HydroSolutions of California, Inc.

P.O. Box 922 • 13975 Wings of Morning
Nevada City, California 95959
(916) 478-1260 • Fax (916) 478-1264

July 16, 1996

Susan Hugo
Alameda County Department of Environmental Health
1131 Harbor Bay Parkway
Alameda, California 94502-6577

SUBJECT: QUARTERLY PROGRESS & GROUNDWATER MONITORING REPORT **(JULY 1996)**
4800 SAN PABLO AVENUE
EMERYVILLE, CALIFORNIA

RRSP: 96286-06-38

Dear Susan:

As requested by the County (correspondence dated February 7, 1996), HydroSolutions of California, Inc. (HSCI) submits this third quarterly progress report of activities conducted on behalf of the City of Emeryville Redevelopment Agency.

STATUS OF INVESTIGATION

HSCI submitted a draft copy of a request to establish a containment zone to the County last quarter. HSCI was informed by the County that the submittal will be reviewed after four quarters of monitoring are completed.

The July 1996 water sampling event (three groundwater monitoring wells [WB-8, WB-9, WB-14]) was completed on July 3, 1996. This quarterly report includes a summary of groundwater data to date.

PROPOSED ACTIVITIES
Activities include: 1) implementation of the October 1996 groundwater sampling event.

TIME SCHEDULES
Activities of the above mentioned activities are expected to be completed in the next 120 days.

METHOD OF CLEANUP
Containment zone including monitoring for one year.

METHOD AND LOCATION OF DISPOSAL OF RELEASED HAZARDOUS SUBSTANCES
Purged groundwater is being placed in one 55-gallon drum.

MANIFESTS
None since January 1996.

MONITOR WELL DATA
Table 1 illustrates well data including; 1) well designation, 2) total depth, 3) screened interval, 4) sample date, 5) depth to groundwater, 6) target constituent concentrations and 7) comments.

A figure illustrating the relative groundwater elevation and direction of slope is included.

Lastly, four graphs have been prepared for your use: 1) water level (depth to groundwater) at WB-8 versus time, 2) water level (depth to groundwater) at WB-14 versus time, 3) BTXE concentrations versus time at WB-8 (central area of plume) and 4) BTXE concentrations versus time at WB-9 (down-gradient area of plume).

GROUNDWATER ELEVATION DATA
Table 1 illustrates groundwater elevation data. Based on measurements collected July 3, 1996, ground water table slopes to the north and is located higher than previously observed. The rise in water level elevation implies an increase in recharge to the subject property.

The perched groundwater condition monitored by WB-14 appears to oscillate with the seasons although the difference in elevation is less than one foot (see hydrograph).

If you have questions, comments or require modification of future progress reports, please contact me.

Respectfully submitted,

Stephen J. Baker
Registered Geologist (No. 4354)
Registered Hydrogeologist (No. 181)

Attachment:

- Laboratory data results
- Chain-of-custody
- BTXE Concentration vs Time at WB-8
- BTXE Concentration vs Time at WB-9
- Depth to Groundwater vs Time at WB-8
- Depth to Groundwater vs Time at WB-14
- Table 1. Monitor Well Data
- Groundwater Elevation Map

cc: Maryann Leshin, City of Emeryville Redevelopment Agency

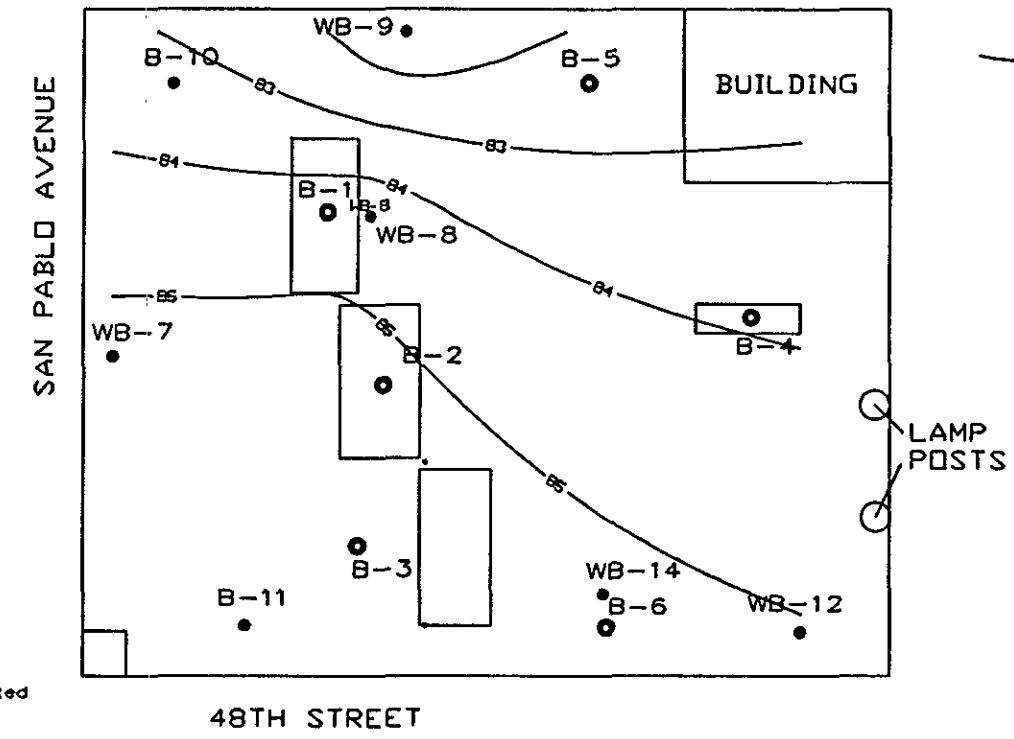
TABLE 1. MONITOR WELL DATA
4800 SAN PABLO AVENUE, EMERYVILLE, CALIFORNIA
JULY 16, 1996

WELL DESIGNATION	WB-8	WB-9	WB-14	WB-12	WB-7
TOTAL DEPTH	31	31	11	31	31
SCREENED INTERVAL	20-30	20-30	7-12	20-30	20-30
SAMPLE DATE	6-20-94				
DEPTH TO WATER	10.87	13.48	7.00	10.40	9.62
GROUNDWATER ELEVATION	83.45	80.42	87.42	84.16	83.95
TPH-G	230	270	1900	ND	ND
TPHR	ND	ND	1100	1700	ND
BENZENE	3	2.8	65	ND	ND
TOLUENE	1	1.3	3.2	ND	ND
XYLENE	ND	ND	10	ND	ND
ETHYLBENZENE	0.6	ND	ND	ND	ND
SAMPLE DATE	1-11-96				
DEPTH TO WATER	10.08	12.67	6.52	9.85	8.88
GROUNDWATER ELEVATION	84.24	81.23	87.90	84.71	84.69
TPH-G	230	300	220	ND	ND
TPH-D	ND	-	ND	ND	-
TPH-motor oil	-	-	-	ND	-
TPHR	160000	-	6900	-	-
BENZENE	2.2	10	3.2	ND	ND
TOLUENE	ND	1.1	ND	ND	ND
XYLENE	2	4.4	1.4	ND	ND
ETHYLBENZENE	5.5	9.6	0.8	ND	ND
DISSOLVED OXYGEN	2.4	3.0	0.6	1.4	1.4
SULFATE	8	12	160	35	40
SAMPLE DATE	4-05-96				
DEPTH TO WATER	10.87	13.48	7.00	9.79	7.98
GROUNDWATER ELEVATION	85.04	82.02	88.78	84.77	85.59
TPH-G	200	420	130		
TPH-D	ND	---	ND		
TPH-motor oil	ND	---	ND		
BENZENE	3.5	11	1.9		
TOLUENE	ND	ND	ND		
XYLENE	0.9	11	1.4		
ETHYLBENZENE	1.6	3.0	ND		
DISSOLVED OXYGEN	3.1	2.4	0.9		
SULFATE	10	44	2		

TABLE 1. MONITOR WELL DATA (CONTINUED)
4800 SAN PABLO AVENUE, EMERYVILLE, CALIFORNIA
JULY 16, 1996

WELL DESIGNATION	WB-8	WB-9	WB-14	WB-12	WB-7
TOTAL DEPTH	31	31	11	31	31
SCREENED INTERVAL	20-30	20-30	7-12	20-30	20-30
SAMPLE DATE	7-03-96				
DEPTH TO WATER	9.62	12.70	6.58	9.50	8.21
GROUNDWATER ELEVATION	84.70	81.20	87.84	85.06	85.36
TPH-G	289	2930	71		
TPH-D	ND	---	ND		
TPH-motor oil	ND	---	ND		
BENZENE	2.6	62.5	0.8		
TOLUENE	0.6	4.0	ND		
XYLENE	0.7	131	ND		
ETHYLBENZENE	ND	153	ND		
DISSOLVED OXYGEN	1.8	<0.2	3.4		
SULFATE	12	<1	4		

- Results reported in ug/l.
  NA means is not applicable or no data generated
- ND means nondetectable
- Petroleum analysis completed by Excelchem Environmental Labs during last two quarterly groundwater sampling events
- TPH-G reported in ug/l (ppb). Analyzed by EPA Method 5030 purge and trap. Detectable limit is 50 ug/l.
- Benzene, toluene, xylene, and ethylbenzene reported in ug/l (ppb). Analyzed by EPA Method 602. Detectable limit is 0.5 ug/l.
- TPH-D analyzed by EPA Method 3510 followed by modified EPA Method 8015 with direct sample injection into a GC equipped with a FID detector. Detectable limit is 0.050 ug/l.
- TPH-motor oil analyzed by extraction using EPA Method 3510 followed by modified EPA Method 8015 with direct sample injection into a GC equipped with a FID. Detectable limit is 500 ug/l.
- TPHR analyzed by Modified EPA Method 418.1. Detectable limit is 10 mg/l.



EXPLANATION

B-5 BORING

WB-7 GROUNDWATER MONITOR WELL

80 GROUNDWATER TABLE CONTOUR LINE AND RELATIVE ELEVATION (FT)

0 20 40 feet

APPROXIMATE SCALE

B-13

NOTES:

Exploratory drilling completed December 23, 1993 and June 16-17, 1994.

A Geoprobe system was used as the coring device for B-1 through B-6. A hollow stem augur was utilized for WB-7 through B-13.

Groundwater was encountered in boring, B-6, at 8.5 feet. Borings, B-1 through B-5 did not penetrate groundwater.

Ground water monitoring wells designated as WB-___ . All wells except WB-14 are 30 feet deep, perforated between the 20 and 30 foot depths, gravel pack to 18 foot depth and grouted to the ground surface. A locking well head is constructed at grade for each well.

Well, WB-14, is 12 feet in depth, perforated between 7 and 12 feet, gravel packed to a 5 foot depth and grouted to the ground surface.

Ground water level elevations are relative elevations.

Borings, WB-7 through B-13, were surveyed with a transit and rod.

Groundwater contour lines calculated by inverse distance method. Data includes WB-7,8,9 and 12.

Water level measurements collected July 3, 1996.

HydroSolutions of California, Inc.
P.O. Box 922
Nevada City, California 95959
(916)478-1260

Title: GROUNDWATER TABLE MAP

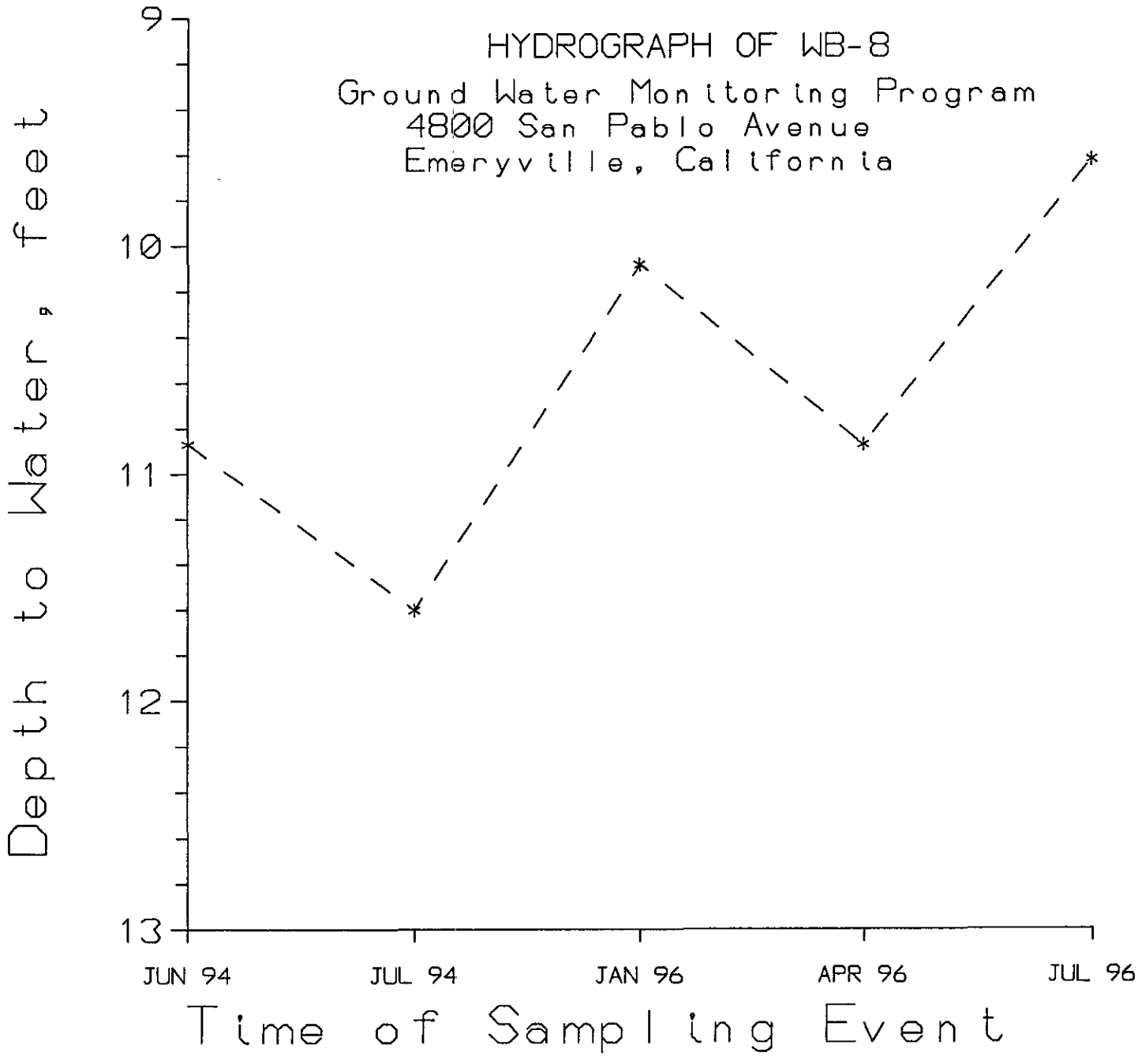
Site: 4800 SAN PABLO AVENUE EMERYVILLE, CALIFORNIA

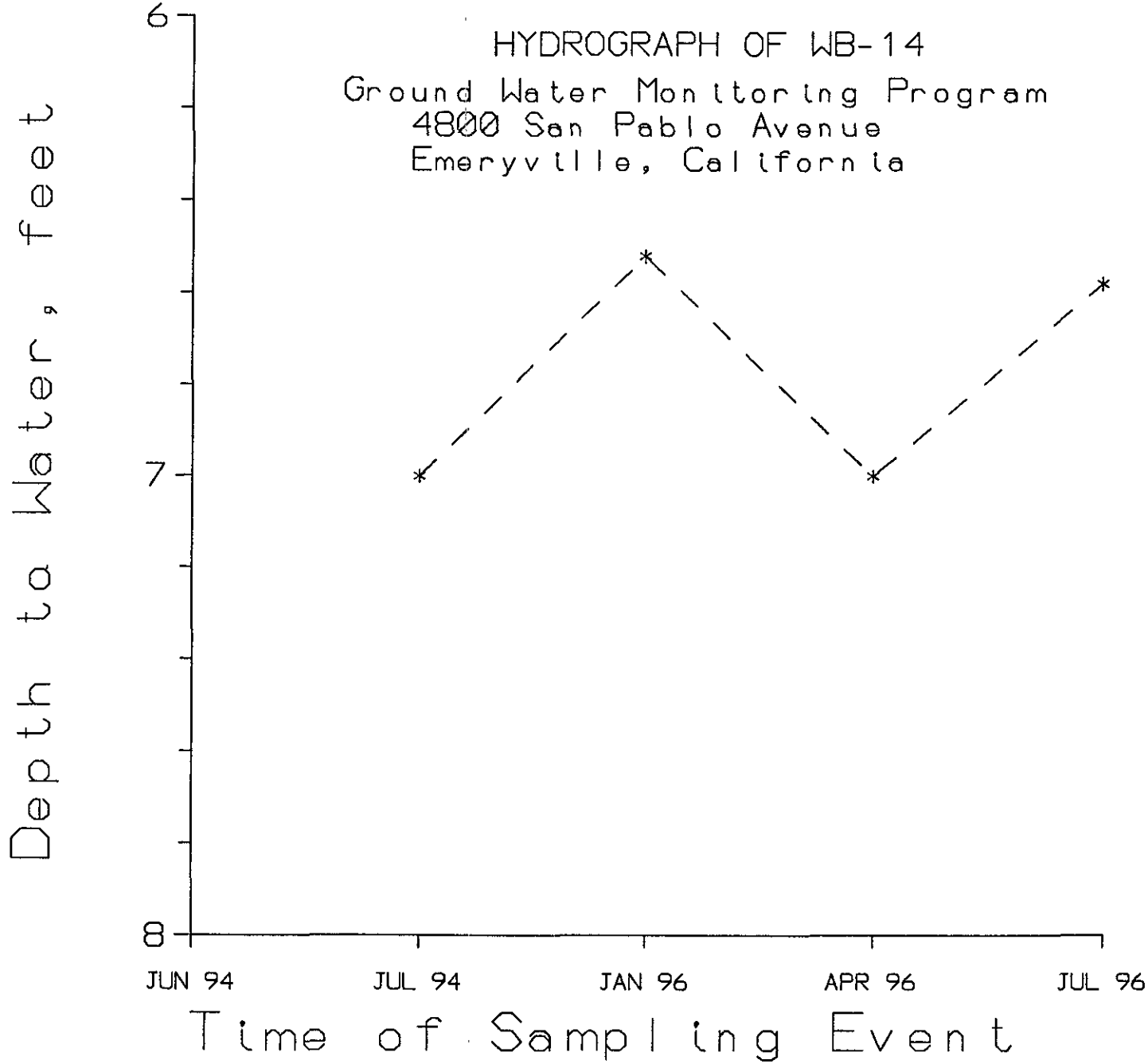
Project Number: 96286

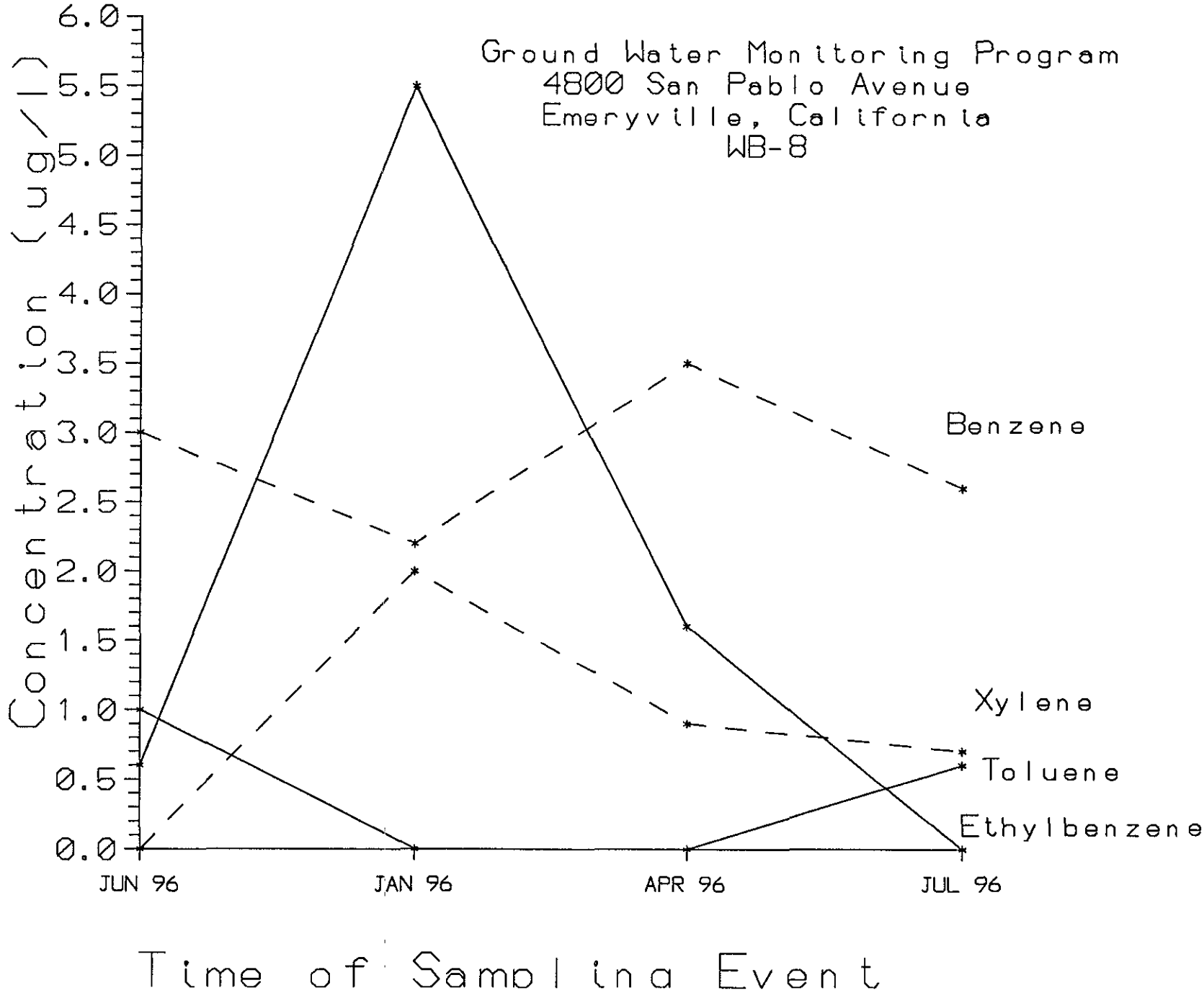
Date: 07-03-96

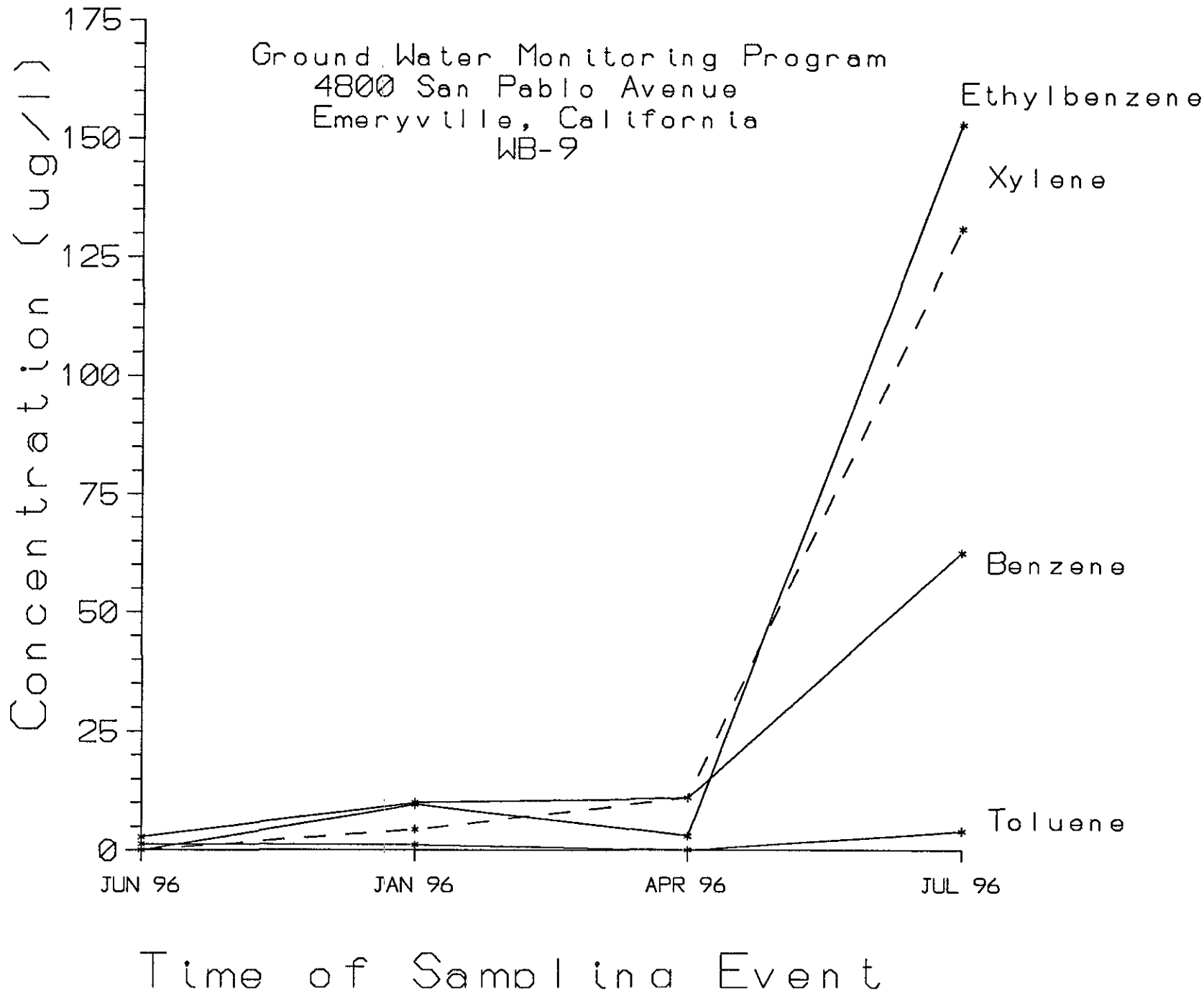
Scale: AS SHOWN

FIGURE


HYDROGRAPH OF WB-8
Ground Water Monitoring Program
4800 San Pablo Avenue
Emeryville, California
Depth to Water, feet
9
10
11
12
13
JUN 94
JUL 94
JAN 96
APR 96
JUL 96
Time of Sampling Event


HYDROGRAPH OF WB-14
Ground Water Monitoring Program
4800 San Pablo Avenue
Emeryville, California
Depth to Water, feet
6
7
8
JUN 94
JUL 94
JAN 96
APR 96
JUL 96
Time of Sampling Event


Ground Water Monitoring Program
4800 San Pablo Avenue
Emeryville, California
WB-8
Concentration (ug/l)
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Benzene
Xylene
Toluene
Ethylbenzene
JUN 96
JAN 96
APR 96
JUL 96
Time of Sampling Event


Ground Water Monitoring Program
4800 San Pablo Avenue
Emeryville, California
WB-9
Concentration (ug/l)
175
150
125
100
75
50
25
0
JUN 96
JAN 96
APR 96
JUL 96
Time of Sampling Event
Ethylbenzene
Xylene
Benzene
Toluene

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 9
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention:	Steve Baker	Date Sampled :	07-03-96
	HydroSolutions of CA, Inc.	Date Received:	07-03-96
	P.O. Box 922	BTEX Analyzed:	07-09-96
	Nevada City, CA 95959	TPHg Analyzed:	07-09-96
Project :	96286 / Pablo	Matrix:	Water

	Benzene PPB	Toluene PPB	Ethyl-benzene PPB	Total Xylenes PPB	TPHg PPB	Chlorobenzene Surrogate
Reporting Limit:	0.5	0.5	0.5	0.5	50	%REC
SAMPLE Laboratory Identification:						
WB-8 W0796093	2.6	0.6	ND	0.7	289	100%
WB-14 W0796095	0.8	ND	ND	ND	71.0	99%

ppb= Parts per billion = ug/L= micrograms per Liter
ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
DF = Dilution Factor = 1

ANALYTICAL PROCEDURES

BTEX-- Benzene, toluene, ethylbenzene, and total xylene isomers (BTEX) are measured by extraction using EPA Method 5030 followed by analysis using EPA Method 602 which utilizes a gas chromatograph (GC) equipped with a photoionization detector (PID).
TPHg--Total petroleum hydrocarbons as gasoline (low to medium boiling points) are measured by extraction using EPA Method 5030, followed by modified EPA Method 8015 which utilizes a GC equipped with a FID.

Laboratory Representative

07-11-96
Date Reported

EXCELCHEM
ENVIRONMENTAL LABS

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Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention:	Steve Baker	Date Sampled:	07-03-96
	HydroSolutions of CA, Inc.	Date Received:	07-03-96
	P.O. Box 922	BTEX Analyzed:	07-09-96
	Nevada City, CA 95959	TPHg Analyzed:	07-09-96
Project :	96286 / Pablo	Matrix:	Water

	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPHg	Chlorobenzene
	PPB	PPB	PPB	PPB	PPB	Surrogate
Reporting Limit:	2.5	2.5	2.5	2.5	250	%REC
SAMPLE Laboratory Identification:						
WB-9 W0796094	62.5	4.0	153	131	2930	98%

ppb= Parts per billion = ug/L= micrograms per Liter
ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
DF = Dilution Factor = 5

ANALYTICAL PROCEDURES

BTEX-- Benzene, toluene, ethylbenzene, and total xylene isomers (BTEX) are measured by extraction using EPA Method 5030 followed by analysis using EPA Method 602 which utilizes a gas chromatograph (GC) equipped with a photoionization detector (PID).
TPHg--Total petroleum hydrocarbons as gasoline (low to medium boiling points) are measured by extraction using EPA Method 5030, followed by modified EPA Method 8015 which utilizes a GC equipped with a FID.

Laboratory Representative

07-11-96
Date Reported

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ENVIRONMENTAL LABS

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Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention:	Steve Baker	Date Sampled :	07-03-96
	HydroSolutions of CA, Inc.	Date Received:	07-03-96
	P.O. Box 922	TPHd Analyzed:	07-09-96
	Nevada City, CA 95959	TPHo Analyzed:	07-10-96
Project:	96286 / Pablo	Matrix:	Water

	TPHd PPB	TPHo PPB
Reporting Limit:	50	500
SAMPLE Laboratory Identification:		
WB-8 W0796093	ND	ND
WB-14 W0796095	ND	ND

PPM = Parts per billion = ug/L = micrograms per liter
ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
DF = Dilution Factor = 1

ANALYTICAL PROCEDURES

TPHd=Total petroleum hydrocarbons as diesel are measured by extraction using EPA Method 3510 followed by modified EPA Method 8015 with direct sample injection into a GC equipped with a FID.
TPHo=Total petroleum hydrocarbons as oil are measured by extraction using EPA Method 3510 followed by modified EPA Method 8015 with direct sample injection into a GC equipped with a FID.

Laboratory Representative

07-11-96
Date Reported

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 9
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

QA/QC REPORT

Attention: Steve Baker
HydroSolutions of CA, Inc.
P.O. Box 922
Nevada City, CA 95959

Project : 96286 / Pablo

Date Analyzed: 07-09-96
Matrix: Water

	Benzene PPB	Toluene PPB	Ethyl-benzene PPB	Total Xylenes PPB
Reporting Limit:	0.5	0.5	0.5	0.5
QA/QC PARAMETER				
Matrix Blank	ND	ND	ND	ND
PERCENT RECOVERIES				
Laboratory Control Spike	100%	99%	100%	100%
Laboratory Control Spike Duplicate	99%	99%	100%	101%

ppb = parts per billion = ug/L = microgram per liter
ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.

All surrogate recoveries were within 30% of target values.
Spikes & Spike Duplicates were each spiked with 250 ng BTEX standard.

ANALYTICAL PROCEDURES

BTEX– Benzene, toluene, ethylbenzene, and total xylene isomers (BTEX) are measured by extraction using EPA Method 5030 followed by analysis using EPA Method 602 which utilizes a gas chromatograph (GC) equipped with a photoionization detector (PID).

Laboratory Representative

07-11-96
Date Reported

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 9
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

QA/QC REPORT

Attention:	Steve Baker	TPHd Analyzed:	07-09 -96
	HydroSolutions of CA, Inc.	Matrix:	Water
	P.O. Box 922		
	Nevada City, CA 95959		
Project:	96286 / Pablo		

	TPHd PPB
Reporting Limit:	50
QA/QC PARAMETER	
Matrix Blank	ND
PERCENT RECOVERIES	
Laboratory Control Spike	79%
Laboratory Control Spike Duplicate	83%

ppb = parts per billion = ug/L = microgram per liter
ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.

Spikes & Spike Duplicates were each spiked with 5000 ug of diesel standard.

ANALYTICAL PROCEDURES

TPHd--Total petroleum hydrocarbons as diesel (high boiling points) are measured by extraction using EPA Method 3510, followed by modified EPA Method 8015 with direct sample injection into a GC equipped with an FID.

Laboratory Representative

07-11-96
Date Reported

Excelchem
Environmental Labs

4946 Watt Avenue, #38
North Highlands, CA 95660
(916)334-8661

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: S. BAKER
Phone #: 916-478-1260
Company/Address: Nevada City, P.O. Box 922, CA 95959
FAX #: 916-478-1264
Project Number: 9628L
P.O.#:
Project Name: PABLO
Project Location: 4800 SAN PABLO AVE., EMERYVILLE
Sampler Signature:

Sample ID	Sampling DATE	Sampling TIME	Container VOA	Container SLEEVE	Container 1L GLASS	Container 1L PLASTIC	Method Preserved HCl	Method Preserved HNO3	Method Preserved ICE	Method Preserved NONE	Matrix WATER	Matrix SOIL	BTEX (602/8020)	BTEX/TPH as Gasoline (602/8020/8015)	TPH as Diesel (8015)	TPH as Oil (8015)	Total Oil & Grease (5520 B/E,F)	Total Oil & Grease IR (5520 B/E,F,C)	96 - Hour Fish Bioassay	EPA 601/8010	EPA 602/8020	EPA 615/8150	EPA 608/8080 - Pesticides	EPA 608/8080-PCBs	EPA 624/8240	EPA 625/8270	ORGANIC LEAD	Reactivity, Corrosivity, Ignitibility	CAM - 17 Metals	EPA - Priority Pollutant Metals	LEAD(7420/7421/239.2)	Ca, Cr, Pb, Zn, Ni	W.E.T. (✓)	TOTAL (✓)	RUSH SERVICE (12 hr) or (24 hr)	EXPEDITED SERVICE (48 hr) or (1 wk)	STANDARD SERVICE (2wk)
WB-8	7/3/96		✓		✓					✓	✓			✓	✓	✓							W079609 3														
WB-9	7/3/96		✓							✓	✓			✓	✓	✓							W079609 4														
WB-14	7/3/96		✓		✓					✓	✓			✓	✓	✓							W079609 5														

Relinquished by: Date 7/3/96 Time
Received by:

Relinquished by: Date Time
Received by:

Relinquished by: Date 7/3/96 Time 1125
Received by Laboratory: Regen Kodes

Remarks: Rush for results

Bill To: Hydro Solutions of Ca.