### Quarterly Monitoring Progress Report for the Period January 1992 through March 1992

K/D Cedar Supply Company 22008 Meekland Avenue Hayward, California

February 27, 1992

BEI Job No. 92013

Prepared by:

Blymyer Engineers, Inc. 1829 Clement Avenue Alameda, CA 94501

### **LIMITATIONS**

The conclusions and recommendations presented herein were prepared in accordance with generally accepted professional engineering and/or geologic practices and principles. The scope of work for the project was conducted within the limitations prescribed by the client. Blymyer Engineers' opinions are based upon observations made at the site; review of available environmental, climatological, and geological data pertaining to the site; review of bore logs and subsurface data obtained during the investigation; and evaluation of analytical soil and/or groundwater data provided by an approved testing laboratory. All data obtained from investigations of this type are reviewed by the state or local regulatory agencies for conformance with their criteria. Therefore, there is no guarantee that additional bores, soil or groundwater analytical tests, or remedial work will not be required at the site. This warranty is in lieu of all other warranties either expressed or implied pertaining to this project.

Ramon Khu Environmental Engineer

Harry W. Short, R.G., C.E.G. Senior Geologist

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### 1.0 INTRODUCTION

Blymyer Engineers, Inc. was retained by K/D Cedar Supply Company to perform quarterly groundwater sampling of three monitoring wells at its facility located at 22008 Meekland Avenue in Hayward, California (Figure 1). The groundwater monitoring program is being conducted as a result of a previous subsurface investigation following the removal of two underground storage tanks as required by the San Francisco Bay Regional Water Quality Control Board in its Tri-Regional Guidelines. Details of the investigation may be found in Blymyer Engineers' Phase I Subsurface Investigation report dated August 2, 1991. The wells were originally sampled on July 16, 1991. This report contains water level measurements and groundwater sampling results for the second quarter of monitoring (January through March 1992) and a summary of all groundwater monitoring results at the site to date.

#### 2.0 DATA COLLECTION

### 2.1 Groundwater Investigation

### 2.1.1 Groundwater Sample Collection

Blymyer Engineers, Inc. collected groundwater samples from the three groundwater monitoring wells at the site (MW-1, MW-2, and MW-3, Figure 2) on January 29, 1992. At least three well-volumes were removed prior to sampling using a decontaminated Teflon bailer. Temperature, pH, and conductivity were measured initially and after the removal of each well-volume. The well was sampled when these measurements were all within 15% of each other for three consecutive well-volumes. The water sample from each well was collected in 40-milliliter glass volatile organic analysis bottles preserved with hydrochloric acid provided by the laboratory, labeled, and placed on ice for transportation to the analytical laboratory. Proper chain-of-custody procedures were observed. All purge water was stored at the site in Department of Transportation (DOT)-approved, 55-gallon drums for later disposal by the owner. A copy of the Well Purging and Sampling Data form for each well is attached as Appendix A.

### 2.1.2 Analytical Methods and Results

Each groundwater sample was analyzed for Total Petroleum Hydrocarbons (TPH) as gasoline using modified EPA Method 8015 and benzene, toluene, ethylbenzene, and total xylenes (BTEX) using EPA Method 602 by NET Pacific, Inc., a California-certified laboratory, on a standard 5-day turnaround. A summary of the current and past analytical results from each well is found in Table I. The full laboratory analytical report for the current sampling event is presented as Appendix B.

### 2.1.3 Groundwater Elevation Measurements

The depth from the top of the well casing to the water surface was measured in each well prior to well sampling. The top of each well casing has been surveyed relative to the Alameda County Datum, which is referenced to the National Geodetic Vertical Datum (NGVD). The results of measurements taken from the last three well sampling events are summarized in Table II. Figures 3 through 5 show the groundwater gradient maps constructed from these measurements.

### 3.0 DATA INTERPRETATION

### 3.1 Discussion of Groundwater Sample Analytical Results

The most recent analyses revealed that the groundwater samples collected from all three wells in January 1992 contained no concentrations of TPH as gasoline or BTEX above the respective reporting limits. TPH as gasoline and BTEX were also not detected above the respective reporting limits in the groundwater samples collected during the initial subsurface investigation in July 1991 and the first quarter well sampling event in October 1991.

### 3.2 Groundwater Gradient

The depth to groundwater at this site ranged from 35.53 to 36.68 feet below ground surface when it was most recently measured in January 1992. The tops of the well casings range in elevation from 63.61 to 63.77 feet NGVD, and the groundwater surface elevation ranged in elevation from 27.09 to 28.08 feet NGVD at the time of the sampling. The groundwater gradient has changed from a northern direction to a northeasterly direction since the gradient was last measured in October 1991.

### 4.0 SUMMARY AND CONCLUSIONS

- TPH as gasoline and BTEX have not been detected above the respective reporting limits in any of the groundwater samples collected from the on-site monitoring wells since they were installed in July 1991.
- The groundwater gradient at the site has changed from a northern direction to a northeasterly direction since the last measurement was performed in October 1991.

### **5.0 RECOMMENDATIONS**

• These results should be forwarded to:

Alameda County Health Care Services Agency Department of Environmental Health Hazardous Materials Program 80 Swan Way, Room 200 Oakland, CA 94621 Attention: Ms. Pamela J. Evans

Attention: Ms. Pameia J. Evans

San Francisco Bay Regional Water Quality Control Board 2101 Webster Street, 5th Floor Oakland, CA 94612 Attention: Mr. Eddy So

• Quarterly sampling of these monitoring wells should continue on schedule as shown in Table III.

Tables

## TABLE I, SUMMARY OF GROUNDWATER ANALYTICAL RESULTS K/D Cedar Supply Company 22008 Meekland Avenue, Hayward, California BEI Job No. 92013

Sample Identification	Sampling Date	Modified EPA Method 8015 (mg/L)	EPA Method 602 (μg/L)			
		TPH as gasoline	Benzene	Toluene	Ethylbenzene	Xylenes
MW-1	7/16/91	< 0.05	< 0.5	< 0.5	< 0.5	< 0.5
	10/7/91	< 0.05	< 0.5	< 0.5	< 0.5	< 0.5
	1/29/92	< 0.05	< 0.5	< 0.5	< 0.5	< 0.5
MW-2	7/16/91	< 0.05	< 0.5	< 0.5	< 0.5	< 0.5
	10/7/91	< 0.05	< 0.5	< 0.5	< 0.5	< 0.5
	1/29/92	< 0.05	< 0.5	< 0.5	< 0.5	< 0.5
MW-3	7/16/91	< 0.05	< 0.5	< 0.5	< 0.5	< 0.5
	10/7/91	< 0.05	< 0.5	< 0.5	< 0.5	<0.5
	1/29/92	< 0.05	< 0.5	< 0.5	< 0.5	<0.5

mg/L = milligrams per liter $\mu g/L = micrograms per liter$ 

TPH = Total Petroleum Hydrocarbons

For results presented as  $\langle x, x \rangle$  represents the reporting limit.

# TABLE II, GROUNDWATER ELEVATION MEASUREMENTS K/D Cedar Supply Company 22008 Meekland Avenue, Hayward, California BEI Job No. 92013

· • • • • • • • • • • • • • • • • • • •		DIX 800 2100	72020	
Well Identification	Date Measured	TOC ELEVATION (feet)*	DEPTH TO WATER (feet from TOC)	WATER SURFACE ELEVATION (feet)*
MW-1	7/16/91	63.77	35.54	28.23
	10/7/91	63.77	36.54	27.23
	1/29/92	63.77	36.68 √	27.09
MW-2	7/16/91	63.61	35.41	28.20
	10/7/91	63.61	36.38	27.23
	1/29/92	63.61	35.53	28.08
MW-3	7/16/91	63.63	35.49	28.14
	10/7/91	63.63	36.41	27.22
	1/29/92	63.63	36.54√	27.09

TOC = Top of Well Casing

\* = based on Alameda County Datum (NGVD)

s course;

### TABLE III, PROPOSED QUARTERLY GROUNDWATER SAMPLING SCHEDULE 1991-1992

1991-1992

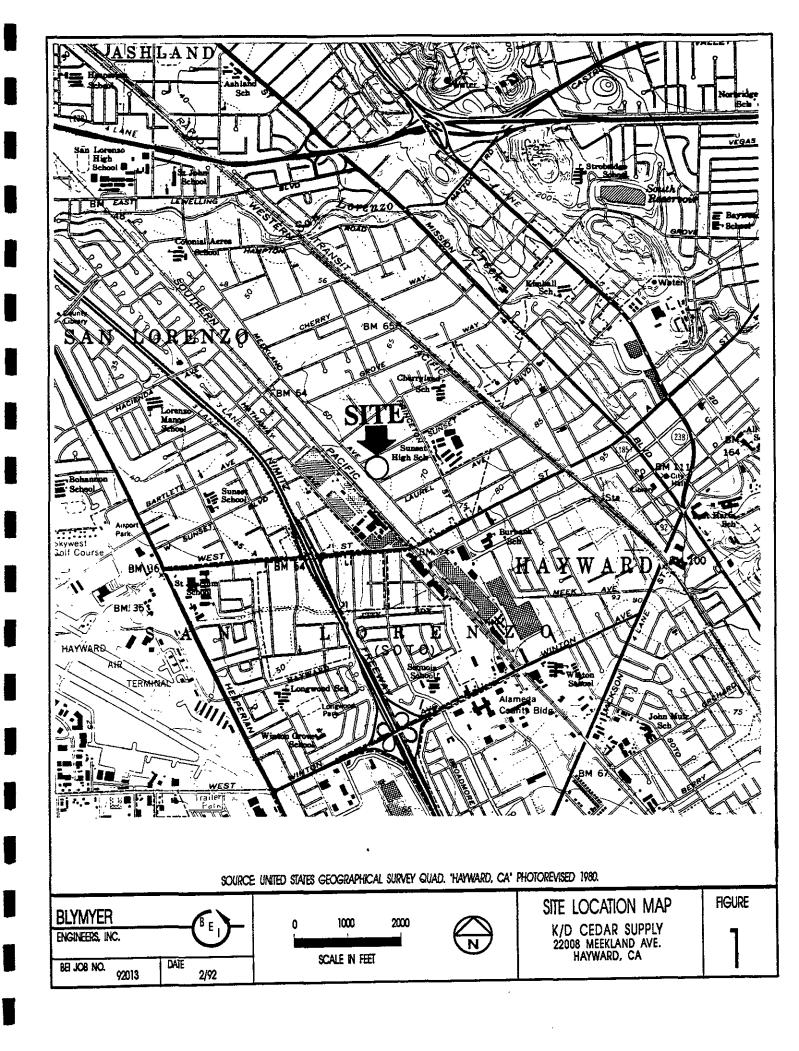
K/D Cedar Supply Company

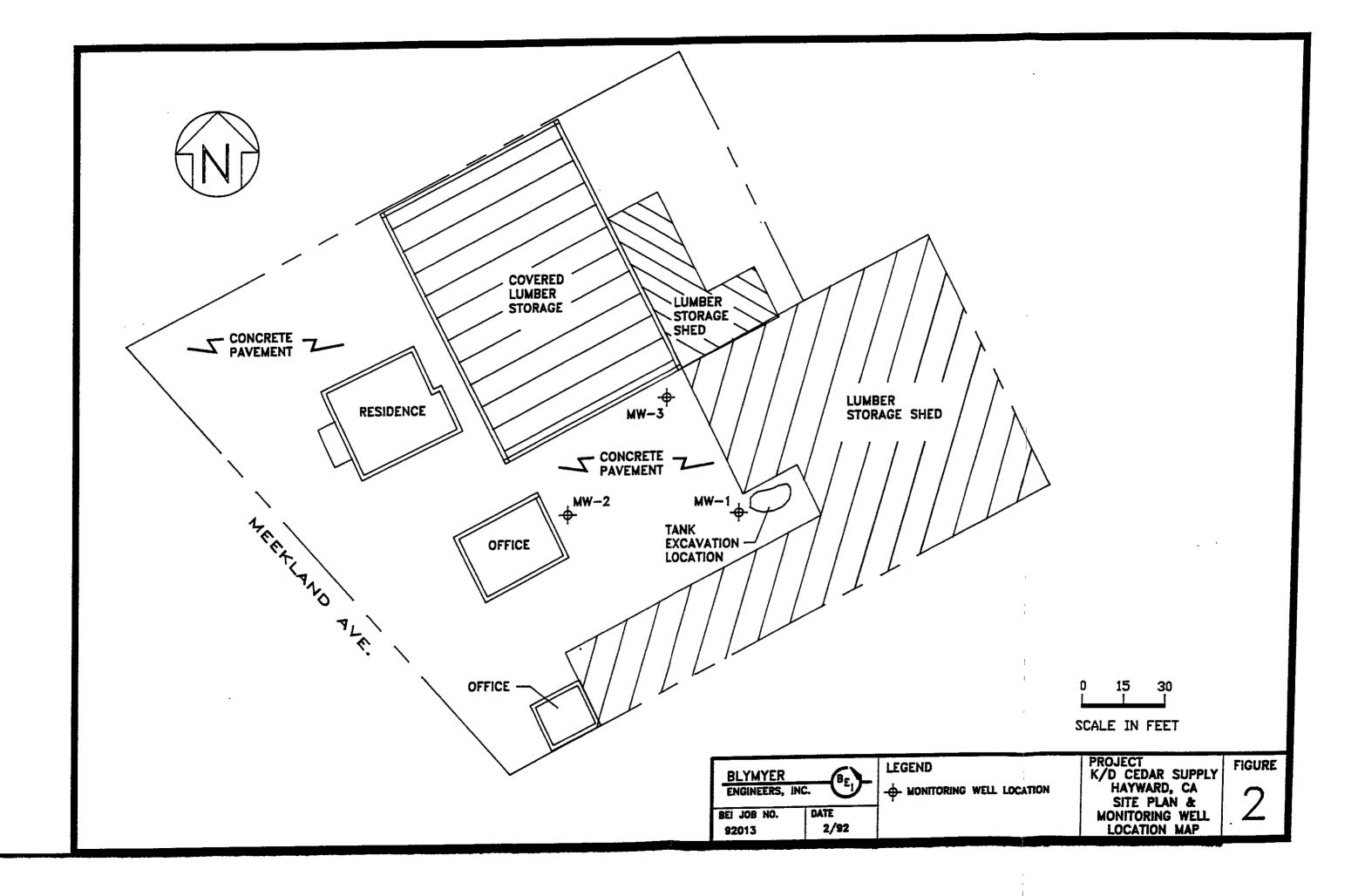
22008 Meekland Avenue, Hayward, California

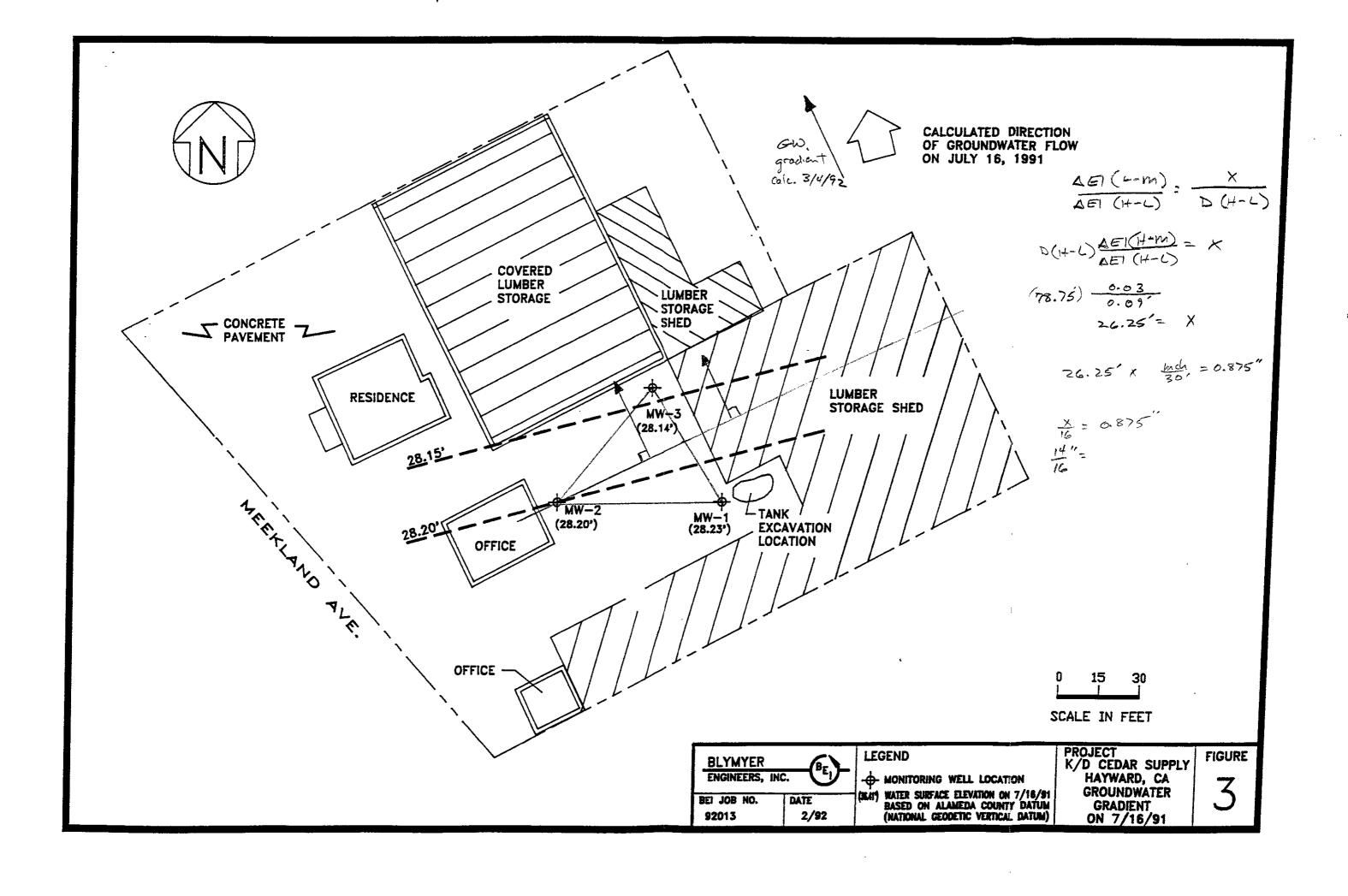
BEI Job No. 92013

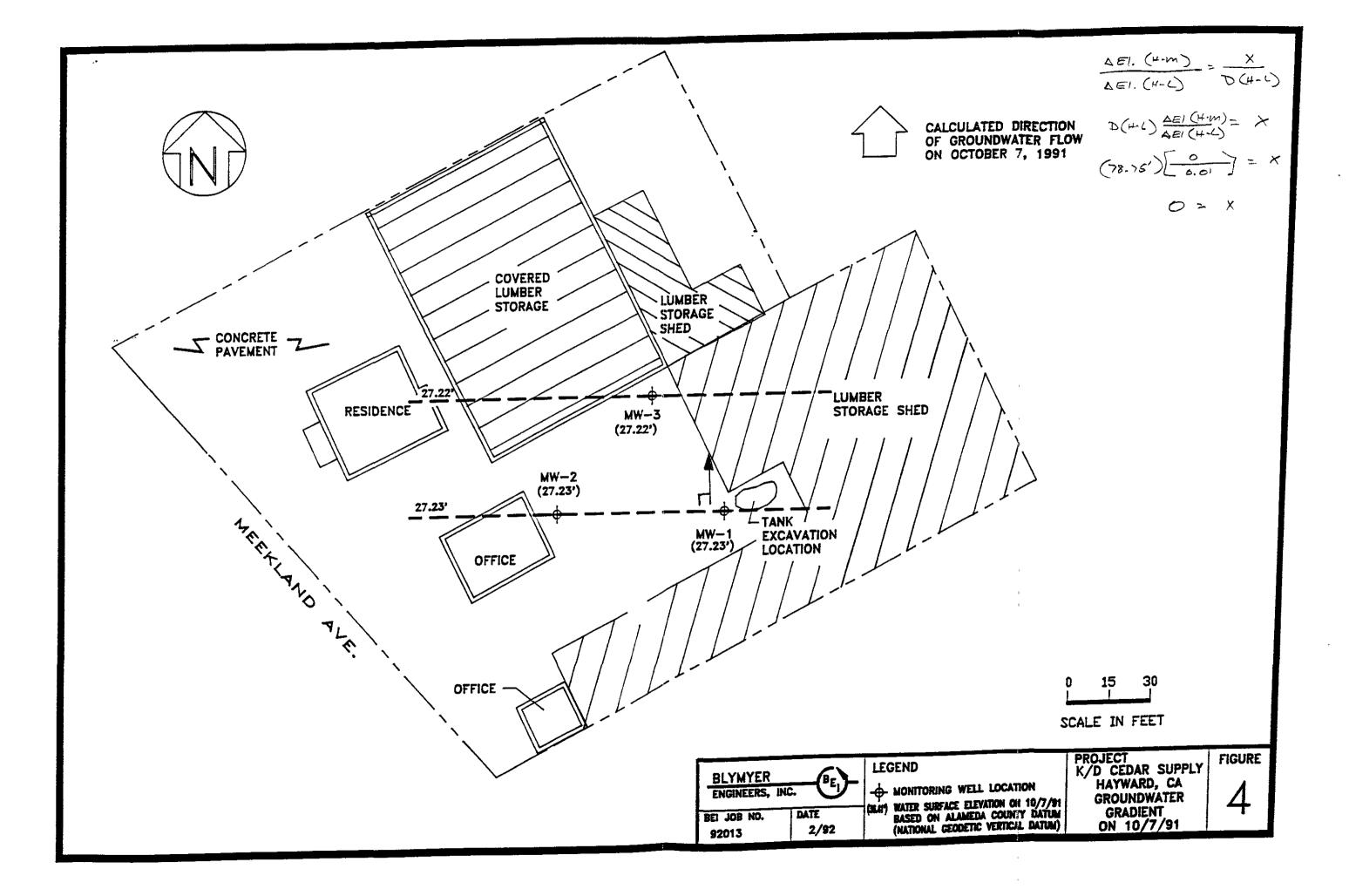
			19	991						1	1992			
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Water Level Measurement	1			1			1							
Water Sampling and Analysis	1			1			1			1				
Quarterly Sampling Report					1			1			1			

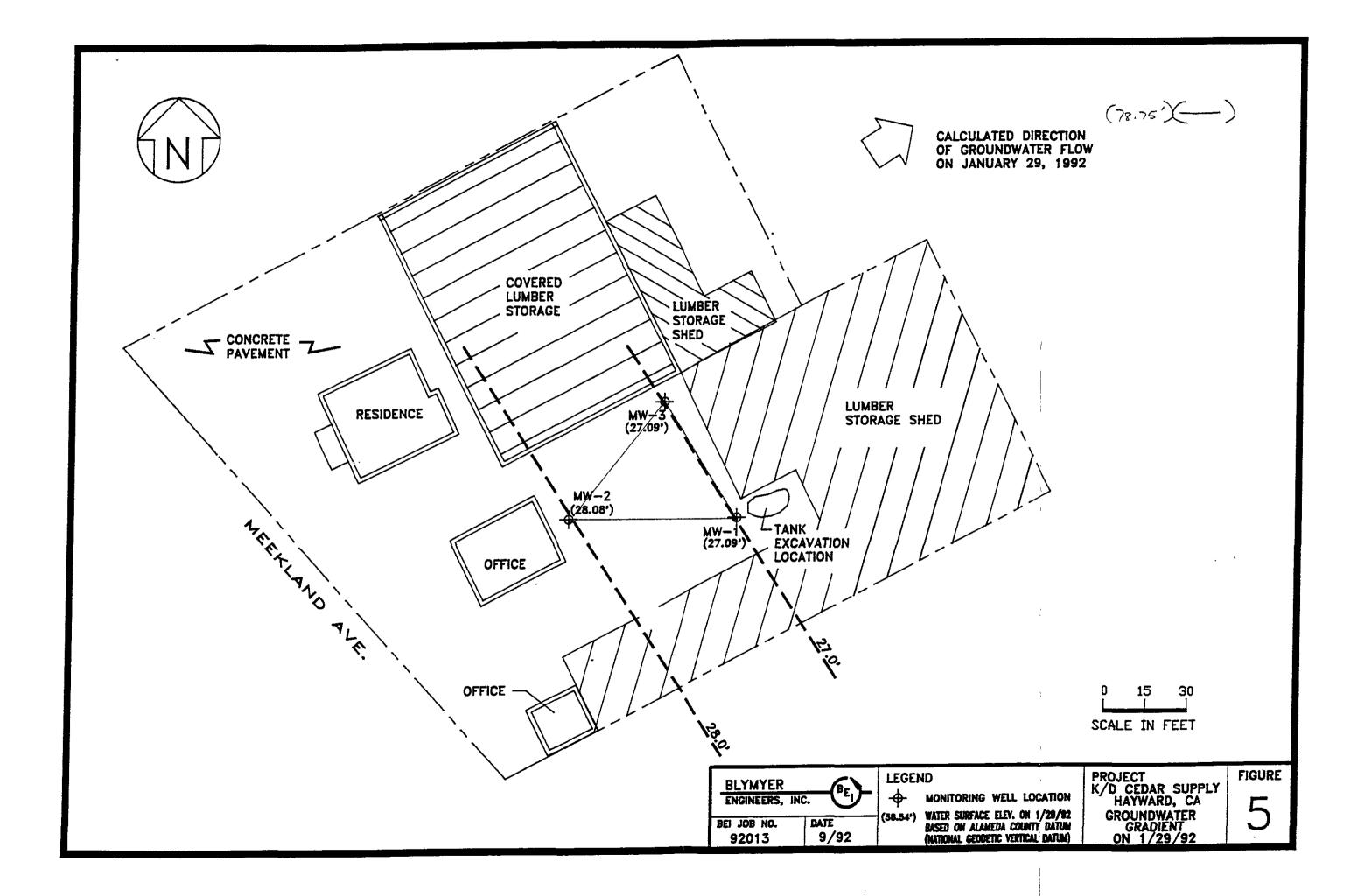
## **Figures**











## Appendix A

#### METT BOKGING WAD SWINLERED DVIV

DATE 1/29/92	PROJECT 920	13 PROJECT	KD CEDAR
WELL MW-1	BORING N	/A CASING DIAMETER	2"
Column of Liquid in Well		Volume to be Removed	
Depth to product	N/A	Gallon per foot of casing	$\frac{0.17 \text{ GAL/FT}}{\text{FT}}$
Depth to water	36.68 FT	Column of water	× <u>12.90</u> FT = 2.2 GAL
Total depth of well	49.58 FT	Number of volumes to remove Total volume to	× <u>3 GA</u> L
Column of water	<u>12.90</u> FT	remove	= 6.6  GAL
Method of measuring liquid	OIL/WATER		
Method of purging well			rate N/A
Method of decon	ALCONOX AN	D DISTILLED WATER	
Physical appearance of water (cla		tori	
Initial	CLEAR, NO ODO	OR, STRANGE WHITE "PA	STE" IN WELL
During		TAN COLOR, NO ODOR	
Final	VERY SILTY,	TAN COLOR, NO ODOR	
		Dunng	Final
Field Analysis	<u>Initial</u> 10:00	10:11 10:1	<del></del>
Time	58.1	59.8 60.3	
Temperature (F)			
Conductivity (us/cm)	1000 8.51	1030 1010 8.10 7.81	<del></del>
Ph	0.31	8.10 7.81	7.31
Method of measurement	HYDAC METER		
	6.75 GAL		
Total volume purged	TRANGE WHITE "PAS	STE" SUBSTANCE IN IT.	NO ODOR, SLIGHTLY
GRITTY, DISSOLVED REA	DILY IN DECON/ALO	CONOX RINSE.	
		-	
Sample NumberMW-1	Am	nount of Samole 3 - 40 ML	VOA W/HCL
Sample Number	· · · · · · · · · · · · · · · · · · ·		
1 ton	, W Mlow	Dota	1/29/92
Signed/Sampler	, , , ,	Date	
ioned (Revewer		Date	

BEI/swm 11/7/91

### WELL PURGING AND SAMPLING DATA

DATE1	/29/92	PROJECT NUMBER	92013	PROJEC NAME_		KD	CEDAR	
WELL I	1W-2	BORING DIAMETER	N/A	CASING DIAMET	ER		2"	
Column of Liqui	d in Well			Volume to be Ren	noved			
Depth to produc	: <b>t</b>	<u>N/A</u>		Gallon per foot of	casing	=	0.17	•
		35.53	FT	Column of water		x	12.39	FT -
Depth to water				Volume of casing		=	2.1	GAL
Total depth of w	veli	48.92	FT	Number of volume to remove		×	3	GAL
Column of water		12.39	FT	Total volume to remove		=	6.3	GAL
Marked of mage	vena liquid			ERFACE PRO	BE			
		TEFLON	BAILER				rate	N/A
	g weil	ALCONO:		ISTILLED W.	ATER			
		nty, color, particula CLEAR,		R				
Initial				AN COLOR,	NO ODO	R	· · · · · · · · · · · · · · · · · · ·	
Dunng_				AN COLOR,				
Final					<u></u>			
Field Analysis		រុបវេធ	<u>!</u>	During			<u>Final</u>	
Time		12	: 30	12:36	12:42		12:50	
Temperature (F)		61	. 2	62.0	61.9		62.3	
Conductivity (us/	em)	109	90_	1090	1070		1100_	
Ph		7.	18	7.21	7.34		7.44	
								1
Total volume purg	ged	6.5 GA	LLONS		<del> </del>			
Comments			<del></del>					
				<u> </u>		<del> </del>		
Sample Number_	MW-2		Amount o	t Samole 3 - 4 (	ML V	DA W	/HCL	
	1 7	i.	Λ			ı	i	
Signed/Sampler	ton	, W M	tue_		Date	1/0	29/92	
Signed/Reviewer_				<del></del>	Date			<del></del>
** Be 'Ann, ' an - ' a ' a ' a ' a'								

BEI/swm 11/7/91

### WELL PURGING AND SAMPLING DATA

1/29/92 DATE	PROJECT 9201	.3 PROJECT NAME	KD CEDAR
WELL NUMBER MW-3	BORING DIAMETER N / A	CASING DIAMETER	2"
Column of Liquid in Well		Volume to be Removed	
Depth to product	N/A	Gallon per foot of casing =	0.17 GAL/F1 12.92 FT
Depth to water	36.54 FT	Column of water x  Volume or casing =	2.2 GAL
Total depth of well	49.46 FT	Numper of volumes to remove x Total volume to	3 GAL
Column of water	12.92 FT	remove = TERFACE PROBE	6.6 GAL
Method of measuring liquid	TEFLON BAILE	R	rate N/A
Method of purging well  Method of decon		DISTILLED WATER	
Physical appearance of water (cla	cLEAR, NO OD	OR	
Dunng		TAN COLOR, NO ODOR	
Final		TAN COLOR, NO ODOR	
Field Analysis	intiai	<u>Durina</u>	<u>Final</u>
Time	11:17	<u>11:28</u> <u>11:37</u>	11:46
Temperature (F)	59.2	60.8 62.0	61.2
Conductivity (us/cm)	1120	1160 1140	1130
Ph	7.28	7.34 7.39	7.44
Method of measurement	HYDAC METER		
Total volume purged	6.75 GALLONS		
Comments			
Sample Number MW-3	Amou	nt of Sample 40 ML VOA	W/HCL
Signed/Sampler	a Cel Mlove-	Date	127/92

BEI/swm 11/7/91

## Appendix B



### NATIONAL 255789 ENVIRONMENTAL TESTING, INC.

NET Pacific, Inc. 435 Tesconi Circle Santa Rosa, CA 95401

Tel: (707) 526-7200 Fax: (707) 526-9623

Ramon Khu Blymyer Engineers, Inc 1829 Clement Ave Alameda, CA 94501 Date: 02/10/1992

NET Client Acct. No: 49500 NET Pacific Log No: 92.0436

Received: 01/30/1992

Client Reference Information

Job 92013, KD Cedar, Hayward

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Approved by:

Jules Skamarack Laboratory Manager

Enclosure(s)



Client Name: Blymyer Engineers, Inc

NET Log No: 92.0436

Date: 02/10/1992

Page: 2

Ref: Job 92013, KD Cedar, Hayward

SAMPLE DESCRIPTION: MW-1

Date Taken: 01/29/1992 Time Taken: 10:43 LAB Job No: (-112309)

TWD JOD NO: (-TISS	ן כנ			
		Reportir	ıg	
Parameter	Method	Limit _	Results	<u> </u>
TPH (Gas/BTXE, Liquid)				
METHOD 5030 (GC,FID)				
DATE ANALYZED			01-31-92	
DILUTION FACTOR*			1	
as Gasoline	5030	0.05	ND	mg/L
SURROGATE RESULTS				
Bromofluorobenzene	5030		96	% Rec
METHOD 8020 (GC, Liquid)				
DATE ANALYZED			01-31-92	
DILUTION FACTOR*			1	
Benzene	8020	0.5	ND	ug/L
Ethylbenzene	8020	0.5	ND	ug/L
Toluene	8020	0.5	ND	ug/L
Xylenes (Total)	8020	0.5	ND	ug/L
<u> </u>				



Client Name: Blymyer Engineers, Inc NET Log No: 92.0436

Date: 02/10/1992 Page: 3

Ref: Job 92013, KD Cedar, Hayward

SAMPLE DESCRIPTION: MW-3

> Date Taken: 01/29/1992 Time Taken: 11:55 LAB Job No: (-112310 )

	,	Reportin		
Parameter	Met <u>hod</u>	Limit	Results	Units
TPH (Gas/BTXE, Liquid)				
METHOD 5030 (GC, FID)				
DATE ANALYZED			01-31-92	
DILUTION FACTOR*			1	
as Gasoline	5030	0.05	ND	mg/L
SURROGATE RESULTS				
Bromofluorobenzene	5030		104	% Rec
METHOD 8020 (GC, Liquid)				
DATE ANALYZED			01-31-92	
DILUTION FACTOR*			1	
Benzene	8020	0.5	ИД	ug/L
Ethylbenzene	8020	0.5	ND	ug/L
Toluene	8020	0.5	ND	ug/L
Xylenes (Total)	8020	0.5	ND	ug/L
•				



Client Name: Blymyer Engineers, Inc NET Log No: 92.0436

Date: 02/10/1992

Page: 4

Ref: Job 92013, KD Cedar, Hayward

SAMPLE DESCRIPTION: MW-2

Date Taken: 01/29/1992 Time Taken: 13:01 LAB Job No: (-112311 )

THE SON NO. ( 2200	,	Reportin	ıg	
Parameter	Method	Limit	Results	Units
TPH (Gas/BTXE,Liquid)				
METHOD 5030 (GC, FID)				
DATE ANALYZED			01-31-92	
DILUTION FACTOR*			1	
as Gasoline	5030	0.05	ND	mg/L
SURROGATE RESULTS		*****	<b></b>	٠,
Bromofluorobenzene	5030		88	% Rec
<b></b>	2020		<del></del>	•
METHOD 8020 (GC, Liquid)			01-31-92	
DATE ANALYZED			1	
DILUTION FACTOR*	8020	0.5	ND	ug/L
Benzene	*	= - =	= =	ug/L
Ethylbenzene	8020	0.5	ND	
Toluene	8020	0.5	ND	ug/L
Xylenes (Total)	8020	0.5	ND	ug/L



Client Name: Blymyer Engineers, Inc

NET Log No: 92.0436

Date: 02/10/1992

Page: 5

Ref: Job 92013, KD Cedar, Hayward

### QUALITY CONTROL DATA

Parameter	Reporting Limits	Units	Cal Verf Stand % Recovery	Blank Data	Spike % Recovery	Duplicate Spike % Recovery	RPD
Gasoline	0.05	mg/L	107	ND	101	103	2.0
Benzene	0.5	ug/L	96	ND	96	99	2.8
Toluene	0.5	ug/L	98	ND	96	99	2.7

COMMENT: Blank Results were ND on other analytes tested.



### KEY TO ABBREVIATIONS and METHOD REFERENCES

<	:	Less than; When appearing in results column indicates analyte
		not detected at the value following. This datum supercedes
		the listed Reporting Limit.

: Reporting Limits are a function of the dilution factor for any given sample. To obtain the actual reporting limits for this sample, multiply the stated Reporting Limits by the dilution factor (but do not multiply reported values).

ICVS : Initial Calibration Verification Standard (External Standard).

mean : Average; sum of measurements divided by number of measurements.

mg/Kg (ppm) : Concentration in units of milligrams of analyte per kilogram

of sample, wet-weight basis (parts per million).

mg/L : Concentration in units of milligrams of analyte per liter of

sample.

mL/L/hr : Milliliters per liter per hour.

MPN/100 mL : Most probable number of bacteria per one hundred milliliters

of sample.

N/A : Not applicable.

NA : Not analyzed.

ND : Not detected; the analyte concentration is less than applicable

listed reporting limit.

NTU : Nephelometric turbidity units.

RPD : Relative percent difference, 100 [Value 1 - Value 2]/mean value.

SNA : Standard not available.

ug/Kg (ppb) : Concentration in units of micrograms of analyte per kilogram

of sample, wet-weight basis (parts per billion).

ug/L : Concentration in units of micrograms of analyte per liter of

sample.

umhos/cm : Micromhos per centimeter.

### Method References

Methods 100 through 493: see "Methods for Chemical Analysis of Water & Wastes", U.S. EPA, 600/4-79-020, rev. 1983.

Methods 601 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants" U.S. EPA, 40 CFR, Part 136, rev. 1988.

Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd edition, 1986.

SM: see "Standard Methods for the Examination of Water & Wastewater, 16th Edition, APHA, 1985.

ENGINEERS, INC.

1829 Clement Avenue

lameda, CA 94501 (415) 521-3773 CHAIN OF CUSTODY RECORD PAGE / OF /																			
ion#	DOOLECT HAL	HE /LOA	TATION	, /	^	T							T	$\neg \top$					Standavd
92013	1/1	)	$(\epsilon$	ctar / Hayu	aid (A			151											TURNAROUND TIME: 10 DAY(S)
CAMPIERS (SIGNATURE)				Mloor		NERS	)LINE + BTXE 015/8020)	TPH AS DIESEL (MOD EPA 8015)	14/8240)	SEMI-YOC (EPA 625/8270)	18.1)	020/602)							REMARKS:
DATE	TIME	COMP	GRAB	SAMPLE NAME/LOCATION		# OF CONTAINERS	TPH AS GASOLINE + BTXE (MOD EPA 8015/8020)	TPH AS DIES	VOC (EPA 62	SEMI-YOC (E	TRPH (EPA 418.1)	BTXE (EPA 8020/602)						30C	
1/29/92	09:40		X	B8-1		-3												У	
1 /27/22	10:43		×	MW-1		3	X												
1 29 92	11:55		×	mw-3		.3	X												
1/27/72	13:01		×	MW-2		3	X												
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REQUESTED BY: RESULTS AND INVOICE TO: Blymyer Engineers Fine																			
Stepl, W Mlone 1/27/12/16:26					RECEIVED BY: (SIGNATURE)						NATURI	2 n	~/	RECEIVED BY: (SIGHATURE)					
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(VIAT AJES)					PINK: Original Sampler														
WHITE: Accompany Samp	WHITE: Accompany Sample YELLOW: BEI, After Lab Signs PINK: Original Sampler																		