

DAVID D. BOHANNON ORGANIZATION

*Community Developer* - 60 HILLSDALE MALL - SAN MATEO, CALIFORNIA 94403-3497  
FAX 415 573-5457 TELEPHONE 415 345-8222

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97 JUN 26 AM 11:32

June 23, 1997

Ms. Juliet Shin  
Alameda County Environmental Health Services  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-6577

**Re.: David D. Bohannon Organization  
First Quarter 1997 Monitoring and Sampling Report  
575 Paseo Grande, San Lorenzo, California**

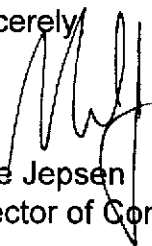
Dear Ms. Shin:

Enclosed for your review is the First Quarter 1997 Monitoring and Sampling Report prepared for the above referenced facility.

The report summarizes the groundwater monitoring and sampling activities conducted by SECOR International Incorporated (SECOR) from January 1 through April 1, 1997. David D. Bohannon Organization has reviewed and agrees with the First Quarter 1997 Monitoring and Sampling Report prepared by SECOR.

Should you have any questions, please feel free to contact me at 415.345.8222.

Sincerely,



Mike Jepsen  
Director of Construction

MJ/lh

Enclosure

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June 16, 1997

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

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BOHANNON DEVELOPMENT COMPANY

**RE: First Quarter 1997 Monitoring and Sampling Report  
575 Paseo Grande  
San Lorenzo, California**

Dear Mr. Jepsen:

SECOR International Incorporated (SECOR) is pleased to present the results of the first quarter 1997 activities conducted at 575 Paseo Grande (the Site) in San Lorenzo, California (Figures 1 and 2). This report presents the results of the quarterly sampling event conducted on April 1, 1997. The first quarter 1997 activities were conducted pursuant to Alameda County Environmental Health Services Department's (ACEHSD's) letter dated December 4, 1996. The first quarter 1997 scope of work included sampling groundwater monitor wells MW-1, MW-2, and MW-3 for gasoline range petroleum hydrocarbons (TPHg), and benzene, toluene, ethylbenzene, and total xylenes (BTEX). David D. Bohannon Organization, the current owners of the Site, plan to redevelop the property into a parking lot and retail business development. A plan showing the proposed development is included in Attachment 1. Construction is expected to begin the first quarter of 1998.

## **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 include 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.

BOHAN-02.L02 - 6.1  
June 16, 1997  
SECOR Job No. 70074-001-02

Mr. Mike Jepsen  
David D. Bohannon Organization  
June 16, 1997  
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JUN 23 1997

BOHANNON DEVELOPMENT COMPANY

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 piping lines 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. 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 Alameda County Health Care Services Agency. The three Site monitoring wells (MW-1, MW-2, and MW-3), were gauged for depth-to-water and sampled on April 1, 1997. Each of the three wells were purged of at least three casing volumes of water prior to sampling. A copy of the field data sheets are presented in Attachment 2. The groundwater samples were submitted to Superior Analytical Laboratory, a California state-certified laboratory, for TPHg and BTEX analysis by U.S. Environmental Protection Agency (EPA) Methods 8015 (modified) and 8020, respectively.

#### GROUNDWATER ELEVATION RESULTS

Groundwater elevation data collected to date is summarized in Table 1. The average depth-to-water at the Site on April 1, 1997, was 6.14 feet below grade. A potentiometric surface map showing the interpreted groundwater surface elevation on April 1, 1997, is presented as Figure 3. The average hydraulic gradient across the Site on April 1, 1997, was approximately 0.006 feet per foot and was toward the south (Figure 3). As indicated on Figure 3, these results are inconsistent with flow direction results obtained during the prior monitoring events (October and May 1996) where the groundwater flows were interpreted to be towards the west and the southeast, respectively. Because the hydraulic gradient is relatively flat across the Site, slight discrepancies in depth-to-water measurements can cause an apparent change in the groundwater flow direction. In addition, the flow direction is likely to be tidally influenced by the San Francisco Bay. Regardless of tidal influences, the predominant groundwater flow direction beneath the Site is presumably towards the west to southwest.

Mr. Mike Jepsen  
David D. Bohannon Organization  
June 16, 1997  
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## GROUNDWATER ANALYTICAL RESULTS

Groundwater analytical results from samples collected to date are summarized in Table 2. TPHg was detected in samples collected from the three Site wells (MW-1, MW-2, and MW-3) at 550 micrograms per liter ( $\mu\text{g}/\ell$ ), 7,600  $\mu\text{g}/\ell$ , and 27,000  $\mu\text{g}/\ell$ , respectively. Benzene was detected in samples collected from monitor wells MW-2 and MW-3 at 470  $\mu\text{g}/\ell$  and 520  $\mu\text{g}/\ell$ , respectively. Toluene was detected in samples collected from monitor wells MW-2 and MW-3 at 64  $\mu\text{g}/\ell$  and 50  $\mu\text{g}/\ell$ , respectively. Ethylbenzene and xylenes were detected in the samples collected from all three monitor wells at up to 520  $\mu\text{g}/\ell$  and 450  $\mu\text{g}/\ell$ , respectively. Based on these results, benzene concentrations in groundwater beneath the Site have dropped below the screening level for a  $1 \times 10^{-4}$  excess cancer risk for potential vapor intrusion from groundwater into buildings for a commercial site based on the American Society for Testing and Materials Risk-Based Corrective Action Guidelines. A copy of the laboratory report and chain-of-custody is included in Attachment 3.

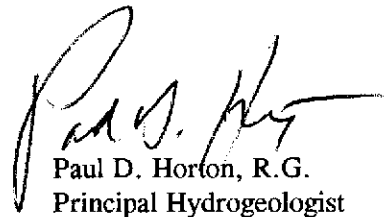
If you have any questions or require more information, please call us at (510) 686-9780.

Sincerely,

**SECOR International Incorporated**



Kirsten L. Wagle  
Staff Engineer



Paul D. Horton, R.G.  
Principal Hydrogeologist

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

Figure 1 - Site Location Map

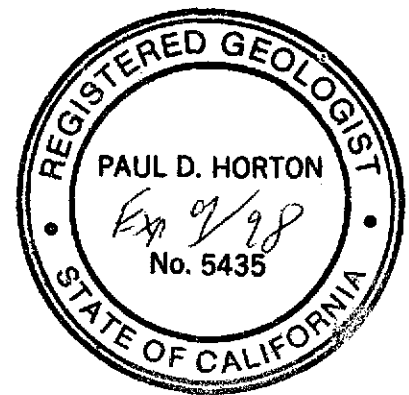
Figure 2 - Site Plan

Figure 3 - Potentiometric Surface Map

Table 1 - Groundwater Elevation Data

Table 2 - Groundwater Analytical Results - TPHg and BTEX

Attachments: 1 - Future Site Development  
2 - Field Data Sheets  
3 - Laboratory Analytical Reports - Groundwater



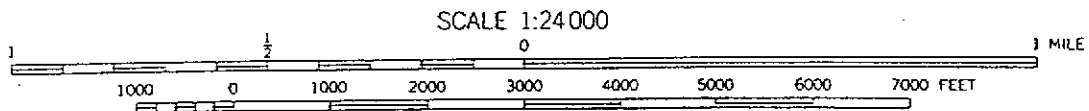
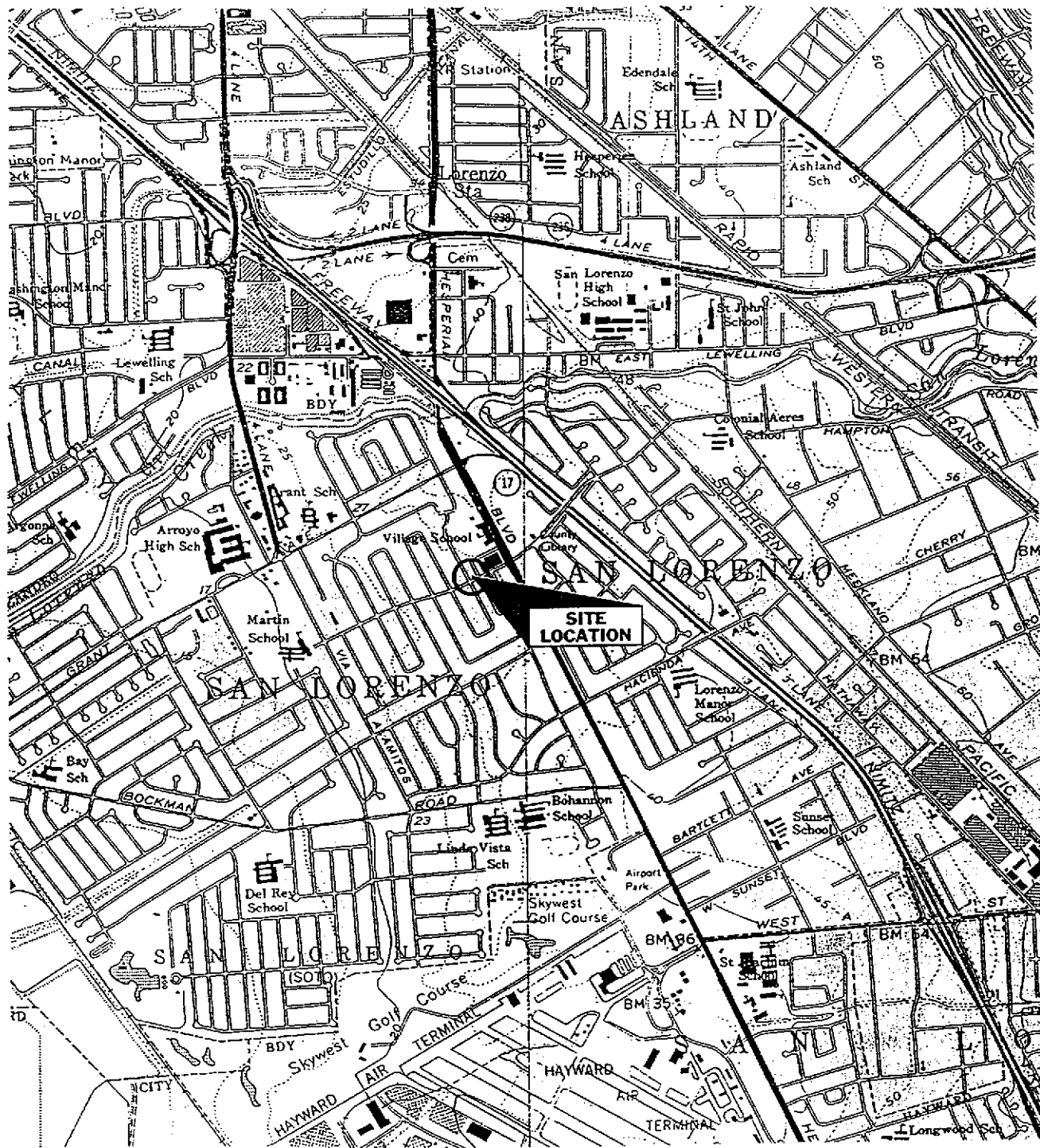
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JUN 23 1997

BOHANNON DEVELOPMENT COMPANY

***FIGURES***

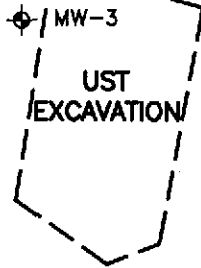
**SAN LEANDRO AND HAYWARD QUADRANGLE**  
 California  
 7.5 Minute Series (Topographic)



|                                  |                          |                              |                 |  |
|----------------------------------|--------------------------|------------------------------|-----------------|--|
| DRAFTED BY:<br><b>JLH</b>        | CHECKED BY:<br><b>SM</b> | <b>PROJECT NO. 70074-001</b> | <b>FIGURE 1</b> | <b>SECOR</b><br>1390 Willow Pass Road<br>Suite 360<br>Concord, CA<br>94520 |
| DWG. DATE:<br><b>06-16-95</b>    | REV. DATE:               |                              |                 |  |
| FILE NAME:<br><b>slorenz.f01</b> |                          |                              |                 |  |

PASEO LARGAVISTA

SIDEWALK



MW-1



MW-2

PRODUCT LINE AND  
PUMP ISLAND  
EXCAVATION

SUMP  
EXCAVATION

ORIGINAL SUMP

SECOND SUMP

PIPELINE LOCATION  
FROM SUMP

G G G G

GAS MAIN LINE

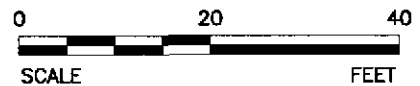
DRIVEWAY

SIDEWALK

PASEO GRANDE

**LEGEND:**

- ◆ MW-1 GROUNDWATER MONITORING WELL
- LIMITS OF FORMER EXCAVATION
- - - - - APPROXIMATE PROPERTY BOUNDARY



SOURCE: NOLTE AND ASSOCIATES, INC., DATED 1996.

199704.280928 X:\JOBS\196\BOHANNON\SNLORENZ\SITEPLAN

**SECOR**  
INTERNATIONAL  
INCORPORATED

|         |              |
|---------|--------------|
| DRAWN   | CCR          |
| APPR    | KW           |
| DATE    | 30APR97      |
| JOB NO. | 70074-001-02 |

**FIGURE 2**  
DAVID D. BOHANNON ORGANIZATION  
575 PASEO GRANDE  
SAN LORENZO, CALIFORNIA  
**SITE PLAN**

PASEO LARGAVISTA

SIDEWALK

MW-3  
(20.62)

MW-1  
(20.84)

OCTOBER 1996

MAY 1996

APRIL 1997

20.60

20.40

20.20

MW-2  
(20.12)

G

G

G

G

GAS MAIN LINE

DRIVEWAY

SIDEWALK

PASEO GRANDE

**LEGEND:**

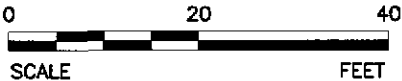
⊕ MW-1 GROUNDWATER MONITORING WELL

— 20.20 — GROUNDWATER ELEVATION CONTOUR (APRIL 1997) (FEET ABOVE MEAN SEA LEVEL)

(20.12) GROUNDWATER ELEVATION (APRIL 1997) (FEET ABOVE MEAN SEA LEVEL)

← APPROXIMATE GROUNDWATER FLOW DIRECTION

- - - APPROXIMATE PROPERTY BOUNDARY



SOURCE: NOLTE AND ASSOCIATES, INC., DATED 1996.

199704\_280902 X:1\JOBS\96\BOHANNON\SNLORENZ\SNLORENZ

**SECOR**  
INTERNATIONAL  
INCORPORATED

|         |              |
|---------|--------------|
| DRAWN   | CCR          |
| APPR    | KW           |
| DATE    | 22MAY97      |
| JOB NO. | 70074-001-02 |

**FIGURE 3**  
DAVID D. BOHANNON ORGANIZATION  
575 PASEO GRANDE  
SAN LORENZO, CALIFORNIA  
**POTENTIOMETRIC SURFACE MAP**



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

| Date      | MW-1            |                  |                  | MW-2            |                  |                  | MW-3            |                  |                  | FLOW DIRECTION |
|-----------|-----------------|------------------|------------------|-----------------|------------------|------------------|-----------------|------------------|------------------|----------------|
|           | TOC<br>(ft msl) | DTW<br>(ft bTOC) | ELEV<br>(ft msl) | TOC<br>(ft msl) | DTW<br>(ft bTOC) | ELEV<br>(ft msl) | TOC<br>(ft msl) | DTW<br>(ft bTOC) | ELEV<br>(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-Apr-97  |                 | 6.27             | 20.84            |                 | 6.61             | 20.12            |                 | 5.53             | 20.62            | south          |

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 - TPHg and BTEX**  
**575 Paseo Grande**  
**San Lorenzo, California**

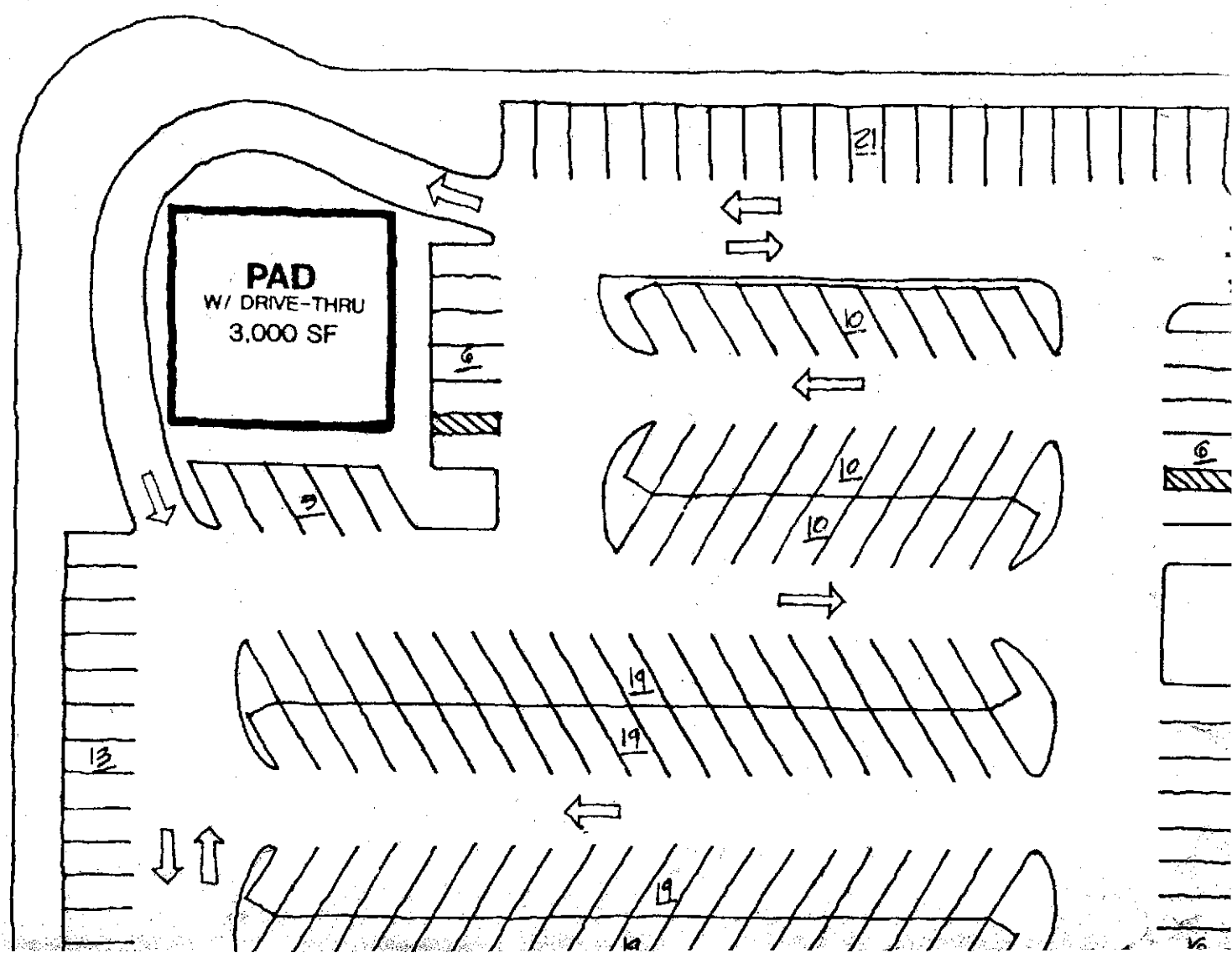
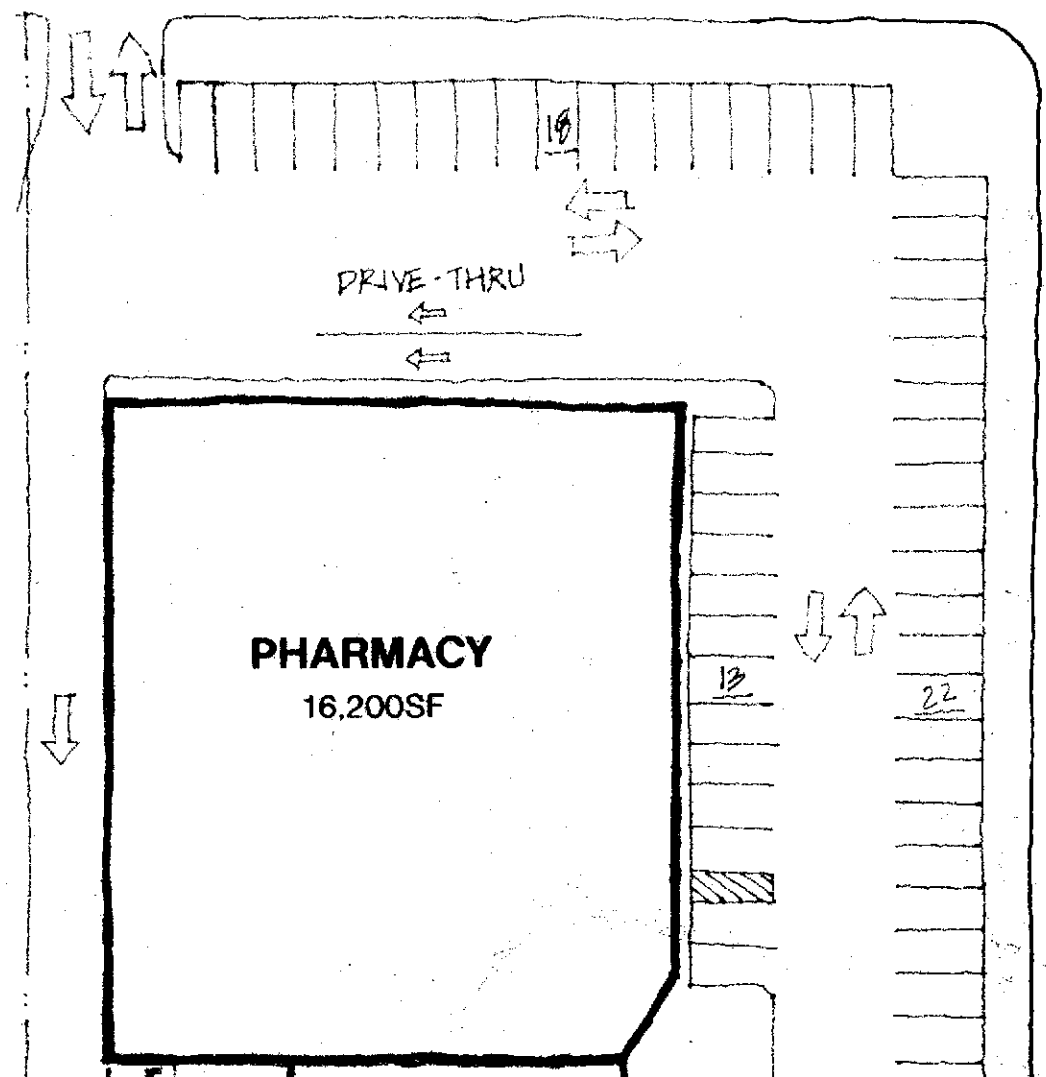
|             | <b>TPHg</b><br>(ug/L) | <b>Benzene</b><br>(ug/L) | <b>Toluene</b><br>(ug/L) | <b>Ethylbenzene</b><br>(ug/L) | <b>Total Xylenes</b><br>(ug/L) |
|-------------|-----------------------|--------------------------|--------------------------|-------------------------------|--------------------------------|
| <b>MW-1</b> |                       |                          |                          |                               |                                |
| 17-May-96   | 1100                  | ND (<0.5)                | 8.7                      | 7.4                           | 17                             |
| 8-Oct-96    | 120                   | ND (<0.5)                | ND (<0.5)                | 2.7                           | ND (<0.5)                      |
| 1-Apr-97    | 550                   | ND (<0.5)                | ND (<0.5)                | 7.6                           | 6.6                            |
| <b>MW-2</b> |                       |                          |                          |                               |                                |
| 17-May-96   | 23000                 | 900                      | 330                      | 650                           | 1500                           |
| 8-Oct-96    | 8400                  | 530                      | ND (<50)                 | 400                           | 360                            |
| 1-Apr-97    | 7600                  | 470                      | 64                       | 210                           | 250                            |
| <b>MW-3</b> |                       |                          |                          |                               |                                |
| 17-May-96   | 6700                  | 140                      | 45                       | 210                           | 180                            |
| 8-Oct-96    | 1800                  | 2700                     | 240                      | 910                           | 970                            |
| 1-Apr-97    | 27000                 | 520                      | 50                       | 520                           | 450                            |

TPHg = Total petroleum hydrocarbons quantified as gasoline

ug/L = Micrograms per liter

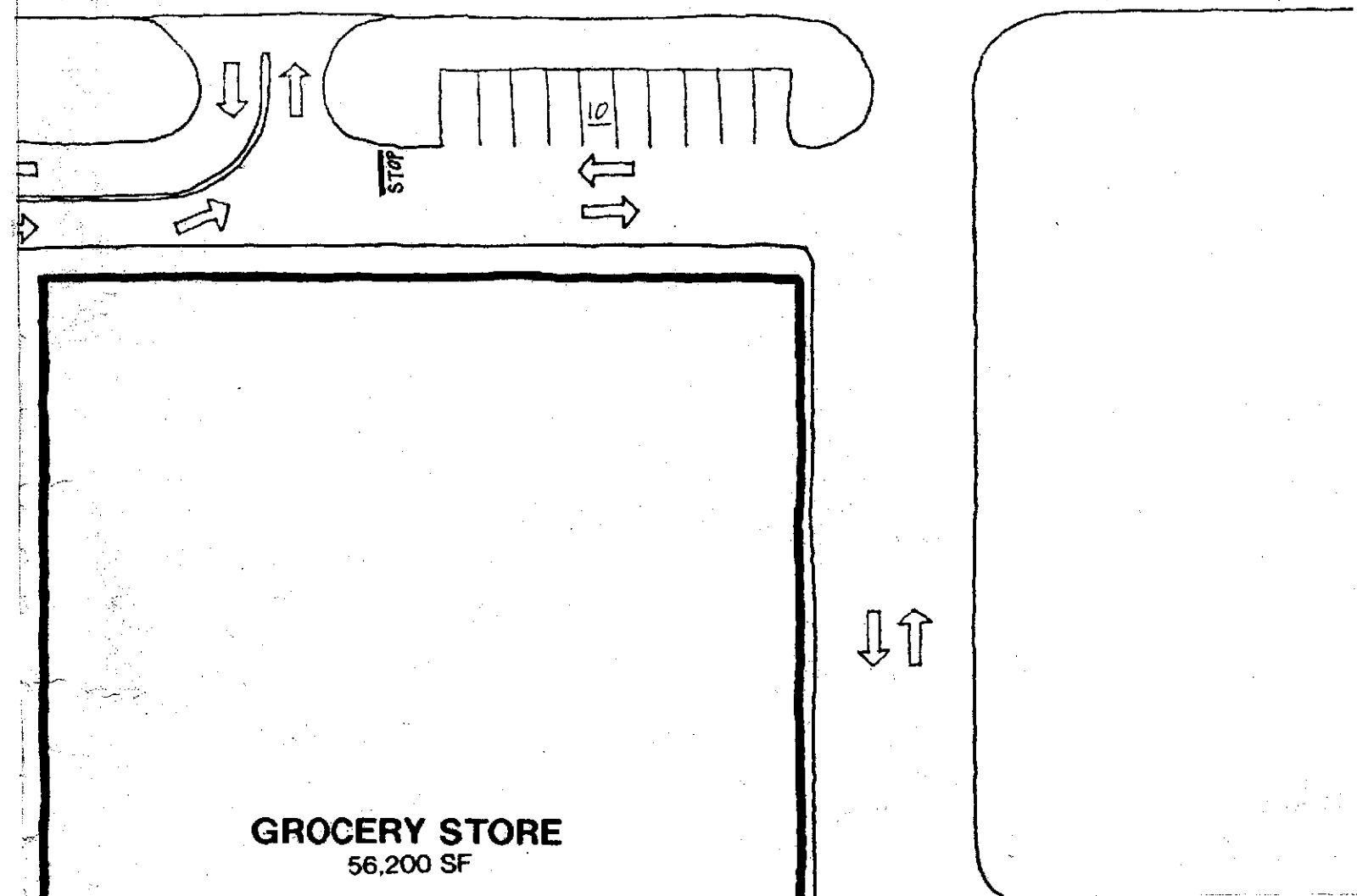
ND = Below laboratory detection limits (detection limit indicated in parentheses)

***ATTACHMENT 1***  
***Future Site Development***

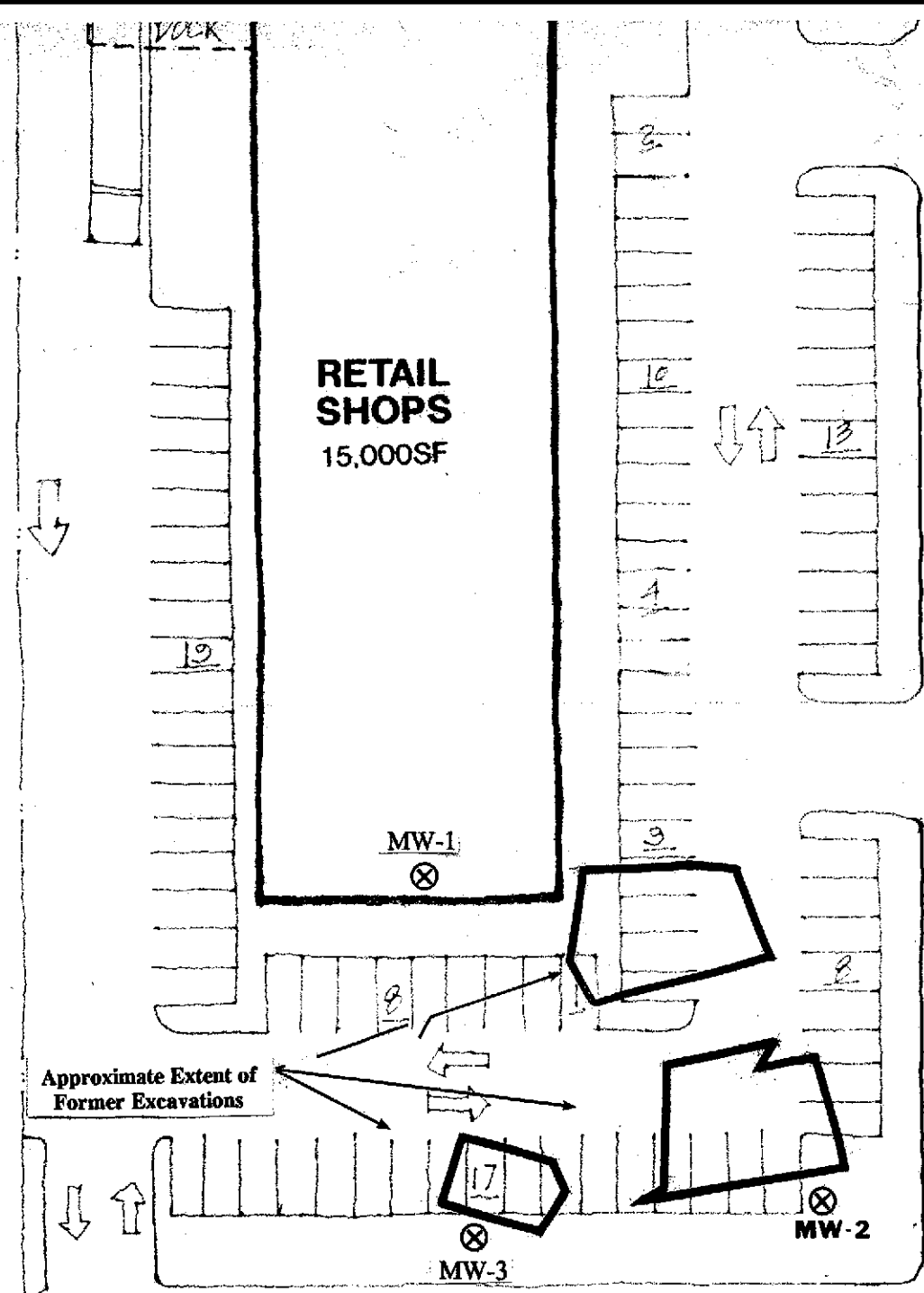


NDE

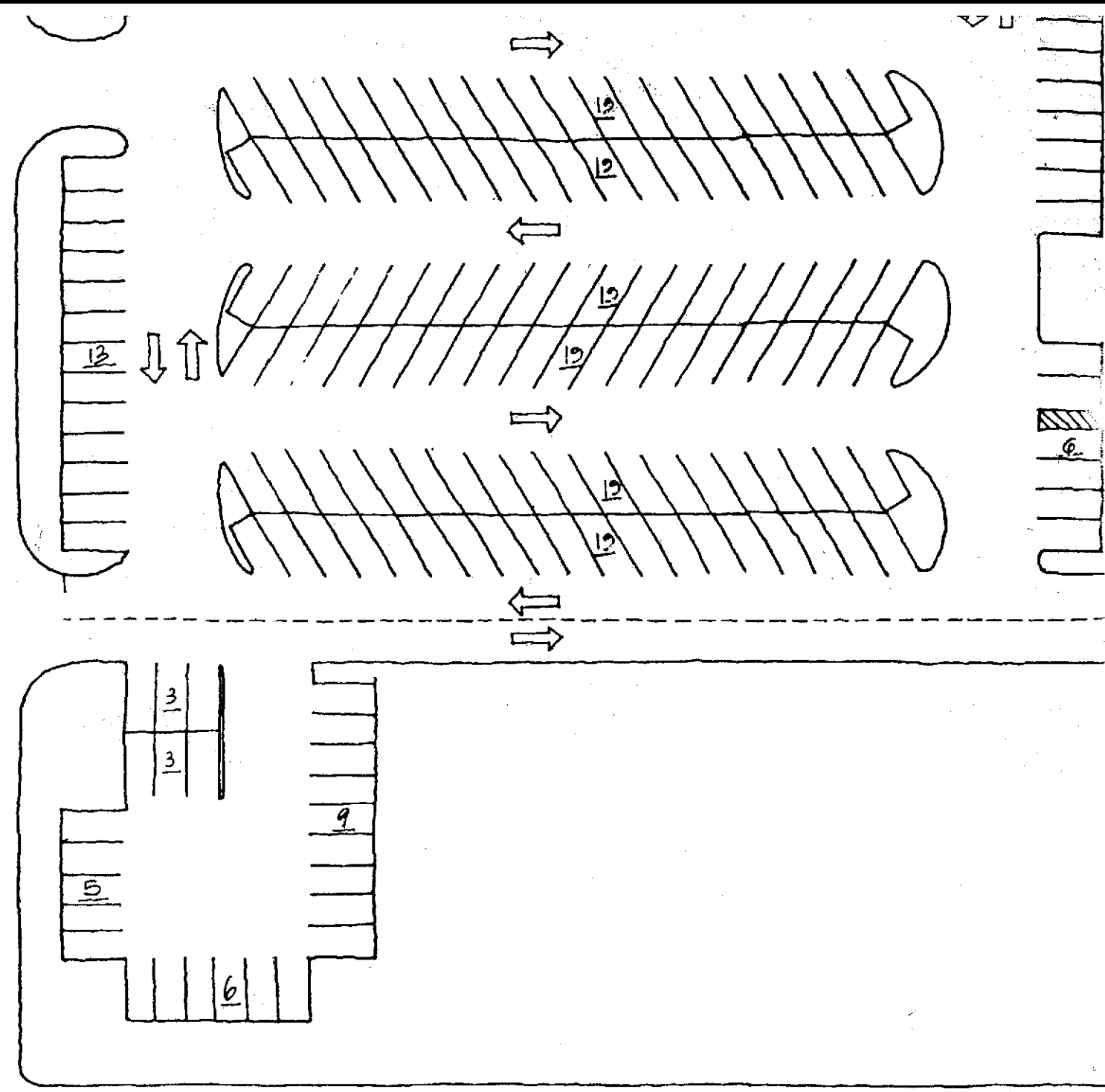
ESPERIAN BOULEVARD



**GROCERY STORE**  
56,200 SF



PASEO GR.

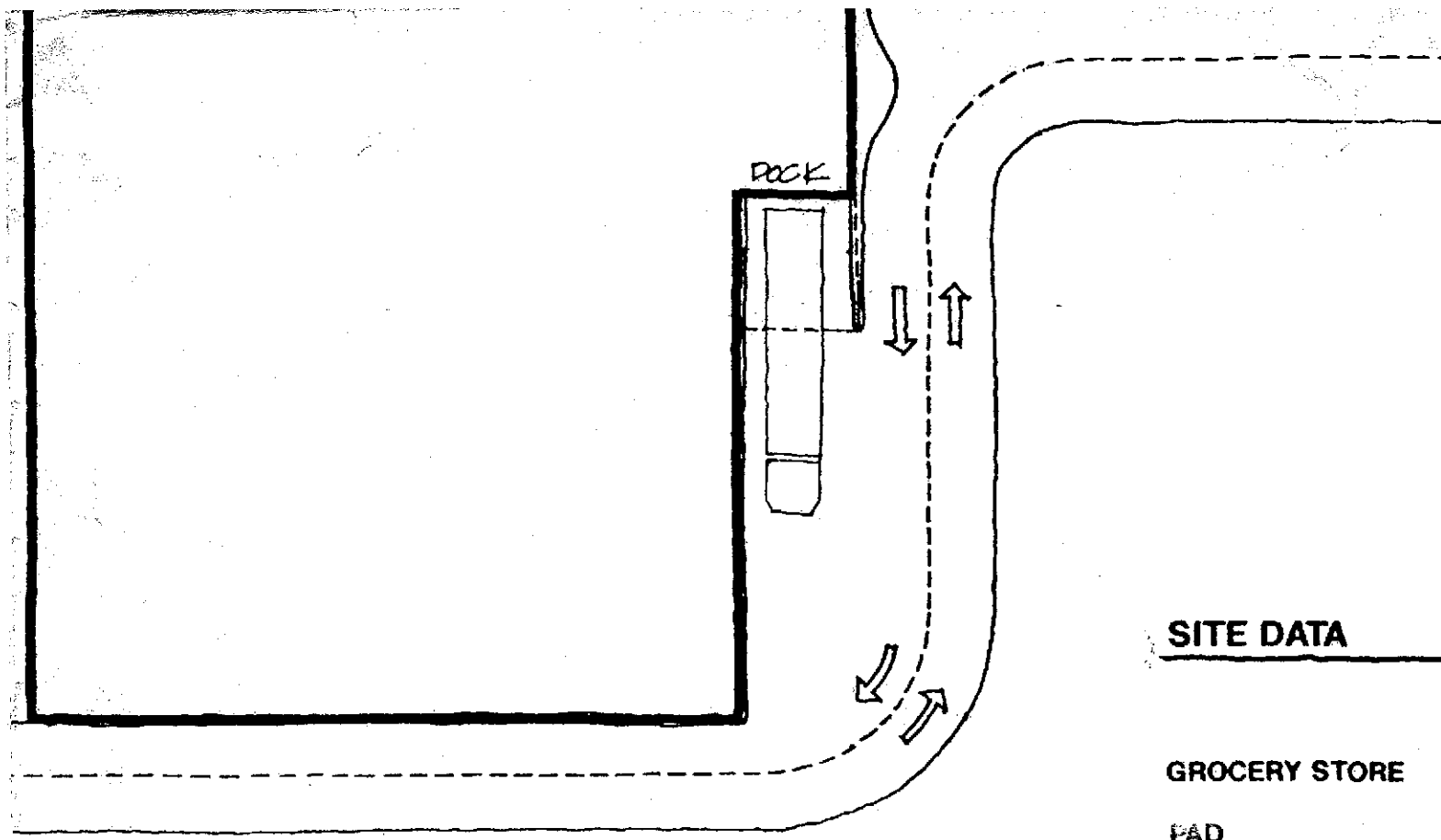


**SECOR**  
**International Incorporated**

SAN LORE

Attachment 1

97 JUN 21 AM  
 12:00 PM  
 12:00 PM



**SITE DATA**

|               | FLOOR AREA       | PARKING   | PARKING RATIO             |
|---------------|------------------|---|---------------------------|
| GROCERY STORE | 56,200 SF        |   |                           |
| PAD           | 3,000 SF         |   |                           |
| <b>TOTAL</b>  | <b>59,200 SF</b> | <b>342 SPACES</b>                                 | <b>5.77 SPACES/1000SF</b> |
| PHARMACY      | 16,200 SF        |   |                           |
| RETAIL SHOPS  | 15,000 SF        |   |                           |
| <b>TOTAL</b>  | <b>31,200 SF</b> | <b>144 SPACES</b><br>(INCLUDES 19 SPACES AT REAR) | <b>4.61 SPACES/1000SF</b> |
|               |                  | <b>125 SPACES</b><br>(EXCLUDES 19 SPACES AT REAR) | <b>4.00 SPACES/1000SF</b> |

**SITE PLAN** 

SCALE: 1"=40'-0"

ZO VILLAGE



***ATTACHMENT 2***  
***Field Data Sheets***



HYDROLOGIC DATA SHEET

DATE: 4-1-97 PROJECT: DAVID D. BOHANNON PROJECT # 70074-001-G2

EVENT: Quarterly monitoring SAMPLER: GRC

| WELL OR LOCATION | TIME | MEASUREMENT |      |       |    |      | COMMENTS |
|------------------|------|-------------|------|-------|----|------|----------|
|                  |      | TOC         | DTW  | DTB   | PT | ELEV |          |
| MW-1             |      |             | 6.27 | 14.82 |    |      |          |
| MW-2             |      |             | 6.61 | 14.73 |    |      |          |
| MW-3             |      |             | 5.53 | 12.64 |    |      |          |
|                  |      |             |      |       |    |      |          |
|                  |      |             |      |       |    |      |          |
|                  |      |             |      |       |    |      |          |
|                  |      |             |      |       |    |      |          |
|                  |      |             |      |       |    |      |          |
|                  |      |             |      |       |    |      |          |
|                  |      |             |      |       |    |      |          |
|                  |      |             |      |       |    |      |          |
|                  |      |             |      |       |    |      |          |
|                  |      |             |      |       |    |      |          |
|                  |      |             |      |       |    |      |          |
|                  |      |             |      |       |    |      |          |
|                  |      |             |      |       |    |      |          |
|                  |      |             |      |       |    |      |          |
|                  |      |             |      |       |    |      |          |
|                  |      |             |      |       |    |      |          |
|                  |      |             |      |       |    |      |          |
|                  |      |             |      |       |    |      |          |

CODES: TOC - TOP OF CASING (FEET, RELATIVE TO MEAN SEA LEVEL)  
DTW - DEPTH TO WATER (FEET)  
DTP - DEPTH TO PRODUCT (FEET)  
PT - PRODUCT THICKNESS (FEET)  
ELEV - GROUNDWATER ELEVATION (FEET, RELATIVE TO MEAN SEA LEVEL)

**SECOR International Inc.**  
WATER SAMPLE FIELD DATA SHEET

PROJECT #: 70074-001-02 PURGED BY: GL WELL I.D.: MW-1  
 CLIENT NAME: DAVID D. Bohannon SAMPLED BY: GL SAMPLE I.D.: MW-1  
 LOCATION: SAN LORENZO QA SAMPLES: None

DATE PURGED 4-1-97 START (2400hr) 9:55 END (2400hr) 10:10  
 DATE SAMPLED 4-1-97 SAMPLE TIME (2400hr) 10:15

SAMPLE TYPE: Groundwater  Surface Water \_\_\_\_\_ Treatment Effluent \_\_\_\_\_ Other \_\_\_\_\_

CASING DIAMETER: 2"  3" \_\_\_\_\_ 4" \_\_\_\_\_ 5" \_\_\_\_\_ 6" \_\_\_\_\_ 8" \_\_\_\_\_ Other \_\_\_\_\_  
 Casing Volume: (gallons per foot) (0.17) (0.38) (0.67) (1.02) (1.50) (2.60) ( )

DEPTH TO BOTTOM (feet) = 14.82 CASING VOLUME (gal) = 1.45  
 DEPTH TO WATER (feet) = 6.27 CALCULATED PURGE (gal) = 4.36  
 WATER COLUMN HEIGHT (feet) = 8.55 ACTUAL PURGE (gal) = 4.50

**FIELD MEASUREMENTS**

| DATE       | TIME (2400hr) | VOLUME (gal) | TEMP. (degrees F) | CONDUCTIVITY (umhos/cm) | pH (units)  | COLOR (visual) | TURBIDITY (visual) |
|------------|---------------|--------------|-------------------|-------------------------|-------------|----------------|--------------------|
| <u>4-1</u> | <u>10:00</u>  | <u>1.5</u>   | <u>64.4</u>       | <u>1000</u>             | <u>6.99</u> | <u>BRN</u>     | <u>High</u>        |
| <u>4-1</u> | <u>10:05</u>  | <u>3.0</u>   | <u>65.5</u>       | <u>1022</u>             | <u>7.07</u> | <u>BRN</u>     | <u>High</u>        |
| <u>4-1</u> | <u>10:10</u>  | <u>4.5</u>   | <u>65.9</u>       | <u>1022</u>             | <u>7.11</u> | <u>BRN</u>     | <u>High</u>        |
|            |               |              |                   |                         |             |                |                    |
|            |               |              |                   |                         |             |                |                    |
|            |               |              |                   |                         |             |                |                    |
|            |               |              |                   |                         |             |                |                    |
|            |               |              |                   |                         |             |                |                    |
|            |               |              |                   |                         |             |                |                    |
|            |               |              |                   |                         |             |                |                    |
|            |               |              |                   |                         |             |                |                    |

**SAMPLE INFORMATION**

SAMPLE DEPTH TO WATER: \_\_\_\_\_ SAMPLE TURBIDITY: \_\_\_\_\_

80% RECHARGE:  YES  NO ANALYSES: TPH & BTEX  
 ODOR: None SAMPLE VESSEL / PRESERVATIVE: 3 HCL vials

**PURGING EQUIPMENT**

Bladder Pump \_\_\_\_\_ Bailer (Teflon) \_\_\_\_\_  
 Centrifugal Pump \_\_\_\_\_ Bailer (PVC) \_\_\_\_\_  
 Submersible Pump \_\_\_\_\_ Bailer (Stainless Steel) \_\_\_\_\_  
 Peristaltic Pump \_\_\_\_\_  Dedicated DDP  
 Other: \_\_\_\_\_  
 Pump Depth: \_\_\_\_\_

**SAMPLING EQUIPMENT**

Bladder Pump \_\_\_\_\_ Bailer (Teflon) \_\_\_\_\_  
 Centrifugal Pump \_\_\_\_\_  Bailer (PVC or  disposable)  
 Submersible Pump \_\_\_\_\_ Bailer (Stainless Steel) \_\_\_\_\_  
 Peristaltic Pump \_\_\_\_\_ Dedicated \_\_\_\_\_  
 Other: \_\_\_\_\_

WELL INTEGRITY: Good LOCK#: None

REMARKS: CAP Does not Fit

SIGNATURE: MRC Page 1 of 1

**SECOR International Inc.**  
WATER SAMPLE FIELD DATA SHEET

PROJECT #: 70074-001-02 PURGED BY: GC WELL I.D.: MW-2  
 CLIENT NAME: DAVID D Bohannon SAMPLED BY: GC SAMPLE I.D.: MW-2  
 LOCATION: SAN LORENZO QA SAMPLES: None

DATE PURGED 4-1-97 START (2400hr) 10:40 END (2400hr) 10:55  
 DATE SAMPLED 4-1-97 SAMPLE TIME (2400hr) 11:00

SAMPLE TYPE: Groundwater  Surface Water \_\_\_\_\_ Treatment Effluent \_\_\_\_\_ Other \_\_\_\_\_

CASING DIAMETER: 2"  3" \_\_\_\_\_ 4" \_\_\_\_\_ 5" \_\_\_\_\_ 6" \_\_\_\_\_ 8" \_\_\_\_\_ Other \_\_\_\_\_  
 Casing Volume: (gallons per foot) (0.17) (0.38) (0.67) (1.02) (1.50) (2.60) ( )

DEPTH TO BOTTOM (feet) = 14.73 CASING VOLUME (gal) = 1.38  
 DEPTH TO WATER (feet) = 6.61 CALCULATED PURGE (gal) = 4.14  
 WATER COLUMN HEIGHT (feet) = 8.12 ACTUAL PURGE (gal) = 4.50

**FIELD MEASUREMENTS**

| DATE       | TIME (2400hr) | VOLUME (gal) | TEMP. (degrees F) | CONDUCTIVITY (umhos/cm) | pH (units)  | COLOR (visual) | TURBIDITY ( <del>NTU</del> ) <i>visual</i> |
|------------|---------------|--------------|-------------------|-------------------------|-------------|----------------|--|
| <u>4-1</u> | <u>10:43</u>  | <u>1.5</u>   | <u>66.4</u>       | <u>1302</u>             | <u>6.54</u> | <u>BRN</u>     | <u>High</u>                                |
| <u>4-1</u> | <u>10:45</u>  | <u>3.0</u>   | <u>66.7</u>       | <u>1349</u>             | <u>6.57</u> | <u>BRN</u>     | <u>High</u>                                |
| <u>4-1</u> | <u>10:50</u>  | <u>4.5</u>   | <u>67.2</u>       | <u>1355</u>             | <u>6.90</u> | <u>BRN</u>     | <u>High</u>                                |
|            |               |              |                   |                         |             |                |  |
|            |               |              |                   |                         |             |                |  |
|            |               |              |                   |                         |             |                |  |
|            |               |              |                   |                         |             |                |  |
|            |               |              |                   |                         |             |                |  |
|            |               |              |                   |                         |             |                |  |
|            |               |              |                   |                         |             |                |  |

**SAMPLE INFORMATION**

SAMPLE DEPTH TO WATER: \_\_\_\_\_ SAMPLE TURBIDITY: \_\_\_\_\_

80% RECHARGE:  YES  NO ANALYSES: TH6 BTEX  
 ODOR: GAS SAMPLE VESSEL / PRESERVATIVE: 3 HCL VOAS

**PURGING EQUIPMENT**

Bladder Pump \_\_\_\_\_ Bailer (Teflon) \_\_\_\_\_  
 Centrifugal Pump \_\_\_\_\_ Bailer (PVC) \_\_\_\_\_  
 Submersible Pump \_\_\_\_\_ Bailer (Stainless Steel) \_\_\_\_\_  
 Peristaltic Pump \_\_\_\_\_  Dedicated Disp

Other: \_\_\_\_\_  
 Pump Depth: \_\_\_\_\_

**SAMPLING EQUIPMENT**

Bladder Pump \_\_\_\_\_ Bailer (Teflon) \_\_\_\_\_  
 Centrifugal Pump \_\_\_\_\_  Bailer (  PVC or  disposable )  
 Submersible Pump \_\_\_\_\_ Bailer (Stainless Steel) \_\_\_\_\_  
 Peristaltic Pump \_\_\_\_\_ Dedicated \_\_\_\_\_

Other: \_\_\_\_\_

WELL INTEGRITY: Good LOCK#: 0909

REMARKS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

SIGNATURE: BRC Page 1 of 1

**SECOR International Inc.**  
WATER SAMPLE FIELD DATA SHEET

PROJECT #: 70274-001-02 PURGED BY: GL WELL I.D.: MW-3  
 CLIENT NAME: DAVID D. Bohannon SAMPLED BY: GL SAMPLE I.D.: MW-3  
 LOCATION: SAN LORENZO QA SAMPLES: NONE

DATE PURGED 4-1-97 START (2400hr) 11:05 END (2400hr) 11:15  
 DATE SAMPLED 4-1-97 SAMPLE TIME (2400hr) 11:25

SAMPLE TYPE: Groundwater  Surface Water \_\_\_\_\_ Treatment Effluent \_\_\_\_\_ Other \_\_\_\_\_

CASING DIAMETER: 2"  3" \_\_\_\_\_ 4" \_\_\_\_\_ 5" \_\_\_\_\_ 6" \_\_\_\_\_ 8" \_\_\_\_\_ Other \_\_\_\_\_  
 Casing Volume: (gallons per foot) (0.17) (0.38) (0.67) (1.02) (1.50) (2.60) ( )

DEPTH TO BOTTOM (feet) = 12.69 CASING VOLUME (gal) = 1.21  
 DEPTH TO WATER (feet) = 5.53 CALCULATED PURGE (gal) = 3.65  
 WATER COLUMN HEIGHT (feet) = 17.16 ACTUAL PURGE (gal) = 4.00

**FIELD MEASUREMENTS**

| DATE       | TIME (2400hr) | VOLUME (gal) | TEMP. (degrees F) | CONDUCTIVITY (umhos/cm) | pH (units)  | COLOR (visual) | TURBIDITY ( <del>NTU</del> Visual) |
|------------|---------------|--------------|-------------------|-------------------------|-------------|----------------|------------------------------------|
| <u>4-1</u> | <u>11:09</u>  | <u>1.5</u>   | <u>64.9</u>       | <u>780</u>              | <u>6.77</u> | <u>BLK</u>     | <u>High</u>                        |
| <u>4-1</u> | <u>11:12</u>  | <u>3.0</u>   | <u>66.2</u>       | <u>789</u>              | <u>6.87</u> | <u>BLK</u>     | <u>High</u>                        |
| <u>4-1</u> | <u>11:15</u>  | <u>4.0</u>   | <u>66.5</u>       | <u>705</u>              | <u>6.89</u> | <u>BLK</u>     | <u>High</u>                        |
|            |               |              |                   |                         |             |                |                                    |
|            |               |              |                   |                         |             |                |                                    |
|            |               |              |                   |                         |             |                |                                    |
|            |               |              |                   |                         |             |                |                                    |
|            |               |              |                   |                         |             |                |                                    |
|            |               |              |                   |                         |             |                |                                    |
|            |               |              |                   |                         |             |                |                                    |

**SAMPLE INFORMATION**

SAMPLE DEPTH TO WATER: \_\_\_\_\_ SAMPLE TURBIDITY: \_\_\_\_\_

80% RECHARGE:  YES  NO ANALYSES: TPH6 BTEX  
 ODOR: GAS SAMPLE VESSEL / PRESERVATIVE: 3 HCL Vials

**PURGING EQUIPMENT**

Bladder Pump \_\_\_\_\_ Bailer (Teflon) \_\_\_\_\_  
 Centrifugal Pump \_\_\_\_\_ Bailer (PVC) \_\_\_\_\_  
 Submersible Pump \_\_\_\_\_ Bailer (Stainless Steel) \_\_\_\_\_  
 Peristaltic Pump \_\_\_\_\_  Dedicated DSP

Other: \_\_\_\_\_  
 Pump Depth: \_\_\_\_\_

**SAMPLING EQUIPMENT**

Bladder Pump \_\_\_\_\_ Bailer (Teflon) \_\_\_\_\_  
 Centrifugal Pump \_\_\_\_\_  Bailer (  PVC or  disposable)  
 Submersible Pump \_\_\_\_\_ Bailer (Stainless Steel) \_\_\_\_\_  
 Peristaltic Pump \_\_\_\_\_ Dedicated \_\_\_\_\_

Other: \_\_\_\_\_

WELL INTEGRITY: Good LOCK#: 0909

REMARKS: Shen on H2O

SIGNATURE: JPC Page 1 of 1

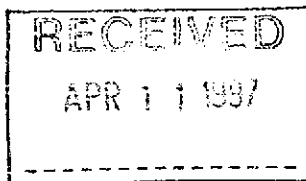
***ATTACHMENT 3***  
***Laboratory Analytical Reports - Groundwater***



# Superior

## Analytical Laboratory

SECOR  
1390 WILLOW PASS RD, STE. 360  
CONCORD, CA 94520



Date: April 10, 1997

Attn: Kirsten Wagle

Laboratory Number : 22617

Project Number/Name : 70074-001-02  
Facility/Site : DAVID D. BOHANNON  
575 PASEO GRANDE  
SAN LORENZO, CA

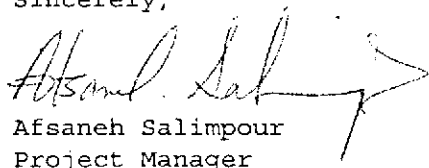
Dear Kirsten Wagle:

Attached is Superior Analytical Laboratory report for the samples received on April 1, 1997. This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety. Following the cover letter is the Case Narrative detailing sample receipt and analysis. Also enclosed is a copy of the original Chain-of-Custody record confirming receipt of samples.

Please note that any unused portion of the sample will be discarded after May 1, 1997, unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions, please contact our Laboratory at (510) 313-0850.

Sincerely,

  
Afsaneh Salimpour  
Project Manager



# Superior

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## Analytical Laboratory

### CASE NARRATIVE

SECOR

Project Number/Name: 70074-001-02

Laboratory Number: 22617

#### Sample Receipt

Three water samples were received by Superior Analytical Laboratory on April 1, 1997.

Cooler temperature was 4.0°C

No abnormalities were noted with sample receiving.

#### Sample Analysis

The samples were analysed for methods 8015M and 8020.

NOTE: Reproduction of this report is permitted only in its entirety.

I / I



# Superior

## Analytical Laboratory

SECOR  
Attn: Kirsten Wagle

Project 70074-001-02  
Reported on April 10, 1997

Gasoline Range Petroleum Hydrocarbons and BTXE  
by EPA SW-846 5030/8015M/8020  
Gasoline Range quantitated as all compounds from C6-C10

Chronology

Laboratory Number 22617

| Sample ID | Sampled  | Received | Extract. | Analyzed | QC Batch | LAB # |
|-----------|----------|----------|----------|----------|----------|-------|
| MW-1      | 04/01/97 | 04/01/97 | 04/03/97 | 04/03/97 | DD032.37 | 01    |
| MW-2      | 04/01/97 | 04/01/97 | 04/03/97 | 04/03/97 | DD032.37 | 02    |
| MW-3      | 04/01/97 | 04/01/97 | 04/03/97 | 04/03/97 | DD032.37 | 03    |

QC Samples

| QC Batch #  | QC Sample ID               | TypeRef.     | Matrix | Extract. | Analyzed |
|-------------|----------------------------|--------------|--------|----------|----------|
| DD032.37-01 | Method Blank               | MB           | Water  | 04/03/97 | 04/03/97 |
| DD032.37-02 | Laboratory Spike           | LS           | Water  | 04/03/97 | 04/03/97 |
| DD032.37-03 | Laboratory Spike Duplicate | LSD          | Water  | 04/03/97 | 04/03/97 |
| DD032.37-04 | 0830 BD040397              | MS 22621-01  | Water  | 04/03/97 | 04/03/97 |
| DD032.37-05 | 0830 BD040397              | MSD 22621-01 | Water  | 04/03/97 | 04/03/97 |





SECOR  
Attn: Kirsten Wagle

Project 70074-001-02  
Reported on April 10, 1997

Gasoline Range Petroleum Hydrocarbons and BTXE  
by EPA SW-846 5030/8015M/8020  
Gasoline Range quantitated as all compounds from C6-C10

| LAB ID   | Sample ID | Matrix | Dil. Factor | Moisture |
|----------|-----------|--------|-------------|----------|
| 22617-01 | MW-1      | Water  | 1.0         | -        |
| 22617-02 | MW-2      | Water  | 10.0        | -        |
| 22617-03 | MW-3      | Water  | 10.0        | -        |

### R E S U L T S   O F   A N A L Y S I S

| Compound                       | 22617-01 |     | 22617-02 |     | 22617-03 |     |
|--------------------------------|----------|-----|----------|-----|----------|-----|
|                                | Conc.    | RL  | Conc.    | RL  | Conc.    | RL  |
|                                | ug/L     |     | ug/L     |     | ug/L     |     |
| Gasoline Range                 | 550      | 50  | 7600     | 500 | 27000    | 500 |
| Benzene                        | ND       | 0.5 | 470      | 5.0 | 520      | 5.0 |
| Toluene                        | ND       | 0.5 | 64       | 5.0 | 50       | 5.0 |
| Ethyl Benzene                  | 7.6      | 0.5 | 210      | 5.0 | 520      | 5.0 |
| Total Xylenes                  | 6.6      | 0.5 | 250      | 5.0 | 450      | 5.0 |
| >> Surrogate Recoveries (%) << |          |     |          |     |          |     |
| Trifluorotoluene (SS)          | 109      |     | 100      |     | 112      |     |



**Superior**

**Analytical Laboratory**

Gasoline Range Petroleum Hydrocarbons and BTXE  
by EPA SW-846 5030/8015M/8020  
Gasoline Range quantitated as all compounds from C6-C10

Quality Assurance and Control Data

Laboratory Number: 22617  
Method Blank(s)

DD032.37-01  
Conc. RL  
ug/L

---

|                |    |     |
|----------------|----|-----|
| Gasoline Range | ND | 50  |
| Benzene        | ND | 0.5 |
| Toluene        | ND | 0.5 |
| Ethyl Benzene  | ND | 0.5 |
| Total Xylenes  | ND | 0.5 |

>> Surrogate Recoveries (%) <<  
Trifluorotoluene (SS) 101



# Superior

## Analytical Laboratory

Gasoline Range Petroleum Hydrocarbons and BTXE  
 by EPA SW-846 5030/8015M/8020  
 Gasoline Range quantitated as all compounds from C6-C10

### Quality Assurance and Control Data

Laboratory Number: 22617

| Compound | Sample conc. | SPK Level | SPK Result | Recovery % | Limits % | RPD % |
|----------|--------------|-----------|------------|------------|----------|-------|
|----------|--------------|-----------|------------|------------|----------|-------|

For Water Matrix (ug/L)  
 DD032.37 02 / 03 - Laboratory Control Spikes

|                |  |      |           |         |        |   |
|----------------|--|------|-----------|---------|--------|---|
| Gasoline Range |  | 2000 | 2000/2000 | 100/100 | 65-135 | 0 |
| Benzene        |  | 20   | 21/21     | 105/105 | 65-135 | 0 |
| Toluene        |  | 20   | 21/22     | 105/110 | 65-135 | 5 |
| Ethyl Benzene  |  | 20   | 21/21     | 105/105 | 65-135 | 0 |
| Total Xylenes  |  | 60   | 63/64     | 105/107 | 65-135 | 0 |

>> Surrogate Recoveries (%) <<

|                       |  |  |  |         |        |  |
|-----------------------|--|--|--|---------|--------|--|
| Trifluorotoluene (SS) |  |  |  | 107/105 | 50-150 |  |
|-----------------------|--|--|--|---------|--------|--|

For Water Matrix (ug/L)  
 DD032.37 04 / 05 - Sample Spiked: 22621 - 01

|                |    |      |           |         |        |    |
|----------------|----|------|-----------|---------|--------|----|
| Gasoline Range | ND | 2000 | 1800/2000 | 90/100  | 65-135 | 11 |
| Benzene        | ND | 20   | 21/21     | 105/105 | 65-135 | 0  |
| Toluene        | ND | 20   | 19/20     | 95/100  | 65-135 | 5  |
| Ethyl Benzene  | ND | 20   | 19/20     | 95/100  | 65-135 | 5  |
| Total Xylenes  | ND | 60   | 21R/33R   | 35/55   | 65-135 | 39 |

>> Surrogate Recoveries (%) <<

|                       |  |  |  |         |        |  |
|-----------------------|--|--|--|---------|--------|--|
| Trifluorotoluene (SS) |  |  |  | 105/105 | 50-150 |  |
|-----------------------|--|--|--|---------|--------|--|



**Superior**

**Analytical Laboratory**

Narrative:

R - MS and/or MSD recoveries were out of control limits. LCS / LCSD recoveries were within acceptable limits.

Definitions:

ND = Not Detected

RL = Reporting Limit

NA = Not Analysed

RPD = Relative Percent Difference

ug/L = parts per billion (ppb)

mg/L = parts per million (ppm)

ug/kg = parts per billion (ppb)

mg/kg = parts per million (ppm)

# SECOR Chain-of Custody Record

Field Office: SECOR  
 Address: 1390 Willow Pass Road Suite 360  
Concord, CA 94520

Additional documents are attached, and are a part of this Record.  
 Job Name: DAVID D. Bohannon  
 Location: 575 PASEO GRANDE  
SAN LORENZO, CA

Project # 70074-001-02 Task # \_\_\_\_\_  
 Project Manager KIRSKA WAGLE  
 Laboratory SUPERIOR  
 Turnaround Time STANDARD

Sampler's Name GARY CHIFF  
 Sampler's Signature [Signature]

### Analysis Request

| Sample ID | Date | Time  | Matrix | HCID | TPHq/BTEX/WTPH-G<br>8015 (modified)/8020 | TPHq/WTPH-D<br>8015 (modified) | TPH 418.1/WTPH 418.1 | Aromatic Volatiles<br>602/8020 | Volatile Organics<br>624/8240 (GC/MS) | Halogenated Volatiles<br>601/8010 | Semi-volatile Organics<br>625/8270 (GC/MS) | Pesticides/PCBs<br>608/8080 | Total Lead<br>7421 | Priority Pollutant<br>Metals (13) | TCLP Metals | Comments/<br>Instructions | Number of Containers |
|-----------|------|-------|--------|------|--|--------------------------------|----------------------|--------------------------------|---------------------------------------|-----------------------------------|--|-----------------------------|--------------------|-----------------------------------|-------------|---------------------------|----------------------|
| MW-1      | 4-1  | 10:15 | H2O    |      | X  |                                |                      |                                |                                       |                                   |  |                             |                    |                                   |             |                           | 3                    |
| MW-2      | 4-1  | 11:00 | H2O    |      | X  |                                |                      |                                |                                       |                                   |  |                             |                    |                                   |             |                           | 3                    |
| MW-3      | 4-1  | 11:25 | H2O    |      | X  |                                |                      |                                |                                       |                                   |  |                             |                    |                                   |             |                           | 3                    |
|           |      |       |        |      |  |                                |                      |                                |                                       |                                   |  |                             |                    |                                   |             |                           |                      |
|           |      |       |        |      |  |                                |                      |                                |                                       |                                   |  |                             |                    |                                   |             |                           |                      |
|           |      |       |        |      |  |                                |                      |                                |                                       |                                   |  |                             |                    |                                   |             |                           |                      |
|           |      |       |        |      |  |                                |                      |                                |                                       |                                   |  |                             |                    |                                   |             |                           |                      |
|           |      |       |        |      |  |                                |                      |                                |                                       |                                   |  |                             |                    |                                   |             |                           |                      |
|           |      |       |        |      |  |                                |                      |                                |                                       |                                   |  |                             |                    |                                   |             |                           |                      |
|           |      |       |        |      |  |                                |                      |                                |                                       |                                   |  |                             |                    |                                   |             |                           |                      |
|           |      |       |        |      |  |                                |                      |                                |                                       |                                   |  |                             |                    |                                   |             |                           |                      |

Special Instructions/Comments:

Relinquished by: SECOR  
 Sign [Signature]  
 Print GARY CHIFF  
 Company SECOR  
 Time 2:00 Date 4-1-97

Relinquished by:  
 Sign [Signature]  
 Print ROBERT R. BUCKLEY  
 Company SAL  
 Time 4:37 PM Date 4/1/97

Received by:  
 Sign [Signature]  
 Print ROBERT R. BUCKLEY  
 Company SAL  
 Time 2 PM Date 4/1/97

Received by:  
 Sign [Signature]  
 Print R. BUCKLEY  
 Company SAL  
 Time 11:50 Date 4/1/97

Sample Receipt

|                                |   |
|--------------------------------|---|
| Total no. of containers:       | 9 |
| Chain of custody seals:        | ✓ |
| Rec'd. in good condition/cold: | ✓ |
| Conforms to record:            | ✓ |

Client: SECOR  
 Client Contact: KIRSKA WAGLE  
 Client Phone: (510) 686-9780