August 9, 1999



Ms. Juliet Shin Alameda County Health Care Services Agency Division of Environmental Protection Department of Environmental Health 1131 Harbor Bay Parkway, 2nd Floor Alameda, California 94502

RE: **Bohannon Development Company** 

> 575 Paseo Grande San Lorenzo, California

Dear Ms. Shin:

On behalf of the Bohannon Development Company, SECOR International Incorporated (SECOR) is pleased to present the results of second quarter 1999 groundwater monitoring and sampling activities conducted at 575 Paseo Grande (the Site) in San Lorenzo, California (Figures 1 and 2). This report presents the results of the June 8, 1999, sampling event which was conducted pursuant to an Alameda County Health Care Services Agency's (ACHCSA's) letter dated December 30, 1998 and as discussed in a meeting between ACHCSA and Bohannon representatives held on December 22, 1998. The previous groundwater monitoring and sampling event was conducted in September 1997, after which monitoring was suspended pending direction from the ACHCSA. The next quarterly monitoring and sampling event is scheduled for September 1999.

Currently, a passive soil vapor survey is being performed at the site. The survey is based, in part, on the findings of a utility trench survey. The findings of the passive soil vapor survey and utility trench survey will be incorporated into a quarterly report. If you have any questions or require more information, please call us at (925) 686-9780.

Sincerely,

**SECOR International Incorporated** 

Robert Robitaille Project Geologist

Be-

Attachment: Second Quarter 1999 Groundwater Monitoring and Sampling Report,

575 Paseo Grande, San Lorenzo, California

July 14, 1999



Mr. Mike Jepsen
David D. Bohannon Organization
60 Hillsdale Mall
San Mateo, California 94403-3497

RE: Second Quarter 1999 Groundwater Monitoring and Sampling Report 575 Paseo Grande

San Lorenzo, California

Dear Mr. Jepsen:

SECOR International Incorporated (SECOR) is pleased to present the results of second quarter 1999 groundwater monitoring and sampling activities conducted at 575 Paseo Grande (the Site) in San Lorenzo, California (Figures 1 and 2). This report presents the results of the June 8, 1999, sampling event which was conducted pursuant to an Alameda County Health Care Services Agency's (ACHCSA's) letter dated December 30, 1998 and as discussed in a meeting between ACHCSA and Bohannon representatives held on December 22, 1998. The previous groundwater monitoring and sampling event was conducted in September 1997, after which monitoring was suspended pending direction from the ACHCSA.

The second quarter 1999 scope of work included sampling groundwater monitor wells MW-1, MW-2, and MW-3 for gasoline range total petroleum hydrocarbons (TPHg); benzene, toluene, ethylbenzene, and total xylenes (BTEX); methyl-tertiary-butyl-ether (MTBE); chromium; and lead. In addition to the groundwater monitoring activities, a groundwater plume definition program has been implemented. The program includes a utility trench location survey and a passive soil-vapor survey. The data will be used to locate at least one additional groundwater monitor well. The results of the groundwater plume definition work will be incorporated into a future quarterly report.

### BACKGROUND

Over the last 25 years, the Site has been used as an asphalt paved parking area located in a commercial area zoned as C1. The Site was a gasoline station prior to 1969. Little information is known about the site history related to its use as a gasoline service station. In anticipation of property redevelopment, initial investigation activities were conducted in March 1995 to determine if out-of-service gasoline service station underground equipment remained on-site. The work was conducted by Twining Laboratories, Inc. (TLI), as documented in their letter report dated April 15, 1995. The work conducted included a magnetometer survey followed by an exploratory excavation. In summary, the work conducted identified underground gasoline service station equipment which included what appeared to be the former tank pit, approximately 110 feet of fuel delivery system piping, and a grease sump and/or hydraulic lift pit in an area which may have been the former service garage (Figure 2). Field evidence and one soil sample indicated the potential for soil contamination along the piping runs, around the grease sump, and around the inferred location of the former tank pit. Characterization of the magnitude and extent of potential soil contamination was not conducted during initial investigation activities.

SECOR Job No. 70074-001-03 //boh2q99.doc Mr. Mike Jepson David D. Bohannon Organization July 9, 1999 Page 2

In June 1995, SECOR conducted additional activities at the Site which included removal of the former underground storage tank (UST) system piping and the former grease sump, and characterization soil sampling along pipelines and around the former grease sump and former tank pit areas. This work was summarized in SECOR's letter report dated June 29, 1995. The characterization data from this investigation indicated that there were two areas of concern (AOCs) at the Site. These areas were the former grease sump area and the former gasoline distribution system area. SECOR subsequently conducted excavation activities in the vicinity of the two AOCs. The soil excavated from the former sump area was transported off-site for disposal. The soil generated from the UST excavation was treated by means of aeration and transported off-site for disposal. Three groundwater monitor wells (MW-1, MW-2, and MW-3) were installed during the investigation activities to evaluate the degree to which the groundwater had been impacted. The results of the soil characterization and groundwater monitoring activities are reported in SECOR's Report of Interim Remedial Actions dated June 4, 1996, and Fourth Quarter 1996 Monitoring and Sampling Report dated November 26, 1996.

### SCOPE OF WORK

Quarterly groundwater sampling activities were conducted at the Site pursuant to the request of the ACHCSA. The three on-site monitor wells (MW-1, MW-2, and MW-3) were gauged for depth-to-water and sampled on June 8, 1999. Each of the three wells were purged using a low flow purging method consisting of a 2-inch diameter, variable speed submersible pump set to pump at less than 0.5 liters per minute. During purging, temperature, conductivity, pH, and dissolved oxygen were continuously measured using an in-line flow-through cell. Copies of the field data sheets are presented in Attachment 1. The groundwater samples were submitted to Sequoia Analytical Laboratory, a California state-certified laboratory, and analyzed for TPHg by U.S. Environmental Protection Agency (EPA) Methods 8015 (modified); BTEX by EPA Method 8020; MTBE by EPA Method 8260; and chromium and lead by EPA Method 200.7.

### MONITOR WELL LOCATION

Quarterly sampling was attempted on April 16, 1999, at which time it was found that well MW-3 had apparently been buried during recent paving activities. On May 28, 1999, an underground utility locating contractor was retained to locate the well. The well box was found buried beneath the asphalt and a layer of soil. Asphalt and soil were then cleared from the well cover and the well was inspected. The well appeared to be in good condition with no signs of damage. The water-tight well cap was still locked in place and no soil or asphalt was found in the well box or well casing.

### GROUNDWATER ELEVATION RESULTS

Groundwater elevation data collected to date is summarized in Table 1. The average depth-to-water at the Site on June 8, 1999 was 6.21 feet below grade with an average water table elevation of 20.45 feet above mean sea level. A potentiometric surface map showing the interpreted groundwater surface elevation on

SECOR Job No. 70074-001-03 //boh2q99.doc Mr. Mike Jepson David D. Bohannon Organization July 9, 1999 Page 3

June 8, 1999 is presented as Figure 3. The average hydraulic gradient across the Site for this event was approximately 0.004 feet per foot and was toward the southwest (Figure 3). These results are generally consistent with flow direction results obtained during the prior monitoring events. As mentioned in previous quarterly reports, the flow direction beneath the Site is likely to be tidally influenced by the San Francisco Bay. Regardless of tidal influences, the groundwater flow direction beneath the Site is predominantly towards the west to southwest.

### GROUNDWATER ANALYTICAL RESULTS

Groundwater analytical results from samples collected to date are summarized in Table 2 and sampling field data sheets are attached. No analytes were detected in the sample collected from MW-1 during this event. Previous sampling of MW-1 had consistently detected TPHg and BTEX compounds. TPHg, BTEX and low concentrations of lead were detected in samples collected from wells MW-2 and MW-3. No MTBE or chromium was detected in any of the samples.

The groundwater sample collected from MW-2 contained TPHg at 2100 micrograms per liter ( $\mu g/\ell$ ), benzene at 240  $\mu g/\ell$ , toluene at 8  $\mu g/\ell$ , ethylbenzene at 33  $\mu g/\ell$ , and total xylenes at 40  $\mu g/\ell$ . The groundwater sample collected from MW-2 also contained 33  $\mu g/\ell$  total lead. The groundwater sample collected from MW-3 contained 1700  $\mu g/\ell$  TPHg, 320  $\mu g/\ell$  benzene, 6.4  $\mu g/\ell$  toluene and 15  $\mu g/\ell$  xylenes. The MW-3 sample also contained 24  $\mu g/\ell$  total lead. A copy of the laboratory report and chain-of-custody is attached.

The next quarterly monitoring and sampling event is scheduled for September 1999. The findings of the passive soil vapor survey and utility trench survey will be incorporated into a quarterly report. If you have any questions or require more information, please call us at (925) 686-9780.

Sincerely,

**SECOR International Incorporated** 

Robert Robitaille Project Geologist

Thomas Crosby, C. Ag. # 257 Principal Hydrogeologist

Attachments:

Figure 1 - Site Location Map

Figure 2 - Site Plan

Figure 3 - Potentiometric Surface Map - June 8, 1999

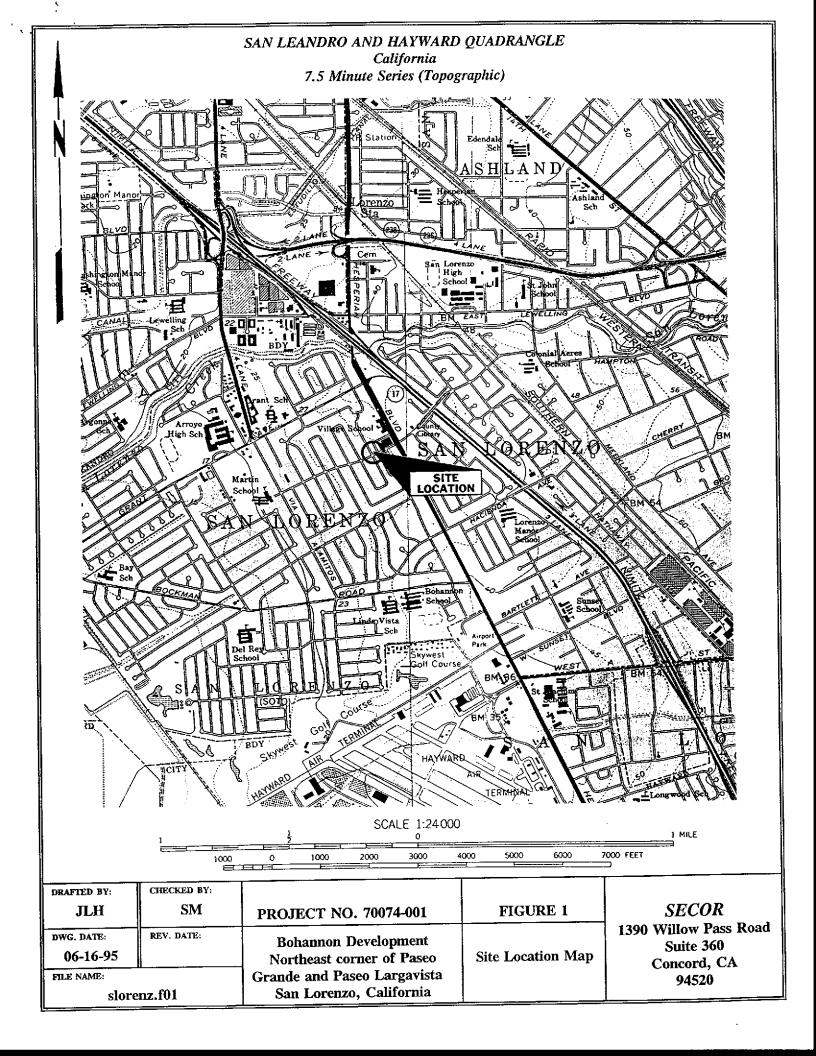
Table 1 - Groundwater Elevation Data

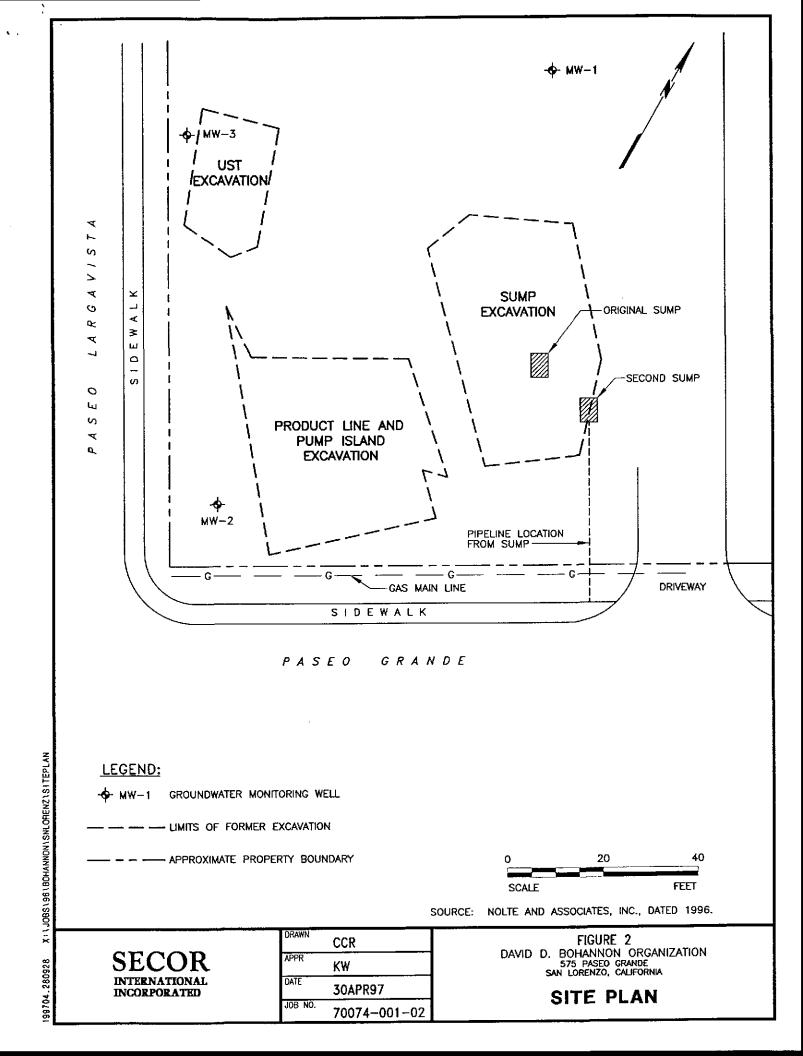
Table 2 - Groundwater Analytical Results - TPHg and BTEX

Field Data Sheets

Laboratory Analytical Reports - Groundwater

cc: Ms. Juliet Shin, Alameda County Health Care Services Agency





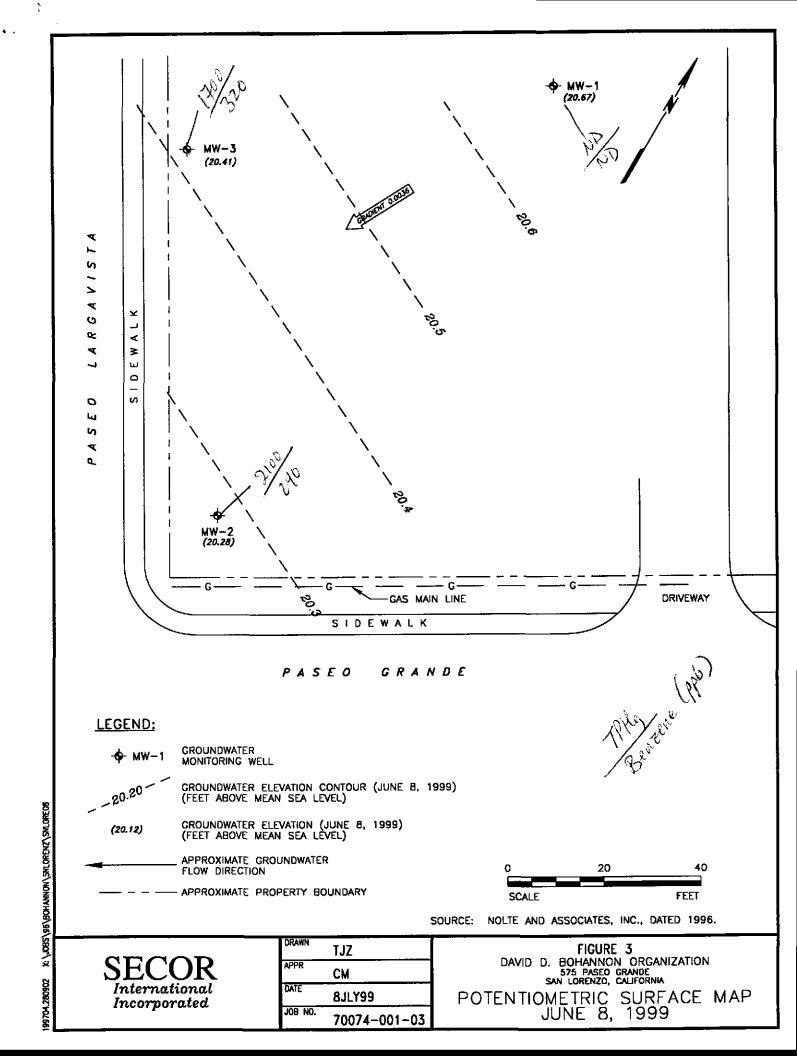


Table 1
Groundwater Elevation Data
575 Paseo Grande
San Lorenzo, California

	MW-1			MW-2			MW-3			
Date	TOC	DTW	ELEV	TOC	DTW	ELEV	TOC	DTW	ELEV	FLOW DIRECTION
	(ft msl)	(ft bTOC)	(ft msl)	(ft msl)	(ft bTOC)	(ft msl)	(ft msl)	(ft bTOC)	(ft msl)	
17-May-96	27.11	5.65	21.46	26.73	5.56	21.17	26.15	4.39	21.76	southeast
8-Oct-96		7.47	19.64		7.15	19.58	]	6.82	19.33	west
1-Арг-97	1	6.27	20.84		6.61	20.12		5.53	20.62	south
12-Jun-97		6.90	20.21		6.76	19.97		6.18	19.97	southwest
10-Sep-97	1	7.48	19.63	1	7.19	19.54	]	6.81	19.34	west
8-Jun-99		6.44	20.67	1	6.45	20.28	]	5.74	20.41	southwest

### Notes:

TOC = Top of well casing

DTW = Depth to Water

ELEV = Water table elevation above MSL

ft msl = Feet above mean sea level

ft bTOC = Feet below top of casing

Table 2 **Groundwater Analytical Results** 575 Paseo Grande San Lorenzo, California

	TPHg	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	Chromium	Lead
	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
 MW-1							_	
17-May-96	1100	ND (<0.5)	8.7	7.4	17	NA	ND (<10)	ND (<50)
8-Oct-96	120	ND (<0.5)	ND (<0.5)	2.7	ND (<0.5)	NA	NA	NA
1-Apr-97	550	ND (<0.5)	ND (<0.5)	7.6	6.6	NA	NA	NA
12-Jun-97	160	ND (<0.5)	ND (<0.5)	2.9	1.7	NA	NA	NA
10-Sep-97	640	2.2 <sup>P</sup>	3.8 <sup>P</sup>	7.4 <sup>P</sup>	16 <sup>P</sup>	NA	NA	NA
8-Jun-99	ND (<50)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<10)	ND (<10)	ND (<20)
MW-2			•					
17-May-96	23000	900	330	650	1500	NA	ND (<10)	ND (<50)
8-Oct-96	8400	530	ND (<50)	400	360	NA	NA	NA
1-Apr-97	7600	470	64	210	250	NA	NA	NA
12-Jun-97	8200	440	52	190	190	NA	NA	NA
10-Sep-97	8500	390	51 <sup>P</sup>	220	240	NA	NA	NA
8-Jun-99	2100	240	8	33	40	ND (<10)	ND (<10)	33
MW-3								
17-May-96	6700	140	45	210	180	NA	ND (<10)	ND (<50)
8-Oct-96	1800	2700	240	910	970	NA	NA	NA
1-Apr-97	27000	520	50	520	450	NA	NA	NA
12-Jun-97	29000	2700	160	940	500	NA	NA	NA
10-Sep-97	290000	1800	3200	2800 <sup>P</sup>	6900 <sup>P</sup>	NA	NA	NA
8-Jun-99	1700	320	6.4	15	ND (<0.5)	ND (<10)	ND (<10)	24

Page 1 of I

Notes:

TPHg = Total petroleum hydrocarbons quantified as gasoline

ug/L = Micrograms per liter

ND = Below laboratory detection limits (detection limit indicated in parentheses)

P The laboratory noted that there was a greater than 25% difference in results between the two GC columns.

NA = Not analylzed

# SECOR International Incorporated

TIVID	AT AAT	ATLACTOR	CHEET
HYDK	ULAKHI	JUATA	SHEET

Date: 6-8-99 Project: BONGUNON Project #: 7	0074-001-03
---	-------------

Sampler: E. Melancon

Page of

WELL or				SUREMENT						
LOCATION	TIME	TOC	DTW	DTB	DIA	ELEV	COMMENTS			
MW-/		27.11	6,44		2"	20.67				
MW-1 MW-2 MW-3		26.73	6,44 6,45 5,74		2"	20.28				
MW-3		26.15	5,74		2"	20.41				
				:						
				-						
				,	<del></del>					
			:							
						_				
t		<u> </u>	<del></del>	<del></del>						

TOC = Top of Well Casing Elevation DTW = Depth to Groundwater Below TOC

DTB = Depth to Bottom of Well Casing Below TOC

DIA = Well Casing Diameter

ELEV = Groundwater Elevation

	onal Incorporated TELD DATA SHEET
PROJECT #: 70074-00/- 03 PURGED BY:	CM WELL I.D.: MW-/
CLIENT NAME: BOLONGO SAMPLED BY:	
	QA SAMPLES:
DATE PURGED 6-8-99 START (2400hr)	
DATE SAMPLED <u>6-8-99</u> SAMPLE TIME (24	400hr) 14,40
SAMPLE TYPE: Groundwater Surface Water _	Treatment Effluent Other
CASING DIAMETER: 2" X 3" 4" 4  Casing Volume Per Foot (0.17) (0.38) (0.67)	6.5" 5" 6" 8" Other (0.83) (1.02) (1.50) (2.60) (
DEPTH TO BOTTOM (feet) =	CASING VOLUME (gal) =
DEPTH TO WATER (feet) = $6.49$	CALCULATED PURGE (gal) = 10 W 1/0 W
WATER COLUMN HEIGHT (feet) =	ACTUAL PURGE (gal) = 1.8
FIELD MEA	ASUEMENTS Disse
TIME VOLUME TEMP. CONDUCT (2400hr) (gal) (degrees ©) (umhos/19:12 0.4 21.98 12 0.19 14:15 0.6 21.66 14.9 14:17 0.8 21.73 14.9 14:20 1.0 21.13 14.8 14:22 1.9 21.18 14:25 1.9 21.24 1.18 14:27 1.6 21.01 1.18 SAMPLE PARAMETERS  ODOR: 4049 SAMPLE VESSEL / PRESERVATIVE: 9000L + 4000/N	(units) (visual) (NTU) 0.0.  08 6.95 (/pa/ /ow 1.15)  9 6.93 1
	<del></del>
PURGING EQUIPMENT  Bladder Pump Centrifugal Pump Submersible Pump Peristaltic Pump Other:  Dedicated 1009  PURGING EQUIPMENT  Bailer (Teflon) Bailer (PCV) Bailer (Stainless Steel) Dedicated 1009	SAMPLING EQUIPMENT  Bladder Pump Bailer (Teflon) Centrifugal Pump Bailer (PVC ordisposable) Peristaltic Pump Bailer (Stainless Steel) Dedicated
WELL INTEGRITY: 908 C	LOCK#:
SIGNATURE:	Page of

``

SECOR Internation WATER SAMPLE FIE	
PROJECT #: 70074-00/- 03 PURGED BY:	CM         WELL I.D.:         MW^Z           CM         SAMPLE I.D.:         MW^Z           C120         QA SAMPLES:
WATER COLUMN HEIGHT (feet) =	ACTUAL PURGE (gal) =
TIME VOLUME TEMP. CONDUCTIV. (2400hr) (gal) (degrees & (umhos/cm) /4'.55 0, 4 21, 23 1, 48 1, 45 15:00 0.8 20.98 1, 46 15:05 1.2 20.88 1, 45 15:08 1, 4 5 15:08 1, 4 5 15:08 1, 4 5 15:10 1, 6 20.87 1, 4 9 5 15:10 1, 6 20.87 1,	TITY pH COLOR TURBIDITY (visual) (NTU) $0.06$ (Visual) (NTU) $0.06$ (NTU) $0.06$ (NTU) $0.63$ (Visual) (NTU) (NTU) $0.63$ (Visual) (NTU) (N
Peristaltic Pump Dedicated	SAMPLING EQUIPMENT  Bladder Pump Bailer (Teflon) Centrifugal Pump Bailer (PVC ordisposable) Peristaltic Pump Bailer (Stainless Steel) Dedicated
WELL INTEGRITY: 9000  REMARKS:  SIGNATURE:	LOCK#:

;

SECOR International Incorporated WATER SAMPLE FIELD DATA SHEET								
PROJECT #: 70074-00/-03 PURGED BY:								
DATE PURGED 6-8-99 START (2400hr) 15:40 END (2400hr) 15:58  DATE SAMPLED 6-8-99 SAMPLE TIME (2400hr) 16:00								
SAMPLE TYPE:         Groundwater         X         Surface Water         Treatment Effluent         Other           CASING DIAMETER:         2" X         3" 4" 4.5" 5" 6" 8" Other           Casing Volume Per Foot         (0.17)         (0.38)         (0.67)         (0.83)         (1.02)         (1.50)         (2.60)         (         )								
DEPTH TO BOTTOM (feet) = CASING VOLUME (gal) = CALCULATED PURGE (gal) = /ow flow  WATER COLUMN HEIGHT (feet) = ACTUAL PURGE (gal) = // 8								
FIELD MEASUEMENTS								
TIME VOLUME TEMP. CONDUCTIVITY pH (2400hr) (gal) (degrees E) (umhos/cm) (units) (visual), (NTU) D.D. (NTU) D.D. (15:42 0.4 22.00 1.29/ 6.72 taked mod. 189 15:45 0.6 21.98 1.287 6.70 C/eo- /ow 0.88 15:47 0.8 22.05 1.290 6.69 1. " 0.7/ 15:50 1.0 22.00 1.290 6.69 1. " 0.7/ 15:52 1.2 21.9/ 1.293 6.69 " " 0.57/ 15:55 1.4 21.94 1.293 6.69 " " 0.57/ 15:58 1.6 21.94 1.298 6.69 " " 0.57/ 15:58 1.6 21.94 1.295 6.69 " " 0.57/ 15:58 1.50 " 0.57/ 15:58 1.6 21.94 1.295 6.69 " " 0.57/ 15:58 1.6 21.94 1.295 6.69 " " 0.57/ 15:58 1.6 21.94 1.295 6.69 " " 0.57/ 15:58 1.6 21.94 1.295 6.69 " " 0.57/ 15:58 1.295 6.6								
PURGING EQUIPMENT  Bladder Pump Centrifugal Pump Submersible Pump Peristaltic Pump Other:  SAMPLING EQUIPMENT  SAMPLING EQUIPMENT  Bailer (Teflon) Centrifugal Pump Bailer (Dev) Centrifugal Pump Bailer (Stainless Steel) Peristaltic Pump Dedicated June Other:  Other:								
WELL INTEGRITY:								

## $LABORATORY\ ANALYTICAL\ REPORTS$



Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834 Petaluma, CA 94954 San Carlos, CA 94070-4111 (650) 364-9600 (925) 988-9600 (916) 921-9600 (707) 792-1865 (650) 232-9600 FAX (650) 364-9233 FAX (925) 988-9673 FAX (916) 921-0100 FAX (707) 792-0342 FAX (650) 232-9612

SECOR

1390 Willow Pass Rd, Ste 360 Concord, CA 94520 Attention: Greg Hoehn

Client Project ID: Sample Matrix: Analysis Method:

First Sample #:

Bohannon Water

EPA 5030/8015 Mod./8020

Sampled: Received: Reported:

Jun 8, 1999 Jun 8, 1999 Jun 22, 1999

QC Batch Number:

GC061599

906-0856 GC061699

GC061699

### TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit μg/L	<b>Sample</b> I.D. 906-0856 MW-1	Sample I.D. 906-0857 MW-2	Sample I.D. 906-0858 MW-3	
Purgeable Hydrocarbons	50	N.D.	2,100	1,700	
Benzene	0.50	N.D.	240	320	
Toluene	0.50	N.D.	8.0	6.4	
Ethyl Benzene	0.50	N.D.	33	15	
Total Xylenes	0.50	N.D.	40	N.D.	
Chromatogram Pat	tern:		Gasoline	Gasoline	

**Quality Control Data** 

Report Limit Multiplication Factor:	1.0	10	10	
Date Analyzed:	6/15/99	6/16/99	6/16/99	
Instrument Identification:	HP-5	HP-5	HP-5	
Surrogate Recovery, %: (QC Limits = 70-130%)	91	85	107	

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

Dimple Sharma Project Manager



Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834 Petaluma, CA 94954 San Carlos, CA 94070-4111

(925) 988-9600 FAX (916) 921-9600 FAX (707) 792-1865 FAX (650) 232-9600 FAX

(650) 364-9600

FAX (650) 364-9233 FAX (925) 988-9673 FAX (916) 921-0100 FAX (707) 792-0342 FAX (650) 232-9612

SECOR 1390 Willow Pass Rd, Ste 360 Concord, CA 94520 Attention: Greg Hoehn Client Project ID: Sample Descript: Analysis Method: Lab Number: Bohannon Water, MW-1 EPA 8260 906-0856 Sampled: Jun 8, 1999 Received: Jun 8, 1999 Analyzed: Jun 18, 1999 Reported: Jun 22, 1999

QC Batch Number:

MS0618998260S2A

Instrument ID:

GC/MS-2

MTBE by EPA 8260

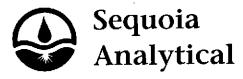
Апаlyte	Detection Limit μg/L	Sample Resu µg/L	ılts
Methyl t-Butyl Ether (MTBE)	2.0	 N.D.	
Surrogates Dibromofluoromethane	Control Limit %	% Recovery 88	

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271

Dimple Sharma Project Manager





Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834 Petaluma, CA 94954 San Carlos, CA 94070-4111 (650) 364-9600 (925) 988-9600 (916) 921-9600 (707) 792-1865 (650) 232-9600 FAX (650) 364-9233 FAX (925) 988-9673 FAX (916) 921-0100 FAX (707) 792-0342 FAX (650) 232-9612

					10,000,000,000
SECOR	Client Project ID:	Bohannon	Sampled:	Jun 8,	1999
1390 Willow Pass Rd, Ste 360	Sample Descript:	Water, MW-2	Received:	Jun 8,	1999
Concord, CA 94520	Analysis Method:	EPA 8260	Analyzed:	Jun 21,	1999
Attention: Greg Hoehn	Lab Number:	906-0857	Reported:	Jun 22,	1999
				200000000000000000000000000000000000000	(2000)

QC Batch Number:

MS0618998260S2A

Instrument ID:

GC/MS-2

MTBE by EPA 8260

Analyte	Detection Limit µg/L		Sample Resu µg/L	lts
Methyl t-Butyl Ether (MTBE)	10		N.D.	1/
Surrogates Dibromofluoromethane	Control Limit %	5 60	% Recovery	

Analytes reported as N.D. were not present above the stated limit of detection. Because matrix effects and/or other factors required additional sample dilution, detection limits for this sample have been raised.

SEQUOIA ANALYTICAL, #1271

Dimple Sharma Project Manager





Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834 Petaluma, CA 94954 San Carlos, CA 94070-4111

(925) 988-9600 (916) 921-9600 (707) 792-1865 (650) 232-9600

(650) 364-9600

FAX (650) 364-9233 FAX (925) 988-9673 FAX (916) 921-0100 FAX (707) 792-0342 FAX (650) 232-9612

Bohannon Sampled: Client Project ID: SECOR Jun 8, 1999 1390 Willow Pass Rd, Ste 360 Sample Descript: Water, MW-3 Received: Jun 8, 1999 Concord, CA 94520 Analysis Method: **EPA 8260** Analyzed: Jun 21, 1999 Reported: Lab Number: 906-0858 Jun 22, 1999 Attention: Greg Hoehn 

QC Batch Number:

MS0618998260S2A

Instrument ID:

GC/MS-2

MTBE by EPA 8260

Analyte	Detection Limit μg/L	Sample Resu µg/L	ılts
Methyl t-Butyl Ether (MTBE)	10	 N.D.	
Surrogates Dibromofluoromethane	Control Limit %	% Recovery 65	

Analytes reported as N.D. were not present above the stated limit of detection. Because matrix effects and/or other factors required additional sample dilution, detection limits for this sample have been raised.

**SEQUOIA ANALYTICAL, #1271** 





Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834 Petaluma, CA 94954 San Carlos, CA 94070-4111

(925) 988-9600 FA (916) 921-9600 FA (707) 792-1865 FA (650) 232-9600 FA

(650) 364-9600

Sampled:

FAX (650) 364-9233 FAX (925) 988-9673 FAX (916) 921-0100 FAX (707) 792-0342 FAX (650) 232-9612

Jun 8, 1999

SECOR 1390 Willow Pass Rd, Ste 360 Concord, CA 94520

Attention: Greg Hoehn

Client Project ID: Sample Descript: Analysis for: First Sample #:

Bohannon Water Chromium 906-0856

Received: Jun 8, 1999 Digested: Jun 15, 1999 Analyzed: Jun 18, 1999 Reported: Jun 22, 1999

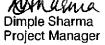
### LABORATORY ANALYSIS FOR:

### Chromium

Sample Number	Sample Description	Detection Limit mg/L	Sample Result mg/L	QC Batch Number	Instrument ID
906-0856	MW-1	0.010	N.D.	ME0615992007MDA	MV-3
906-0857	MW-2	0.010	N.D.	ME0615992007MDA	MV-3
906-0858	MW-3	0.010	N.D.	ME0615992007MDA	MV-3

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271







Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834 Petaluma, CA 94954 San Carlos, CA 94070-4111

ME0615992007MDA

ME0615992007MDA

FAX (650) 364-9233 (650) 364-9600 (925) 988-9600 FAX (925) 988-9673 (916) 921-9600 FAX (916) 921-0100 (707) 792-1865 (650) 232-9600

FAX (707) 792-0342 FAX (650) 232-9612 Jun 8, 1999

MV-3

MV-3

SECOR 1390 Willow Pass Rd, Ste 360 Concord, CA 94520 Attention: Greg Hoehn

> Sample Number

906-0856

906-0857

906-0858

MW-2

MW-3

Client Project ID: Sample Descript: Analysis for: First Sample #:

0.020

0.020

LABORATORY ANALYSIS FOR:

Bohannon Water Lead 906-0856

0.033

0.024

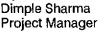
Sampled: Received: Jun 8, 1999 Digested: Jun 15, 1999 Analyzed: Jun 18, 1999 Reported: Jun 22, 1999

Sample Description	Detection Limit mg/L	Sample Result mg/L	QC Batch Number	Instrument ID
MW-1	0.020	N.D.	ME0615992007MDA	MV-3

Lead

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271







Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834 Petaluma, CA 94954 San Carlos, CA 94070-4111

(925) 988-9600 (916) 921-9600 (707) 792-1865 (650) 232-9600

(650) 364-9600

FAX (650) 364-9233 FAX (925) 988-9673 FAX (916) 921-0100 FAX (707) 792-0342 FAX (650) 232-9612

SECOR

1390 Willow Pass Rd, Ste 360 Concord, CA 94520

Attention: Greg Hoehn

Client Project ID: Bohannon Matrix:

Liquid

QC Sample Group: 9060856-858

Reported:

Jun 22, 1999

### QUALITY CONTROL DATA REPORT

Analyte:	Benzens	Toluene	Ethyl	Xylenes	
,			Benzene		
QC Batch#:	GC061599	GC061599	GC061599	GC061599	
	802005A	802005A	802005A	802005A	
Analy, Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030	
Analyst:	D. Newcomb	D. Newcomb	D. Newcomb	D. Newcomb	
MS/MSD #:	9060856	9060856	9060856	9060856	
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	
Prepared Date:	6/15/99	6/15/99	6/15/99	6/15/99	
Analyzed Date:	6/15/99	6/15/99	6/15/99	6/15/99	
strument I.D.#:	HP-5	HP-5	HP-5	HP-5	
Conc. Spiked:	20 μg/L	20 μg/L	20 μg/L	60 μg/L	
Result:	19	19	19	59	
IS % Recovery:	95	95	95	98	
Dup. Result:	19	18	18	57	
MSD % Recov.:	95	90	90	95	
RPD:	0.0	5.4	5.4	3.4	
RPD Limit:	0-20	0-20	0-20	0-20	

LCS #:	5LCS061599	5LCS061599	5LCS061599	5LC\$061599	
Prepared Date:	6/15/99	6/15/99	6/15/99	6/15/99	
Analyzed Date:	6/15/99	6/15/99	6/15/99	6/15/99	
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5	
Conc. Spiked:	20 μg/L	20 μg/L	20 μg/L	60 μg/L	
LCS Result:	18	18	18	57	
LCS % Recov.:	90	90	90	95	

MS/MSD					 	
LCS	70-130	70-130	70-130	70-130		
Control Limits						

SEQUOIA ANALYTICAL, #1271

Masma Dimple Sharma 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





Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834 Petaluma, CA 94954 San Carlos, CA 94070-4111 (650) 364-9600 (925) 988-9600 (916) 921-9600 (707) 792-1865 (650) 232-9600 FAX (650) 364-9233 FAX (925) 988-9673 FAX (916) 921-0100 FAX (707) 792-0342 FAX (650) 232-9612

SECOR

1390 Willow Pass Rd, Ste 360

Concord, CA 94520 Attention: Greg Hoehn Client Project ID: Bohannon

Matrix: Liquid

QC Sample Group: 9060856-858

Reported:

Jun 22, 1999

### **QUALITY CONTROL DATA REPORT**

Analyte:	Benzene	Toluene	Ethyl	Xylenes	MTBE
•			Benzene		
QC Batch#:	GC061699	GC061699	GC061699	GC061699	M\$061899
	802005A	802005A	802005A	802005A	8260S2A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8260
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	D. Newcomb	D. Newcomb	D. Newcomb	D. Newcomb	N. Nelson
MS/MSD #:	9060876	9060876	9060876	9060876	9060856
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	6/16/99	6/16/99	6/16/99	6/16/99	6/18/99
Analyzed Date:	6/16/99	6/16/99	6/16/99	6/16/99	6/18/99
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5	GC/MS-2
Conc. Spiked:	20 μg/L	20 μg/L	20 μg/L	60 μg/L	50 μg/L
Result:	19	19	19	59	46
MS % Recovery:	95	95	95	98	92
Đup. Result:	19	19	19	58	49
MSD % Recov.:	95	95	95	97	98
RPD:	0.0	0.0	0.0	1.7	6.3
RPD Limit:	0-20	0-20	0-20	0-20	0-25

LCS #:	5LCS061699	5LCS061699	5LCS061699	5LCS061699	LCS062199	
Prepared Date:	6/16/99	6/16/99	6/16/99	6/16/99	6/21/99	
Analyzed Date:	6/16/99	6/16/99	6/16/99	6/16/99	6/21/99	
nstrument I.D.#:	HP-5	HP-5	HP-5	HP-5	GC/MS-2	
Conc. Spiked:	20 μg/L	20 μg/L	$20\mu\mathrm{g/L}$	60 μg/L	50 μg/L	
LCS Result:	20	20	19	59	55	
LCS % Recov.:	100	100	95	98	110	

MS/MSD LCS	70-130	70-130	70-130	70-130	70-130
Control Limits					

SEQUOIA ANALYTICAL, #1271

Dimple Sharma 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





Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834 Petaluma, CA 94954 San Carlos, CA 94070-4111

(925) 988-9600 (916) 921-9600 (707) 792-1865 (650) 232-9600

(650) 364-9600

FAX (650) 364-9233 FAX (925) 988-9673 FAX (916) 921-0100 FAX (707) 792-0342 FAX (650) 232-9612

SECOR

1390 Willow Pass Rd, Ste 360

Concord, CA 94520 Attention: Greg Hoehn Client Project ID: Bohannon

Matrix: Liquid

QC Sample Group: 9060856-858

Reported:

Jun 22, 1999

### **QUALITY CONTROL DATA REPORT**

			•
Analyte:	Chromium	Lead	
QC Batch#:	ME061599	ME061599	
QC Datch#.	2007MDA	2007MDA	}
Analy. Method:	EPA 200.7	EPA 200.7	
Prep. Method:	EPA 200.7	EPA 200.7 EPA 200.7	
Analyst:	J. Kelly	J. Kelly	
MS/MSD #:	9060826	9060826	
Sample Conc.:	9060826 N.D.		
Prepared Date:		0.028 mg/L	
Analyzed Date:	6/15/99	6/15/99	
Instrument I.D.#:	6/17/99 MV-3	6/17/99 MV-3	
Conc. Spiked:			
Conc. Spikeu:	1.0 mg/L	1.0 mg/L	
Result:	0.95	0.98	
MS % Recovery:	95	95	
Dup. Result:	0.97	1.0	
MSD % Recov.:	97	97	
RPD:	2.1	2.0	
RPD Limit:	0-20	0-20	
, <u>_</u>	<b>4 -</b> 5	<b>V</b> = <b>V</b>	
LCS #:	LCS061599	LCS061599	
Prepared Date:	6/15/99	6/15/99	
Analyzed Date:	6/17/99	6/17/99	
Instrument I.D.#:	MV-3	MV-3	
Conc. Spiked:	1.0 mg/L	1.0 mg/L	
LCS Result:	0.97	1.0	
LCS % Recov.:	97	100	
230 % 11000411	91	100	
MS/MSD	<u> </u>		
LCS	80-120	80-120	

**SEQUOIA ANALYTICAL, #1271** 

Dimple Sharma Project Manager

**Control Limits** 

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



Chain-of Custody Number: SECOR Chain-of Custody Record 9906245 Additional documents are attached, and are a part of this Record. Field Office: (ON CONC , Ste. 360 Job Name: Bohanyon Address: 75 Paseo Grana Location: **Analysis Request** Project Manager 629 Hochn TPH 418,1/WTPH 418.1 Number of Containers Laboratory 504 126 Turnaround Time\_\_ Priority Pollutant Metals (13) Sampler's Name Cha Sampler's Signature Comments/ Instructions Matrix Sample ID 5 9060856 68-99 14:40 W41 R 5 15,20 9060857 9060858 16:00 Sample Receipt Relinquished by: \_ Relinquished by Special Instructions/Comments: Total no. of containers: <del>Si</del>an **Print** Chain of custody seals: Company SECAK Company Rec'd in good condition/cold: Time / 7:15 Date 6-8-99 Time\_ Date\_ Conforms to record: Relinquished by: Relinquished by: Client: \_\_\_ Sign\_ Print Remarket Scenson Client Contact: \_\_\_\_\_ Print . Company SECOR Company\_

Date\_

71me\_

SECOR CUSTREC Rev. 1/95

Date: 6 / 8 / 91 Page 1 of 1

Client Phone: \_\_\_\_

Time 17:15 Date 6/8/99