced to once per year. The three wells that were sampled at this time, however, will remain on a quarterly sampling program and groundwater levels from all on-site wells will also be measured quarterly.

### Groundwater Sampling

Before sampling, Exceltech measured the depth to groundwater in each well with an electric sounding tape and checked for the presence of free-phase hydrocarbons using a clear acrylic bailer. No free-phase hydrocarbons were detected. An equipment sampling blank was then collected from a clean teflon bailer for quality control and groundwater samples were collected following Exceltech's groundwater sampling protocol (Appendix A). Approximately three well-casing volumes of groundwater were removed from RW-1 and four each from wells MW-2 and MW-7. Equipment rinse water and groundwater removed from the wells were placed in drums approved by the Department of Transportation and left at the site pending the analytical results.

### Hydrogeology

The groundwater surface contour map (Figure 2) reveals a shallow groundwater gradient in the area of investigation for May 17, 1990. The contours indicate that the gradient is gently inclined with a variable flow direction. The average calculated gradient is approximately 0.7 percent.

### Laboratory Analyses/Results

The groundwater samples and sampling equipment blank (BB-1) were analyzed by Sequoia Analytical, located in Redwood City, California. Sequoia, a state-certified laboratory, analyzed the samples for the presence of total petroleum hydrocarbons as gasoline (TPHG), as well as benzene, toluene, ethyl benzene, and total xylenes (BTEX) using Environmental Protection Agency Methods 5030/8015/8020.



Sequoia reported that petroleum hydrocarbons were detected in two of the four samples submitted from the May sampling. Samples from wells MW-2 and RW-1 were reported to contain the following concentrations.

Compound	MW-2	RW-1
TPHG	240	1,400
Benzene	<0.3	52
Toluene	<0.3	1.0
Ethyl Benzene	<0.3	20
Total Xylenes	<0.3	12

< 0.3 Not detected at or above laboratory detection limit  
Results in micrograms per liter (parts per billion)

No petroleum hydrocarbons were detected in samples MW-7 and BB-1. A summary of past and present analytical results is presented in Table 1. Copies of the analytical report and chain-of-custody document are attached in Appendix B.

### Reporting Requirements

A copy of this report should be forwarded by Crown Metal Manufacturing to the following agencies in a timely manner:

California Regional Water Quality Control Board  
San Francisco Bay Region  
1800 Harrison Street, Suite 700  
Oakland, California 94621  
Attention: Mr. Lester Feldman

Alameda County  
Health Care Services Agency  
Department of Environmental Health  
80 Swan Way, Room 200  
Oakland, California 94621  
Attention: Ms. Pamela Evans

### Limitations

The discussion and recommendations presented in this report are based on the following:

1. The observations by field personnel.
2. The results of laboratory analyses performed by a state-certified laboratory.
3. Our understanding of the regulations of the State of California and Alameda County and/or the City of San Lorenzo.

It is possible that variations in the soil or groundwater conditions could exist beyond the points explored in this investigation. Also, changes in the groundwater conditions could occur at some time in the future due to variations in rainfall, temperature, regional water usage, or other factors.

The service performed by Exceltech has been conducted in a manner consistent with the level of care and skill ordinarily exercised by members of our profession currently practicing under similar conditions in the San Lorenzo area. Please note that contamination of soil and groundwater must be reported to the appropriate agencies in a timely manner. No other warranty, expressed or implied, is made.

Exceltech includes in this report chemical analytical data from a state-certified laboratory. The analytical results are performed according to procedures suggested by the U.S. EPA and State of California. Exceltech is not responsible for laboratory errors in procedure or result reporting.

The next quarterly sampling is scheduled for August 1990. If you have any questions, please call.

Sincerely,  
Exceltech, Inc.

*Key Ramell for*  
Britt Von Thaden  
Project Geologist

*Lawrence D. Pavlak*  
Lawrence D. Pavlak, C.E.G. 1187  
Corporate C.E.G.

BVT/LDP/sw

Exceltech, Inc.  
 Project No. 1587-2G  
 July 3, 1990

Crown Metal Manufacturing  
 Pacific International Steel Facility  
 San Lorenzo, CA

**TABLE 1**  
**SUMMARY OF GROUNDWATER ANALYSES DATA**

Well	Date Sampled	TPHG µg/l	Benzene µg/l	Toluene µg/l	Ethyl Benzene µg/l	Total Xylenes µg/l	Well Elevation ft	Depth to Water ft	Floating Product ft
MW-1	7/14/87	BDL	BDL	BDL	---	BDL	8.86	7.56	---
	11/24/87	BDL	BDL	BDL	---	9.0		7.51	---
	2/29/88	BDL	BDL	BDL	---	BDL		7.18	---
	5/25/88	BDL	BDL	BDL	---	BDL		7.40	---
	8/10/88	ND	ND	ND	ND	ND		7.85	---
	11/29/88	ND	ND	ND	ND	ND		7.86	---
	2/7/89	ND	ND	ND	ND	ND		7.43	---
	5/12/89	ND	1.4	ND	ND	ND		7.23	---
	8/4/89	ND	ND	ND	ND	ND		8.17	---
	11/14/89	ND	ND	ND	---	---		7.93	---
	1/3/90	---	---	---	---	---		7.77	---
	2/22/90	ND	ND	ND	ND	ND		7.28	---
	5/17/90	---	---	---	---	---		---	7.62
MW-2	7/14/87	110	1.2	1.9	---	2.0	9.17	7.79	---
	11/24/87	3,600	82	47	---	13		7.73	---
	2/29/88	800	BDL	BDL	---	BDL		7.26	---
	5/25/88	250	ND	ND	---	ND		7.45	---
	8/10/88	260	ND	ND	ND	ND		7.90	---
	11/29/88	870	9.0	ND	1.0	1.0		8.20	---
	2/7/89	710	16	ND	ND	ND		7.47	---
	5/12/89	260	2.8	0.76	1.3	3.0		7.27	---
	8/4/89	360	ND	ND	ND	0.48		8.23	---
	11/14/89	85	ND	3.5	0.36	2.5		8.08	---
	1/3/90	---	---	---	---	---		7.95	---
	2/22/90	120	ND	ND	1.5	0.55		7.47	---
	5/17/90	240	ND	ND	ND	ND		7.70	---
MW-3	7/14/87	260	BDL	1.0	---	2.0	8.54	7.09	---
	11/24/87	8,900	1,700	3.0	---	12		7.11	---

Exceltech, Inc.  
 Project No. 1587-2G  
 July 3, 1990

Crown Metal Manufacturing  
 Pacific International Steel Facility  
 San Lorenzo, CA

TABLE 1 CONTINUED

Well	Date Sampled	TPHG µg/l	Benzene µg/l	Toluene µg/l	Ethyl Benzene µg/l	Total Xylenes µg/l	Well Elevation ft	Depth to Water ft	Floating Product ft		
MW-3 (Cont.)	2/29/88	9,300	1,600	93	---	99	8.54	6.57	---		
	5/25/88	11,000	140	16	---	34		6.80	---		
	8/10/88	4,600	23	4.8	140	3.0		7.20	---		
	11/29/88	16,000	3,900	11	600	40		7.41	---		
	2/7/89	---	---	---	---	---		N A	---		
	5/12/89	2,500	N D	5.6	N D	2.7		6.64	---		
	8/4/89	2,900	800	7.5	96	N D		7.38	---		
	11/14/89	Destroyed in August 1989									
MW-4	7/14/87	BDL	BDL	BDL	---	BDL	8.48	7.25	---		
	11/24/87	60	BDL	0.65	---	7.6		6.97	---		
	2/29/88	BDL	BDL	BDL	---	BDL		6.54	---		
	5/25/88	BDL	BDL	BDL	---	BDL		6.36	---		
	8/10/88	---	---	---	---	---		N A	---		
	11/29/88	N D	0.87	N D	N D	N D		6.85	---		
	2/7/89	N D	N D	N D	N D	N D		6.26	---		
	5/12/89	N D	N D	N D	N D	0.76		6.55	---		
	8/4/89	---	---	---	---	---		N A	---		
	11/14/89	---	---	---	---	---		---	---		
	2/22/90	N D	N D	N D	N D	N D		6.67	---		
	5/17/90	---	---	---	---	---		---	---		
MW-5	7/14/87	BDL	BDL	BDL	---	BDL	9.11	7.06	---		
	11/24/87	BDL	BDL	BDL	---	7.2		7.24	---		
	2/29/88	BDL	BDL	BDL	---	BDL		6.75	---		
	5/25/88	---	---	---	---	---		---	---		
	8/10/88	N D	N D	N D	N D	N D		7.35	---		
	11/29/88	N D	N D	N D	N D	N D		---	---		
	2/7/89	N D	N D	N D	N D	N D		7.02	---		
	5/12/89	N D	N D	N D	N D	0.84		6.69	---		
	8/4/89	N D	N D	N D	N D	N D		7.52	---		
	11/14/89	N D	N D	N D	N D	N D		7.51	---		

Exceltech, Inc.  
 Project No. 1587-2G  
 July 3, 1990

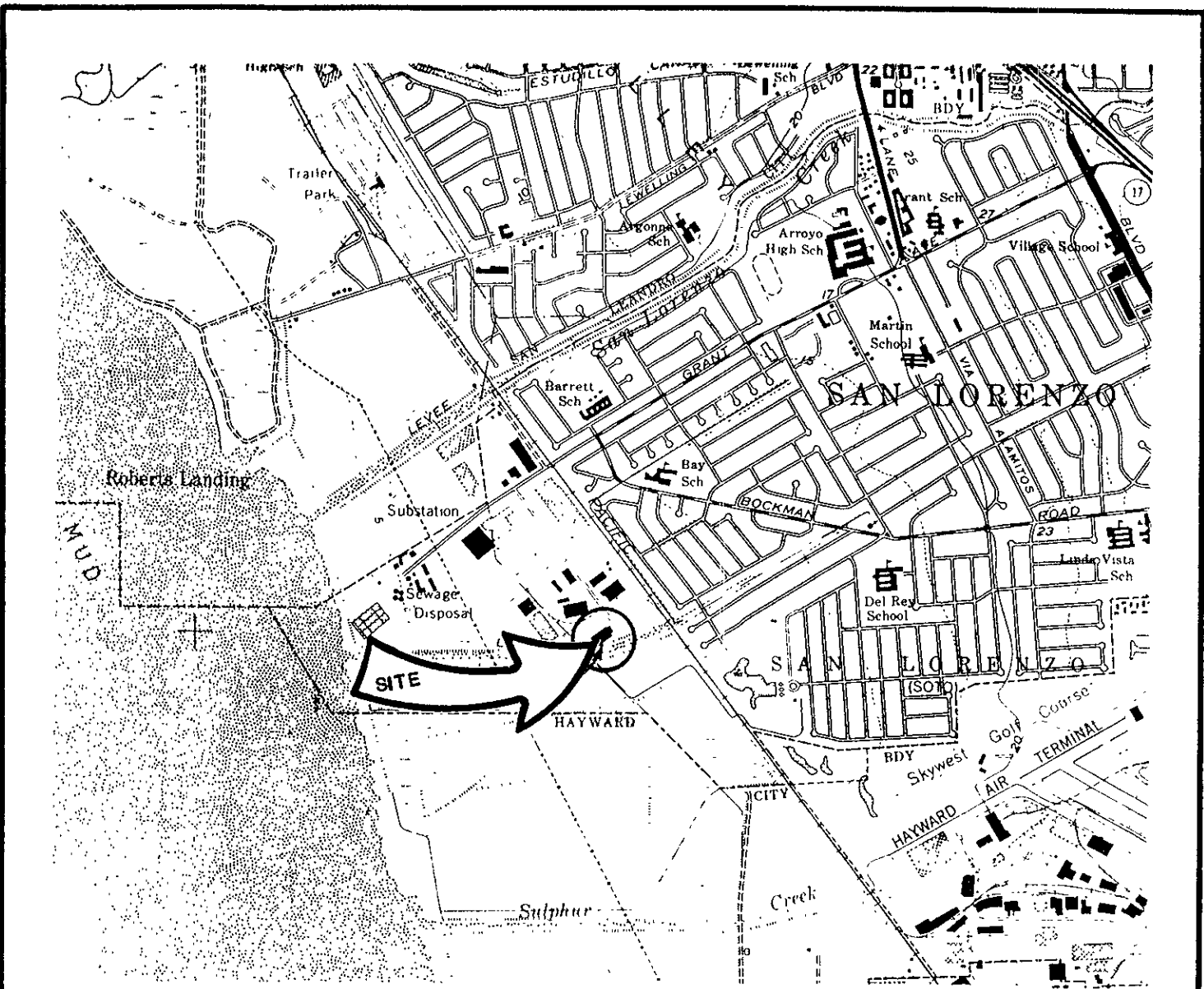
Crown Metal Manufacturing  
 Pacific International Steel Facility  
 San Lorenzo, CA

TABLE 1 CONTINUED

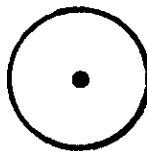
Well	Date Sampled	TPHG µg/l	Benzene µg/l	Toluene µg/l	Ethyl Benzene µg/l	Total Xylenes µg/l	Well Elevation ft	Depth to Water ft	Floating Product ft
MW-5 (Cont.)	1/3/90	---	---	---	---	---	9.11	7.42	---
	2/21/90	N D	N D	N D	N D	N D		6.85	---
	5/17/90	---	---	---	---	---		7.09	---
MW-6	7/14/87	BDL	BDL	BDL	---	BDL	9.19	---	---
	11/24/87	---	---	---	---	---		---	---
	1/5/88	BDL	BDL	BDL	---	BDL		---	---
	2/29/88	BDL	BDL	BDL	---	BDL		7.19	---
	5/25/88	BDL	BDL	BDL	N D	BDL		7.33	---
	8/10/88	N D	N D	N D	N D	N D		7.50	---
	11/29/88	N D	N D	N D	N D	N D		7.93	---
	2/7/89	N D	N D	N D	N D	N D		7.56	---
	5/12/89	N D	N D	N D	N D	N D		7.16	---
	8/4/89	N D	N D	N D	N D	N D		7.94	---
	11/14/89	N D	N D	N D	N D	N D		8.92	---
	1/3/90	---	---	---	---	---		7.89	---
	2/21/90	N D	N D	N D	N D	N D		7.28	---
5/17/90	---	---	---	---	---	8.62	---		
MW-7	1/3/90	---	---	---	---	---	8.41	8.06	---
	1/9/90	N D	N D	N D	N D	N D		8.42	---
	2/21/90	N D	N D	N D	N D	N D		6.63	---
	5/17/90	N D	N D	N D	N D	N D		6.81	---
RW-1	1/3/90	---	---	---	---	---	11.02	9.81	---
	1/9/90	1,300	150	15	100	170		9.75	---
	3/1/90	440	9.4	1.3	16	25		9.34	---
	5/17/90	1,400	52	1.0	20	12		9.55	---
BB-1	1/9/90	N D	N D	N D	N D	N D	---	---	---
	5/17/90	N D	N D	N D	N D	N D	---	---	---

TPHG Total petroleum hydrocarbons as gasoline µg/l Micrograms per liter (parts-per-billion)  
 N D Not detected at or above the method detection limit BB-1 Bailer blank  
 --- No data obtained

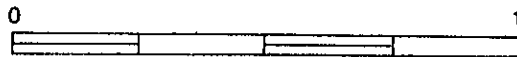




**LEGEND**



**SITE LOCATION**



**SCALE IN MILES**

USGS 7.5 MINUTE SAN LEANDRO QUADRANGLE 1980



**SITE LOCATION MAP**

**CROWN METAL MFG-PACIFIC INT'L STEEL**  
**16525 WORTHLEY DRIVE**  
**SAN LORENZO, CALIFORNIA**

**JOB #:** 1587G



**SCALE:**  
1:24000

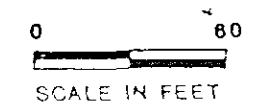
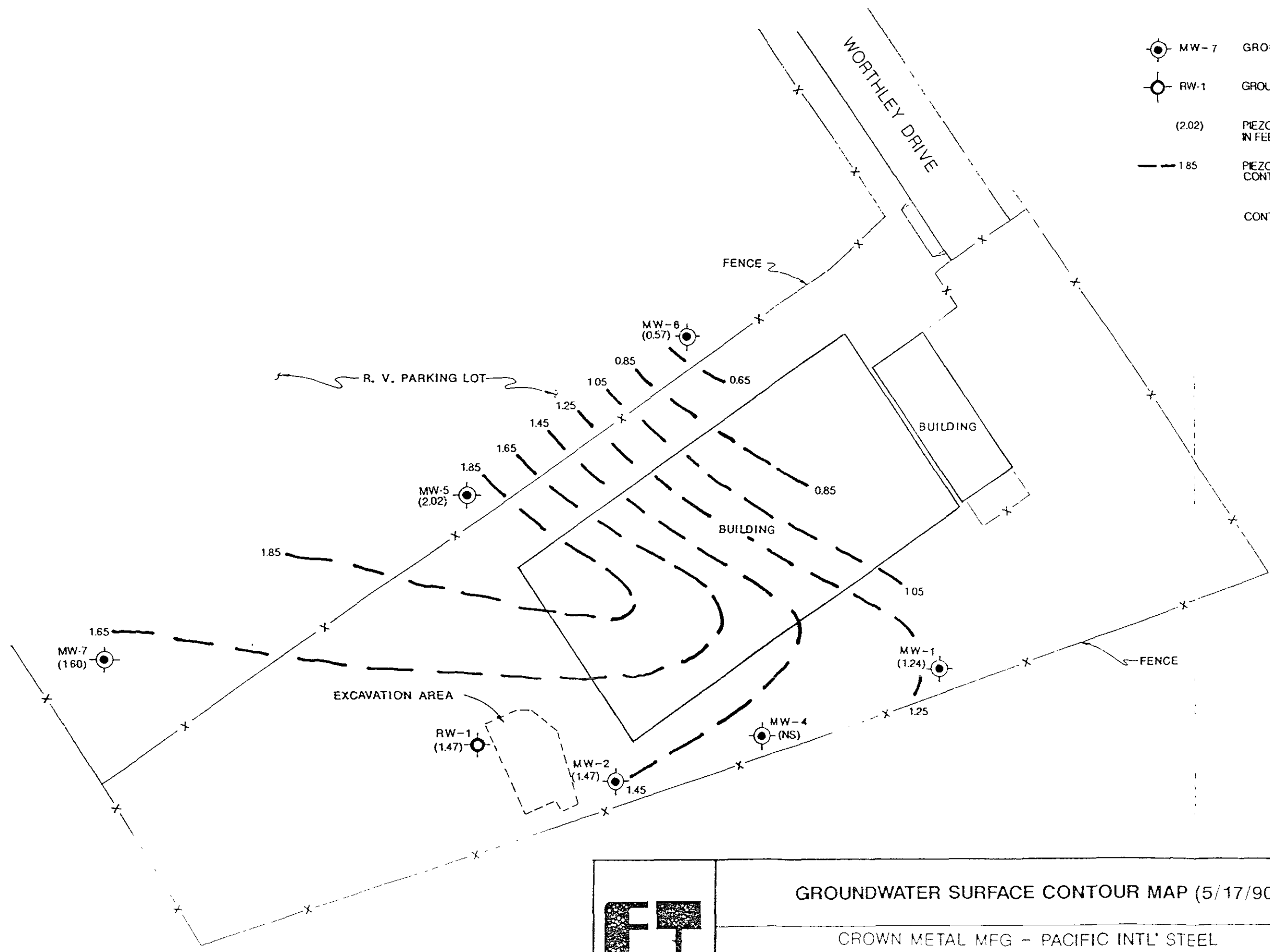
**DRAWN BY:**


**DATE:**  
6/6/87

**DRAWING #:**  
FIG. 1

**LEGEND**

-  MW-7 GROUNDWATER MONITORING WELL
-  RW-1 GROUNDWATER RECOVERY WELL
- (2.02) PIEZOMETRIC GROUNDWATER SURFACE ELEVATION IN FEET (DATUM: M.S.L.)
- 1.85 — PIEZOMETRIC GROUNDWATER SURFACE ELEVATION CONTOUR LINE IN FEET (DATUM: M.S.L.)
- CONTOUR INTERVAL=0.20 FEET



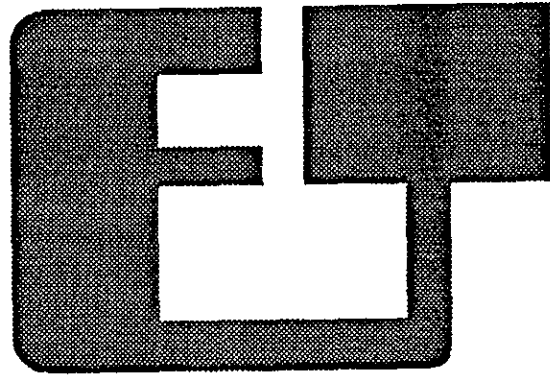
 <b>EXCELTECH</b>	<b>GROUNDWATER SURFACE CONTOUR MAP (5/17/90)</b>	REVIEWED BY:	APPROVED BY:
	CROWN METAL MFG - PACIFIC INTL' STEEL	<i>K.P.</i>	<i>LP</i>
	16525 WORTHLEY DRIVE	DESIGNED BY:	DATE:
	SAN LORENZO, CALIFORNIA	JOB #: 1587G	DRAWN BY: SLS
		DATE: 1/4/90	DRAWING #: FIG 2

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**APPENDIX A**

**GROUNDWATER SAMPLING PROTOCOL**

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**EXCELTECH**

**Groundwater Sampling  
Protocol**

# GROUNDWATER SAMPLING PROTOCOL

Sampling of groundwater is performed by Exceltech, Inc. sampling technicians. Summarized field sampling procedures are as follows:

1. Measurements of liquid surface in the well and depth of monitoring well.
2. Field check for presence of floating product.
3. Purge well prior to collecting samples.
4. Monitor groundwater for temperature, pH, and specific conductance during purging.
5. Collect samples using Environmental Protection Agency (EPA) approved sample collection devices, i.e., teflon or stainless steel bailers or pumps.
6. Transfer samples into laboratory-supplied EPA-approved containers.
7. Label samples and log onto chain-of-custody form.
8. Store samples in a chilled ice chest for shipment to a state-certified analytical laboratory.

# GROUNDWATER SAMPLING PROCEDURES

## Equipment Cleaning

All water samples are placed in precleaned laboratory-supplied bottles. Sample bottles and caps remain sealed until actual usage at the site. All equipment which comes in contact with the well or groundwater is thoroughly cleaned with a trisodium phosphate (TSP) solution and rinsed with deionized or distilled water before use at the site. This cleaning procedure is followed between each well sampled. Wells are sampled in approximate order of increasing contamination. If a teflon cord is used, the cord is cleaned. If a nylon or cotton cord is used, a new cord is used in each well. All equipment blanks are collected prior to sampling. The blanks are analyzed periodically to ensure proper cleaning.

## Water Level Measurements

Depth to groundwater is measured in each well using a sealed sampling tape or scaled electric sounder prior to purging or sampling. If the well is known or suspected of containing free-phase petroleum hydrocarbons, an optical interface probe is used to measure the hydrocarbon thickness and groundwater level. Measurements are collected and recorded to the nearest 0.01 foot.

## Bailer Sheen Check

If no measurable free-phase petroleum hydrocarbons are detected, a clear acrylic bailer is used to determine the presence of a sheen. Any observed film as well as odor and color of the water is recorded.

## Groundwater Sampling

Prior to groundwater sampling, each well is purged of "standing" groundwater. Either a bailer, hand pump, or submersible pump is used to purge the well. The amount of purging is dependent on the well yield. In a high yield formation, samples will be collected when normal field measurement, including temperature, pH, and specific conductance stabilize, provided a minimum of three well-casing volumes of water have been removed. Field measurements will be taken after purging each well volume. In low yield formations, the well is purged such that the "standing" water is removed and the well is allowed to recharge. (Normal field measurements will be periodically recorded during the purging process.) In

situations where recovery to 80% of static water level is estimated, or observed to exceed a two hour duration, a sample will be collected when sufficient volume is available for a sample for each parameter. At no time will the well be purged dry so that the recharge rate causes the formation water to cascade into the well.

In wells where free-phase hydrocarbons are detected, the free-phase portion will be bailed from the well and the volume removed recorded. A groundwater sample will be collected if bailing reduces the amount of free-phase hydrocarbons to the point where they are not present in the well. Well sampling will be conducted using one of the aforementioned methods depending on the formation yield. However, if free-phase hydrocarbons persist throughout bailing, then a groundwater samples will not be collected.

Groundwater sample containers are labeled with a unique sample number, location, product name and number, and date of collection. All samples are logged into a chain-of-custody form and placed in a chilled ice chest for shipment to a laboratory certified by the State of California Department of Health Services.

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**APPENDIX B**

**LABORATORY REPORTS  
AND  
CHAIN-OF-CUSTODY DOCUMENT**

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# SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063  
(415) 364-9600 • FAX (415) 364-9233

Exceltech  
41674 Christy Street  
Fremont, CA 94538  
Attention: Britt Von Thaden

Client Project ID: #1587-2G, Crown Metals, San Lorenzo  
Matrix Descript: Water  
Analysis Method: EPA 5030/8015/8020  
First Sample #: 005-3312 A

Sampled: May 17, 1990  
Received: May 21, 1990  
Analyzed: May 31, 1990  
Reported: Jun 11, 1990

## TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P.	Benzene	Toluene	Ethyl Benzene	Xylenes
		Hydrocarbons µg/L (ppb)	µg/L (ppb)	µg/L (ppb)	µg/L (ppb)	µg/L (ppb)
0053312 A	BB-1	N.D.	N.D.	N.D.	N.D.	N.D.
0053313 A	MW-7	N.D.	N.D.	N.D.	N.D.	N.D.
005-3314	MW-2	240	N.D.	N.D.	N.D.	N.D.
005-3315	RW-1	1,400	52	1.0	20	12

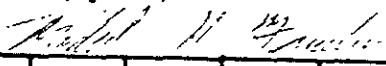
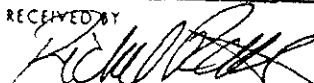
<b>Detection Limits:</b>	<b>30</b>	<b>0.30</b>	<b>0.30</b>	<b>0.30</b>	<b>0.30</b>
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Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.  
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

  
Vickie Tague  
Project Manager

# CHAIN OF CUSTODY RECORD

PROJECT NO		PROJECT NAME					TEST REQUESTED																
15822C		15515 Weather Pt Crown Metals (Route 101) San Jose, CA																					
SAMPLERS (Signature)												TYPING / BTEX											
																							
NO	DATE	TIME	DRIVE	GRAB	STATION AND LOCATION																		
B31	5-12	1:53																					
142-7		2:11																					
142-2		2:58																					
144-1		3:32																					
														Sequoia AT Normal (10 day) REMARKS									
RELINQUISHED BY			DATE	TIME	RECEIVED BY			RELINQUISHED BY			DATE	TIME	RECEIVED BY										
Mike Friedman			5-14-80	1:00																			
RELINQUISHED BY			DATE	TIME	RECEIVED BY			RELINQUISHED BY			DATE	TIME	RECEIVED BY LABORATORY										
REMARKS																							
DISTRIBUTION <i>Britt Von Thuden</i>																							



41638 CHRISTY STREET  
 FREMONT, CA 94538  
 (415) 659-0404  
 CONT LIC #444324