

# AC Transit

Alameda Contra Costa Transit District

**Suzanne Patton, P.E.**

Environmental Engineer

(510) 577-8869

January 30, 2003

Mr. Barney Chan

Alameda County Health Division

Division of Environmental Protection

Department of Environmental Health

1131 Harbor Bay Parkway, Second Floor

Alameda, CA 94502

AG  
✓ 20296

Alameda County

FEB 03 2003

Environmental Health

Dear Mr. Chan:

Subject: Quarterly Groundwater Monitoring Report  
AC Transit, 1100 Seminary Avenue, Oakland, CA

AC Transit hereby submits the enclosed quarterly groundwater monitoring report for the fourth quarter of 2002 for the AC Transit facility located at 1100 Seminary Avenue in Oakland. Groundwater sampling of monitoring wells MW-1 through MW-3 and MW-9 through MW-11 was performed by Cameron-Cole in accordance with directives from your office.

Groundwater samples were collected from the six on-site monitoring wells on November 14, 2002. Samples were analyzed for total petroleum hydrocarbons (TPH) as gasoline and diesel using EPA Method 8015, benzene, toluene, ethylbenzene, and xylenes (BTEX) and methyl-tert butyl ether (MTBE) using EPA Method 8260B and nitrate and sulfate using Standard Methods 300.0A. Field parameters collected during sampling included pH, temperature, electrical conductivity, dissolved oxygen, ferrous iron and oxidation reduction potential. In addition, monitoring well MW-2 is being purged dry monthly and during each quarterly sampling event

Analytical results of grab water samples showed benzene concentrations above the California maximum contaminant level (MCL) of 1 ppb in wells MW-1, MW-2, and MW-3. Ethylbenzene was detected above the MCL of 700 ppb in well MW-2 at a concentration of 1,600 ppb. Total xylenes were detected above the MCL of 700 ppb in monitoring well MW-2. Unspecified hydrocarbons, thought to be degraded diesel, were detected at concentrations above laboratory reporting limits in all wells.

If you have any questions regarding this report or other matters pertaining to this site, please call me at (510) 577-8869.

Sincerely,

  
Suzanne Patton, P.E.  
Environmental Engineer

**MONITORING REPORT  
FOR THE AC TRANSIT FACILITY  
LOCATED AT 1100 SEMINARY AVENUE,  
OAKLAND, CALIFORNIA**

December 2002

Ms. Suzanne Patton  
AC Transit  
10626 E. 14<sup>th</sup> Street  
Oakland, California 94603

*Alameda County  
FEB 03 2003  
Environmental Health*

**Prepared By:**  
Cameron-Cole  
101 W. Atlantic, Building 90  
Alameda, California 94501

Project No: 2016



**CAMERON-COLE**

**MONITORING REPORT FOR THE  
AC TRANSIT FACILITY  
LOCATED AT 1100 SEMINARY AVENUE,  
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December 2002

**Prepared For:**

Ms. Suzanne Patton  
AC Transit  
10626 E. 14<sup>th</sup> Street  
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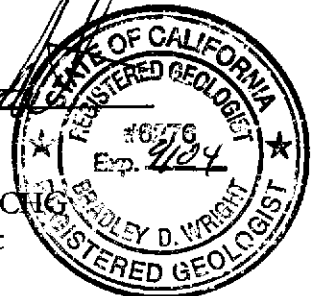
**CAMERON-COLE**

*Emily Waters*

Written By  
Emily Waters  
Environmental Scientist I

*Brad Wright*

Approved By  
Brad Wright, RG, CIG  
Sr. Hydrogeologist



## TABLE OF CONTENTS

|   |   |
|---|---|
| INTRODUCTION .....                              | 1 |
| OBJECTIVES AND SCOPE OF WORK.....               | 1 |
| Groundwater Elevations and Flow Direction ..... | 1 |
| Groundwater Sampling Activities.....            | 2 |
| Groundwater Analytical Results.....             | 2 |
| SUMMARY OF RESULTS.....                         | 3 |
| PROJECTED WORK AND RECOMMENDATIONS.....         | 3 |

## LIST OF FIGURES

|          |                            |
|----------|----------------------------|
| Figure 1 | Site Location Map          |
| Figure 2 | Potentiometric Surface Map |

## LIST OF TABLES

|         |   |
|---------|---|
| Table 1 | Groundwater Level Measurements            |
| Table 2 | Analytical Results of Groundwater Samples |

## LIST OF APPENDICES

|            |  |
|------------|--|
| APPENDIX A | Certified Analytical Reports and Chain-of-Custody<br>Documentation |
| APPENDIX B | Sampling Event Data Sheets   |

## **INTRODUCTION**

This report presents the results of the November 2002 sampling event for the AC Transit facility located at 1100 Seminary Avenue, Oakland, California (Site) (Figure 1). Groundwater sampling of monitor wells MW-1 through MW-3 and MW-9 through MW-11 was performed by Cameron-Cole, in accordance with directives from the Alameda County Health Care Services Agency (ACHCS).

## **OBJECTIVES AND SCOPE OF WORK**

Work performed during quarterly sampling included measuring depth to water and presence of free phase hydrocarbons in the monitor wells and collecting water samples. Field parameters collected during sampling included pH, temperature, electric conductivity, dissolved oxygen (DO), ferrous iron ( $\text{Fe}^{2+}$ ) and oxygen reduction potential (ORP). Groundwater samples were collected for laboratory analysis using United States Environmental Protection Agency (USEPA) Method 8015 for total petroleum hydrocarbons (TPH) gasoline/diesel, USEPA Method 8260B for benzene, toluene, ethylbenzene, and xylene (BTEX) and methyl-tert butyl ether (MTBE) and methods of chemical analysis for water and waste (MCAWW) 300.0A for nitrate and sulfate.

Chain-of-custody documents and certified analytical reports are presented in Appendix A. Field data sheets are included in Appendix B.

### **Groundwater Elevations and Flow Direction**

Prior to purging and sample collection, all six Site monitor wells were inspected and measured for presence of free phase hydrocarbons and depth to groundwater. Measurements of depths to groundwater are presented on Table 1 and were used to construct the groundwater elevation contours shown in Figure 2. As shown, groundwater flow is to the northwest at a gradient of 0.0008 feet/foot.

## **Groundwater Sampling Activities**

The monitor wells were purged a minimum of three casing volumes, using a centrifugal pump and samples were collected using disposable polyethylene bailers. During well purging, field parameters for pH, electrical conductivity, DO, ORP, Fe<sup>2+</sup> and temperature were monitored using calibrated field meters.

In addition, MW-2 is now being purged of ten casing volumes monthly and during all quarterly sampling events to expedite the removal of free phase hydrocarbons from the vicinity of the well. Field data sheets the over-purge events are included in Appendix B.

Groundwater samples were transferred to appropriate laboratory supplied and preserved containers and placed in an ice-filled cooler for shipment under chain-of-custody to a State of California certified laboratory. A trip blank was submitted for analysis by USEPA Method 8260B.

## **Groundwater Analytical Results**

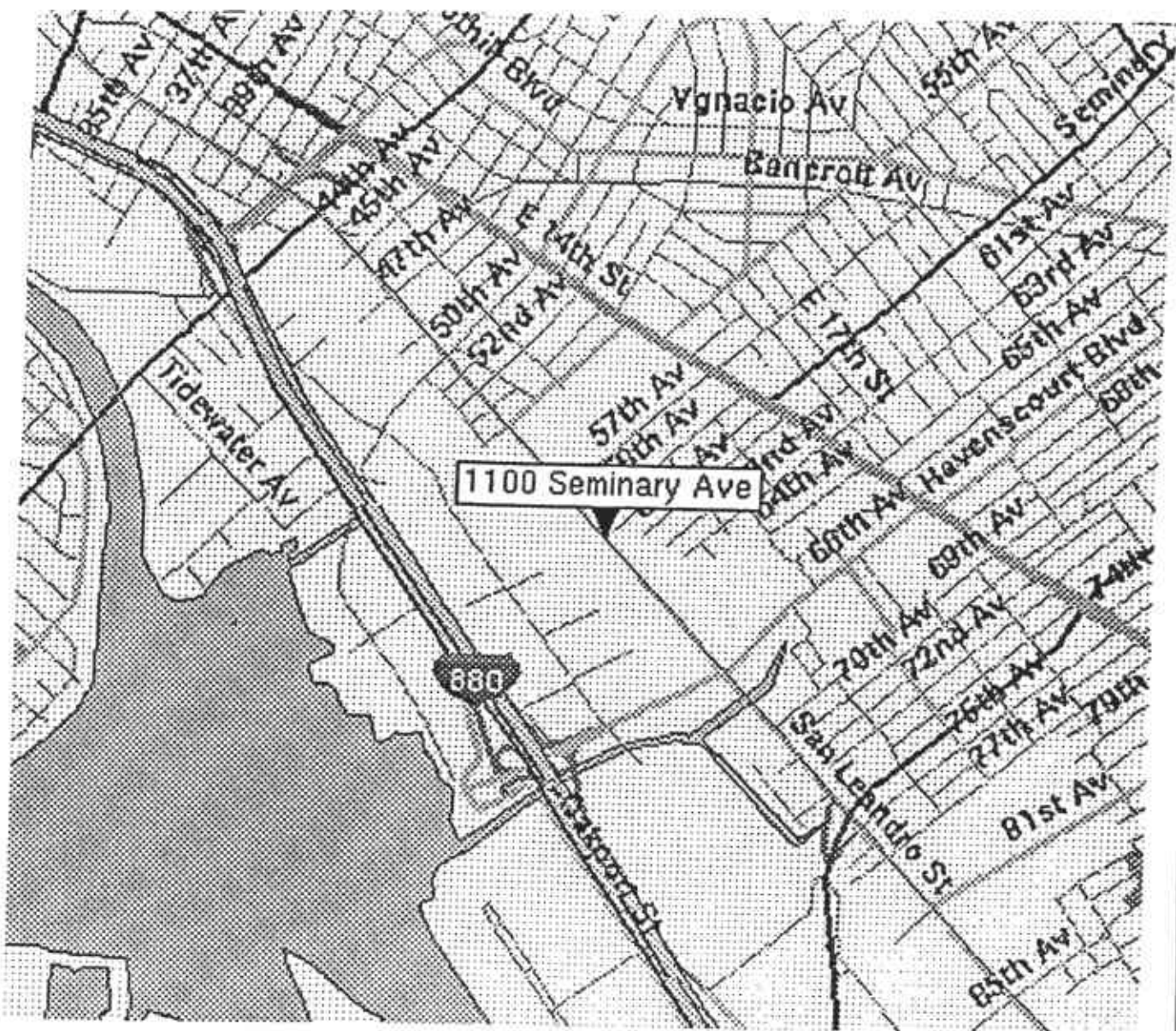
Table 2 presents groundwater historic and fourth quarter 2002 analytical results. Concentrations of benzene above the State of California maximum contaminant level (MCL) of 1.0 part per billion (ppb) were detected in monitor wells MW-1, MW-2 and MW-3. Toluene was detected above the MCL of 150 ppb in monitor well MW-2. Ethylbenzene was detected above the MCL of 700 ppb in monitor well MW-2. Total xylenes were detected above the MCL of 1,750 ppb in MW-2. TPH-Gas was detected above the reporting limit in monitor wells MW-1, MW-2 and MW-3. TPH-Diesel was detected above the reporting limit in all monitor wells. No analytes were detected in the trip blanks or method blanks. A lab control spike and lab control spike duplicate passed the USEPA's criteria for acceptance.

## **SUMMARY OF RESULTS**

- Groundwater flow direction is towards the northwest at a gradient of 0.0008 feet/foot.
- Chemical concentrations in excess of MCLs were limited to benzene in wells MW-1, MW-2 and MW-3, toluene in well MW-2, ethylbenzene in well MW-2 and xylenes in well MW-2.
- The free phase product level previously measured in well MW-2 has not been detected since the second quarter 2002.

## **PROJECTED WORK AND RECOMMENDATIONS**

- Quarterly groundwater monitoring is scheduled for February 2003.
- Continued monthly over purges of MW-2.



LOCMAP

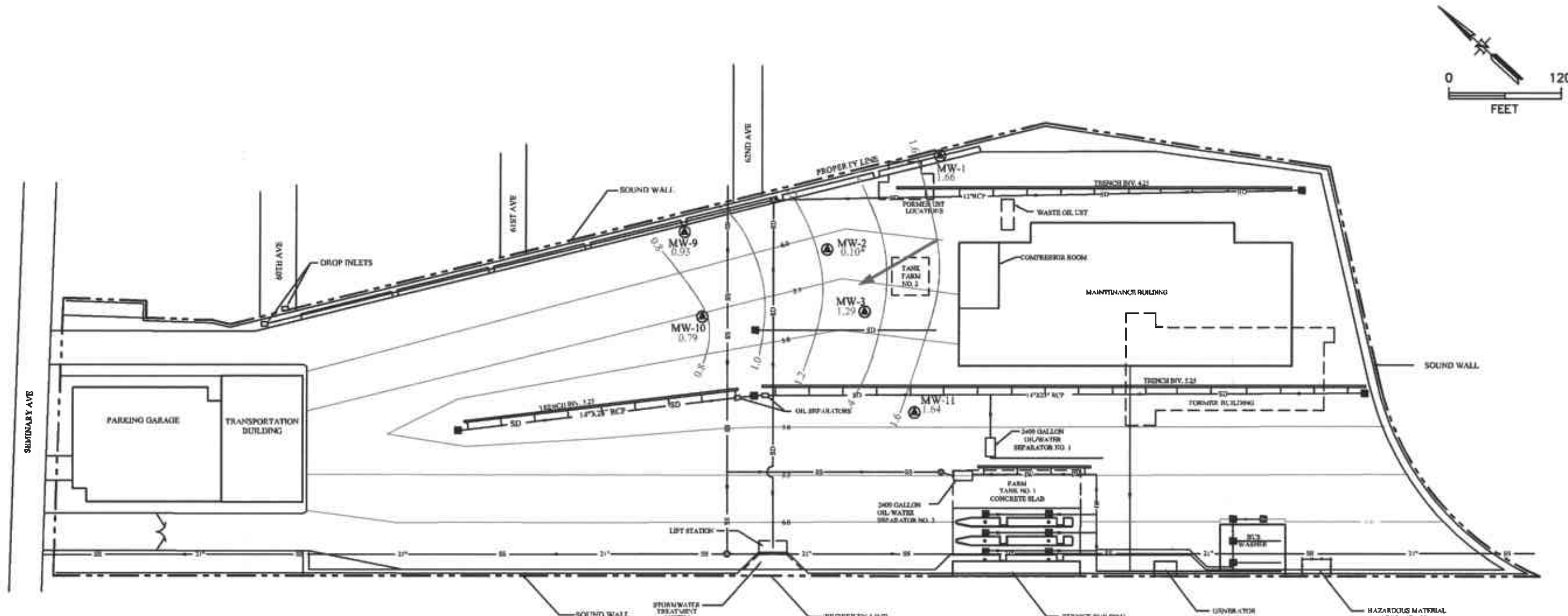


AC TRANSIT - OAKLAND, CALIFORNIA

FIGURE 1  
SITE LOCATION MAP  
1100 SEMINARY ROAD

|          |         |
|----------|---------|
| SCALE    | DATE    |
| NO SCALE | 3/22/00 |





| LEGEND |  |
|--------|--|
| 1.0    | GROUNDWATER ELEVATION CONTOUR 0.79 GROUNDWATER ELEVATION (FT. MSL) |
| ←      | REPORTED GROUNDWATER FLOW  |
| 6.0    | CONTOUR  |
| SD     | STORM DRAIN PIPELINE   |
| SS     | SANITARY SEWER PIPELINE  |
| IW     | INDUSTRIAL WASTE PIPELINE  |
| —      | SURFACE DRAINAGE TRENCH  |
| *      | NOT USED IN CONTOURING   |
| ⊙      | EXISTING MONITORING WELL   |
| ⊙      | MANHOLE  |
| ▢      | CATCH BASIN  |

| BY  | DATE   |
|-----|--------|
| WRB | 1/9/03 |
|     |        |
|     |        |
|     |        |



| FIGURE 2   |           |
|--|-----------|
| AC TRANSIT - OAKLAND, CALIFORNIA                                   |           |
| 1100 SEMINARY ROAD-POTENTIOMETRIC SURFACE MAP<br>NOVEMBER 14, 2002 |           |
| SCALE:   | DWG. NO.: |
| 1" = 120'  | 2016-01   |

**TABLE 1**  
**GROUNDWATER LEVEL MEASUREMENTS**  
**AC Transit Facility**  
**1100 Seminary Avenue, Oakland, California**

| Well             | Date             | Top of Casing Elevation (ft-msl)* | Product Thickness (feet) | DTW (feet)  | Measured Groundwater Elevation (ft-msl) | Groundwater Elevation Corrected for Product Thickness** |
|------------------|------------------|-----------------------------------|--------------------------|-------------|---|---|
| MW-1             | 7-Jan-99         | 6.25                              | None                     | 5.13        | 1.12                                    |   |
|                  | 7-Feb-00         |                                   | None                     | 3.75        | 2.5                                     |   |
|                  | 25-May-00        |                                   | None                     | 3.69        | 2.56                                    |   |
|                  | 22-Aug-00        |                                   | None                     | 4.79        | 1.46                                    |   |
|                  | 20-Nov-00        |                                   | None                     | 4.92        | 1.33                                    |   |
|                  | 1-Mar-01         |                                   | None                     | 2.75        | 3.50                                    |   |
|                  | 14-May-01        |                                   | None                     | 3.67        | 2.58                                    |   |
|                  | 26-Jul-01        |                                   | None                     | 4.73        | 1.52                                    |   |
|                  | 16-Oct-01        |                                   | None                     | 5.35        | 0.90                                    |   |
|                  | 21-Feb-02        |                                   | None                     | 3.30        | 2.95                                    |   |
|                  | 29-May-02        |                                   | None                     | 3.70        | 2.55                                    |   |
|                  | 17-Sep-02        |                                   | None                     | 4.85        | 1.40                                    |   |
|                  | <b>14-Nov-02</b> |                                   | <b>None</b>              | <b>4.59</b> | <b>1.66</b>                             |   |
|                  | MW-2             |                                   | 7-Jan-99                 | 5.53        | 2.27                                    | 6.91  |
| 8-Jun-99         |                  | 2.23                              | 5.83                     |             | -0.3                                    | 1.48  |
| 9-Jun-99         |                  | 0                                 | 3.9                      |             | 1.63                                    | 1.63  |
| 10-Jun-99        |                  | 0                                 | 3.9                      |             | 1.63                                    | 1.63  |
| 15-Jun-99        |                  | 0.42                              | 3.92                     |             | 1.61                                    | 1.95  |
| 8-Jul-99         |                  | 0.2                               | 4.3                      |             | 1.23                                    | 1.39  |
| 7-Feb-00         |                  | Sheen                             | 3.8                      |             | 1.73                                    |   |
| 25-May-00        |                  | 0.12                              | 3.23                     |             | 2.3                                     | 2.40  |
| 22-Aug-00        |                  | 0.23                              | 4.45                     |             | 1.08                                    | 1.10  |
| 20-Nov-00        |                  | 0.23                              | 4.70                     |             | 0.83                                    | 0.85  |
| 1-Mar-01         |                  | 0.13                              | 2.75                     |             | 2.78                                    | 2.79  |
| 14-May-01        |                  | Sheen                             | 3.30                     |             | 2.23                                    |   |
| 26-Jul-01        |                  | None                              | 3.27                     |             | 2.26                                    |   |
| 16-Oct-01        |                  | 0.02                              | 5.25                     |             | 0.28                                    | 0.28  |
| 21-Feb-02        |                  | 0.01                              | 3.32                     |             | 2.21                                    | 2.21  |
| 29-May-02        |                  | 0.02                              | 2.98                     |             | 2.55                                    | 2.55  |
| 17-Sep-02        |                  | None                              | 4.83                     |             | 0.70                                    |   |
| <b>14-Nov-02</b> | <b>None</b>      | <b>5.43</b>                       | <b>0.10</b>              |             |   |   |
| MW-3             | 7-Jan-99         | 4.76                              | None                     | 4.11        | 0.65                                    |   |
|                  | 7-Feb-00         |                                   | None                     | 3.1         | 1.66                                    |   |
|                  | 25-May-00        |                                   | None                     | 2.41        | 2.35                                    |   |
|                  | 22-Aug-00        |                                   | None                     | 3.45        | 1.31                                    |   |
|                  | 20-Nov-00        |                                   | None                     | 3.42        | 1.34                                    |   |
|                  | 1-Mar-01         |                                   | None                     | 2.00        | 2.76                                    |   |
|                  | 14-May-01        |                                   | None                     | 2.64        | 2.12                                    |   |
|                  | 26-Jul-01        |                                   | None                     | 3.17        | 1.59                                    |   |
|                  | 16-Oct-01        |                                   | None                     | 3.97        | 0.79                                    |   |
|                  | 21-Feb-02        |                                   | None                     | 2.20        | 2.56                                    |   |
|                  | 29-May-02        |                                   | None                     | 2.52        | 2.24                                    |   |
|                  | 17-Sep-02        |                                   | None                     | 3.65        | 1.11                                    |   |
|                  | <b>14-Nov-02</b> |                                   | <b>None</b>              | <b>3.47</b> | <b>1.29</b>                             |   |

**TABLE 1**  
**GROUNDWATER LEVEL MEASUREMENTS**  
**AC Transit Facility**  
**1100 Seminary Avenue, Oakland, California**

| Well      | Date      | Top of Casing Elevation (ft-msl)* | Product Thickness (feet) | DTW (feet) | Measured Groundwater Elevation (ft-msl) | Groundwater Elevation Corrected for Product Thickness** |
|-----------|-----------|-----------------------------------|--------------------------|------------|---|---|
| MW-9      | 7-Feb-00  | 5.8                               | None                     | 4.37       | 1.43                                    |   |
|           | 25-May-00 |                                   | None                     | 4.95       | 0.85                                    |   |
|           | 22-Aug-00 |                                   | None                     | 5.18       | 0.62                                    |   |
|           | 20-Nov-00 |                                   | None                     | 4.70       | 1.10                                    |   |
|           | 1-Mar-01  |                                   | None                     | 3.03       | 2.77                                    |   |
|           | 14-May-01 |                                   | None                     | 4.56       | 1.24                                    |   |
|           | 26-Jul-01 |                                   | None                     | 5.17       | 0.63                                    |   |
|           | 16-Oct-01 |                                   | None                     | 5.19       | 0.61                                    |   |
|           | 21-Feb-02 |                                   | None                     | 4.79       | 1.01                                    |   |
|           | 29-May-02 |                                   | None                     | 4.07       | 1.73                                    |   |
|           | 17-Sep-02 |                                   | None                     | 4.94       | 0.86                                    |   |
|           | 14-Nov-02 |                                   | None                     | 4.87       | 0.93                                    |   |
|           | MW-10     |                                   | 7-Feb-00                 | 4.65       | None                                    | 3.19  |
| 25-May-00 |           | None                              | 3.11                     |            | 1.54                                    |   |
| 22-Aug-00 |           | None                              | 4.35                     |            | 0.30                                    |   |
| 20-Nov-00 |           | None                              | 4.18                     |            | 0.47                                    |   |
| 1-Mar-01  |           | None                              | 3.14                     |            | 1.51                                    |   |
| 14-May-01 |           | None                              | 3.27                     |            | 1.38                                    |   |
| 26-Jul-01 |           | None                              | 3.95                     |            | 0.70                                    |   |
| 16-Oct-01 |           | None                              | 4.57                     |            | 0.08                                    |   |
| 21-Feb-02 |           | None                              | 3.29                     |            | 1.36                                    |   |
| 29-May-02 |           | None                              | 3.30                     |            | 1.35                                    |   |
| 17-Sep-02 |           | None                              | 4.11                     |            | 0.54                                    |   |
| 14-Nov-02 |           | None                              | 3.86                     |            | 0.79                                    |   |
| MW-11     |           | 7-Feb-00                          | 4.19                     |            | None                                    | 4.97  |
|           | 25-May-00 | None                              |                          | 7.58       | -3.39                                   |   |
|           | 22-Aug-00 | None                              |                          | 3.01       | 1.18                                    |   |
|           | 20-Nov-00 | None                              |                          | 2.88       | 1.31                                    |   |
|           | 1-Mar-01  | None                              |                          | 1.91       | 2.28                                    |   |
|           | 14-May-01 | None                              |                          | 4.49       | -0.3                                    |   |
|           | 26-Jul-01 | None                              |                          | 2.95       | 1.24                                    |   |
|           | 16-Oct-01 | None                              |                          | 3.35       | 0.84                                    |   |
|           | 21-Feb-02 | None                              |                          | 1.85       | 2.34                                    |   |
|           | 29-May-02 | None                              |                          | 2.36       | 1.83                                    |   |
|           | 17-Sep-02 | None                              |                          | 3.11       | 1.08                                    |   |
|           | 14-Nov-02 | None                              |                          | 2.55       | 1.64                                    |   |

Notes:

\* ft-msl: feet-mean sea level

\*\* used 0.8 specific gravity of product

DTW: Depth to Water

**TABLE 2**  
**ANALYTICAL RESULTS OF GROUNDWATER SAMPLES (ppb)**  
**AC Transit Facility**  
**1100 Seminary Avenue, Oakland, California**

| Well      | Date      | TPH-G     | TPH-D   | TPH     | Benzene | Toluene   | Ethyl    |         | MTBE     | Nitrate    | Sulfate | DO     | Fe     |
|-----------|-----------|-----------|---------|---------|---------|-----------|----------|---------|----------|------------|---------|--------|--------|
|           |           |           |         |         |         |           | Benzene  | Xylenes |          |            |         |        |        |
|           |           | MCL (ppb) |         |         | 1.0     | 150       | 700      | 1,750   | 13       |            |         |        |        |
| MW-1      | 7-Jan-99  | <100      | 470     | NA      | 17.0    | 2         | 31.0     | 18      | <50      | 150        | 3,400   | 360    | 53     |
|           | 7-Feb-00  | 390       | <60     | 1,300   | 13.0    | <10       | <10      | <10     | <20      | <50        | 1,200   | 1,220  | 11,800 |
|           | 25-May-00 | <50       | <50     | 1,000   | 12.0    | <1.0      | <1.0     | <1.0    | <2.0     | 140        | 1,500   | 1,950  | 1,380  |
|           | 22-Aug-00 | <50       | <50     | 600     | 6.3     | <1.0      | 2.3      | <1.0    | <2.0     | 75         | 2,100   | 6,850  | 2,350  |
|           | 20-Nov-00 | <50       | <50     | 630     | 2.8     | <1.0      | 1.1      | <1.0    | <2.0     | <50        | 4,500   | 11,210 | 1,170  |
|           | 1-Mar-01  | <50       | <50     | 900     | 29.0    | 1.2       | 16.0     | 6       | <2.0     | <50        | 2,800   | 6,020  | 2,920  |
|           | 14-May-01 | <50       | <50     | 540     | 4.1     | <1.0      | 3.1      | <1.0    | <2.0     | <50        | 2,500   | 13,970 | 1,870  |
|           | 26-Jul-01 | 190       | <50     | 500     | <1.0    | <1.0      | <1.0     | <1.0    | <2.0     | 75         | 3,700   | 8,480  | 1,950  |
|           | 16-Oct-01 | <50       | <50     | 650     | 16.0    | 1.1       | 4.6      | 1.6     | <2.0     | <50        | 3,600   | 9,480  | 2,560  |
|           | 21-Feb-02 | 560       | <50     | 550     | 21      | 1.0       | 19       | 15      | <2.0     | <50        | 3,000   | 5,890  | 2,200  |
|           | 29-May-02 | 130       | <50     | 510     | <1.0    | <1.0      | <1.0     | <1.0    | <2.0     | <50        | 2,300   | 6,820  | 1,300  |
|           | 17-Sep-02 | 140       | <50     | 330     | <1.0    | <1.0      | <1.0     | <1.0    | <2.0     | <50        | 5,200   | 5,840  | >3300  |
|           | 14-Nov-02 | 150       | 570     | NA      | 4.8     | 0.57      | 2.7      | 1.1     | <1.0     | <200       | 12,000  | 4,720  | >3300  |
|           | MW-2      | 8-Jun-99  | 11,000  | 434,000 | 117,000 | 1,000,000 | <100,000 | 260,000 | <300,000 | <5,000,000 | NA      | NA     | NA     |
| 7-Feb-00  |           | 51,000    | 160,000 | <5000   | 19,000  | <500      | 920      | <500    | <1000    | 51         | <1000   | 6,660  | 7,300  |
| 25-May-00 |           | <1200     | <50000  | 65,000  | 11,000  | <500      | 670      | 530     | <1000    | 330        | <1000   | 5,670  | 0      |
| 22-Aug-00 |           | <2500     | <2500   | 150,000 | 23,000  | <500      | 1,100    | 1,100   | <1000    | 370        | <1000   | 4,530  | 3,680  |
| 20-Nov-00 |           | <1200     | <25000  | 430,000 | 18,000  | <500      | 840      | 610     | <1000    | <250       | <500    | 1,700  | 3,300  |
| 3-Mar-01  |           | <500      | <25000  | 610,000 | 14,000  | <830      | <830     | <830    | <1700    | <250       | <5000   | 7,880  | 3,300  |
| 14-May-01 |           | <1000     | 280,000 | 51,000  | 19,000  | 240       | 1,100    | 1,200   | <330     | <50        | <1000   | 3,330  | >3300  |
| 26-Jul-01 |           | 54,000    | 590,000 | <25000  | 19,000  | <500      | 1,300    | 1,500   | <1000    | <50        | <1000   | 9,960  | >3300  |
| 16-Oct-01 |           | 43,000    | 560,000 | <25000  | 18,000  | 280       | 1,100    | 1,300   | <100     | <50        | 1,500   | 17,630 | >3300  |
| 21-Feb-02 |           | 46,000    | 180,000 | <12000  | 18,000  | <500      | 950      | 1,500   | <1000    | <100       | <2000   | 3,650  | >3300  |
| 29-May-02 |           | 49,000    | 130,000 | <5000   | 17,000  | 350       | 970      | 1,700   | <500     | <50        | 1,000   | 2,220  | >3300  |
| 17-Sep-02 |           | 60,000    | <25000  | 470,000 | 21,000  | <500      | 1,600    | 2,700   | <1000    | <50        | <1000   | 4,270  | >3300  |
| 14-Nov-02 |           | 36,000    | 490,000 | NA      | 14,000  | 280       | 970      | 2,200   | <400     | <200       | <500    | 6,050  | >3300  |

**TABLE 2**  
**ANALYTICAL RESULTS OF GROUNDWATER SAMPLES (ppb)**  
**AC Transit Facility**  
**1100 Seminary Avenue, Oakland, California**

| Well      | Date          | TPH-G        | TPH-D      | TPH            | Benzene        | Toluene        | Ethyl          | Xylenes        | MTBE           | Nitrate        | Sulfate       | DO           | Fe           |
|-----------|---------------|--------------|------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|---------------|--------------|--------------|
|           |               |              |            |                |                |                | Benzene        |                |                |                |               |              |              |
|           |               | MCL (ppb)    |            |                | 1.0            | 150            | 700            | 1,750          | 13             |                |               |              |              |
| MW-3      | 7-Jan-99      | 199          | 2,680      | NA             | 450            | <10            | 250            | 190            | <500           | 170            | 3,300         | 880          | 0            |
|           | 7-Feb-00      | 2,000        | <150       | 3,100          | 26             | <2             | 5              | 2              | <4             | <50            | 47,300        | 6,480        | 17,800       |
|           | 25-May-00     | <50          | <50        | 1,000          | 35             | <1.0           | 6              | 4              | <2.0           | <50            | 21,700        | 4,640        | 600          |
|           | 22-Aug-00     | <50          | <50        | 2,400          | 240            | <10            | <10            | <10            | <20            | <50            | 19,300        | 3,970        | 20           |
|           | 20-Nov-00     | <50          | <50        | 2,400          | <25            | <25            | <25            | <25            | <50            | <50            | 26,500        | 4,120        | 20           |
|           | 1-Mar-01      | <50          | <50        | 1,200          | 100            | <5.0           | 8.3            | <5.0           | <10            | <50            | 27,000        | 1,510        | 50           |
|           | 14-May-01     | <50          | <50        | 860            | 8.4            | <1.0           | 1.2            | <1.0           | <2.0           | <50            | 21,100        | 9,800        | 0            |
|           | 26-Jul-01     | 1,200        | <50        | 790            | 140            | <5.0           | 12             | <5.0           | <10            | <50            | 18,700        | 8,650        | 80           |
|           | 16-Oct-01     | 1,000        | <50        | 1,600          | 5.1            | <1.0           | 4.3            | <1.0           | <2.0           | <50            | 29,800        | 11,360       | 640          |
|           | 21-Feb-02     | 1,700        | <50        | 990            | 200            | <10            | 29.0           | 12             | <20            | <50            | 20,500        | 5,730        | 0            |
|           | 29-May-02     | 630          | <50        | 840            | 68             | <1.0           | 4.2            | 3.3            | <2.0           | <50            | 14,300        | 5,870        | 1,070        |
|           | 17-Sep-02     | <50          | <50        | 1,100          | 4.1            | <1.0           | 1.8            | 1.0            | <2.0           | <50            | 17,000        | 6,820        | 2,820        |
|           | 14-Nov-02     | <b>2,800</b> | <b>460</b> | <b>NA</b>      | <b>200</b>     | <b>1.1</b>     | <b>28</b>      | <b>9.0</b>     | <b>&lt;2.0</b> | <b>&lt;200</b> | <b>19,000</b> | <b>9,780</b> | <b>1,210</b> |
|           | MW-9          | 7-Feb-00     | <50        | <50            | 240            | <1             | <1             | <1             | <1             | <2             | 230           | 183,000      | 6,940        |
| 25-May-00 |               | <50          | <50        | 130            | <1.0           | <1.0           | <1.0           | <1.0           | <2.0           | 250            | 172,000       | 6,020        | 1,200        |
| 22-Aug-00 |               | <50          | <50        | 120            | <1.0           | <1.0           | <1.0           | <1.0           | <2.0           | 280            | 157,000       | 7,250        | 0            |
| 20-Nov-00 |               | <50          | <50        | 130            | <1.0           | <1.0           | <1.0           | <1.0           | <2.0           | 340            | 147,000       | 9,690        | 0            |
| 1-Mar-01  |               | <50          | <50        | 150            | <1.0           | <1.0           | <1.0           | <1.0           | <2.0           | 230            | 116,000       | 4,210        | 0            |
| 14-May-01 |               | <50          | <50        | 110            | <1.0           | <1.0           | <1.0           | <1.0           | <2.0           | 100            | 140,000       | 8,290        | 0            |
| 26-Jul-01 |               | <50          | <50        | 71             | <1.0           | <1.0           | <1.0           | <1.0           | <2.0           | 130            | 143,000       | 7,560        | 0            |
| 16-Oct-01 |               | <50          | <50        | 120            | <1.0           | <1.0           | <1.0           | <1.0           | <2.0           | 89             | 141,000       | 967          | 50           |
| 21-Feb-02 |               | <50          | <50        | 89             | <1.0           | <1.0           | <1.0           | <1.0           | <2.0           | 94             | 137,000       | 3,500        | 70           |
| 29-May-02 |               | <50          | <50        | 95             | <1.0           | <1.0           | <1.0           | <1.0           | <2.0           | 94             | 141,000       | 4,590        | 90           |
| 17-Sep-02 |               | <50          | <50        | 96             | <1.0           | <1.0           | <1.0           | <1.0           | <2.0           | 100            | 143,000       | 3,860        | 2,130        |
| 14-Nov-02 | <b>&lt;50</b> | <b>82</b>    | <b>NA</b>  | <b>&lt;0.5</b> | <b>&lt;0.5</b> | <b>&lt;0.5</b> | <b>&lt;1.0</b> | <b>&lt;1.0</b> | <b>&lt;200</b> | <b>130,000</b> | <b>10,120</b> | <b>670</b>   |              |

**TABLE 2**  
**ANALYTICAL RESULTS OF GROUNDWATER SAMPLES (ppb)**  
**AC Transit Facility**  
**1100 Seminary Avenue, Oakland, California**

| Well         | Date         | TPH-G      | TPH-D      | TPH         | Benzene        | Toluene        | Ethyl          |                | MTBE           | Nitrate        | Sulfate       | DO           | Fe           |        |
|--------------|--------------|------------|------------|-------------|----------------|----------------|----------------|----------------|----------------|----------------|---------------|--------------|--------------|--------|
|              |              |            |            |             |                |                | Benzene        | Xylenes        |                |                |               |              |              |        |
|              |              | MCL (ppb)  |            |             | 1.0            | 150            | 700            | 1,750          | 13             |                |               |              |              |        |
| <b>MW-10</b> | 7-Feb-00     | <50        | <50        | 470         | <1             | <1             | <1             | <1             | <2             | 53             | 114,000       | 1,200        | 55,000       |        |
|              | 25-May-00    | <50        | <50        | 220         | <1.0           | <1.0           | <1.0           | <1.0           | <2.0           | 480            | 136,000       | 1,940        | 0            |        |
|              | 22-Aug-00    | <50        | <50        | 140         | <1.0           | <1.0           | <1.0           | <1.0           | <2.0           | 69             | 126,000       | 4,350        | 0            |        |
|              | 20-Nov-00    | <50        | <50        | 300         | <1.0           | <1.0           | <1.0           | <1.0           | <2.0           | <50            | 76,200        | 3,790        | 0            |        |
|              | 1-Mar-01     | <50        | <50        | 250         | <1.0           | <1.0           | <1.0           | <1.0           | <2.0           | <250           | 106,000       | 7,440        | 0            |        |
|              | 14-May-01    | <50        | <50        | 74          | <1.0           | <1.0           | <1.0           | <1.0           | <2.0           | <50            | 135,000       | 6,790        | 0            |        |
|              | 26-Jul-01    | <50        | <50        | 120         | <1.0           | <1.0           | <1.0           | <1.0           | <2.0           | <50            | 125,000       | 9,680        | 1,970        |        |
|              | 16-Oct-01    | <50        | <50        | 190         | <1.0           | <1.0           | <1.0           | <1.0           | <2.0           | <50            | 90,100        | 28,000       | 570          |        |
|              | 21-Feb-02    | <50        | <50        | 190         | <1.0           | <1.0           | <1.0           | <1.0           | <2.0           | <50            | 77,700        | 4,280        | 0            |        |
|              | 29-May-02    | <50        | <50        | 110         | <1.0           | <1.0           | <1.0           | <1.0           | <2.0           | <50            | 126,000       | 7,230        | 270          |        |
|              | 17-Sep-02    | <50        | <50        | 170         | <1.0           | <1.0           | <1.0           | <1.0           | <2.0           | <50            | 107,000       | 4,230        | >3300        |        |
|              | 14-Nov-02    | <50        | <b>270</b> | NA          | <b>&lt;0.5</b> | <b>&lt;0.5</b> | <b>&lt;0.5</b> | <b>&lt;1.0</b> | <b>1.5</b>     | <b>&lt;200</b> | <b>64,000</b> | <b>1,680</b> | <b>1,400</b> |        |
|              | <b>MW-11</b> | 7-Feb-00   | <50        | <50         | 400            | <1             | <1             | <1             | <1             | 25             | 800           | 167,000      | 7,300        | 16,200 |
|              |              | 25-May-00  | <50        | <50         | 200            | <1.0           | <1.0           | <1.0           | <1.0           | 16             | 480           | 207,000      | 6,540        | 0      |
| 22-Aug-00    |              | <50        | <50        | 170         | <1.0           | <1.0           | <1.0           | <1.0           | 9.3            | 610            | 168,000       | 4,640        | 20           |        |
| 20-Nov-00    |              | <50        | <50        | 190         | <1.0           | <1.0           | <1.0           | <1.0           | 7.5            | 550            | 143,000       | 2,380        | 0            |        |
| 1-Mar-01     |              | <50        | <50        | 250         | <1.0           | <1.0           | <1.0           | <1.0           | 15.0           | 170            | 80,300        | 5,860        | 0            |        |
| 14-May-01    |              | <50        | <50        | 160         | <1.0           | <1.0           | <1.0           | <1.0           | 14.0           | 230            | 103,000       | 6,060        | 2,910        |        |
| 26-Jul-01    |              | <50        | <50        | 220         | 5.9            | <1.0           | <1.0           | 2.7            | 20.0           | 180            | 71,300        | 7,360        | >3300        |        |
| 16-Oct-01    |              | <50        | <50        | 170         | <1.0           | <1.0           | <1.0           | <1.0           | 12.0           | 190            | 101,000       | 8,810        | >3300        |        |
| 21-Feb-02    |              | <50        | <50        | 170         | <1.0           | <1.0           | <1.0           | <1.0           | 2.2            | 110            | 75,600        | 4,280        | 0            |        |
| 29-May-02    |              | <50        | <50        | 290         | <1.0           | <1.0           | <1.0           | <1.0           | 2.3            | 140            | 98,700        | 8,350        | 0            |        |
| 17-Sep-02    | <50          | <500       | 1,900      | <1.0        | <1.0           | <1.0           | <1.0           | 3.8            | 54             | 141,000        | 6,260         | 90           |              |        |
| 11/14/2002   | <50          | <b>740</b> | NA         | <b>0.88</b> | <b>&lt;0.5</b> | <b>&lt;0.5</b> | <b>1.2</b>     | <b>5.3</b>     | <b>&lt;200</b> | <b>120,000</b> | <b>8,380</b>  | <b>0</b>     |              |        |

Notes:

ppb: parts per billion

TPH-G: total petroleum hydrocarbons as gasoline

TPH-D: total petroleum hydrocarbons as diesel

TPH: total petroleum hydrocarbons as motor oil or unknown hydrocarbon

MCL: Maximum Contaminant Level

MTBE: Methyl-tert-butylether

DO: Dissolved Oxygen

Fe: Ferrous Iron

NA: Not Analyzed

**APPENDIX A**  
**CERTIFIED ANALYTICAL REPORTS**  
**CHAIN-OF-CUSTODY DOCUMENTS**

# Entech Analytical Labs, Inc.

RECEIVED DEC 02 2002

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

November 25, 2002

Brad Wright  
Cameron-Cole  
101 W. Atlantic Ave., Bldg#90  
Alameda, CA 94501

**Order:** 32109

**Date Collected:** 11/14/02

**Project Name:** AC Transit Sem.

**Date Received:** 11/14/02

**Project Number:** 2014

**P.O. Number:** 2014

**Project Notes:**

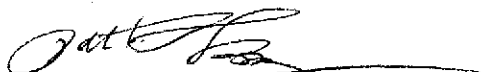
On November 14, 2002, samples were received under documented chain of custody. Results for the following analyses are attached:

| <u>Matrix</u> | <u>Test</u>            | <u>Method</u>               |
|---------------|------------------------|-----------------------------|
| Liquid        | BTEX+MTBE by EPA 8260B | EPA 8260B                   |
|               | Nitrate as N           | EPA 300.0                   |
|               | PDF                    | PDF                         |
|               | Sulfate by IC          | EPA 300.0                   |
|               | TPH as Diesel          | EPA 8015 MOD. (Extractable) |
|               | TPH as Gasoline        | EPA 8015 MOD. (Purgeable)   |

Chemical analysis of these samples has been completed. Summaries of the data are contained on the following pages. USEPA protocols for sample storage and preservation were followed.

Entech Analytical Labs, Inc. is certified by the State of California (#2346). If you have any questions regarding procedures or results, please call me at 408-588-0200.

Sincerely,



Patti Sandrock  
QA/QC Manager



# Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

Cameron-Cole  
101 W. Atlantic Ave., Bldg#90  
Alameda, CA 94501  
Attn: Brad Wright

Date: 11/22/02  
Date Received: 11/14/02  
Project Name: AC Transit Sem.  
Project Number: 2014  
P.O. Number: 2014  
Sampled By: Mike Marotto

## Certified Analytical Report

**Order ID:** 32109      **Lab Sample ID:** 32109-002      **Client Sample ID:** MW-1  
**Sample Time:** 8:20 AM      **Sample Date:** 11/14/02      **Matrix:** Liquid

| Parameter    | Result | DF | PQL | DLR | Units | Analysis Date | QC Batch ID | Method    |
|--------------|--------|----|-----|-----|-------|---------------|-------------|-----------|
| Nitrate as N | ND     | 1  | 0.2 | 0.2 | mg/L  | 11/15/02      | WIC021115   | EPA 300.0 |
| Sulfate      | 12     | 1  | 0.5 | 0.5 | mg/L  | 11/15/02      | WIC021115   | EPA 300.0 |

**Order ID:** 32109      **Lab Sample ID:** 32109-003      **Client Sample ID:** MW-3  
**Sample Time:** 9:30 AM      **Sample Date:** 11/14/02      **Matrix:** Liquid

| Parameter    | Result | DF | PQL | DLR | Units | Analysis Date | QC Batch ID | Method    |
|--------------|--------|----|-----|-----|-------|---------------|-------------|-----------|
| Nitrate as N | ND     | 1  | 0.2 | 0.2 | mg/L  | 11/15/02      | WIC021115   | EPA 300.0 |
| Sulfate      | 19     | 5  | 0.5 | 2.5 | mg/L  | 11/15/02      | WIC021115   | EPA 300.0 |

**Order ID:** 32109      **Lab Sample ID:** 32109-004      **Client Sample ID:** MW-10  
**Sample Time:** 10:00 AM      **Sample Date:** 11/14/02      **Matrix:** Liquid

| Parameter    | Result | DF | PQL | DLR | Units | Analysis Date | QC Batch ID | Method    |
|--------------|--------|----|-----|-----|-------|---------------|-------------|-----------|
| Nitrate as N | ND     | 1  | 0.2 | 0.2 | mg/L  | 11/15/02      | WIC021115   | EPA 300.0 |
| Sulfate      | 64     | 10 | 0.5 | 5   | mg/L  | 11/15/02      | WIC021115   | EPA 300.0 |

**Order ID:** 32109      **Lab Sample ID:** 32109-005      **Client Sample ID:** MW-9  
**Sample Time:** 10:45 AM      **Sample Date:** 11/14/02      **Matrix:** Liquid

| Parameter    | Result | DF | PQL | DLR | Units | Analysis Date | QC Batch ID | Method    |
|--------------|--------|----|-----|-----|-------|---------------|-------------|-----------|
| Nitrate as N | ND     | 1  | 0.2 | 0.2 | mg/L  | 11/15/02      | WIC021115   | EPA 300.0 |
| Sulfate      | 130    | 10 | 0.5 | 5   | mg/L  | 11/15/02      | WIC021115   | EPA 300.0 |

**Order ID:** 32109      **Lab Sample ID:** 32109-006      **Client Sample ID:** MW-2  
**Sample Time:** 11:30 AM      **Sample Date:** 11/14/02      **Matrix:** Liquid

| Parameter    | Result | DF | PQL | DLR | Units | Analysis Date | QC Batch ID | Method    |
|--------------|--------|----|-----|-----|-------|---------------|-------------|-----------|
| Nitrate as N | ND     | 1  | 0.2 | 0.2 | mg/L  | 11/15/02      | WIC021115   | EPA 300.0 |
| Sulfate      | ND     | 1  | 0.5 | 0.5 | mg/L  | 11/15/02      | WIC021115   | EPA 300.0 |

DF = Dilution Factor      ND = Not Detected      DLR = Detection Limit Reported      PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

  
Patti Sandrock, QA/QC Manager

Environmental Analysis Since 1983

# Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

Cameron-Cole  
101 W. Atlantic Ave., Bldg#90  
Alameda, CA 94501  
Attn: Brad Wright

Date: 11/22/02  
Date Received: 11/14/02  
Project Name: AC Transit Sem.  
Project Number: 2014  
P.O. Number: 2014  
Sampled By: Mike Marotto

## Certified Analytical Report

Order ID: 32109

Lab Sample ID: 32109-007

Client Sample ID: MW-11

Sample Time: 1:10 PM

Sample Date: 11/14/02

Matrix: Liquid

| Parameter    | Result | DF | PQL | DLR | Units | Analysis Date | QC Batch ID | Method    |
|--------------|--------|----|-----|-----|-------|---------------|-------------|-----------|
| Nitrate as N | ND     | 1  | 0.2 | 0.2 | mg/L  | 11/15/02      | WIC021115   | EPA 300.0 |
| Sulfate      | 120    | 10 | 0.5 | 5   | mg/L  | 11/15/02      | WIC021115   | EPA 300.0 |

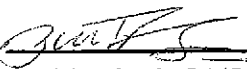
DF = Dilution Factor

ND = Not Detected

DLR = Detection Limit Reported

PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

  
Patti Sandrock, QA/QC Manager

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Cameron-Cole  
101 W. Atlantic Ave., Bldg#90  
Alameda, CA 94501  
Attn: Brad Wright

Date: 11/25/02  
Date Received: 11/14/02  
Project Name: AC Transit Sem.  
Project Number: 2014  
P.O. Number: 2014  
Sampled By: Mike Marotto

## Certified Analytical Report

Order ID: 32109

Lab Sample ID: 32109-001

Client Sample ID: TB-01

Sample Time: 8:00 AM

Sample Date: 11/14/02

Matrix: Liquid

| Parameter            | Result | Flag | DF | PQL                  | DLR | Units | Extraction Date | Analysis Date             | QC Batch ID | Method                    |
|----------------------|--------|------|----|----------------------|-----|-------|-----------------|---------------------------|-------------|---------------------------|
| Methyl-t-butyl Ether | ND     |      | 1  | 1                    | 1   | µg/L  | N/A             | 11/19/02                  | WMS31807    | EPA 8260B                 |
| Benzene              | ND     |      | 1  | 0.5                  | 0.5 | µg/L  | N/A             | 11/19/02                  | WMS31807    | EPA 8260B                 |
| Toluene              | ND     |      | 1  | 0.5                  | 0.5 | µg/L  | N/A             | 11/19/02                  | WMS31807    | EPA 8260B                 |
| Ethyl Benzene        | ND     |      | 1  | 0.5                  | 0.5 | µg/L  | N/A             | 11/19/02                  | WMS31807    | EPA 8260B                 |
| Xylenes, Total       | ND     |      | 1  | 1                    | 1   | µg/L  | N/A             | 11/19/02                  | WMS31807    | EPA 8260B                 |
|                      |        |      |    | <b>Surrogate</b>     |     |       |                 | <b>Surrogate Recovery</b> |             | <b>Control Limits (%)</b> |
|                      |        |      |    | 4-Bromofluorobenzene |     |       |                 | 84.4                      |             | 65 - 135                  |
|                      |        |      |    | Dibromofluoromethane |     |       |                 | 94.1                      |             | 57 - 156                  |
|                      |        |      |    | Toluene-d8           |     |       |                 | 89.3                      |             | 77 - 150                  |

DF = Dilution Factor

ND = Not Detected

DLR = Detection Limit Reported

PQL = Practical Quantitation Limit

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Cameron-Cole  
101 W. Atlantic Ave., Bldg#90  
Alameda, CA 94501  
Attn: Brad Wright

Date: 11/25/02  
Date Received: 11/14/02  
Project Name: AC Transit Sem.  
Project Number: 2014  
P.O. Number: 2014  
Sampled By: Mike Marotto

## Certified Analytical Report

Order ID: 32109      Lab Sample ID: 32109-002      Client Sample ID: MW-1  
Sample Time: 8:20 AM      Sample Date: 11/14/02      Matrix: Liquid

| Parameter            | Result | Flag | DF                   | PQL | DLR | Units                     | Extraction Date | Analysis Date | QC Batch ID               | Method    |
|----------------------|--------|------|----------------------|-----|-----|---------------------------|-----------------|---------------|---------------------------|-----------|
| Methyl-t-butyl Ether | ND     |      | 1                    | 1   | 1   | µg/L                      | N/A             | 11/19/02      | WMS31807                  | EPA 8260B |
| Benzene              | 4.8    |      | 1                    | 0.5 | 0.5 | µg/L                      | N/A             | 11/19/02      | WMS31807                  | EPA 8260B |
| Toluene              | 0.57   |      | 1                    | 0.5 | 0.5 | µg/L                      | N/A             | 11/19/02      | WMS31807                  | EPA 8260B |
| Ethyl Benzene        | 2.7    |      | 1                    | 0.5 | 0.5 | µg/L                      | N/A             | 11/19/02      | WMS31807                  | EPA 8260B |
| Xylenes, Total       | 1.1    |      | 1                    | 1   | 1   | µg/L                      | N/A             | 11/19/02      | WMS31807                  | EPA 8260B |
|                      |        |      | <b>Surrogate</b>     |     |     | <b>Surrogate Recovery</b> |                 |               | <b>Control Limits (%)</b> |           |
|                      |        |      | 4-Bromofluorobenzene |     |     | 89.6                      |                 |               | 65 - 135                  |           |
|                      |        |      | Dibromofluoromethane |     |     | 93.8                      |                 |               | 57 - 156                  |           |
|                      |        |      | Toluene-d8           |     |     | 89.0                      |                 |               | 77 - 150                  |           |


| Parameter     | Result | Flag | DF               | PQL | DLR | Units                     | Extraction Date | Analysis Date | QC Batch ID               | Method                         |
|---------------|--------|------|------------------|-----|-----|---------------------------|-----------------|---------------|---------------------------|--------------------------------|
| TPH as Diesel | 570    | x    | 1                | 50  | 50  | µg/L                      | 11/15/02        | 11/18/02      | DW4258A                   | EPA 8015 MOD.<br>(Extractable) |
|               |        |      | <b>Surrogate</b> |     |     | <b>Surrogate Recovery</b> |                 |               | <b>Control Limits (%)</b> |                                |
|               |        |      | o-Terphenyl      |     |     | 102.0                     |                 |               | 32 - 145                  |                                |

**Comment:** Not a TPH as Diesel pattern; Value due to a higher boiling hydrocarbon mixture overlapping into the Diesel range, possibly Hydraulic Oil.

| Parameter       | Result | Flag | DF                   | PQL | DLR | Units                     | Extraction Date | Analysis Date | QC Batch ID               | Method                       |
|-----------------|--------|------|----------------------|-----|-----|---------------------------|-----------------|---------------|---------------------------|------------------------------|
| TPH as Gasoline | 150    |      | 1                    | 50  | 50  | µg/L                      | N/A             | 11/15/02      | WGC62659B                 | EPA 8015 MOD.<br>(Purgeable) |
|                 |        |      | <b>Surrogate</b>     |     |     | <b>Surrogate Recovery</b> |                 |               | <b>Control Limits (%)</b> |                              |
|                 |        |      | 4-Bromofluorobenzene |     |     | 93.9                      |                 |               | 65 - 135                  |                              |

DF = Dilution Factor      ND = Not Detected      DLR = Detection Limit Reported      PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

  
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Cameron-Cole  
 101 W. Atlantic Ave., Bldg#90  
 Alameda, CA 94501  
 Attn: Brad Wright

Date: 11/25/02  
 Date Received: 11/14/02  
 Project Name: AC Transit Sem.  
 Project Number: 2014  
 P.O. Number: 2014  
 Sampled By: Mike Marotto

## Certified Analytical Report

Order ID: 32109      Lab Sample ID: 32109-003      Client Sample ID: MW-3  
 Sample Time: 9:30 AM      Sample Date: 11/14/02      Matrix: Liquid

| Parameter            | Result | Flag | DF                   | PQL | DLR | Units              | Extraction Date | Analysis Date | QC Batch ID        | Method    |
|----------------------|--------|------|----------------------|-----|-----|--------------------|-----------------|---------------|--------------------|-----------|
| Methyl-t-butyl Ether | ND     |      | 2                    | 1   | 2   | µg/L               | N/A             | 11/19/02      | WMS31807           | EPA 8260B |
| Benzene              | 200    |      | 2                    | 0.5 | 1   | µg/L               | N/A             | 11/19/02      | WMS31807           | EPA 8260B |
| Toluene              | 1.1    |      | 2                    | 0.5 | 1   | µg/L               | N/A             | 11/19/02      | WMS31807           | EPA 8260B |
| Ethyl Benzene        | 28     |      | 2                    | 0.5 | 1   | µg/L               | N/A             | 11/19/02      | WMS31807           | EPA 8260B |
| Xylenes, Total       | 9.0    |      | 2                    | 1   | 2   | µg/L               | N/A             | 11/19/02      | WMS31807           | EPA 8260B |
|                      |        |      | Surrogate            |     |     | Surrogate Recovery |                 |               | Control Limits (%) |           |
|                      |        |      | 4-Bromofluorobenzene |     |     | 86.8               |                 |               | 65 - 135           |           |
|                      |        |      | Dibromofluoromethane |     |     | 95.3               |                 |               | 57 - 156           |           |
|                      |        |      | Toluene-d8           |     |     | 87.1               |                 |               | 77 - 150           |           |

| Parameter     | Result | Flag | DF          | PQL | DLR | Units              | Extraction Date | Analysis Date | QC Batch ID        | Method                         |
|---------------|--------|------|-------------|-----|-----|--------------------|-----------------|---------------|--------------------|--------------------------------|
| TPH as Diesel | 460    | x    | 1           | 50  | 50  | µg/L               | 11/15/02        | 11/18/02      | DW4258A            | EPA 8015 MOD.<br>(Extractable) |
|               |        |      | Surrogate   |     |     | Surrogate Recovery |                 |               | Control Limits (%) |                                |
|               |        |      | o-Terphenyl |     |     | 69.0               |                 |               | 32 - 145           |                                |

**Comment:** Not a TPH as Diesel pattern; Value due to a higher boiling hydrocarbon mixture overlapping into the Diesel range, possibly Motor Oil.

| Parameter       | Result | Flag | DF                   | PQL | DLR  | Units              | Extraction Date | Analysis Date | QC Batch ID        | Method                       |
|-----------------|--------|------|----------------------|-----|------|--------------------|-----------------|---------------|--------------------|------------------------------|
| TPH as Gasoline | 2800   |      | 20                   | 50  | 1000 | µg/L               | N/A             | 11/15/02      | WGC62659B          | EPA 8015 MOD.<br>(Purgeable) |
|                 |        |      | Surrogate            |     |      | Surrogate Recovery |                 |               | Control Limits (%) |                              |
|                 |        |      | 4-Bromofluorobenzene |     |      | 119.4              |                 |               | 65 - 135           |                              |

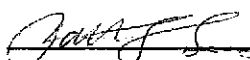
DF = Dilution Factor

ND = Not Detected

DLR = Detection Limit Reported

PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

  
 Patti Sandrock, QA/QC Manager

Environmental Analysis Since 1983

# Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

Cameron-Cole  
101 W. Atlantic Ave., Bldg#90  
Alameda, CA 94501  
Attn: Brad Wright

Date: 11/25/02  
Date Received: 11/14/02  
Project Name: AC Transit Sem.  
Project Number: 2014  
P.O. Number: 2014  
Sampled By: Mike Marotto

## Certified Analytical Report

Order ID: 32109

Lab Sample ID: 32109-004

Client Sample ID: MW-10

Sample Time: 10:00 AM

Sample Date: 11/14/02

Matrix: Liquid

| Parameter            | Result | Flag | DF | PQL | DLR | Units | Extraction Date | Analysis Date | QC Batch ID | Method    |
|----------------------|--------|------|----|-----|-----|-------|-----------------|---------------|-------------|-----------|
| Methyl-t-butyl Ether | 1.5    |      | 1  | 1   | 1   | µg/L  | N/A             | 11/19/02      | WMS31807    | EPA 8260B |
| Benzene              | ND     |      | 1  | 0.5 | 0.5 | µg/L  | N/A             | 11/19/02      | WMS31807    | EPA 8260B |
| Toluene              | ND     |      | 1  | 0.5 | 0.5 | µg/L  | N/A             | 11/19/02      | WMS31807    | EPA 8260B |
| Ethyl Benzene        | ND     |      | 1  | 0.5 | 0.5 | µg/L  | N/A             | 11/19/02      | WMS31807    | EPA 8260B |
| Xylenes, Total       | ND     |      | 1  | 1   | 1   | µg/L  | N/A             | 11/19/02      | WMS31807    | EPA 8260B |

| Surrogate            | Surrogate Recovery | Control Limits (%) |
|----------------------|--------------------|--------------------|
| 4-Bromofluorobenzene | 87.2               | 65 - 135           |
| Dibromofluoromethane | 93.3               | 57 - 156           |
| Toluene-d8           | 88.8               | 77 - 150           |

| Parameter     | Result | Flag | DF | PQL | DLR | Units | Extraction Date | Analysis Date | QC Batch ID | Method                         |
|---------------|--------|------|----|-----|-----|-------|-----------------|---------------|-------------|--------------------------------|
| TPH as Diesel | 270    | x    | 1  | 50  | 50  | µg/L  | 11/15/02        | 11/18/02      | DW4258A     | EPA 8015 MOD.<br>(Extractable) |

| Surrogate   | Surrogate Recovery | Control Limits (%) |
|-------------|--------------------|--------------------|
| o-Terphenyl | 62.0               | 32 - 145           |

Comment: Not a TPH as Diesel pattern; Value due to a higher boiling hydrocarbon mixture overlapping into the Diesel range, possibly Motor Oil.

| Parameter       | Result | Flag | DF | PQL | DLR | Units | Extraction Date | Analysis Date | QC Batch ID | Method                       |
|-----------------|--------|------|----|-----|-----|-------|-----------------|---------------|-------------|------------------------------|
| TPH as Gasoline | ND     |      | 1  | 50  | 50  | µg/L  | N/A             | 11/15/02      | WGC62659B   | EPA 8015 MOD.<br>(Purgeable) |

| Surrogate            | Surrogate Recovery | Control Limits (%) |
|----------------------|--------------------|--------------------|
| 4-Bromofluorobenzene | 100.5              | 65 - 135           |


DF = Dilution Factor

ND = Not Detected

DLR = Detection Limit Reported

PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

  
Patti Sandrock, QA/QC Manager

Environmental Analysis Since 1983

# Entech Analytical Labs, Inc.

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Cameron-Cole  
 101 W. Atlantic Ave., Bldg#90  
 Alameda, CA 94501  
 Attn: Brad Wright

Date: 11/25/02  
 Date Received: 11/14/02  
 Project Name: AC Transit Sem.  
 Project Number: 2014  
 P.O. Number: 2014  
 Sampled By: Mike Marotto

## Certified Analytical Report

Order ID: 32109      Lab Sample ID: 32109-005      Client Sample ID: MW-9  
 Sample Time: 10:45 AM      Sample Date: 11/14/02      Matrix: Liquid

| Parameter            | Result | Flag | DF                   | PQL | DLR | Units                     | Extraction Date | Analysis Date | QC Batch ID               | Method    |
|----------------------|--------|------|----------------------|-----|-----|---------------------------|-----------------|---------------|---------------------------|-----------|
| Methyl-t-butyl Ether | ND     |      | 1                    | 1   | 1   | µg/L                      | N/A             | 11/19/02      | WMS31807                  | EPA 8260B |
| Benzene              | ND     |      | 1                    | 0.5 | 0.5 | µg/L                      | N/A             | 11/19/02      | WMS31807                  | EPA 8260B |
| Toluene              | ND     |      | 1                    | 0.5 | 0.5 | µg/L                      | N/A             | 11/19/02      | WMS31807                  | EPA 8260B |
| Ethyl Benzene        | ND     |      | 1                    | 0.5 | 0.5 | µg/L                      | N/A             | 11/19/02      | WMS31807                  | EPA 8260B |
| Xylenes, Total       | ND     |      | 1                    | 1   | 1   | µg/L                      | N/A             | 11/19/02      | WMS31807                  | EPA 8260B |
|                      |        |      | <b>Surrogate</b>     |     |     | <b>Surrogate Recovery</b> |                 |               | <b>Control Limits (%)</b> |           |
|                      |        |      | 4-Bromofluorobenzene |     |     | 83.9                      |                 |               | 65 - 135                  |           |
|                      |        |      | Dibromofluoromethane |     |     | 94.5                      |                 |               | 57 - 156                  |           |
|                      |        |      | Toluene-d8           |     |     | 90.7                      |                 |               | 77 - 150                  |           |


| Parameter     | Result | Flag | DF               | PQL | DLR | Units                     | Extraction Date | Analysis Date | QC Batch ID               | Method                         |
|---------------|--------|------|------------------|-----|-----|---------------------------|-----------------|---------------|---------------------------|--------------------------------|
| TPH as Diesel | 82     | x    | 1                | 50  | 50  | µg/L                      | 11/15/02        | 11/18/02      | DW4258A                   | EPA 8015 MOD.<br>(Extractable) |
|               |        |      | <b>Surrogate</b> |     |     | <b>Surrogate Recovery</b> |                 |               | <b>Control Limits (%)</b> |                                |
|               |        |      | o-Terphenyl      |     |     | 54.0                      |                 |               | 32 - 145                  |                                |

**Comment:** Not a TPH as Diesel pattern; Value due to a higher boiling hydrocarbon mixture overlapping into the Diesel range, possibly Motor Oil.

| Parameter       | Result | Flag | DF                   | PQL | DLR | Units                     | Extraction Date | Analysis Date | QC Batch ID               | Method                       |
|-----------------|--------|------|----------------------|-----|-----|---------------------------|-----------------|---------------|---------------------------|------------------------------|
| TPH as Gasoline | ND     |      | 1                    | 50  | 50  | µg/L                      | N/A             | 11/15/02      | WGC62659B                 | EPA 8015 MOD.<br>(Purgeable) |
|                 |        |      | <b>Surrogate</b>     |     |     | <b>Surrogate Recovery</b> |                 |               | <b>Control Limits (%)</b> |                              |
|                 |        |      | 4-Bromofluorobenzene |     |     | 101.6                     |                 |               | 65 - 135                  |                              |

DF = Dilution Factor      ND = Not Detected      DLR = Detection Limit Reported      PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

  
 Patti Sandrock, QA/QC Manager

Environmental Analysis Since 1983

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Cameron-Cole  
101 W. Atlantic Ave., Bldg#90  
Alameda, CA 94501  
Attn: Brad Wright

Date: 11/25/02  
Date Received: 11/14/02  
Project Name: AC Transit Sem.  
Project Number: 2014  
P.O. Number: 2014  
Sampled By: Mike Marotto

## Certified Analytical Report

Order ID: 32109      Lab Sample ID: 32109-006      Client Sample ID: MW-2  
Sample Time: 11:30 AM      Sample Date: 11/14/02      Matrix: Liquid

| Parameter            | Result | Flag | DF                   | PQL | DLR | Units              | Extraction Date | Analysis Date | QC Batch ID        | Method    |
|----------------------|--------|------|----------------------|-----|-----|--------------------|-----------------|---------------|--------------------|-----------|
| Methyl-t-butyl Ether | ND     |      | 400                  | 1   | 400 | µg/L               | N/A             | 11/20/02      | WMS31809           | EPA 8260B |
| Benzene              | 14000  |      | 400                  | 0.5 | 200 | µg/L               | N/A             | 11/20/02      | WMS31809           | EPA 8260B |
| Toluene              | 280    |      | 400                  | 0.5 | 200 | µg/L               | N/A             | 11/20/02      | WMS31809           | EPA 8260B |
| Ethyl Benzene        | 970    |      | 400                  | 0.5 | 200 | µg/L               | N/A             | 11/20/02      | WMS31809           | EPA 8260B |
| Xylenes, Total       | 2200   |      | 400                  | 1   | 400 | µg/L               | N/A             | 11/20/02      | WMS31809           | EPA 8260B |
|                      |        |      | Surrogate            |     |     | Surrogate Recovery |                 |               | Control Limits (%) |           |
|                      |        |      | 4-Bromofluorobenzene |     |     | 84.5               |                 |               | 65 - 135           |           |
|                      |        |      | Dibromofluoromethane |     |     | 94.0               |                 |               | 57 - 156           |           |
|                      |        |      | Toluene-d8           |     |     | 88.9               |                 |               | 77 - 150           |           |


| Parameter     | Result | Flag | DF          | PQL | DLR | Units              | Extraction Date | Analysis Date | QC Batch ID        | Method                         |
|---------------|--------|------|-------------|-----|-----|--------------------|-----------------|---------------|--------------------|--------------------------------|
| TPH as Diesel | 430000 |      | 500         | 1   | 500 | µg/L               | 11/15/02        | 11/18/02      | DW4258A            | EPA 8015 MOD.<br>(Extractable) |
|               |        |      | Surrogate   |     |     | Surrogate Recovery |                 |               | Control Limits (%) |                                |
|               |        |      | o-Terphenyl |     |     | NR                 |                 |               | 32 - 145           |                                |

Comment: NR = Not Reportable. Surrogate recovery not reportable due to dilution.

| Parameter       | Result | Flag | DF                   | PQL | DLR  | Units              | Extraction Date | Analysis Date | QC Batch ID        | Method                       |
|-----------------|--------|------|----------------------|-----|------|--------------------|-----------------|---------------|--------------------|------------------------------|
| TPH as Gasoline | 36000  |      | 100                  | 50  | 5000 | µg/L               | N/A             | 11/15/02      | WGC62659B          | EPA 8015 MOD.<br>(Purgeable) |
|                 |        |      | Surrogate            |     |      | Surrogate Recovery |                 |               | Control Limits (%) |                              |
|                 |        |      | 4-Bromofluorobenzene |     |      | 99.9               |                 |               | 65 - 135           |                              |

DF = Dilution Factor      ND = Not Detected      DLR = Detection Limit Reported      PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

  
Patti Sandrock, QA/QC Manager

Environmental Analysis Since 1983



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Cameron-Cole  
101 W. Atlantic Ave., Bldg#90  
Alameda, CA 94501  
Attn: Brad Wright

Date: 11/25/02  
Date Received: 11/14/02  
Project Name: AC Transit Sem.  
Project Number: 2014  
P.O. Number: 2014  
Sampled By: Mike Marotto

## Certified Analytical Report

Order ID: 32109      Lab Sample ID: 32109-007      Client Sample ID: MW-11  
Sample Time: 1:10 PM      Sample Date: 11/14/02      Matrix: Liquid

| Parameter            | Result | Flag | DF                   | PQL | DLR | Units                     | Extraction Date | Analysis Date | QC Batch ID               | Method    |
|----------------------|--------|------|----------------------|-----|-----|---------------------------|-----------------|---------------|---------------------------|-----------|
| Methyl-t-butyl Ether | 5.3    |      | 1                    | 1   | 1   | µg/L                      | N/A             | 11/19/02      | WMS31807                  | EPA 8260B |
| Benzene              | 0.88   |      | 1                    | 0.5 | 0.5 | µg/L                      | N/A             | 11/19/02      | WMS31807                  | EPA 8260B |
| Toluene              | ND     |      | 1                    | 0.5 | 0.5 | µg/L                      | N/A             | 11/19/02      | WMS31807                  | EPA 8260B |
| Ethyl Benzene        | ND     |      | 1                    | 0.5 | 0.5 | µg/L                      | N/A             | 11/19/02      | WMS31807                  | EPA 8260B |
| Xylenes, Total       | 1.2    |      | 1                    | 1   | 1   | µg/L                      | N/A             | 11/19/02      | WMS31807                  | EPA 8260B |
|                      |        |      | <b>Surrogate</b>     |     |     | <b>Surrogate Recovery</b> |                 |               | <b>Control Limits (%)</b> |           |
|                      |        |      | 4-Bromofluorobenzene |     |     | 90.1                      |                 |               | 65 - 135                  |           |
|                      |        |      | Dibromofluoromethane |     |     | 93.1                      |                 |               | 57 - 156                  |           |
|                      |        |      | Toluene-d8           |     |     | 88.4                      |                 |               | 77 - 150                  |           |

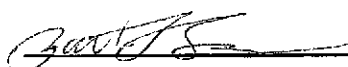
| Parameter     | Result | Flag | DF               | PQL | DLR | Units                     | Extraction Date | Analysis Date | QC Batch ID               | Method                         |
|---------------|--------|------|------------------|-----|-----|---------------------------|-----------------|---------------|---------------------------|--------------------------------|
| TPH as Diesel | 740    | x    | 5                | 50  | 250 | µg/L                      | 11/15/02        | 11/18/02      | DW4258A                   | EPA 8015 MOD.<br>(Extractable) |
|               |        |      | <b>Surrogate</b> |     |     | <b>Surrogate Recovery</b> |                 |               | <b>Control Limits (%)</b> |                                |
|               |        |      | o-Terphenyl      |     |     | 91.0                      |                 |               | 32 - 145                  |                                |

**Comment:** Not a TPH as Diesel pattern; Value due to a higher boiling hydrocarbon mixture overlapping into the Diesel range, possibly Motor Oil.

| Parameter       | Result | Flag | DF                   | PQL | DLR | Units                     | Extraction Date | Analysis Date | QC Batch ID               | Method                       |
|-----------------|--------|------|----------------------|-----|-----|---------------------------|-----------------|---------------|---------------------------|------------------------------|
| TPH as Gasoline | ND     |      | 1                    | 50  | 50  | µg/L                      | N/A             | 11/18/02      | WGC62660                  | EPA 8015 MOD.<br>(Purgeable) |
|                 |        |      | <b>Surrogate</b>     |     |     | <b>Surrogate Recovery</b> |                 |               | <b>Control Limits (%)</b> |                              |
|                 |        |      | 4-Bromofluorobenzene |     |     | 101.7                     |                 |               | 65 - 135                  |                              |

DF = Dilution Factor      ND = Not Detected      DLR = Detection Limit Reported      PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

  
Patti Sandrock, QA/QC Manager

Environmental Analysis Since 1983

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## STANDARD LAB QUALIFIERS (FLAGS)

All Entech lab reports now reference standard lab qualifiers. These qualifiers are noted in the adjacent column to the analytical result and are adapted from the U.S. EPA CLP program. The current qualifier list is as follows:

| Qualifier<br>(Flag) | Description   |
|---------------------|---|
| U                   | Compound was analyzed for but not detected  |
| J                   | Estimated value for tentatively identified compounds or if result is below PQL but above MDL                          |
| N                   | Presumptive evidence of a compound (for Tentatively Identified Compounds)   |
| B                   | Analyte is found in the associated Method Blank   |
| E                   | Compounds whose concentrations exceed the upper level of the calibration range  |
| D                   | Multiple dilutions reported for analysis; discrepancies between analytes may be due to dilution                       |
| X                   | Results within quantitation range; chromatographic pattern not typical of fuel  |
| Y                   | PQL is reported below MDL but verified against a standard analyzed at the client requested reporting limit of 0.5 ppb |
| C                   | Reported results affected by contaminated reagent materials. See narrative for further explanation                    |

# Entech Analytical Labs, Inc.

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## Quality Control Results Summary

QC Batch #: DW4258A  
Matrix: Liquid

Units:  $\mu\text{g/L}$   
Date Analyzed: 11/15/02

| Parameter                  | Method     | Blank Result              | Spike Sample ID | Spike Amount              | Sample Result | Spike Result | QC Type | % Recovery | RPD   | RPD Limits | Recovery Limits |
|----------------------------|------------|---------------------------|-----------------|---------------------------|---------------|--------------|---------|------------|-------|------------|-----------------|
| <b>Test: TPH as Diesel</b> |            |                           |                 |                           |               |              |         |            |       |            |                 |
| TPH as Diesel              | EPA 8015 M | ND                        |                 | 1000                      |               | 840.91       | LCS     | 84.1       |       |            | 44.3 - 137.5    |
| <b>Surrogate</b>           |            | <b>Surrogate Recovery</b> |                 | <b>Control Limits (%)</b> |               |              |         |            |       |            |                 |
| o-Terphenyl                |            | 96.0                      |                 | 32 - 145                  |               |              |         |            |       |            |                 |
| <b>Test: TPH as Diesel</b> |            |                           |                 |                           |               |              |         |            |       |            |                 |
| TPH as Diesel              | EPA 8015 M | ND                        |                 | 1000                      |               | 658.59       | LCSD    | 65.9       | 24.32 | 25.00      | 44.3 - 137.5    |
| <b>Surrogate</b>           |            | <b>Surrogate Recovery</b> |                 | <b>Control Limits (%)</b> |               |              |         |            |       |            |                 |
| o-Terphenyl                |            | 71.0                      |                 | 32 - 145                  |               |              |         |            |       |            |                 |

# Entech Analytical Labs, Inc.

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## Quality Control Results Summary

QC Batch #: WMS31807

Units: µg/L

Matrix: Liquid

Date Analyzed: 11/19/02

| Parameter                           | Method    | Blank Result | Spike Sample ID | Spike Amount | Sample Result | Spike Result | QC Type | % Recovery | RPD | RPD Limits | Recovery Limits |
|-------------------------------------|-----------|--------------|-----------------|--------------|---------------|--------------|---------|------------|-----|------------|-----------------|
| <b>Test: BTEX+MTBE by EPA 8260B</b> |           |              |                 |              |               |              |         |            |     |            |                 |
| Benzene                             | EPA 8260B | ND           |                 | 20           |               | 18.2         | LCS     | 91.0       |     |            | 65.0 - 135.0    |
| Methyl-t-butyl Ether                | EPA 8260B | ND           |                 | 20           |               | 17.7         | LCS     | 88.5       |     |            | 56.0 - 135.0    |
| Toluene                             | EPA 8260B | ND           |                 | 20           |               | 17.1         | LCS     | 85.5       |     |            | 65.0 - 135.0    |

| Surrogate            | Surrogate Recovery | Control Limits (%) |
|----------------------|--------------------|--------------------|
| 4-Bromofluorobenzene | 86.0               | 65 - 135           |
| Dibromofluoromethane | 95.6               | 57 - 156           |
| Toluene-d8           | 88.3               | 77 - 150           |

**Test: TPH as Gasoline - GC-MS**

TPH as Gasoline GC-MS ND 250 209.5 LCS 83.8 65.0 - 135.0

| Surrogate            | Surrogate Recovery | Control Limits (%) |
|----------------------|--------------------|--------------------|
| 4-Bromofluorobenzene | 85.6               | 65 - 135           |
| Dibromofluoromethane | 94.3               | 57 - 156           |
| Toluene-d8           | 86.9               | 77 - 150           |

**Test: BTEX+MTBE by EPA 8260B**

Benzene EPA 8260B ND 20 17.7 LCSD 88.5 2.79 25.00 65.0 - 135.0  
 Methyl-t-butyl Ether EPA 8260B ND 20 17.7 LCSD 88.5 0.00 25.00 56.0 - 135.0  
 Toluene EPA 8260B ND 20 17.7 LCSD 88.5 3.45 25.00 65.0 - 135.0

| Surrogate            | Surrogate Recovery | Control Limits (%) |
|----------------------|--------------------|--------------------|
| 4-Bromofluorobenzene | 83.4               | 65 - 135           |
| Dibromofluoromethane | 97.0               | 57 - 156           |
| Toluene-d8           | 86.3               | 77 - 150           |

**Test: TPH as Gasoline - GC-MS**

TPH as Gasoline GC-MS ND 250 222.9 LCSD 89.2 6.20 30.00 65.0 - 135.0

| Surrogate            | Surrogate Recovery | Control Limits (%) |
|----------------------|--------------------|--------------------|
| 4-Bromofluorobenzene | 83.5               | 65 - 135           |
| Dibromofluoromethane | 94.4               | 57 - 156           |
| Toluene-d8           | 88.3               | 77 - 150           |

**Test: BTEX+MTBE by EPA 8260B**

Benzene EPA 8260B ND 32109-002 20 4.8 22.2 MS 87.0 65.0 - 135.0  
 Methyl-t-butyl Ether EPA 8260B ND 32109-002 20 0. 18.6 MS 93.0 56.0 - 135.0  
 Toluene EPA 8260B ND 32109-002 20 0.57 17.1 MS 85.5 65.0 - 135.0

| Surrogate            | Surrogate Recovery | Control Limits (%) |
|----------------------|--------------------|--------------------|
| 4-Bromofluorobenzene | 86.7               | 65 - 135           |
| Dibromofluoromethane | 95.9               | 57 - 156           |
| Toluene-d8           | 87.2               | 77 - 150           |

**Test: BTEX+MTBE by EPA 8260B**

Benzene EPA 8260B ND 32109-002 20 4.8 22.2 MSD 87.0 0.00 25.00 65.0 - 135.0  
 Methyl-t-butyl Ether EPA 8260B ND 32109-002 20 0. 19.2 MSD 96.0 3.17 25.00 56.0 - 135.0  
 Toluene EPA 8260B ND 32109-002 20 0.57 16.8 MSD 84.0 1.77 25.00 65.0 - 135.0

# Entech Analytical Labs, Inc.

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## Quality Control Results Summary

QC Batch #: WMS31807

Units:  $\mu\text{g/L}$

Matrix: Liquid

Date Analyzed: 11/19/02

| Parameter            | Method | Blank Result | Spike Sample ID    | Spike Amount | Sample Result      | Spike Result | QC Type | % Recovery | RPD | RPD Limits | Recovery Limits |
|----------------------|--------|--------------|--------------------|--------------|--------------------|--------------|---------|------------|-----|------------|-----------------|
| Surrogate            |        |              | Surrogate Recovery |              | Control Limits (%) |              |         |            |     |            |                 |
| 4-Bromofluorobenzene |        |              |                    | 86.4         |                    | 65 - 135     |         |            |     |            |                 |
| Dibromofluoromethane |        |              |                    | 95.8         |                    | 57 - 156     |         |            |     |            |                 |
| Toluene-d8           |        |              |                    | 84.9         |                    | 77 - 150     |         |            |     |            |                 |

# Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

## Quality Control Results Summary

QC Batch #: WGC62659B  
Matrix: Liquid

Units:  $\mu\text{g/L}$   
Date Analyzed: 11/15/02

| Parameter                    | Method     | Blank Result | Spike Sample ID | Spike Amount | Sample Result | Spike Result | QC Type | % Recovery | RPD  | RPD Limits | Recovery Limits |
|------------------------------|------------|--------------|-----------------|--------------|---------------|--------------|---------|------------|------|------------|-----------------|
| <b>Test:</b> TPH as Gasoline |            |              |                 |              |               |              |         |            |      |            |                 |
| TPH as Gasoline              | EPA 8015 M | ND           |                 | 250          |               | 258.37       | LCS     | 103.3      |      |            | 65.0 - 135.0    |
| <b>Surrogate</b>             |            |              |                 |              |               |              |         |            |      |            |                 |
| 4-Bromofluorobenzene         |            |              |                 | 102.7        |               | 65 - 135     |         |            |      |            |                 |
| <b>Test:</b> TPH as Gasoline |            |              |                 |              |               |              |         |            |      |            |                 |
| TPH as Gasoline              | EPA 8015 M | ND           |                 | 250          |               | 261.12       | LCSD    | 104.4      | 1.06 | 25.00      | 65.0 - 135.0    |
| <b>Surrogate</b>             |            |              |                 |              |               |              |         |            |      |            |                 |
| 4-Bromofluorobenzene         |            |              |                 | 99.7         |               | 65 - 135     |         |            |      |            |                 |

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## Quality Control Results Summary

QC Batch #: WGC62660  
 Matrix: Liquid

Units: µg/L  
 Date Analyzed: 11/18/02

| Parameter                    | Method     | Blank Result              | Spike Sample ID | Spike Amount              | Sample Result | Spike Result | QC Type | % Recovery | RPD   | RPD Limits | Recovery Limits |
|------------------------------|------------|---------------------------|-----------------|---------------------------|---------------|--------------|---------|------------|-------|------------|-----------------|
| <b>Test: TPH as Gasoline</b> |            |                           |                 |                           |               |              |         |            |       |            |                 |
| TPH as Gasoline              | EPA 8015 M | ND                        |                 | 250                       |               | 272.81       | LCS     | 109.1      |       |            | 65.0 - 135.0    |
| <b>Surrogate</b>             |            | <b>Surrogate Recovery</b> |                 | <b>Control Limits (%)</b> |               |              |         |            |       |            |                 |
| 4-Bromofluorobenzene         |            | 92.3                      |                 | 65 - 135                  |               |              |         |            |       |            |                 |
| <b>Test: TPH as Gasoline</b> |            |                           |                 |                           |               |              |         |            |       |            |                 |
| TPH as Gasoline              | EPA 8015 M | ND                        |                 | 250                       |               | 253.81       | LCSD    | 101.5      | 7.22  | 25.00      | 65.0 - 135.0    |
| <b>Surrogate</b>             |            | <b>Surrogate Recovery</b> |                 | <b>Control Limits (%)</b> |               |              |         |            |       |            |                 |
| 4-Bromofluorobenzene         |            | 93.2                      |                 | 65 - 135                  |               |              |         |            |       |            |                 |
| <b>Test: TPH as Gasoline</b> |            |                           |                 |                           |               |              |         |            |       |            |                 |
| TPH as Gasoline              | EPA 8015 M | ND                        | 32123-002       | 100                       | 0.            | 109.6        | MS      | 109.6      |       |            | 65.0 - 135.0    |
| <b>Surrogate</b>             |            | <b>Surrogate Recovery</b> |                 | <b>Control Limits (%)</b> |               |              |         |            |       |            |                 |
| 4-Bromofluorobenzene         |            | 109.1                     |                 | 65 - 135                  |               |              |         |            |       |            |                 |
| <b>Test: TPH as Gasoline</b> |            |                           |                 |                           |               |              |         |            |       |            |                 |
| TPH as Gasoline              | EPA 8015 M | ND                        | 32123-002       | 100                       | 0.            | 96.6         | MSD     | 96.6       | 12.61 | 25.00      | 65.0 - 135.0    |
| <b>Surrogate</b>             |            | <b>Surrogate Recovery</b> |                 | <b>Control Limits (%)</b> |               |              |         |            |       |            |                 |
| 4-Bromofluorobenzene         |            | 101.8                     |                 | 65 - 135                  |               |              |         |            |       |            |                 |

# Entech Analytical Labs, Inc.

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## Quality Control Results Summary

QC Batch #: WMS31809  
Matrix: Liquid

Units:  $\mu\text{g/L}$   
Date Analyzed: 11/20/02

| Parameter                           | Method    | Blank Result | Spike Sample ID           | Spike Amount | Sample Result | Spike Result              | QC Type | % Recovery | RPD   | RPD Limits | Recovery Limits |
|-------------------------------------|-----------|--------------|---------------------------|--------------|---------------|---------------------------|---------|------------|-------|------------|-----------------|
| <b>Test: BTEX+MTBE by EPA 8260B</b> |           |              |                           |              |               |                           |         |            |       |            |                 |
| Benzene                             | EPA 8260B | ND           |                           | 20           |               | 22.6                      | LCS     | 113.0      |       |            | 65.0 - 135.0    |
| Toluene                             | EPA 8260B | ND           |                           | 20           |               | 17.4                      | LCS     | 87.0       |       |            | 65.0 - 135.0    |
| <b>Surrogate</b>                    |           |              | <b>Surrogate Recovery</b> |              |               | <b>Control Limits (%)</b> |         |            |       |            |                 |
| 4-Bromofluorobenzene                |           |              | 91.2                      |              |               | 65 - 135                  |         |            |       |            |                 |
| Dibromofluoromethane                |           |              | 95.2                      |              |               | 57 - 156                  |         |            |       |            |                 |
| Toluene-d8                          |           |              | 93.9                      |              |               | 77 - 150                  |         |            |       |            |                 |
| <b>Test: BTEX+MTBE by EPA 8260B</b> |           |              |                           |              |               |                           |         |            |       |            |                 |
| Benzene                             | EPA 8260B | ND           |                           | 20           |               | 20.6                      | LCSD    | 103.0      | 9.26  | 25.00      | 65.0 - 135.0    |
| Toluene                             | EPA 8260B | ND           |                           | 20           |               | 19.7                      | LCSD    | 98.5       | 12.40 | 25.00      | 65.0 - 135.0    |
| <b>Surrogate</b>                    |           |              | <b>Surrogate Recovery</b> |              |               | <b>Control Limits (%)</b> |         |            |       |            |                 |
| 4-Bromofluorobenzene                |           |              | 89.3                      |              |               | 65 - 135                  |         |            |       |            |                 |
| Dibromofluoromethane                |           |              | 96.0                      |              |               | 57 - 156                  |         |            |       |            |                 |
| Toluene-d8                          |           |              | 91.9                      |              |               | 77 - 150                  |         |            |       |            |                 |



# Entech Analytical Labs, Inc.

3334 Victor Court  
Santa Clara, CA 95054

(408) 588-0200  
(408) 588-0201 - Fax

## Chain of Custody / Analysis Request

|  |                                     |                                   |                                 |             |
|--|-------------------------------------|-----------------------------------|---------------------------------|-------------|
| Attention to: <b>Brad Wright</b>                       | Phone No.: <b>(510) 769-3563</b>    | Purchase Order No.:               | Send Invoice to (if Different): | Phone:      |
| Company Name: <b>Cameron-Cole</b>                      | Fax No.: <b>(510) 337 3994</b>      | Project Number: <b>2014</b>       | Company:                        |             |
| Mailing Address: <b>101 West Atlantic Ave Bldg #90</b> | Project Name: <b>ACTransit Sem.</b> | Billing Address (if Different):   |                                 |             |
| City: <b>Alameda</b>                                   | State: <b>CA</b> Zp: <b>94501</b>   | Project Location: <b>Seminary</b> | City:                           | State: Zip: |

|   |  |
|---|--|
| Sampler: <b>Amir Moriazavi</b><br><b>Mike Masotto</b> | Turn <input type="checkbox"/> Same Day<br>Round <input type="checkbox"/> 24 Hour<br>Time <input type="checkbox"/> 48 Hour<br><input checked="" type="checkbox"/> 72 Hour<br><input checked="" type="checkbox"/> 21 Days Standard |
| Date: <b>11/14/02</b>                                 |  |

|           |          |
|-----------|----------|
| Order ID: | Sampling |
|-----------|----------|

| Client ID | Laboratory No. | Date     | Time | Matrix | Composite | Grab | Containers | Preservative | Analysis Methods | Remarks |
|-----------|----------------|----------|------|--------|-----------|------|------------|--------------|------------------|---------|
| TB-01     | 32109-001      | 11/14/02 | 0800 | X      |           |      | 3          | X            |                  |         |
| MW-1      | 002            |          | 0820 |        |           |      | 3          |              |                  |         |
|           |                |          |      |        |           |      | 2          |              |                  |         |
|           |                |          |      |        |           |      | 1          |              |                  |         |
| MW-3      | 003            |          | 0930 |        |           |      | 3          | X            |                  |         |
|           |                |          |      |        |           |      | 3          |              |                  |         |
|           |                |          |      |        |           |      | 2          |              |                  |         |
|           |                |          |      |        |           |      | 1          |              |                  |         |

- 824  Volatile Organics by GC/MS
- 826  Fuel Oxidants by GC/MS
- 827  MTBE by GC/MS
- 828  Pesticides-8091
- 801/8010  Halogenated or Aromatic Volatiles
- 802/8020  TPH as Gas
- 8270  Base/Natural Acid Organics
- 8270  Fuel Scan
- 8270  Diesel
- 8270  SIMS
- 8460  w/ Silver Standard Cleanup
- 8460  w/ Silver Column Cleanup
- 8015  Nitrate / Sulfate
- 8015  Nitrate
- 8015  Sulfate
- THM (8022)
- Metals - Circle Below
- Total
- Disolved

|                                   |                                 |                       |                   |
|-----------------------------------|---------------------------------|-----------------------|-------------------|
| Relinquished by: <b>Joe Conko</b> | Received by: <b>[Signature]</b> | Date: <b>11/14/02</b> | Time: <b>1600</b> |
| Relinquished by:                  | Received by:                    | Date:                 | Time:             |
| Relinquished by:                  | Received by: <b>[Signature]</b> | Date: <b>11/14/02</b> | Time: <b>1755</b> |
| Relinquished by:                  | Received by:                    | Date:                 | Time:             |

Special Instructions or Comments  NPDES Detection Limits

Metals: Al, As, Sb, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, K, Si, Ag, Na, Se, Sr, Ti, Sn, Tl, V, Zn, W : CAM-17  Plating  PPM-13  LUFT-5

# Entech Analytical Labs, Inc.

3334 Victor Court  
Santa Clara, CA 95054

(408) 588-0200  
(408) 588-0201 - Fax

# Chain of Custody / Analysis Request

|   |                                  |                                     |                                   |                                     |
|---|----------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|
| Attention to: <b>Brad Wright</b>                      | Phone No.: <b>(510) 769-3563</b> | Purchase Order No.:                 | Send Invoice to (if Different):   | Phone:                              |
| Company Name: <b>Camson-Cole</b>                      | Fax No.: <b>(510) 337-3994</b>   | Project Number: <b>2014</b>         | Company:                          |                                     |
| Mailing Address: <b>101 West Atlantic Ave Bldg 90</b> |                                  | Project Name: <b>Ac Transit Sem</b> | Billing Address (if Different):   |                                     |
| City: <b>Alameda</b>                                  | State: <b>CA</b>                 | Zip: <b>94501</b>                   | Project Location: <b>Seminary</b> | City: _____ State: _____ Zip: _____ |

|   |  |
|---|--|
| Sampler: <b>Mike Moratto</b><br><i>Amir Morfazabi</i> | Turn <input type="checkbox"/> Same Day<br>Around <input type="checkbox"/> 24 Hour<br>Time <input type="checkbox"/> 48 Hour<br><b>2 days</b> <input checked="" type="checkbox"/> 72 Hour<br><input type="checkbox"/> Standard |
| Date: <b>11/14/02</b>                                 |  |

|           |          |
|-----------|----------|
| Order ID: | Sampling |
|-----------|----------|

| Client ID | Laboratory No. | Date     | Time | Matrix H <sub>2</sub> O | Composite | Grab | Containers | Preservative HCL | Volatile Organics by GC/MS: 8240 <input type="checkbox"/> | Fuel Organics by GC/MS: 8260B <input type="checkbox"/> | MTBE by 8260B <input type="checkbox"/> | Pesticides-8081 <input type="checkbox"/> | Halogenated or Aromatic Volatiles: 801/8010 <input type="checkbox"/> | PCBs - 8082 <input type="checkbox"/> | TPH as Gas-87EX <input type="checkbox"/> | TPH as Gas/DIEM/MTBE: F113 802/8020 <input type="checkbox"/> | Base/Neutral/Acid Organics: 8270 <input type="checkbox"/> | Fuel Scan: 8270-SIMS <input type="checkbox"/> | Diesel <input type="checkbox"/> | w/ Sil-gel Standard Cleanup w/ Sil-gel Column Cleanup <input type="checkbox"/> | 8260/STEX/MTBE <input type="checkbox"/> | TPPH <input type="checkbox"/> | Oil & Grease <input type="checkbox"/> | 8015 GLO <input type="checkbox"/> | 8015 DRO <input type="checkbox"/> | THM (502.2) <input type="checkbox"/> | Metals - Check Below Total <input type="checkbox"/> | Dispersed <input type="checkbox"/> | Remarks |  |
|-----------|----------------|----------|------|-------------------------|-----------|------|------------|------------------|---|--|--|--|--|--------------------------------------|--|--|---|---|---------------------------------|--|---|-------------------------------|---------------------------------------|-----------------------------------|-----------------------------------|--------------------------------------|---|------------------------------------|---------|--|
| MW-10     | 32109-004      | 11/14/02 | 1000 | X                       |           |      | 3          | X                |   |  |  |  |  |                                      |  |  |   |   |                                 |  |   |                               |                                       |                                   |                                   |                                      |   |                                    |         |  |
|           |                |          |      |                         |           |      | 2          |                  |   |  |  |  |  |                                      |  |  |   |   |                                 |  |   |                               |                                       |                                   |                                   |                                      |   |                                    |         |  |
|           |                |          |      |                         |           |      | 1          |                  |   |  |  |  |  |                                      |  |  |   |   |                                 |  |   |                               |                                       |                                   |                                   |                                      |   |                                    |         |  |
| MW-9      | 005            |          | 1045 |                         |           |      | 3          | X                |   |  |  |  |  |                                      |  |  |   |   |                                 |  |   |                               |                                       |                                   |                                   |                                      |   |                                    |         |  |
|           |                |          |      |                         |           |      | 3          |                  |   |  |  |  |  |                                      |  |  |   |   |                                 |  |   |                               |                                       |                                   |                                   |                                      |   |                                    |         |  |
|           |                |          |      |                         |           |      | 2          |                  |   |  |  |  |  |                                      |  |  |   |   |                                 |  |   |                               |                                       |                                   |                                   |                                      |   |                                    |         |  |
| MW-2      | 006            |          | 1130 |                         |           |      | 3          | X                |   |  |  |  |  |                                      |  |  |   |   |                                 |  |   |                               |                                       |                                   |                                   |                                      |   |                                    |         |  |
|           |                |          |      |                         |           |      | 3          |                  |   |  |  |  |  |                                      |  |  |   |   |                                 |  |   |                               |                                       |                                   |                                   |                                      |   |                                    |         |  |
|           |                |          |      |                         |           |      | 2          |                  |   |  |  |  |  |                                      |  |  |   |   |                                 |  |   |                               |                                       |                                   |                                   |                                      |   |                                    |         |  |
|           |                |          |      |                         |           |      | 1          |                  |   |  |  |  |  |                                      |  |  |   |   |                                 |  |   |                               |                                       |                                   |                                   |                                      |   |                                    |         |  |

|                                     |                                 |                       |                   |
|-------------------------------------|---------------------------------|-----------------------|-------------------|
| Relinquished by: <i>[Signature]</i> | Received by: <i>[Signature]</i> | Date: <b>11/14/02</b> | Time: <b>1600</b> |
| Relinquished by:                    | Received by: <i>[Signature]</i> | Date: <b>11/14/02</b> | Time: <b>1735</b> |
| Relinquished by:                    | Received by:                    | Date:                 | Time:             |
| Relinquished by:                    | Received by:                    | Date:                 | Time:             |

**Special Instructions or Comments**  NPDES Detection Limits

Metals: Al, As, Sb, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, K, Si, Ag, Na, Se, Sr, Tl, Sn, Ti, V, Zn, W : CAM-17  Plating  PPM-13  LUFT-5

# Entech Analytical Labs, Inc.

9334 Victor Court  
Santa Clara, CA 95054

(408) 588-0200  
(408) 588-0201 - Fax

# Chain of Custody / Analysis Request

|   |                                       |                                |                                      |                       |
|---|---------------------------------------|--------------------------------|--------------------------------------|-----------------------|
| Attention to:<br><b>Brad Wright</b>                 | Phone No.:<br><b>(510) 789-3562</b>   | Purchase Order No.:            | Send Invoice to (if Different)       | Phone                 |
| Company Name:<br><b>Cameron-Cole</b>                | Fax No.:<br><b>(510) 337-3994</b>     | Project Number:<br><b>2014</b> | Company                              |                       |
| Mailing Address:<br><b>101 W. Atlantic Bldg #90</b> | Project Name:<br><b>ACTRANSET SEM</b> | Billing Address (if Different) |                                      |                       |
| City:<br><b>Alameda</b>                             | State:<br><b>Ca</b>                   | Zip:<br><b>94501</b>           | Project Location:<br><b>SEMINARY</b> | City:<br>State<br>Zip |

|                                  |  |
|----------------------------------|--|
| Sampler:<br><b>Amir Montazur</b> | Turn <input type="checkbox"/> Same Day<br>Around <input type="checkbox"/> 24 Hour<br>Time <input type="checkbox"/> 48 Hour<br>72 Hour <input type="checkbox"/><br>Standard <input checked="" type="checkbox"/> |
| <b>Mike Marotto</b>              |  |
| Date:<br><b>11/14/02</b>         | <b>21 Days</b>   |

|           |          |  |           |      |            |
|-----------|----------|--|-----------|------|------------|
| Order ID: | Sampling | Matrix <input type="checkbox"/> H <sub>2</sub> O | Composite | Grab | Containers |
|-----------|----------|--|-----------|------|------------|

| Client ID | Laboratory No. | Date     | Time | Matrix H <sub>2</sub> O | Composite | Grab | Containers | Preservative HCl | Volatile Organics by GC/MS: 8240 <input type="checkbox"/> | Fuel Oxygenates by 8280B <input type="checkbox"/> | MTBE by 8280B <input type="checkbox"/> | Pesticides-9091 <input type="checkbox"/> | Halogenated or Aromatic Volatiles: 801/8010 <input type="checkbox"/> | PCBs - 8082 <input type="checkbox"/> | TPH as Gas/PTC <input type="checkbox"/> | TPH as Gas/MTBE <input type="checkbox"/> | Base/Neutral/Acid Organics: 8270 <input type="checkbox"/> | Fuel Scan: 8270-SIMS <input type="checkbox"/> | Diesel <input type="checkbox"/> | w/ Special Standard Cleanup <input type="checkbox"/> | w/ Special Column Cleanup <input type="checkbox"/> | 8260 BTX/MTRE <input type="checkbox"/> | MTRE/MTRE <input type="checkbox"/> | Oil & Grease <input type="checkbox"/> | SO <sub>4</sub> DRO <input type="checkbox"/> | SO <sub>4</sub> C-RO <input type="checkbox"/> | THM (502z) <input type="checkbox"/> | Metals: Circle Below <input type="checkbox"/> | Total <input type="checkbox"/> | Discolored <input type="checkbox"/> | Remarks |  |  |
|-----------|----------------|----------|------|-------------------------|-----------|------|------------|------------------|---|---|--|--|--|--------------------------------------|---|--|---|---|---------------------------------|--|--|--|------------------------------------|---------------------------------------|--|---|-------------------------------------|---|--------------------------------|-------------------------------------|---------|--|--|
| MW-11     | 32109-007      | 11/14/02 | 1310 | X                       |           |      | W          | X                |   |   |  |  |  |                                      |   |  |   |   |                                 |  |  |  |                                    |                                       |  |   |                                     |   |                                |                                     |         |  |  |
| ↓         |                | ↓        | ↓    | ↓                       |           |      | W          | X                |   |   |  |  |  |                                      |   |  |   |   |                                 |  |  |  |                                    |                                       |  |   |                                     |   |                                |                                     |         |  |  |
| ↓         |                | ↓        | ↓    | ↓                       |           |      | W          | X                |   |   |  |  |  |                                      |   |  |   |   |                                 |  |  |  |                                    |                                       |  |   |                                     |   |                                |                                     |         |  |  |

|  |                                    |                          |                      |
|--|------------------------------------|--------------------------|----------------------|
| Relinquished by:<br><i>[Signature]</i> | Received by:<br><i>[Signature]</i> | Date:<br><b>11/14/02</b> | Time:<br><b>1600</b> |
| Relinquished by:                       | Received by:<br><i>[Signature]</i> | Date:<br><b>11/14/02</b> | Time:<br><b>1735</b> |
| Relinquished by:                       | Received by:                       | Date:                    | Time:                |
| Relinquished by:                       | Received by:                       | Date:                    | Time:                |

**Special Instructions or Comments**  NPDES Detection Limits

Metals: Al, As, Sb, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, K, Si, Ag, Na, Se, Sr, Tl, Sn, Ti, V, Zn, W : CAM-17  Plating  PPM-13  LUFT-5

**APPENDIX B**  
**SAMPLING EVENT DATA**

DEPTH TO WATER

DATE: 11/14/02

PROJECT AC Transit Seminary

EVENT Quarterly

TECHNICIAN MM

| NO. | WELL OR LOCATION | DATE     | TIME | MEASUREMENT | CODE | COMMENTS              |
|-----|------------------|----------|------|-------------|------|-----------------------|
| ✓ 1 | MW-1             | 11/14/02 | 0747 | 4.59        | SWL  |                       |
| 2   | MW-2             | ↓        | 0740 | 5.43        |      | No oil layers present |
| ✓ 3 | MW-3             |          | 0732 | 3.47        |      |                       |
| 4   | MW-9             |          | 0720 | 4.87        |      |                       |
| ✓ 5 | MW-10            |          | 0726 | 3.86        |      |                       |
| 6   | MW-11            |          | ▽    | 0751        | 2.55 | ▽                     |
| 7   |                  |          |      |             |      |                       |
| 8   |                  |          |      |             |      |                       |
| 9   |                  |          |      |             |      |                       |
| 10  |                  |          |      |             |      |                       |
| 11  |                  |          |      |             |      |                       |
| 12  |                  |          |      |             |      |                       |
| 13  |                  |          |      |             |      |                       |
| 14  |                  |          |      |             |      |                       |
| 15  |                  |          |      |             |      |                       |
| 16  |                  |          |      |             |      |                       |
| 17  |                  |          |      |             |      |                       |
| 18  |                  |          |      |             |      |                       |
| 19  |                  |          |      |             |      |                       |
| 20  |                  |          |      |             |      |                       |

CODES: SWL - Static Water Level  
OIL - Oil Level









Project Name: AC Seminary  
 Casing Diameter (in): 2"  
 Total Well Depth (ft): 19.50  
 Depth to Water (ft) before purging: 4.87

Project Number: 2014  
 Sample Date: 11/14/02  
 Sample ID: MW-9

Well ID: MW-9

Development Method:

NA Bailer:  Teflon  Stainless Steel  PVC  ABS Plastic  
 Pump:  Dedicated Submersible Pump  Bladder Pump  
 Non-Dedicated Submersible Pump

| Time | pH   | Conductivity (umho/cm) | Temperature (Celsius) | Water Level (to 0.01 ft.) | Cum. Vol. (gal) | Pump Rate (GPM) |
|------|------|------------------------|-----------------------|---------------------------|-----------------|-----------------|
| 1020 | 7.17 | 1218                   | 26.5                  | 6.32                      | 2               | 0.25            |
| 1028 | 7.11 | 1225                   | 25.7                  | 8.11                      | 4               | ↓               |
| 1036 | 7.14 | 1228                   | 26.2                  | 10.09                     | 6               | ↓               |
|      |      |                        |                       |                           |                 |                 |
|      |      |                        |                       |                           |                 |                 |
|      |      |                        |                       |                           |                 |                 |
|      |      |                        |                       |                           |                 |                 |
|      |      |                        |                       | Tot vol = 7.5 gal         |                 |                 |

Water Volume to be Purged (gal):

(Casing Length in Ft - Depth to Water in Ft) (X) (3)  
 Where X = 1 Well Volume in Gal/ft, X = 0.165 for 2" wells, X = 0.37 for 3" wells, X = 0.65 for 4" wells

NOTE:  $(19.50 - 4.87) \times (14.63 \times 0.165) = (2.41 \times 3) = 7.24$

At least 3 well casing volumes were removed prior to sampling.

Sample Collection Method:

Bailer:  Teflon  Stainless Steel  PVC  ABS Plastic  
 Pump:  Dedicated Submersible Pump  Bladder Pump  
 Non-Dedicated Submersible Pump

QA/QC Samples if any (Duplicate, Field Blank, Rinse Blank, Etc.):

Parameter Collected: 8260 8015 GRO/DRO Nitrate/Sulfate

Sample Appearance

OVA Reading (ppm)  
 Suspended Solids (describe): ent pump used to purge  
disc. bailer used to sample:

Decontamination Performed:

Washed/Rinsed  
Sounds/meters

Start: 1012  
 Stop: 1042  
 Sample: 1045

Fe: 0.67 mg/L  
 ORP: 20 mV  
 DO: 10.12 mg/L

Comments / Calculations:

Name: Mike Marotto

Date: 11/14/02

Project Name: AC Seminary  
Casing Diameter (in): 2"  
Total Well Depth (ft): 11.40  
Depth to Water (ft) before purging: 3.82

Project Number: 2014  
Sample Date: 11/14/02  
Sample ID: MW-10

Well ID: MW-10

Development Method:

Bailer:  Teflon  Stainless Steel  PVC  ABS Plastic

NA

Pump:  Dedicated Submersible Pump  Bladder Pump  
 Non-Dedicated Submersible Pump

| Time | pH   | Conductivity (umho/cm) | Temperature (Celsius) | Water Level (to 0.01 ft.) | Cum. Vol. (gal) | Pump Rate (GPM) |
|------|------|------------------------|-----------------------|---------------------------|-----------------|-----------------|
| 0943 | 7.13 | 1373                   | 29.2                  | 5.32                      | 1               | 0.25            |
| 0947 | 7.09 | 1470                   | 29.4                  | 5.67                      | 2               | ↓               |
| 0951 | 7.15 | 1709                   | 29.0                  | 5.83                      | 3               | ↓               |
|      |      |                        |                       |                           |                 |                 |
|      |      |                        |                       |                           |                 |                 |
|      |      |                        |                       |                           |                 |                 |
|      |      |                        |                       |                           |                 |                 |
|      |      |                        |                       |                           |                 |                 |
|      |      |                        |                       | Tot Vol = 4               |                 |                 |

Water Volume to be Purged (gal):

(Casing Length in Ft - Depth to Water in Ft) (X) (3)

Where X = 1 Well Volume in Gal/ft, X=0.165 for 2" wells, X=0.37 for 3" wells, X=0.65 for 4" wells

$$(11.40 - 3.82) = (7.58 \times 0.165) = (1.25 \times 3) = 3.75$$

NOTE: 3 to 5 Well Casing Volumes required prior to sample collection.

At least 3 well casing volumes were removed prior to sampling.

Sample Collection Method:

Bailer:  Teflon  Stainless Steel  PVC  ABS Plastic

Pump:  Dedicated Submersible Pump  Bladder Pump  
 Non-Dedicated Submersible Pump

QA/QC Samples if any (Duplicate, Field Blank, Rinse Blank, Etc.):

Parameter Collected: 8260 8015 GR0/DRO Nitrate/Sulfate

Sample Appearance

OVA Reading (ppm)

Suspended Solids (describe): disc. bailer used to sample

cont pump used to purge

Decontamination Performed:

Washed/Rinsed

Sounder/retics

ments / Calculations:

Start: 0939

Stop: 0954

Sample: 1000

Fe: 1.40 mg/L

ORP: -45 mV

DO: 1.68 mg/L

Name: Nike Marotto

Date: 11/14/02

Project Name: AC Seminary  
 Casing Diameter (in): 2"  
 Total Well Depth (ft): 13.5  
 Depth to Water (ft) before purging: 2.55

Project Number: 2014  
 Sample Date: 11/14/02  
 Sample ID: MW-11

Well ID: MW-11

Development Method:

NA Bailer:  Teflon  Stainless Steel  PVC  ABS Plastic  
 Pump:  Dedicated Submersible Pump  Bladder Pump  
 Non-Dedicated Submersible Pump

| Time                             | pH          | Conductivity (umho/cm) | Temperature (Celsius) | Water Level (to 0.01 ft.) | Cum. Vol. (gal) | Pump Rate (GPM) |
|----------------------------------|-------------|------------------------|-----------------------|---------------------------|-----------------|-----------------|
| <del>11:40</del> <u>11:40 AM</u> | <u>7.12</u> | <u>1008</u>            | <u>23.4</u>           | <u>7.41</u>               | <u>1.5</u>      | <u>0.046</u>    |
| <u>12:20</u>                     | <u>7.23</u> | <u>764</u>             | <u>22.9</u>           | <u>9.15</u>               | <u>3.0</u>      | ↓               |
| <u>13:00</u>                     | <u>7.17</u> | <u>865</u>             | <u>23.3</u>           | <u>9.74</u>               | <u>4.5</u>      | ↓               |
|                                  |             |                        |                       |                           |                 |                 |
|                                  |             |                        |                       |                           |                 |                 |
|                                  |             |                        |                       |                           |                 |                 |

Water Volume to be Purged (gal):  
 (Casing Length in Ft - Depth to Water in Ft) (X) (3)  
 Where X = 1 Well Volume in Gal/ft, X=0.165 for 2" wells, X=0.37 for 3" wells, X=0.65 for 4" wells  
 $(13.5 - 2.55) \times (10.95 \times 0.165) = (1.81 \times 3) = 5.42$   
**NOTE: 3 to 5 Well Casing Volumes required prior to sample collection.**

At least 3 well casing volumes were removed prior to sampling.

Sample Collection Method:

Bailer:  Teflon  Stainless Steel  PVC  ABS Plastic  
 Pump:  Dedicated Submersible Pump  Bladder Pump  
 Non-Dedicated Submersible Pump

QA/QC Samples if any (Duplicate, Field Blank, Rinse Blank, Etc.):

Parameter Collected: 8260 8015 GRO/DRO Nitrate/Sulfate

Sample Appearance  
 OVA Reading (ppm)  
 Suspended Solids (describe): Per: 654 pump used to purge  
dis. bailer used to sample:

Decontamination Performed:

Washed/Rinsed  
Sounder/retics

Start: 11:10 Fe: 0  
 Stop: 13:08 ORP: 85mV  
 Sample: 1310 DO: 11.26 8.38

Comments / Calculations:

Name: Mike Marotto Date: 11/14/02

Project Name: AC Transit (Seminary)

Project Number: 2016-1-1

Well ID: MW-2  
(Overpurge)

Casing Diameter (in): 2"

Sample Date: 10/24/02

Total Well Depth (ft): 23.51

Sample ID: NA

Depth to Water (ft) before purging: Oil/Water  
None 6.43

Development Method:

NA Bailer:            Teflon            Stainless Steel            PVC            ABS Plastic  
Pump:            Dedicated Submersible Pump            Bladder Pump  
           Non-Dedicated Submersible Pump

| Time  | pH   | Conductivity (umho/cm)                                  | Temperature (Celsius) | Water Level (to 0.01 ft.)              | Cum. Vol. (gal) | Pump Rate (GPM) |
|-------|------|---|-----------------------|--|-----------------|-----------------|
| Start | 1039 |   |                       |  |                 |                 |
| Stop  | 1150 | → Pumped to a depth that Cent. Pump couldn't pull from. |                       |  |                 |                 |
| Start | 1210 |   |                       |  |                 |                 |
| Stop  | 1316 |   |                       |  |                 |                 |
|       |      |   |                       | Total Vol. = 29 gallons<br>(Overpurge) |                 |                 |

Water Volume to be Purged (gal):  $17.08 \times 0.165 = 2.82 \times 10 = 28.16$   
(Casing Length in Ft - Depth to Water in Ft) (X) (3)

Where X = 1 Well Volume in Gal/ft, X = 0.165 for 2" wells, X = 0.37 for 3" wells, X = 0.65 for 4" wells

**NOTE: 3 to 5 Well Casing Volumes required prior to sample collection.**

At least NA well casing volumes were removed prior to sampling.

Sample Collection Method:

NA Bailer:            Teflon            Stainless Steel            PVC            ABS Plastic  
Pump:            Dedicated Submersible Pump            Bladder Pump  
           Non-Dedicated Submersible Pump

QA/QC Samples if any (Duplicate, Field Blank, Rinse Blank, Etc.):

Parameter Collected: None →

Sample Appearance

NA OVA Reading (ppm)  
NA Suspended Solids (describe):

Decontamination Performed:

→ Washed & rinsed sonder, & Oil/Water interface probe.

Comments / Calculations:

→ Implemented soakase before purge.

→ left soakase in well at the end of purge.

Name: Tom Tringali

Date: 10/24/02

