FIRST QUARTER 1996 GROUND WATER
MONITORING REPORT
S&S BUILDING SUPPLY
SAN LEANDRO, CALIFORNIA

LOWNEY ASSOCIATES
Environmental / Geotechnical / Engineering Services

LOWNEY ASSOCIATES
Environmental / Geotechnical / Engineering Services

February 16, 1995
1063-1, MV021402

Mr. Bob Gardner
S&S BUILDING SUPPLY
701 Fremont Avenue
San Leandro, California 94577

RE: FIRST QUARTER 1996 GROUND WATER MONITORING REPORT S&S BUILDING SUPPLY SAN LEANDRO, CALIFORNIA

Dear Mr. Gardner:

In accordance with your request, we are pleased to present the first quarter 1996 ground water monitoring report for the referenced site, located at 701 Fremont Avenue in San Leandro, California.

To evaluate the ground water quality, ground water samples were collected from monitoring wells MW-1, MW-2, and MW-3 on February 1, 1996. Laboratory analysis of the ground water samples detected gasoline range petroleum hydrocarbons at concentrations of 1,300 and 2,600 parts per billion (ppb) in monitoring wells MW-1 and MW-3, respectively. Gasoline range petroleum hydrocarbons were not detected in the ground water samples collected from monitoring well MW-2. The concentrations detected are similar to those detected during previous sampling events.

Based on the December 8, 1995 letter from the State Water Resources Control, this site should be considered for case closure by the Alameda County Environmental Health Department.

We refer you to the text of the report for details regarding our investigation. If you have any questions, please call.

Very truly yours,

LOWNEY ASSOCIATES

Stason I. Foster, P.E.
Associate
Environmental Engineer

REGISTERED PROFESSIONAL ENGINEER
STASON I. FOSTER
No. 051495
Exp. 6-30-98
CIVIL
STATE OF CALIFORNIA

Ron L. Helm, C.E.G.
Principal
Environmental Geologist

REGISTERED GEOLOGIST
RON L. HELM
No. EG1808
Exp. 7-31-97
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

RLH:SIF:PJR:tjc

Copies: Addressee (2)
Alameda County Environmental Health Department (1)
Attn: Mr. Dale Klettke

650 -

405 Clyde Avenue, Mountain View, CA 94043-2209 (415) 967-2365 FAX (415) 967-2785
Mailing Address: P.O. Box 1388, Mountain View, CA 94042-1388

Mountain View *Walnut Creek*

FIRST QUARTER 1996 MONITORING REPORT

For

S&S BUILDING SUPPLY
San Leandro, California

To

Mr. Bob Gardner
S&S BUILDING SUPPLY
701 Fremont Avenue
San Leandro, California 94577

February 1996

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FIRST QUARTER 1996 GROUND WATER MONITORING REPORT

S&S BUILDING SUPPLY

SAN LEANDRO, CALIFORNIA

1.0 INTRODUCTION

1.1 Purpose

In this report, we present the results of the first quarter 1996 monitoring of ground water at 701 Fremont Avenue in San Leandro, California. The purpose of this work was to evaluate current ground water quality.

1.2 Site Background

Two 1,000-gallon gasoline underground storage tanks (USTs) and dispenser island were formerly located on-site. During the removal of the USTs in 1989, two soil samples were collected from beneath the northern and southern ends of each UST. Laboratory analysis of soil samples collected from beneath the northern and southern ends of the westernmost UST detected petroleum hydrocarbons in the gasoline range (TPHg) at 2,300 parts per million (ppm) and 7,600 ppm, respectively. Laboratory analysis of soil samples collected from beneath the easternmost UST did not detect TPHg or benzene, ethylbenzene, toluene, or xylenes (BTEX) above the laboratory detection limits.

We understand that additional soil was removed from the UST excavation; however, it does not appear that any additional verification soil samples were collected. The excavation reportedly was extended to ground water at a depth of 10 to 12 feet. Analysis of five composite soil samples collected from the stockpiled soil after aeration did not detect TPHg or BTEX compounds. The stockpiled soil was subsequently used to backfill the excavation.

1.3 Scope of Work

The scope of work performed during this investigation included the following:

- Measurement of ground water elevations and evaluation of the ground water flow direction.
- Collection of ground water samples from on-site monitoring wells MW-1, MW-2, and MW-3.
- Laboratory analysis of the ground water samples collected.

2.0 GROUND WATER QUALITY INVESTIGATION

2.1 Ground Water Quality

To evaluate current ground water quality, ground water samples from the three on-site wells were collected on February 1, 1996. The samples were analyzed for TPHg/BTEX (EPA Test Method 8015/8020). The analytical results are presented in Table 1 and on Figure 3. A discussion of well sampling protocol and copies of all laboratory reports are presented in Appendices A and B, respectively.

TABLE 1. Analytical Results for Ground Water Samples
(concentrations in parts per billion)

Well Number	Date Sampled	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes
MW-1	11/03/94	35,000	<25	<25	140	430
	01/25/95	4,100	22	9.4	25	71
	04/2//95	3,600	9.6	7.0	39	120
	08/15/95	1,300	15	<5.0	46	90
	02/01/96	1,300	16	<5.0	33	76

continued

TABLE 1. Analytical Results for Ground Water Samples
(concentrations in parts per billion)
(continued)

Well Number	Date Sampled	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes
MW-2	11/03/94	1,200	<2.5	<2.5	<2.5	<2.5
	01/25/95	330	<0.50	<0.50	<0.50	<0.50
	04/28/95	220	1.8	<0.50	0.58	4.2
	08/15/95	69	<0.50	<0.50	<0.50	<0.50
	02/01/96	<50	<0.50	<0.50	<0.50	<0.50
MW-3	11/03/94	2,400	4.2	<2.0	40	43
	11/03/94*	3,000	5.6	<2.0	39	44
	01/25/95	2,800	27	<5.0	110	150
	04/28/95	6,500	12	11	300	410
	08/15/95	2,000	9.9	<5.0	64	45
	02/01/96	2,600	23	7	89	110
Drinking Water Standards•		NE	1.0	1,000	680	1,750

• -U.S. Environmental Protection Agency, "Drinking Water Standards and Health Advisory Table", August 1991
< -Compound not detected above the specified laboratory detection limit.
* -Split Sample
NE -Not Established

2.2 Ground Water Flow

To evaluate the ground water flow direction at the site, the static ground water levels in monitoring wells MW-1, MW-2, and MW-3 were measured from the top of each well casing using an electronic depth sounder. The ground water and top of casing elevations are presented in Table 2. As shown on Figure 2, the ground water flow direction beneath the site is towards the south, which is consistent with the previous measurements.

TABLE 2. Ground Water and Top of Casing Elevations
(measurements in feet)

Well Number	Date	Top of Casing Elevation	Ground Water Depth•	Ground Water Elevation
MW-1	11/03/94	100.05*	15.46	84.59
	01/25/95		12.21	87.84
	04/28/95		11.07	88.98
	08/15/95	33.90**	12.43	21.47
	02/01/96		11.94	21.96
MW-2	11/03/94	100.00*	15.29	84.71
	01/25/95		12.06	87.94
	04/28/95		10.86	89.14
	08/15/95	33.85**	12.22	21.63
	02/01/96		11.77	22.08
MW-3	11/03/94	99.58*	14.96	84.62
	01/25/95		11.75	87.83
	04/28/95		10.59	88.99
	08/15/95	33.43**	11.96	21.47
	02/01/96		11.48	21.95

* Relative top of casing elevation
** Surveyed to City of San Leandro benchmark located in the intersection of Floresta Boulevard and Del Monte Way (Elevation = 32.403 feet above mean sea level).
• Measured from top of casing

3.0 CONCLUSIONS AND RECOMMENDATIONS

The purpose of this investigation was to evaluate the current ground water quality in the existing on-site monitoring wells.

Laboratory analysis of the ground water samples collected from the on-site monitoring wells detected gasoline range petroleum hydrocarbons in samples collected from monitoring wells MW-1 and MW-3 at concentrations of 1,300 and 2,600 ppb, respectively. Gasoline range petroleum hydrocarbons were not detected in the ground water samples collected from monitoring well MW-2. The concentrations have generally decreased in the three on-site monitoring wells over the past five sampling events.

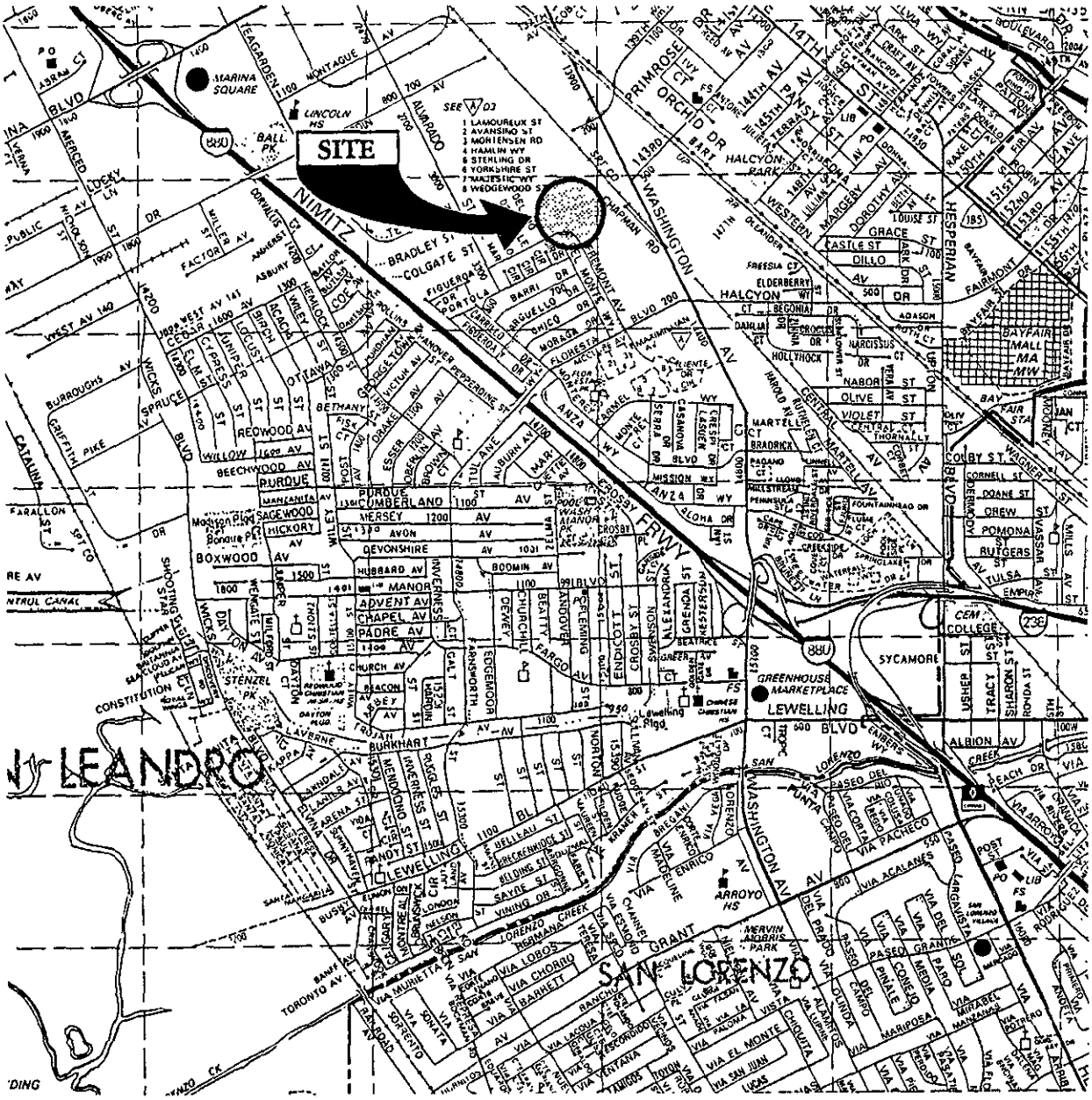
In our opinion, a continued decrease in petroleum hydrocarbon concentrations would be expected due to natural degradation and attenuation processes.

In a December 8, 1995 letter from the State Water Resources Control Board, the State recommends that local oversight agencies should proceed aggressively to close low risk fuel leak sites. Based on the laboratory results of the past five consecutive sampling events and considering the State's recent interim guidance for fuel leak cases, and the related California Regional Water Quality Control Board (CRWQCB) January 5, 1996 memorandum, this site should be considered for case closure by the Alameda County Environmental Health Department (ACEHD).

4.0 LIMITATIONS

This report was prepared for the use of S&S Building Supply in evaluating ground water quality at the referenced site at the time of this study. We make no warranty, expressed or implied, except that our services have been performed in accordance with environmental principles generally accepted at this time and location. The chemical and other data presented in this report can change over time and are applicable only to the time this study was performed.

* * * * * * * * * * * * *



"Reproduced with permission granted by THOMAS BROS. MAPS."

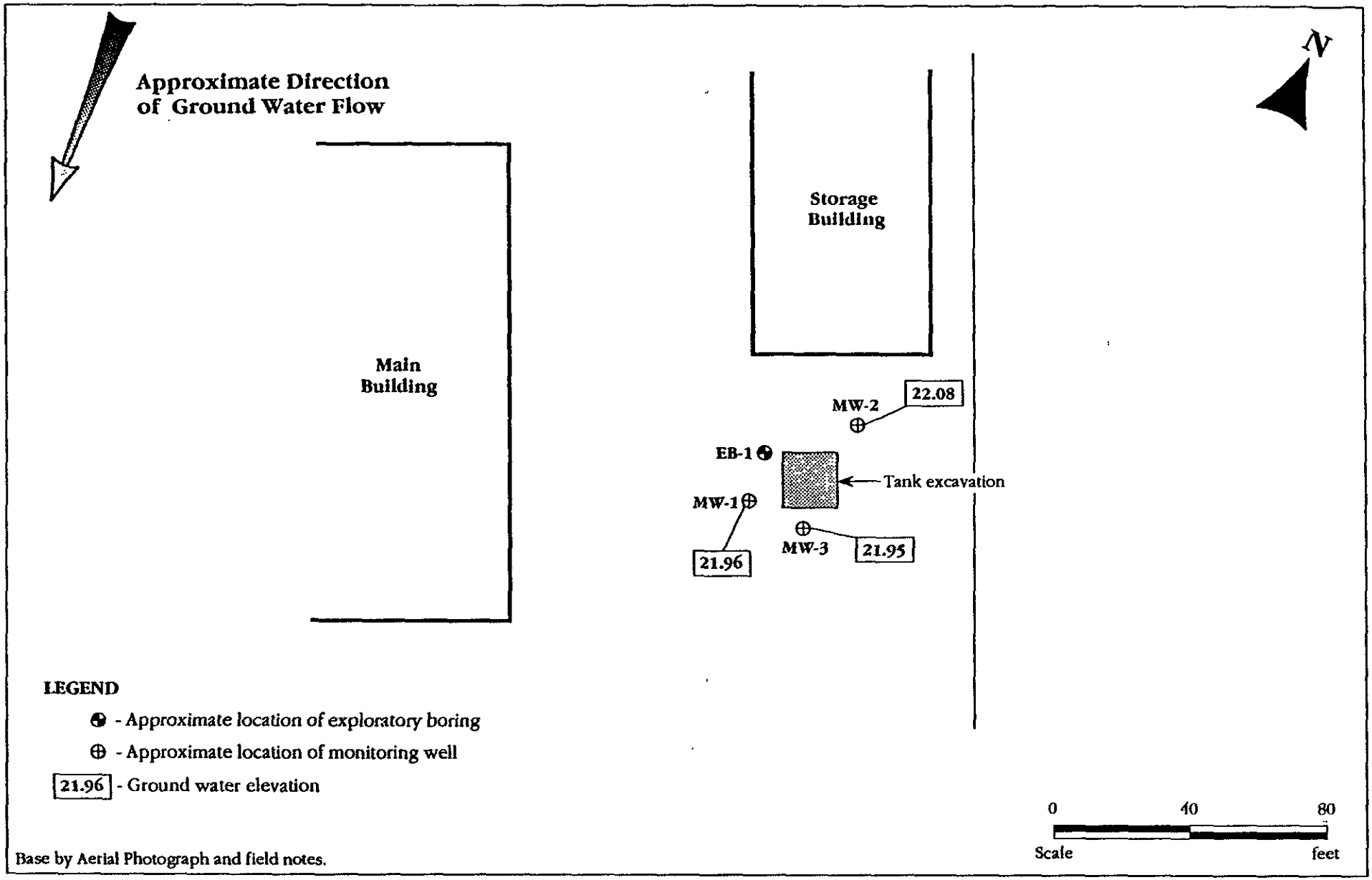
1063-1,'98*EB

VICINITY MAP

S & S BUILDING SUPPLY
San Leandro, California

LOVNEY ASSOCIATES
Environmental/Geotechnical/Engineering Services

FIGURE 1
1063-1



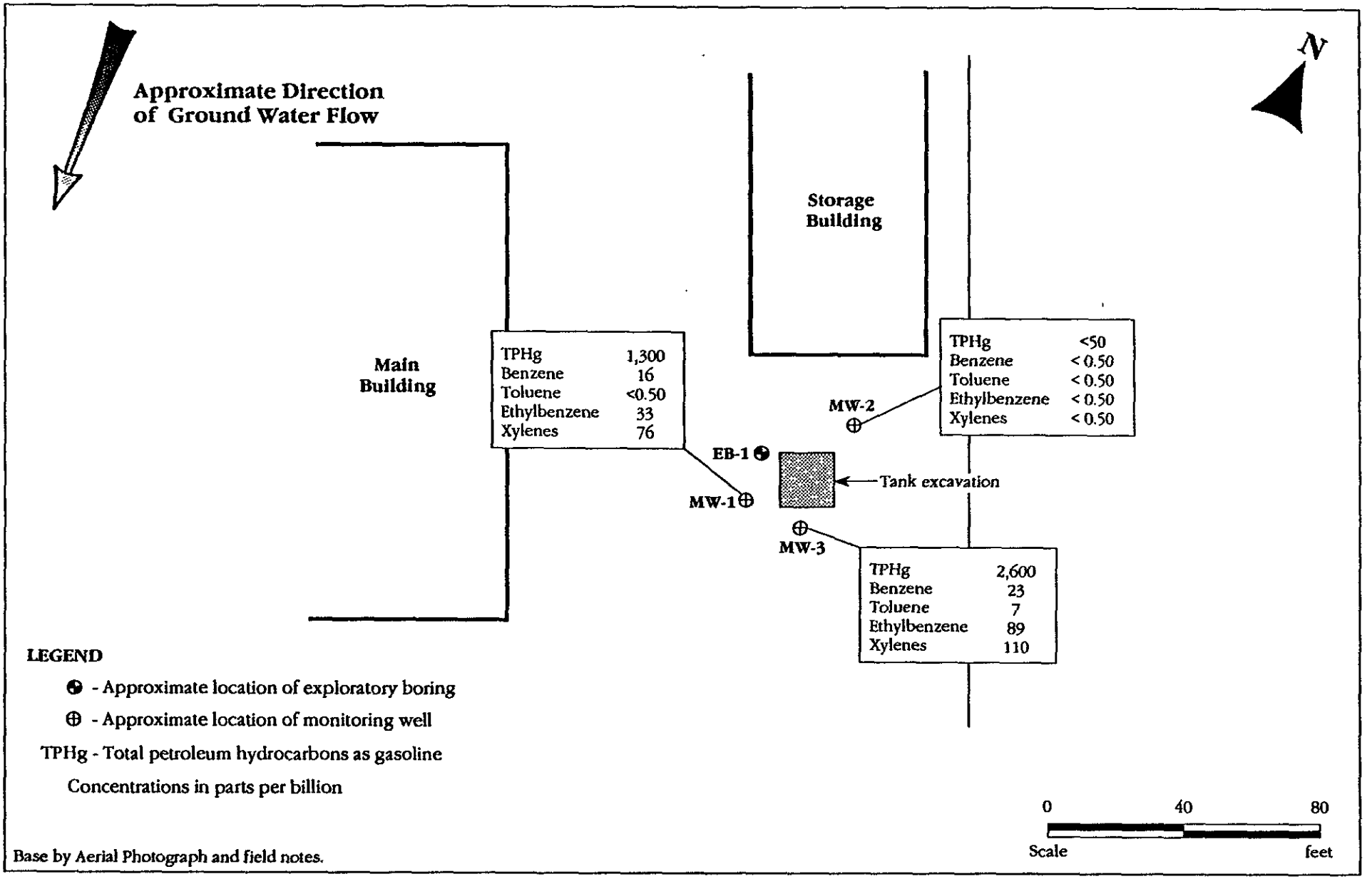
1063-1, 2/98 PR'EB

GROUND WATER ELEVATION MAP

S & S BUILDING SUPPLY
San Leandro, California

LOVNEY ASSOCIATES
Environmental/Geotechnical/Engineering Services

FIGURE 2
1063-1



1063-1*EB

ANALYTICAL RESULTS FOR GROUND WATER SAMPLES

S & S BUILDING SUPPLY
San Leandro, California

LOWNEY ASSOCIATES
Environmental/Geotechnical/Engineering Services

FIGURE 3
1063-1

APPENDIX A

WELL SAMPLING PROTOCOL

Ground Water Sampling

A Teflon bailer was used to purge a minimum of four well casing volumes of water from each well. After purging each well volume, pH, temperature, and conductivity measurements were recorded. In general, these measurements stabilize after three to four well volumes. If, after the fourth well volume the pH and conductivity did not stabilize, additional well volumes were removed until these measurements did stabilize. If the yield was low and the well was pumped dry, the well was allowed to recharge to 80 percent of the initial water level before sampling. Samples were collected in appropriate sample bottles, labeled, and immediately placed into an ice-cooled chest for delivery to a state certified analytical laboratory for analysis.

Equipment Decontamination

All well sampling equipment was cleaned with an aqueous tri-sodium phosphate solution and distilled water or steam cleaned prior to entering each well.

Well development and sampling records are attached.

LOWNEY ASSOCIATES — Environmental & Geotechnical Engineering Services

RECORD OF WELL DEVELOPMENT/SAMPLING

Project Number 1063-1

Project Name S & S Building Supply

Field Geologist/Engineer PJR

Well Number MW-1 **Total Well Depth** (completed) 25 (Feet)

Casing Diameter 2 (Inches) **Development Date** _____

Volume Produced _____ (liter/gal) **Development Method** _____

WELL VOLUME CONVERSION FACTORS

2-INCH CASING DIAMETER;
VOL (GALLONS)= FEET OF WATER X 0.17
VOL (LITERS) = FEET OF WATER X 0.62

4-INCH CASING DIAMETER;
VOL (GALLONS) = FEET OF WATER X 0.66
VOL (LITERS) = FEET OF WATER X 2.5

Sampling Date 2-1-96 **Time** 2:00 **Method** Teflon Bailer

Static Water Level Prior to Purging 11.94 (ft)
(Measured from top of casing)

Feet of Water 13.06 (ft)

Well Volume 8.10 (liter/gal)

Three Well Volumes 32.39 (liter/gal)

Total Produced 33.0 (liter/gal)

Number of Well Volumes 4.08

Production Time _____ (min)

Production Rate _____ (/min)

Well Volumes	pH	Cond µsx100	Temp °F
1	7.2	73	68
2	7.2	72	69
3	7.3	71	68
4	7.2	71	67
5			
6			
7			
8			
9			
10			

Water Characteristics:

Color; Gray **Clear** ☐ **Cloudy** ☒ **Very Silty** ☐
Odor; **None** ☐ **Slight** ☐ **Moderate** ☒ **Strong** ☐
Sheen; **Yes** ☐ **No** ☒ **Other** _____

Water Level After Recovery 11.95 (ft) **80% Recharged** **Yes** ☒ **No** ☐

Sample I.D. MW-1 **Laboratory** Sequoia

Comments: _____

LOWNEY ASSOCIATES — RECORD OF WELL DEVELOPMENT/SAMPLING

Environmental Exploration and Engineering Services

Project Number 1063-1

Project Name S & S Building Supply

Field Geologist/Engineer PJR

Well Number MW-2 **Total Well Depth** (completed) 25 (Feet)

Casing Diameter 2 (Inches) **Development Date** _____

Volume Produced _____ (liter/gal) **Development Method** _____

WELL VOLUME CONVERSION FACTORS

2-INCH CASING DIAMETER;
VOL (GALLONS) = FEET OF WATER X 0.17
VOL (LITERS) = FEET OF WATER X 0.62

4-INCH CASING DIAMETER;
VOL (GALLONS) = FEET OF WATER X 0.66
VOL (LITERS) = FEET OF WATER X 2.5

Sampling Date 2-1-96 **Time** 1:00 **Method** Teflon Bailer

Static Water Level Prior to Purging 11.77 (ft)
(Measured from top of casing)

Feet of Water 13.23 (ft)

Well Volume 8.20 (liter/gal)

Three Well Volumes 32.81 (liter/gal)

Total Produced 33.0 (liter/gal)

Number of Well Volumes 4.02

Production Time _____ (min)

Production Rate _____ (/min)

Well Volumes	pH	Cond µsx100	Temp °F
1	6.7	72	7.3
2	6.8	70	7.4
3	6.8	70	7.3
4	6.8	71	7.3
5			
6			
7			
8			
9			
10			

Water Characteristics:

Color; Clear - Light tan **Clear** ☐ **Cloudy** ☒ **Very Silty** ☐

Odor; **None** ☐ **Slight** ☒ **Moderate** ☐ **Strong** ☐

Sheen; **Yes** ☐ **No** ☒ **Other** _____

Water Level After Recovery 11.78 (ft) **80% Recharged** **Yes** ☒ **No** ☐

Sample I.D. MW-2 **Laboratory** Sequoia

Comments: _____

APPENDIX B

ANALYTICAL RESULTS

The chilled samples were delivered to a state certified analytical laboratory. Chain of custody documentation was maintained for all samples. Attached are copies of the analytical results and chain of custody forms.

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Lowney Associates
405 Clyde Avenue
Mt. View, CA 94043
Attention: Stason Foster

Client Project ID: S & S Building Supply
Sample Matrix: Water
Analysis Method: EPA 5030/8015 Mod./8020
First Sample #: 602-0063

Sampled: Feb 1, 1996
Received: Feb 1, 1996
Reported: Feb 7, 1996

QC Batch Number: GC020596 802002A | GC020596 802002A | GC020696 802004A

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 602-0063 MW-1	Sample I.D. 602-0064 MW-2	Sample I.D. 602-0065 MW-3
Purgeable Hydrocarbons	50	1,300	N.D.	2,600
Benzene	0.50	16	N.D.	23
Toluene	0.50	N.D.	N.D.	7.0
Ethyl Benzene	0.50	33	N.D.	89
Total Xylenes	0.50	76	N.D.	110
Chromatogram Pattern:		Gasoline	--	Gasoline

FEB 22 1996
RECEIVED

Quality Control Data

Report Limit Multiplication Factor:	10	1.0	10
Date Analyzed:	2/5/96	2/5/96	2/6/96
Instrument Identification:	HP-2	HP-2	HP-4
Surrogate Recovery, %: (QC Limits = 70-130%)	106	101	99

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

Kevin Van Slambrook
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Lowney Associates
405 Clyde Avenue
Mt. View, CA 94043
Attention: Stason Foster

Client Project ID: S & S Building Supply
Matrix: Liquid

QC Sample Group: 6020063-065

Reported: Feb 9, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC020596 802002A	GC020596 802002A	GC020596 802002A	GC020596 802002A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	S. Chullakorn	S. Chullakorn	S. Chullakorn	S. Chullakorn
MS/MSD #:	6020064	6020064	6020064	6020064
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	2/5/96	2/5/96	2/5/96	2/5/96
Analyzed Date:	2/5/96	2/5/96	2/5/96	2/5/96
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L
Result:	21	20	20	60
MS % Recovery:	105	100	100	100
Dup. Result:	23	21	22	65
MSD % Recov.:	115	105	110	108
RPD:	9.1	4.9	9.5	8.0
RPD Limit:	0-50	0-50	0-50	0-50
LCS #:	1LCS020596	1LCS020596	1LCS020596	1LCS020596
Prepared Date:	2/5/96	2/5/96	2/5/96	2/5/96
Analyzed Date:	2/5/96	2/5/96	2/5/96	2/5/96
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L
LCS Result:	22	22	25	67
LCS % Recov.:	110	110	125	112
MS/MSD LCS Control Limits	71-133	72-128	72-130	71-120

SEQUOIA ANALYTICAL, #1271

Kevin Van Slambrook
Project Manager

Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Lowney Associates
405 Clyde Avenue
Mt. View, CA 94043
Attention: Stason Foster

Client Project ID: S & S Building Supply
Matrix: Liquid

QC Sample Group: 6020063-065

Reported: Feb 9, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC020696	GC020696	GC020696	GC020696
	802004A	802004A	802004A	802004A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	N. Beaman	N. Beaman	N. Beaman	N. Beaman
MS/MSD #:	6011521	6011521	6011521	6011521
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	2/6/96	2/6/96	2/6/96	2/6/96
Analyzed Date:	2/6/96	2/6/96	2/6/96	2/6/96
Instrument I.D.#:	HP-4	HP-4	HP-4	HP-4
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L
Result:	23	24	23	71
MS % Recovery:	115	120	115	118
Dup. Result:	22	23	23	69
MSD % Recov.:	110	115	115	115
RPD:	4.4	4.3	0.0	2.9
RPD Limit:	0-50	0-50	0-50	0-50
LCS #:	2LCS020696	2LCS020696	2LCS020696	2LCS020696
Prepared Date:	2/6/96	2/6/96	2/6/96	2/6/96
Analyzed Date:	2/6/96	2/6/96	2/6/96	2/6/96
Instrument I.D.#:	HP-4	HP-4	HP-4	HP-4
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L
LCS Result:	21	22	22	67
LCS % Recov.:	105	110	110	112
MS/MSD LCS Control Limits	71-133	72-128	72-130	71-120

SEQUOIA ANALYTICAL, #1271

Kevin Van Slambrook
Project Manager

Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

LOWNEY ASSOCIATES

CHAIN OF CUSTODY RECORD

SEND RESULTS TO:

☒ Mountain View Office
405 Clyde Ave
Mountain View, Ca 94043
415-967-2365
FAX COPY: ☒ 415-967-2785 (FAX)

☐ Walnut Creek Office
1600 S. Main St, Suite 125
Walnut Creek, Ca 94596
510-938-9356
FAX COPY: ☐ 510-938-9359 (FAX)

Project Name: S & S Building Supply

Job No.: 1063-1

Report To: Stason Foster

Sampler (print): Paul J. Reginato

Sampler (signature): [signature]

QC Requirements:
☒ Level A (standard) ☐ Level B ☐ Level C ☐ Level D

Turnaround Requirements:
☐ 10 Working days
☒ 5 Working days
☐ 3 Working days
☐ 48 Hours
☐ 24 Hours
☐ 2-3 Hours (RUSH)

ANALYSIS REQUESTED

Sample I.D.	Date	Time	Lab I.D.	Sample Matrix	No. of Cont.	TPHgas/BTEX (8015/8020)	TPH as diesel (8015M)	TRPH (5520) EF/BF	Halogenated VOCs (8010)	Purgeable Organics (8240)	Extractable Organics (8270)	Remarks
MW-1	2-1-96	2:00		Water	4	X						6020063 A-D
MW-2	↓	1:00		Water	4	X						6020064 ↓
MW-3	↓	3:00		Water	4	X						6020065 ↓

Relinquished By: [signature] Date: 2-1-96 Time: 4:00

Relinquished By: / Date: / Time: /

Relinquished By: / Date: / Time: /

Received By: Date: Time:

Received By: Date: Time:

Lab Of Record: Sequoia

Received By Lab: Kari Nklander Date: 2/1/96 Time: 16:00

PM initial:

Temperature: