**Brown & Root Environmental**

455 Fairway Drive, Suite 200
Deerfield Beach, FL 33441

(954) 570-5885
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ENVIRONMENTAL PROTECTION
97 JAN 17 PM 4:07

January 10, 1997

Ms. Madhulla Logan
Alameda County Department of Health Services
1131 Harbor Bay Parkway
Alameda, California 94502

**Subject:** **Transmittal of Fourth Quarter Groundwater Monitoring Report**

Dear Ms. Logan:

Enclosed please find a copy of the fourth quarter groundwater monitoring report for the former E-Z Serve facility #100877, located at 525 West A Street, Hayward, California.

If you have any comments regarding this correspondence, please feel free to contact me at (954) 570-5885.

Sincerely,
BROWN & ROOT ENVIRONMENTAL

Arnold C. Lamb
California State Manager

enclosure

cc: B. Cobb - E-Z Serve
C. Dalton - BRE DFB

ACL0182.DOC

**Brown & Root Environmental**

455 Fairway Drive, Suite 200
Deerfield Beach, FL 33441

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January 15, 1997

Mr. Brian Cobb
Environmental and Construction Manager
E-Z Serve Petroleum Marketing Company of California
P.O. Box 922021
Houston, Texas 77292-2021

**SUBJECT: Fourth Quarter 1996 Groundwater Monitoring (October through December)**
**Former E-Z Serve Facility No. 100877**
**525 West "A" Street, Hayward, California**

Dear Mr. Cobb:

Brown & Root Environmental (BRE) was contracted by E-Z Serve Petroleum Marketing Company of California (E-Z Serve) to perform groundwater monitoring at the former E-Z Serve Facility No. 100877 (Site). The Site is located at 525 West "A" Street, Hayward, California. The Site is presently a vacant lot. The underground storage tanks (USTs) were excavated and removed in June 1990. Site features are depicted on Figure 1.

This report summarizes field and analytical data collected during the current quarter (October 1996 through December 1996) for this facility. The activities summarized in this report were completed at the direction of the Alameda County Department of Health Services (ACDHS).

## MONITORING RESULTS

On December 4, 1996, BRE personnel completed the fourth quarter groundwater monitoring event. Depth to groundwater measurements were collected prior to well purging and sampling. Prior to sampling all monitoring wells were checked for the presence of phase separated product using clear Teflon bailers. A nominal amount of phase separated product, too limited to measure, was detected in MW-1A. The field protocol followed by BRE personnel during groundwater well purging and sampling is included as Appendix A. Well purging and sampling documentation logs are included as Appendix B. BRE will forward documentation of purge water disposal under a separate cover.

Depth to groundwater beneath the facility during this monitoring event ranged from 15.61 (MW-1) to 17.19 (MW-2) feet below land surface (bls). Depth to groundwater measurements across the study area during this quarter indicate the groundwater table dropped slightly from the last monitoring event. Table 1 presents the depth to groundwater and groundwater elevation data.

Water table elevations and a groundwater contour map for December 4, 1996, are depicted on Figure 1. The data indicate that groundwater flows generally to the southwest. The average hydraulic gradient is approximately 0.0020 foot per foot. The flow direction and gradient are similar to the third quarter monitoring event.

BRE personnel collected groundwater samples from 11 monitoring wells during this field event. Due to an automobile being parked over MW-13, BRE personnel were unable to obtain a sample from this well. MW-9 was previously destroyed by landscaping activities. MW-8 and MW-11 were inaccessible and are presumed destroyed due to the on-going road widening activities. Groundwater samples were transported to a California certified laboratory, Centrum Analytical Laboratories, Inc., in Redlands California, and analyzed for Total Petroleum Hydrocarbons - Gasoline Range Organics (TPHg) by EPA Method 8015 (modified) and Total Volatile Organic Aromatics (TVOA), including Methyl Tertiary Butyl Ether (MTBE), by EPA Method 8020.

Laboratory analysis of the groundwater samples indicates the presence of dissolved phase petroleum hydrocarbons above laboratory method detection limits (MDLs) in all of the sampled monitoring wells. TPHg concentrations ranged from below detection limits (MW-12) to 52,000 µg/L (MW-1A). TVOA concentrations ranged 8.5 µg/L (MW-12) to 11,040 µg/L (MW-2). MTBE concentrations ranged from below detection limits (MW-12) to 1,900 µg/L (MW-4). Table 1 presents the analytical testing data. The analytical data is depicted on a site plan as Figure 2. The complete analytical laboratory report with the chain of custody is included as Appendix C.

Quality assurance and quality control (QA/QC) samples were also obtained during this quarterly sampling event. The QA/QC samples consisted of one duplicate sample (obtained from well MW-7), one trip blank, and one equipment blank. Hydrocarbon constituents were not detected in either the trip blank or the equipment blank. Duplicate sample results are within an acceptable range. The original sample result for MW-7 is presented on Figure 2.

## CONCLUSIONS AND RECOMMENDATIONS

Data collected during the fourth quarter indicate the site conditions are relatively unchanged from those of the third quarter.

BRE recommends the following:

- Monitoring MW-8 (Provided the well is not destroyed), and MW-13 semi-annually. These are upgradient and appear to be beyond the extent of contamination. In the third quarter groundwater monitoring report, BRE recommended semi-annual monitoring for MW-12. Given the recent analytical results, BRE recommends continuing quarterly monitoring for MW-12.

- BRE recommends forwarding the results of the quarterly sampling event to the ACDHS for review and comment.

Based on the monitoring data collected during the forth quarter, the monitoring events should continue on a quarterly basis.

If you have any questions or comments pertaining to this correspondence, please contact the undersigned at (954) 570-5885.

Sincerely,
BROWN & ROOT ENVIRONMENTAL

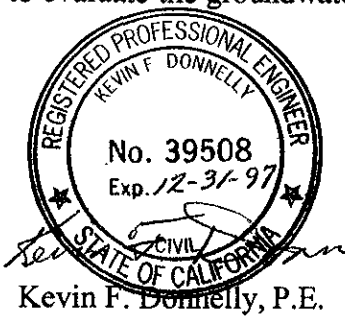
Colleen Dalton
Site Manager

Distribution: (1) Ms. Madhulla Logan
Alameda County Department of Health Services
1131 Harbor Bay Parkway
Alameda, CA 94502

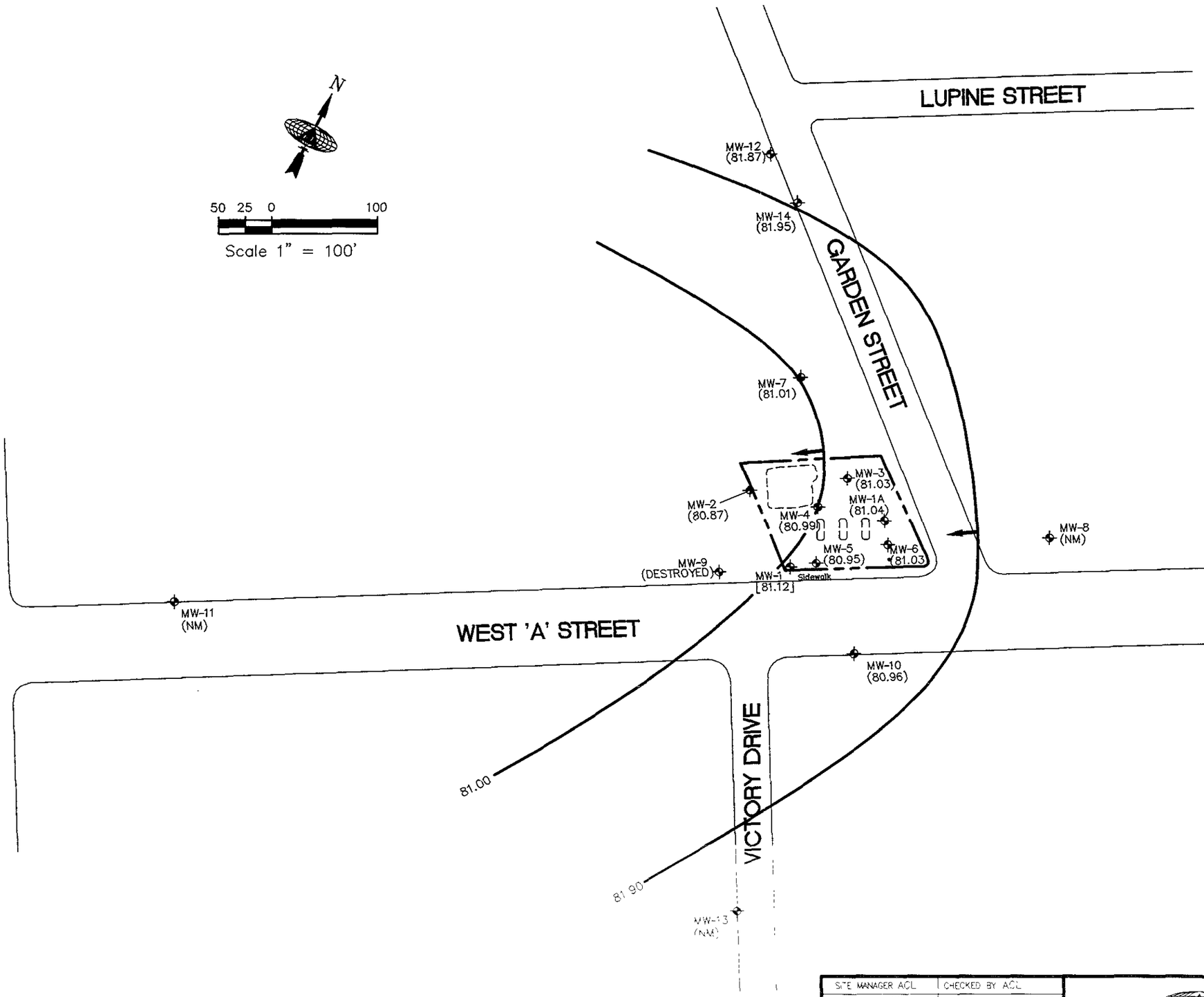
## PROFESSIONAL CERTIFICATION

Fourth Quarter 1996 Groundwater Monitoring
Former E-Z Serve #100877
525 West A Street
Hayward, California

This quarterly groundwater monitoring report was prepared under my responsible supervision in conformance with standard engineering practices and principles, and California Business and Professions Code Section 6735, 7835, and 7835.1, to evaluate the groundwater conditions at this site.




Kevin F. Donnelly, P.E.
California Registration No. 39508



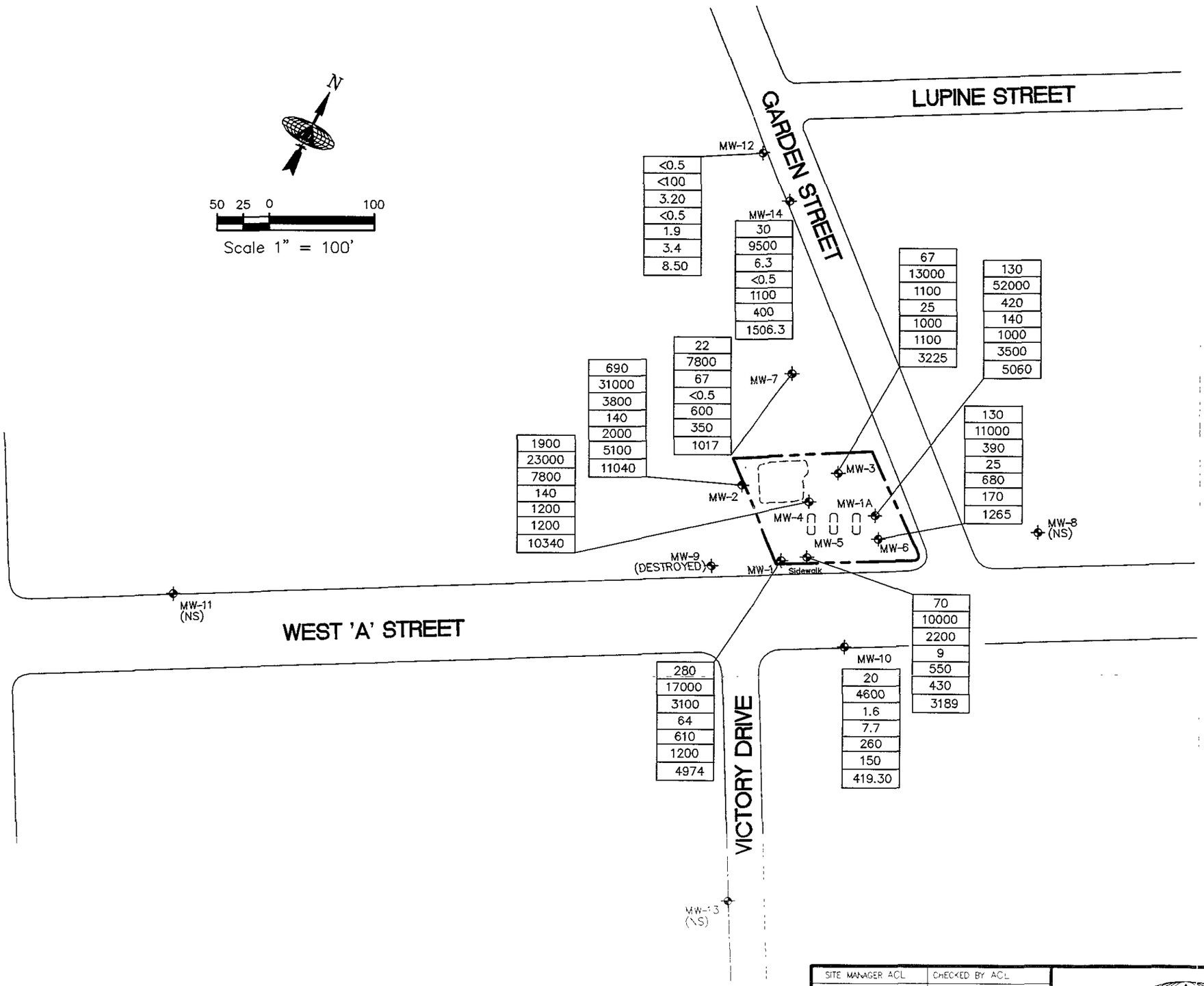

## LEGEND

| | |
|---|---|
| MW-1 | MONITORING WELL |
| | GROUNDWATER FLOW DIRECTION |
| 81.00 | GROUNDWATER CONTOUR |
| (81.01) | GROUNDWATER ELEVATION |
| [81.12] | DATA NOT USED TO DETERMINE CONTOURS |
| NM | NOT MEASURED |

| | |
|---|---|
| SITE MANAGER ACL | CHECKED BY ACL |
| DRAWN BY TCB | DRAWING DATE 12/20/96 |
| SURVEYED BY | SURVEY DATE |
| SCALE 1" = 100' | |
| CAD DWG NO MY40RSIT | PROJ NO MY40 |

Brown & Root Environmental

FIGURE 1
GROUNDWATER ELEVATION CONTOUR MAP
DECEMBER 4, 1996
EZ-SERVE NO. 100877, 525 WEST A STREET
HAYWARD, CALIFORNIA




## LEGEND

| | |
|---|---|
| MW-1 | MONITORING WELL |
| (83.99) | GROUNDWATER ELEVATION |
| <1.0 | MTBE CONCENTRATION IN µg/L |
| <500 | TPHg CONCENTRATION IN µg/L |
| <0.6 | BENZENE CONCENTRATION IN µg/L |
| <2.0 | TOLUENE CONCENTRATION IN µg/L |
| <1.0 | ETHYLBENZENE CONCENTRATION IN µg/L |
| <6.0 | XYLENE CONCENTRATION IN µg/L |
| 4974 | TVOA CONCENTRATION IN µg/L |
| (NS) | NOT SAMPLED |

| | |
|---|---|
| SITE MANAGER ACL | CHECKED BY ACL |
| DRAWN BY TCB | DRAWING DATE 12/20/96 |
| SURVEYED BY | SURVEY DATE |
| SCALE 1" = 100' | |
| CAD DWG NO MY40RST | PROJ NO MY40 |

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FIGURE 2

**GROUNDWATER ANALYTICAL RESULTS DECEMBER 4, 1996**

EZ-SERVE NO. 100877, 525 WEST A STREET HAYWARD, CALIFORNIA

**Table 1**
**Summary of Groundwater Elevation Data and Analytical Results**
**Former E-Z Serve Facility #100877**
**525 West "A" Street, Hayward, California**

| Well ID | Date Sampled | Well Elevation (feet) | Depth to Water (feet) | Groundwater Elevation (feet) | MTBE (ug/l) | Benzene (ug/l) | Toluene (ug/l) | Ethylbenzene (ug/l) | Xylenes (ug/l) | TVOA (ug/l) | TPHg (ug/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **MW-1** | 2/5/92 | 99.91 | 20.82 | 79.09 | NA | 76,000 | 23,000 | 2,400 | 6,500 | 107,900 | 46,000 |
| (screened | 9/11/92 | | 20.08 | 79.83 | NA | 9,000 | 1,200 | 1,800 | 4,600 | 16,600 | 48,000 |
| interval | 12/22/92 | | 19.79 | 80.12 | NA | 22,000 | 1,600 | 4,800 | 17,000 | 45,400 | 84,000 |
| 14.5 - 28.5 | 3/3/93 | | 16.23 | 83.68 | NA | 16,000 | 1,600 | 1,900 | 4,300 | 23,800 | 54,000 |
| ft bls) | 6/23/93 | 96.73 | 16.86 | 79.87 | NA | 18,000 | 1,100 | 1,400 | 3,700 | 24,200 | 30,000 |
| | 9/30/93 | | 18.04 | 78.69 | NA | 10,000 | 440 | 940 | 1,700 | 13,080 | 33,000 |
| | 2/6/94 | | 18.15 | 78.58 | NA | 18,000 | 1,600 | 4,700 | 12,000 | 36,300 | 64,000 |
| | 5/2/94 | | 17.26 | 79.47 | NA | 2,100 | 29 | 490 | 520 | 3,139 | 7,200 |
| | 7/1/94 | | 17.60 | 79.13 | NA | 3,700 | 150 | 550 | 12,000 | 16,400 | 13,000 |
| | 9/20/94 | | 20.59 | 76.14 | NA | 3,100 | 75 | 440 | 870 | 4,485 | 10,000 |
| | 12/5/94 | | 17.83 | 78.90 | NA | 3,700 | 87 | 520 | 950 | 5,257 | 87,000 |
| | 3/15/95 | | 14.43 | 82.30 | NA | 56 | 2 | 12 | 47 | 117 | 290 |
| | 6/16/95 | | 14.56 | 82.17 | NA | 530 | 12 | 90 | 160 | 792 | 2,000 |
| | 9/22/95 | | 16.05 | 80.68 | NA | 1,400 | 9 | 75 | 110 | 1,594 | 1,600 |
| | 12/11/95 | | 16.74 | 79.99 | NA | 1,700 | <25 | 183 | 270 | 2,153 | 6,330 |
| | 2/13/96 | | 13.38 | 83.35 | NA | 8 | 3 | <1 | 10.6 | 22 | 140 |
| | 6/14/96 | | 13.41 | 83.32 | 240 | 6,900 | 150 | 960 | 1,500 | 9,510 | 24,000 |
| | 9/23/96 | | 14.92 | 81.81 | 270 | 5,200 | 860 | 700 | 1,100 | 7,860 | 20,000 |
| | **12/4/96** | | **15.61** | **81.12** | **280** | **3,100** | **64** | **610** | **1,200** | **4,974** | **17,000** |
| | | | | | | | | | | | |

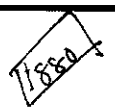

**Table 1**
**Summary of Groundwater Elevation Data and Analytical Results**
**Former E-Z Serve Facility #100877**
**525 West "A" Street, Hayward, California**

| Well ID | Date Sampled | Well Elevation (feet) | Depth to Water (feet) | Groundwater Elevation (feet) | MTBE (ug/l) | Benzene (ug/l) | Toluene (ug/l) | Ethylbenzene (ug/l) | Xylenes (ug/l) | TVOA (ug/l) | TPHg (ug/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **MW-1A** (screened interval not avail.) | 6/23/93 | 97.59 | 17.80 | 80.00 | NA - 0.21 ft of free product | | | | | | |
| | 2/6/94 | | 18.89 | 78.70 | NA | 1,700 | 42 | 1000 | 400 | 3,142 | 8,900.00 |
| | 5/2/94 | | 18.35 | 79.24 | NA - 0.09 ft of free product | | | | | | |
| | 7/1/94 | | 18.45 | 79.14 | NA | 1,100 | <1 | 920 | 1,100 | 3,120 | 12,000 |
| | 9/20/94 | | 21.72 | 75.87 | NA - 0.22 ft of free product | | | | | | |
| | 12/5/94 | | 18.87 | 78.72 | NA - 0.07 ft of free product | | | | | | |
| | 3/14/95 | | 15.55 | 82.04 | NA - 0.05 ft of free product | | | | | | |
| | 6/15/95 | | 15.63 | 81.96 | NA - 0.03 ft of free product | | | | | | |
| | 9/22/95 | | 17.05 | 80.54 | NA | 180 | 9.2 | 130 | 310 | 629 | 2,000 |
| | 12/11/95 | | 15.72 | 81.87 | NA | 310 | 26 | 350 | 850 | 1,536 | 10,100 |
| | 2/13/96 | | 14.35 | 83.24 | NA | 830 | 70 | 730 | 2,300 | 3,930 | 20,700 |
| | 6/14/96 | | 14.28 | 83.31 | NA - 0.01 ft of free product | | | | | | |
| | 9/23/96 | | 16.00 | 81.59 | NA - 0.01 ft of free product | | | | | | |
| | **12/4/96** | | **16.55** | **81.04** | **130** | **420** | **140** | **1,000** | **3,500** | **5,060** | **52,000** |
| | | | | | | | | | | | |

**Table 1**
**Summary of Groundwater Elevation Data and Analytical Results**
**Former E-Z Serve Facility #100877**
**525 West "A" Street, Hayward, California**

| Well ID | Date Sampled | Well Elevation (feet) | Depth to Water (feet) | Groundwater Elevation (feet) | MTBE (ug/l) | Benzene (ug/l) | Toluene (ug/l) | Ethylbenzene (ug/l) | Xylenes (ug/l) | TVOA (ug/l) | TPHg (ug/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **MW-2** | 2/5/92 | 101.45 | 22.35 | 79.10 | NA | 13,000 | 4,700 | 820 | 1,300 | 19,820 | 67,000 |
| (screened | 9/11/92 | | 21.67 | 79.78 | NA | 9,000 | 1,400 | 1,200 | 8,400 | 20,000 | 57,000 |
| interval | 12/22/92 | | 21.39 | 80.06 | NA | 9,900 | 350 | 2,000 | 4,100 | 16,350 | 31,000 |
| 15 - 29 | 3/3/93 | | 17.75 | 83.70 | NA | 5,100 | 1,300 | 720 | 1,900 | 9,020 | 17,000 |
| ft bls) | 6/23/93 | 98.06 | 18.42 | 79.64 | NA | 23,000 | 1,500 | 4,500 | 17,000 | 46,000 | 60,000 |
| | 9/30/93 | | 19.63 | 78.43 | NA | 12,000 | 780 | 1,500 | 6,500 | 20,780 | 38,000 |
| | 2/6/94 | | 19.61 | 78.45 | NA | 8,900 | 450 | 2,000 | 5,500 | 16,850 | 34,000 |
| | 5/2/94 | | 19.84 | 78.22 | NA | 3,800 | 260 | 1,100 | 3,500 | 8,660 | 18,000 |
| | 7/1/94 | | 19.18 | 78.88 | NA | 3,700 | 510 | 870 | 2,600 | 7,680 | 18000 |
| | 9/20/94 | | 22.17 | 75.89 | NA | 4,500 | 300 | 1,200 | 4,000 | 10,000 | 19000 |
| | 12/5/94 | | 19.37 | 78.69 | NA | 4,700 | 340 | 1,400 | 4,500 | 10,940 | 22,000 |
| | 3/15/95 | | 16.89 | 81.17 | NA | 5,600 | 350 | 1,900 | 6,300 | 14,150 | 29,000 |
| | 6/16/95 | | 16.79 | 81.27 | NA | 4,400 | 270 | 1,600 | 4,700 | 10,970 | 27,000 |
| | 9/22/95 | | 17.54 | 80.52 | NA | 6,700 | 390 | 1,800 | 6,400 | 15,290 | 3,700 |
| | 12/11/95 | | 17.33 | 80.73 | NA | 3,500 | 190 | 1,500 | 3,700 | 8,890 | 35,400 |
| | 2/13/96 | | 14.89 | 83.17 | NA | 4,800 | 190 | 1,100 | 3,500 | 9,590 | 30,500 |
| | 6/14/96 | | 15.04 | 83.02 | 430 | 3,300 | 120 | 1,500 | 3,600 | 8,520 | 23,000 |
| | 9/23/96 | | 16.61 | 81.45 | 860 | 3,700 | 150 | 1,000 | 4,300 | 9,150 | 29,000 |
| | **12/4/96** | | **17.19** | **80.87** | **690** | **3,800** | **140** | **2,000** | **5,100** | **11,040** | **31,000** |
| | | | | | | | | | | | |

**Table 1**
**Summary of Groundwater Elevation Data and Analytical Results**
**Former E-Z Serve Facility #100877**
**525 West "A" Street, Hayward, California**

| Well ID | Date Sampled | Well Elevation (feet) | Depth to Water (feet) | Groundwater Elevation (feet) | MTBE (ug/l) | Benzene (ug/l) | Toluene (ug/l) | Ethylbenzene (ug/l) | Xylenes (ug/l) | TVOA (ug/l) | TPHg (ug/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **MW-3** | 2/5/92 | 101.50 | 21.85 | 79.65 | NA | 1,100 | <1 | <1 | <1 | 1,100 | 5,900 |
| (screened | 9/11/92 | | 21.13 | 80.37 | NA | 1,200 | 180 | 550 | 1,100 | 3,030 | 9,400 |
| interval | 12/22/92 | | 20.88 | 80.62 | NA | 2,800 | 190 | 850 | 1,600 | 5,440 | 12,000 |
| 15 - 29 | 3/3/93 | | 17.29 | 84.21 | NA | 2,200 | 360 | 570 | 900 | 4,030 | 11,000 |
| ft bls) | 6/23/93 | 97.66 | 17.88 | 79.78 | NA | 12,000 | 2,700 | 1,300 | 3,500 | 19,500 | 33000 |
| | 9/30/93 | | 19.18 | 78.48 | NA | 1,100 | 160 | 690 | 670 | 2,620 | 4300 |
| | 2/6/94 | | 19.21 | 78.45 | NA | 4,800 | 430 | 1,500 | 2,900 | 9,630 | 20000 |
| | 5/2/94 | | 18.30 | 79.36 | NA | 680 | 48 | 310 | 540 | 1,578 | 4200 |
| | 7/1/94 | | 18.63 | 79.03 | NA | 600 | 63 | 240 | 470 | 1,373 | 4600 |
| | 9/20/94 | | 21.64 | 76.02 | NA | 2,200 | 130 | 670 | 930 | 3,930 | 8200 |
| | 12/6/94 | | 19.15 | 78.51 | NA | 640 | 34 | 290 | 480 | 1,444 | 4000 |
| | 3/15/95 | | 16.61 | 81.05 | NA | 980 | 47 | 370 | 780 | 2,177 | 4300 |
| | 6/16/95 | | 16.58 | 81.08 | NA | 520 | 20 | 280 | 430 | 1,250 | 3,300 |
| | 9/22/95 | | 17.02 | 80.64 | NA | 2,100 | <100 | 840 | 1,600 | 4,540 | 3,800 |
| | 12/11/95 | | 17.79 | 79.87 | NA | 610 | 22 | 350 | 550 | 1,532 | 6,920 |
| | 2/13/96 | | 14.38 | 83.28 | NA | 1,000 | 33 | 500 | 870 | 2,403 | 28,900 |
| | 6/14/96 | | 14.39 | 83.27 | 15 | 580 | 21 | 490 | 580 | 1,671 | 6,000 |
| | 9/23/96 | | 16.11 | 81.55 | 80 | 950 | 20 | 700 | 780 | 2,450 | 10,000 |
| | **12/4/96** | | **16.63** | **81.03** | **67** | **1,100** | **25** | **1,000** | **1,100** | **3,225** | **13,000** |
| | | | | | | | | | | | |

**Table 1**
**Summary of Groundwater Elevation Data and Analytical Results**
**Former E-Z Serve Facility #100877**
**525 West "A" Street, Hayward, California**

| Well ID | Date Sampled | Well Elevation (feet) | Depth to Water (feet) | Groundwater Elevation (feet) | MTBE (ug/l) | Benzene (ug/l) | Toluene (ug/l) | Ethylbenzene (ug/l) | Xylenes (ug/l) | TVOA (ug/l) | TPHg (ug/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **MW-4** | 2/5/92 | 100.50 | 21.31 | 79.19 | NA | 2,700 | 410 | <1 | 3,400 | 6,510 | 16,000 |
| (screened | 9/11/92 | | 20.62 | 79.88 | NA | 7,600 | 1,600 | 1,400 | 4,100 | 14,700 | 43,000 |
| interval | 12/22/92 | | 20.37 | 80.13 | NA | 8,800 | 1,200 | 1,500 | 3,700 | 15,200 | 29,000 |
| 15 - 29 | 3/3/93 | | 16.78 | 83.72 | NA | 5,000 | 1,500 | 680 | 1,700 | 8,880 | 17,000 |
| ft bls) | 6/23/93 | 97.10 | 17.45 | 79.65 | NA | 3,000 | 120 | 560 | 790 | 4,470 | 5,700 |
| | 9/30/93 | | 18.64 | 78.46 | NA | 7,000 | 2,100 | 970 | 2,600 | 12,670 | 21,000 |
| | 2/6/94 | | 18.59 | 78.51 | NA | 7,200 | 1,600 | 990 | 3,200 | 12,990 | 24,000 |
| | 5/2/94 | | 17.81 | 79.29 | NA | 2,200 | 440 | 470 | 1,200 | 4,310 | 10,000 |
| | 7/1/94 | | 18.13 | 78.97 | NA | 2,000 | 370 | 350 | 930 | 3,650 | 8,200 |
| | 9/20/94 | | 21.13 | 75.97 | NA | 2,000 | 360 | 380 | 1,000 | 3,740 | 7,200 |
| | 12/6/94 | | 18.36 | 78.74 | NA | 2,300 | 400 | 440 | 1,100 | 4,240 | 9,000 |
| | 3/15/95 | | 14.89 | 82.21 | NA | 4,400 | 600 | 770 | 2,660 | 8,430 | 15,000 |
| | 6/16/95 | | 14.68 | 82.42 | NA | 5,600 | 490 | 890 | 2,300 | 9,280 | 19,000 |
| | 9/22/95 | | 16.60 | 80.50 | NA | 9,300 | 1,000 | 1,200 | 3,600 | 15,100 | 3,600 |
| | 12/11/95 | | 17.27 | 79.83 | NA | 1,600 | 57 | 390 | 510 | 2,557 | 6,720 |
| | 2/13/96 | | 13.88 | 83.22 | NA | 7,200 | 500 | 650 | 2,000 | 10,350 | 11,700 |
| | 6/14/96 | | 13.92 | 83.18 | 720 | 4,100 | 720 | 690 | 1,800 | 7,310 | 17,000 |
| | 9/23/96 | | 15.56 | 81.54 | 2,100 | 7,400 | 540 | 1,500 | 2,800 | 12,240 | 32,000 |
| | **12/4/96** | | **16.11** | **80.99** | **1,900** | **7,800** | **140** | **1,200** | **1,200** | **10,340** | **23,000** |
| | | | | | | | | | | | |

**Table 1**
**Summary of Groundwater Elevation Data and Analytical Results**
**Former E-Z Serve Facility #100877**
**525 West "A" Street, Hayward, California**

| Well ID | Date Sampled | Well Elevation (feet) | Depth to Water (feet) | Groundwater Elevation (feet) | MTBE (ug/l) | Benzene (ug/l) | Toluene (ug/l) | Ethylbenzene (ug/l) | Xylenes (ug/l) | TVOA (ug/l) | TPHg (ug/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **MW-5** | 2/5/92 | 100.48 | 20.93 | 79.55 | NA | 7,900 | 5,000 | 2,900 | 1,800 | 17,600 | 78,000 |
| (screened | 9/11/92 | | 20.27 | 80.21 | NA | 4,700 | 400 | 1,400 | 4,100 | 10,600 | 49,000 |
| interval | 12/22/92 | | 19.99 | 80.49 | NA | 8,600 | 340 | 2,200 | 4,800 | 15,940 | 34,000 |
| 15 - 29 | 3/3/93 | | 16.49 | 83.99 | NA | 7,500 | 640 | 1,300 | 3,400 | 12,840 | 22,000 |
| ft bls) | 6/23/93 | 96.73 | 17.02 | 79.71 | NA | 5,800 | 120 | 1,100 | 2,100 | 9,120 | 15,000 |
| | 9/30/93 | | 18.25 | 78.48 | NA | 7,600 | 410 | 1,000 | 4,400 | 13,410 | 25,000 |
| | 2/6/94 | | 18.26 | 78.47 | NA | 6,000 | 180 | 2,000 | 5,900 | 14,080 | 23,000 |
| | 5/2/94 | | 17.50 | 79.23 | NA | 1,300 | 29 | 440 | 770 | 2,539 | 8,000 |
| | 7/1/94 | | 17.79 | 78.94 | NA | 1,700 | 97 | 600 | 1,400 | 3,797 | 10,000 |
| | 9/20/94 | | 20.77 | 75.96 | NA | 1,600 | 54 | 650 | 1,400 | 3,704 | 8,400 |
| | 12/5/94 | | 18.02 | 78.71 | NA | 1,700 | 56 | 670 | 1,600 | 4,026 | 10,000 |
| | 3/15/95 | | 14.70 | 82.03 | NA | 1,800 | <50 | 620 | 1,400 | 3,820 | 5,300 |
| | 6/16/95 | | 14.82 | 81.91 | NA | 1,100 | 11 | 180 | 320 | 1,611 | 5,300 |
| | 9/22/95 | | 16.19 | 80.54 | NA | 1,400 | 11 | 180 | 310 | 1,901 | 4,000 |
| | 12/11/95 | | 16.92 | 79.81 | NA | 2,800 | <100 | 350 | 710 | 3,860 | 8,190 |
| | 2/13/96 | | 13.57 | 83.16 | NA | 1,200 | <10 | 270 | 360 | 1,830 | 1,200 |
| | 6/14/96 | | 13.55 | 83.18 | 110 | 2,100 | 33 | 570 | 1,000 | 3,703 | 11,000 |
| | 9/23/96 | | 15.19 | 81.54 | 100 | 1,800 | 11 | 470 | 510 | 2,791 | 9,800 |
| | **12/4/96** | | **15.78** | **80.95** | **70** | **2,200** | **9** | **550** | **430** | **3,189** | **10,000** |
| | | | | | | | | | | | |

**Table 1**
**Summary of Groundwater Elevation Data and Analytical Results**
**Former E-Z Serve Facility #100877**
**525 West "A" Street, Hayward, California**

| Well ID | Date Sampled | Well Elevation (feet) | Depth to Water (feet) | Groundwater Elevation (feet) | MTBE (ug/l) | Benzene (ug/l) | Toluene (ug/l) | Ethylbenzene (ug/l) | Xylenes (ug/l) | TVOA (ug/l) | TPHg (ug/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **MW-6** | 2/5/92 | 100.97 | 21.29 | 79.68 | NA | 5,400 | 3,500 | 3,600 | 10,000 | 22,500 | 51,000 |
| (screened | 9/11/92 | | 20.56 | 80.41 | NA | 2,500 | 830 | 1,400 | 2,300 | 7,030 | 24,000 |
| interval | 12/22/92 | | 20.31 | 80.66 | NA | 5,100 | 630 | 2,000 | 3,100 | 10,830 | 23,000 |
| 15 - 29 | 3/3/93 | | 16.83 | 84.14 | NA | 4,400 | 820 | 1,400 | 2,400 | 9,020 | 18,000 |
| ft bls) | 6/23/93 | 97.09 | 17.30 | 79.79 | NA | 4,600 | 850 | 2,700 | 3,400 | 11,550 | 18,000 |
| | 9/30/93 | | 19.05 | 78.04 | NA - 0.03 ft of free product | | | | | | |
| | 2/6/94 | | 18.55 | 78.54 | NA | 4,600 | 690 | 2,100 | 2,500 | 9,890 | 20,000 |
| | 5/2/94 | | 17.74 | 79.35 | NA | 930 | 54 | 610 | 240 | 1,834 | 5,300 |
| | 7/1/94 | | 18.09 | 79.00 | NA | 1,500 | 160 | 850 | 690 | 3,200 | 10,000 |
| | 9/20/94 | | 21.05 | 76.04 | NA | 2,000 | 140 | 1,200 | 760 | 4,100 | 11,000 |
| | 12/5/94 | | 18.33 | 78.76 | NA | 1,300 | 87 | 980 | 610 | 2,977 | 8,600 |
| | 3/15/95 | | 14.91 | 82.18 | NA | 1,600 | 110 | 1,000 | 1,000 | 3,710 | 9,800 |
| | 6/16/95 | | 15.11 | 81.98 | NA | 1,100 | 78 | 1,000 | 550 | 2,728 | 9,200 |
| | 9/22/95 | | 16.44 | 80.65 | NA | 1,700 | 110 | 1,200 | 760 | 3,770 | 3,000 |
| | 12/11/95 | | 17.20 | 79.89 | NA | 990 | 110 | 1,000 | 520 | 2,620 | 13,200 |
| | 2/13/96 | | 13.89 | 83.20 | NA | 1,100 | 48 | 750 | 560 | 2,458 | 12,500 |
| | 6/14/96 | | 13.80 | 83.29 | 61 | 800 | 99 | 1,500 | 730 | 3,129 | 14,000 |
| | 9/23/96 | | 15.50 | 81.59 | 51 | 520 | 55 | 930 | 350 | 1,855 | 12,000 |
| | **12/4/96** | | **16.06** | **81.03** | **130** | **390** | **25** | **680** | **170** | **1,265** | **11,000** |
| | | | | | | | | | | | |

**Table 1**
**Summary of Groundwater Elevation Data and Analytical Results**
**Former E-Z Serve Facility #100877**
**525 West "A" Street, Hayward, California**

| Well ID | Date Sampled | Well Elevation (feet) | Depth to Water (feet) | Groundwater Elevation (feet) | MTBE (ug/l) | Benzene (ug/l) | Toluene (ug/l) | Ethylbenzene (ug/l) | Xylenes (ug/l) | TVOA (ug/l) | TPHg (ug/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **MW-7** | 6/23/93 | 97.44 | 17.87 | 79.57 | NA | 4,200 | 71 | 4,400 | 5,600 | 14,271 | 29,000 |
| (screened | 9/30/93 | | 18.94 | 78.50 | NA | 3,200 | 71 | 2,800 | 3,400 | 9,471 | 30,000 |
| interval | 2/6/94 | | 19.11 | 78.33 | NA - 0.06 ft of free product | | | | | | |
| 10 - 29 | 5/2/94 | | 18.11 | 79.33 | NA | 630 | 13 | 660 | 400 | 1,703 | 5,700 |
| ft bls) | 7/1/94 | | **18.72** | 78.72 | NA | 180 | 99 | 160 | 520 | 959 | 3,100 |
| | 9/20/94 | | 21.41 | 76.03 | NA | 540 | 6 | 750 | 730 | 2,026 | 6,100 |
| | 12/5/94 | | 18.66 | 78.78 | NA | 280 | <10 | 430 | 350 | 1,060 | 3,700 |
| | 3/14/95 | | 15.23 | 82.21 | NA | 290 | 4 | 26 | 296 | 616 | 1,900 |
| | 6/16/95 | | 15.17 | 82.27 | NA | 380 | 5 | 360 | 540 | 1,285 | 5,800 |
| | 9/21/95 | | 16.83 | 80.61 | NA | 110 | <1 | 220 | 220 | 550 | 4,020 |
| | 12/11/95 | | 17.61 | 79.83 | NA | 120 | 31 | 400 | 330 | 881 | 3,750 |
| | 2/14/96 | | 14.07 | 83.37 | NA | 190 | <5 | 190 | 280 | 660 | 4,500 |
| | 6/14/96 | | 14.26 | 83.18 | 11 | 85 | <2 | 470 | 200 | 755 | 4,400 |
| | 9/23/96 | | 15.94 | 81.50 | 15 | 76 | <0.5 | 420 | 270 | 766 | 6,300 |
| | **12/4/96** | | **16.43** | **81.01** | **22** | **67** | **<0.5** | **600** | **350** | **1,017** | **7,800** |
| **Duplicate** | **12/4/96** | | **16.43** | **81.01** | **30** | **68** | **<0.5** | **590** | **340** | **998** | **8,100** |
| | | | | | | | | | | | |

**Table 1**
**Summary of Groundwater Elevation Data and Analytical Results**
**Former E-Z Serve Facility #100877**
**525 West "A" Street, Hayward, California**

| Well ID | Date Sampled | Well Elevation (feet) | Depth to Water (feet) | Groundwater Elevation (feet) | MTBE (ug/l) | Benzene (ug/l) | Toluene (ug/l) | Ethylbenzene (ug/l) | Xylenes (ug/l) | TVOA (ug/l) | TPHg (ug/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **MW-8** | 6/23/93 | 97.61 | 17.64 | 79.97 | NA | 43 | 9 | 35 | 67 | 154 | 350 |
| (screened | 9/30/93 | | 18.85 | 78.76 | NA | 190 | 340 | 170 | 720 | 1,420 | 2,700 |
| interval | 2/6/94 | | 18.91 | 78.70 | NA | <1 | 1 | 1 | 2 | 4 | <100 |
| 10 - 29 | 5/2/94 | | 18.11 | 79.50 | NA | <1 | 3 | <1 | 7 | 10 | <100 |
| ft bls) | 7/1/94 | | 18.43 | 79.18 | NA | 18 | 48 | 19 | 37 | 122 | 300 |
| | 9/20/94 | | 21.43 | 76.18 | NA | <1 | <1 | <1 | <1 | NCD | <100 |
| | 12/5/94 | | 18.72 | 78.89 | NA | <0.5 | <0.5 | <0.5 | <0.5 | NCD | <50 |
| | 3/14/95 | | 14.83 | 82.78 | NA | <0.5 | <0.5 | <0.5 | 1 | 1 | <50 |
| | 6/16/95 | | 14.92 | 82.69 | NA | <0.5 | <0.5 | <0.5 | <0.5 | NCD | <50 |
| | 9/21/95 | | 16.52 | 81.09 | NA | 2.3 | 1.3 | 2.7 | 9 | 15 | <100 |
| | 12/11/95 | | 17.52 | 80.09 | NA | 1.3 | <1 | <1 | <3 | 1 | <100 |
| | 2/14/96 | | 14.27 | 83.34 | NA | <1 | <1 | <1 | <3 | NCD | <100 |
| | 6/14/96 | | 14.06 | 83.55 | <1 | <0.6 | <2 | 4 | <6 | 4 | <500 |
| | 9/23/96 | | 15.83 | 81.78 | <0.5 | <0.5 | 2.5 | 1.1 | <1.5 | 4 | <100 |
| | **12/4/96** | | * | * | * | * | * | * | * | * | * |
| | | | | | | | | | | | |

**Table 1**
**Summary of Groundwater Elevation Data and Analytical Results**
**Former E-Z Serve Facility #100877**
**525 West "A" Street, Hayward, California**

| Well ID | Date Sampled | Well Elevation (feet) | Depth to Water (feet) | Groundwater Elevation (feet) | MTBE (ug/l) | Benzene (ug/l) | Toluene (ug/l) | Ethylbenzene (ug/l) | Xylenes (ug/l) | TVOA (ug/l) | TPHg (ug/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **MW-9** | 6/23/93 | 95.41 | 15.94 | 79.47 | NA | 14,000 | 1,200 | 2,800 | 12,000 | 30,000 | 12,000 |
| (screened | 9/30/93 | | 17.05 | 78.36 | NA | 22,000 | 1,100 | 3,300 | 15,000 | 41,400 | 15,000 |
| interval | 2/6/94 | | 17.07 | 78.34 | NA | 10,000 | 460 | 2,100 | 7,500 | 20,060 | 7,500 |
| 10 - 29 | 5/2/94 | | 16.24 | 79.17 | NA | 5,400 | 270 | 1,300 | 4,700 | 11,670 | 4,700 |
| ft bls) | 7/1/94 | | 16.59 | 78.82 | NA | 2,100 | 120 | 450 | 1,300 | 3,970 | 1,300 |
| | 9/20/94 | | 19.61 | 75.80 | NA | 2,200 | 97 | 400 | 1,200 | 3,897 | 1,200 |
| | 12/5/94 | | 16.85 | 78.56 | NA | 2,700 | 130 | 530 | 1,600 | 4,960 | 1,600 |
| | 3/14/95 | | 14.18 | 81.23 | NA | 5,900 | 270 | 1,200 | 3,680 | 11,050 | 3,680 |
| | 6/15/95 | | 14.09 | 81.32 | NA | 2,500 | 130 | 670 | 1,800 | 5,100 | 1,800 |
| | 9/21/95 | | | 95.41 | NA - no access | | | | | | |
| | 12/11/95 | | 15.58 | 79.83 | NA | 2,100 | 140 | 550 | 1,600 | 4,390 | 12,200 |
| | 2/14/96 | | | 95.41 | NA - no access | | | | | | |
| | 6/14/96 | | | 95.41 | Destroyed | | | | | | |
| | 9/23/96 | | | 95.41 | Destroyed | | | | | | |
| | **12/4/96** | | * | * | * | * | * | * | * | * | * |
| | | | | | | | | | | | |

**Table 1**
**Summary of Groundwater Elevation Data and Analytical Results**
**Former E-Z Serve Facility #100877**
**525 West "A" Street, Hayward, California**

| Well ID | Date Sampled | Well Elevation (feet) | Depth to Water (feet) | Groundwater Elevation (feet) | MTBE (ug/l) | Benzene (ug/l) | Toluene (ug/l) | Ethylbenzene (ug/l) | Xylenes (ug/l) | TVOA (ug/l) | TPHg (ug/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **MW-10** | 6/23/93 | 97.11 | 17.39 | 79.72 | NA | 980 | 640 | 3,500 | 12,000 | 17,120 | 35,000 |
| (screened | 9/30/93 | | 18.58 | 78.53 | NA | 230 | 12 | 100 | 680 | 1,022 | 4,000 |
| interval | 2/6/94 | | 18.61 | 78.50 | NA | 69 | 12 | 220 | 120 | 421 | 2,000 |
| 10 - 29 | 5/2/94 | | 17.83 | 79.28 | NA | 16 | 6 | 85 | 62 | 169 | 710 |
| ft bls) | 7/1/94 | | 18.17 | 78.94 | NA | 52 | 43 | 120 | 210 | 425 | 2,000 |
| | 9/20/94 | | 21.15 | 75.96 | NA | 34 | 16 | 270 | 560 | 880 | 2,800 |
| | 12/5/94 | | 18.43 | 78.68 | NA | 30 | 13 | 260 | 430 | 733 | 2,700 |
| | 3/14/95 | | 15.93 | 81.18 | NA | 18 | 6 | 200 | 239 | 463 | 1,400 |
| | 6/15/95 | | 15.97 | 81.14 | NA | 14 | 4 | 140 | 98 | 256 | 1,600 |
| | 9/21/95 | | 16.48 | 80.63 | NA | 37 | 17 | 240 | 380 | 674 | 4,680 |
| | 12/11/95 | | 17.30 | 79.81 | NA | 2.8 | 1.3 | 36 | 19 | 59 | 670 |
| | 2/14/96 | | 14.02 | 83.09 | NA | <5 | <5 | 330 | 350 | 680 | 5,200 |
| | 6/14/96 | | 13.89 | 83.22 | <1 | <0.6 | <2 | 120 | <6 | 120 | 1,700 |
| | 9/23/96 | | 15.59 | 81.52 | 9 | 4 | 2.9 | 220 | 170 | 397 | 3,800 |
| | **12/4/96** | | **16.15** | **80.96** | **20** | **1.60** | **7.7** | **260** | **150** | **419.30** | **4,600** |
| | | | | | | | | | | | |

**Table 1**
**Summary of Groundwater Elevation Data and Analytical Results**
**Former E-Z Serve Facility #100877**
**525 West "A" Street, Hayward, California**

| Well ID | Date Sampled | Well Elevation (feet) | Depth to Water (feet) | Groundwater Elevation (feet) | MTBE (ug/l) | Benzene (ug/l) | Toluene (ug/l) | Ethylbenzene (ug/l) | Xylenes (ug/l) | TVOA (ug/l) | TPHg (ug/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **MW-11** | 2/10/95 | 92.68 | 11.80 | 80.88 | NA | 140 | 22 | 600 | 1,000 | 1,762 | 7,000 |
| (screened | 3/14/95 | | 13.96 | 78.72 | NA | 200 | 17 | 750 | 1,276 | 2,243 | 6,000 |
| interval | 6/15/95 | | 13.84 | 78.84 | NA | 450 | 63 | 1,600 | 2,200 | 4,313 | 13,000 |
| 5 - 25 ft bls) | 9/21/95 | | 13.13 | 79.55 | NA | 340 | 27 | 440 | 640 | 1,447 | 7,000 |
| | 12/11/95 | | 13.73 | 78.95 | NA | 770 | 89 | 1,800 | 2,500 | 5,159 | 12,600 |
| | 2/14/96 | | 10.42 | 82.26 | NA | 440 | 42 | 1,000 | 1,800 | 3,282 | 8,300 |
| | 6/14/96 | | 10.61 | 82.07 | 36 | 570 | 99 | 3,000 | 3500 | 7,169 | 21,000 |
| | 9/23/96 | | 12.29 | 80.39 | 40 | 55 | 81 | 3,000 | 3500 | 6,636 | 27,000 |
| | **12/4/96** | | * | * | * | * | * | * | * | * | * |
| | | | | | | | | | | | |

**Table 1**
**Summary of Groundwater Elevation Data and Analytical Results**
**Former E-Z Serve Facility #100877**
**525 West "A" Street, Hayward, California**

| Well ID | Date Sampled | Well Elevation (feet) | Depth to Water (feet) | Groundwater Elevation (feet) | MTBE (ug/l) | Benzene (ug/l) | Toluene (ug/l) | Ethylbenzene (ug/l) | Xylenes (ug/l) | TVOA (ug/l) | TPHg (ug/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **MW-12** (screened interval 10 - 30 ft bls) | 2/10/95 | 99.03 | 16.30 | 82.73 | NA | <0.5 | <0.5 | <0.5 | <0.5 | NCD | <50 |
| | 3/14/95 | | 15.69 | 83.34 | NA | <0.5 | <0.5 | <0.5 | <0.5 | NCD | <50 |
| | 6/15/95 | | 15.55 | 83.48 | NA | <0.5 | <0.5 | <0.5 | <0.5 | NCD | <50 |
| | 9/21/95 | | 17.58 | 81.45 | NA | <1 | <1 | <1 | <3 | NCD | <100 |
| | 12/11/95 | | 18.36 | 80.67 | NA | <1 | 1 | 1 | 1.5 | 3.50 | <100 |
| | 2/14/96 | | 14.78 | 84.25 | NA | <1 | <1 | <1 | <3 | NCD | <100 |
| | 6/14/96 | | 14.99 | 84.04 | <1 | <0.6 | <2 | <1 | <6 | NCD | <500 |
| | 9/23/96 | | 16.67 | 82.36 | <0.5 | <0.5 | 1.6 | <0.5 | <1.5 | 1.60 | <100 |
| | **12/4/96** | | **17.16** | **81.87** | **<0.5** | **3.20** | **<0.5** | **1.90** | **3.40** | **8.50** | **<100** |
| | | | | | | | | | | | |

**Table 1**
**Summary of Groundwater Elevation Data and Analytical Results**
**Former E-Z Serve Facility #100877**
**525 West "A" Street, Hayward, California**

| Well ID | Date Sampled | Well Elevation (feet) | Depth to Water (feet) | Groundwater Elevation (feet) | MTBE (ug/l) | Benzene (ug/l) | Toluene (ug/l) | Ethylbenzene (ug/l) | Xylenes (ug/l) | TVOA (ug/l) | TPHg (ug/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **MW-13** (screened interval 10 - 30 ft bls) | 2/10/95 | 96.80 | 14.45 | 82.35 | NA | <0.5 | <0.5 | <0.5 | <0.5 | NCD | <50 |
| | 3/14/95 | | 15.81 | 80.99 | NA | <0.5 | <0.5 | <0.5 | <0.5 | NCD | <50 |
| | 6/15/95 | | 15.79 | 81.01 | NA | <0.5 | <0.5 | <0.5 | <0.5 | NCD | <50 |
| | 9/21/95 | | 15.50 | 81.30 | NA | 2.6 | 2.2 | <1 | 9.4 | 14.20 | <100 |
| | 12/11/95 | | 16.60 | 80.20 | NA | <1 | <1 | 1 | <3 | 1.00 | <100 |
| | 2/14/96 | | 12.92 | 83.88 | NA | <1 | <1 | <1 | 7.3 | 7.30 | <100 |
| | 6/14/96 | | 12.91 | 83.89 | <1 | <0.6 | <2 | <1 | <6 | NCD | <500 |
| | 9/23/96 | | 14.60 | 82.20 | <0.5 | <0.5 | 0.8 | 1 | <1.5 | 1.80 | <100 |
| | **12/4/96** | | * | * | * | * | * | * | * | * | * |
| | | | | | | | | | | | |

# Table 1
## Summary of Groundwater Elevation Data and Analytical Results
## Former E-Z Serve Facility #100877
## 525 West "A" Street, Hayward, California

| Well ID | Date Sampled | Well Elevation (feet) | Depth to Water (feet) | Groundwater Elevation (feet) | MTBE (ug/l) | Benzene (ug/l) | Toluene (ug/l) | Ethylbenzene (ug/l) | Xylenes (ug/l) | TVOA (ug/l) | TPHg (ug/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **MW-14** | 2/10/95 | 99.01 | 16.28 | 82.73 | NA | 42 | 8 | 740 | 2100.0 | 2,890.00 | 12,000 |
| (screened | 3/14/95 | | 14.87 | 84.14 | NA | 6 | 2 | 36 | 298.0 | 342.00 | 1,400 |
| interval | 6/15/95 | | 14.72 | 84.29 | NA | 8 | <0.5 | 6 | 26.0 | 40.00 | 660 |
| 10 - 30 ft bls) | 9/21/95 | | 17.61 | 81.40 | NA | 25 | 15 | 280 | 310.0 | 630.00 | 4,430 |
| | 12/11/95 | | 18.30 | 80.71 | NA | 6.8 | 1 | 120 | 150.0 | 277.80 | 1,330 |
| | 2/14/96 | | 14.87 | 84.14 | NA | <1 | <1 | 3.1 | 3.3 | 6.40 | <100 |
| | 6/14/96 | | 14.90 | 84.11 | 3 | 19 | 8 | 240 | 80 | 347.00 | 1,900 |
| | 9/23/96 | | 16.67 | 82.34 | 9.6 | 2.8 | <0.5 | 690 | 96 | 788.80 | 6,400 |
| | **12/4/96** | | **17.06** | **81.95** | **30.0** | **6.3** | **<0.5** | **1,100** | **400** | **1,506.30** | **9,500** |

NOTE:

TPHg = Total Petroleum Hydrocarbons as gasoline (EPA Method 8015 - GRO)

MTBE = Methyl Tertiary Butyl Ether (EPA Method 8020)

TVOA = Total Volatile Organics (Sum of Benzene, Toluene, Ethylbenzene and total Xylenes.)

NA = Not Analyzed for this constituent

NCD = No component detected

* = Information not available

Historical Information obtained for the previous consultant and is not guaranteed by Brown & Root Environmental.

# APPENDIX A

BRE STANDARD OPERATING PROCEDURES
FOR WELL PURGING AND SAMPLING

# BROWN & ROOT ENVIRONMENTAL
# CALIFORNIA

## STANDARD OPERATING PROCEDURE
## for
## *GROUNDWATER SAMPLING*

**OBJECTIVE :**
The purpose of this SOP is to provide a concise guideline for the proper collection of groundwater samples. Implementation of the sampling procedures has a significant effect on the quality of the analytical data.

Sampling of existing monitoring wells and newly installed monitoring wells will consist of the following seven activities :

- Measurement of depth to water level and total depth of the well ( to calculate well volume), if the total depth is not provided;
- Decontamination of sampling equipment;
- Evacuation of static water (purging);
- Measurement and recording of groundwater temperature, pH, and specific conductance;
- Collection of the sample;
- Sample preservation and;
- Sample handling and transportation to the laboratory.

**DECONTAMINATION :**
All sampling devices and monitoring equipment must be properly decontaminated prior to use. Equipment decontamination must be documented in the logbook. The decontamination process will consist of the following activities:

- Alconox and tap water wash;
- Tap water rinse;
- Reagent Grade Methanol rinse (the equipment shall be thoroughly wetted with Methanol);
- Analyte-free water rinse;
- Air dry.

**WATER LEVEL MEASUREMENTS :**

A complete round of water level measurements must be collected prior to any purging or sampling activities. Water level measurements, using an electronic water level indicator, should be taken to the nearest 0.01 foot. Where possible water level measurements shall be taken on the North Side of the monitoring well at the top of the casing, unless a measurement point has been previously established.

**PURGING STATIC WATER :**

- All information concerning the purging of static water including calculations must be recorded for each well. The type of equipment used to purge the well must be described in the logbook. If a pump is utilized information concerning the pump type and flow-rate must be included in the logbook.

- When a bailer is used for purging and/or sampling activities it must be lowered gently into the well such that the formation waters are disturbed as little as possible. It is very important that the turbidity of the sample not be increased by improper purging and/or sampling techniques.

- A minimum of three well volumes of the standing water column will be purged from the well prior to the collection of samples. Monitoring well purging will continue until groundwater temperature, pH, and specific conductance has stabilized for three measurements each following the removal of one well volume. If five well volumes are removed then, only one set of water quality measurements is required on the final purge volume. No more than five wells volumes shall be removed during purging activities. Over purging the well may result in the collection of non-representative groundwater samples.

- If the well does not recover quickly enough to permit the removal of three well volumes, the well will be pumped or bailed dry and sampled immediately following sufficient recovery. Generally, bailing the well dry once is adequate. Purging will be performed utilizing a properly decontaminated stainless steel or Teflon bailer or the appropriate pump.

Utilization of a submersible pump is the preferable method of purging as repeatedly lowering the bailer into the monitoring well may oxygenate the formation waters and change the chemistry of the groundwater.

**LANYARDS :**

- Lanyards may be disposable (braided or monofilament nylon) or reusable ( stainless steel Teflon coated).

- A disposable lanyard must be changed for each monitor well. But the same lanyard may used for purging and sampling operations without decontamination between purging sampling activities.

- Reusable lanyards shall be decontaminated between monitoring wells but do not require between purging and sampling operations.

- Lanyards must never come in contact with the ground or other surface which may contaminate the lanyard.

**SAMPLE COLLECTION ORDER :**

Samples shall be collected from the least to the most contaminated sampling locations within a site. This information can be obtained from historical data, the Site Manager, or OVA readings at the site.

Unless field conditions justify other sampling regimens, samples shall be collected in the following order :

a. Volatile Organic Contaminants (VOCs)
b. Extractable Organics [ includes Total Recoverable Petroleum Hydrocarbons (TRPH), & Grease, Pesticides and Herbicides];
c. Total Metals;
d. Dissolved Metals;
e. Microbiological;
f. Inorganics (including Nutrients, Demands and Physical Properties); and
g. Radionuclides.

**SAMPLE PRESERVATION :**

Samples must be preserved with the appropriate preservative and maintained on ice. A laboratory certified to perform hazardous waste testing by the State of California

Department of Health Services (DOHS) will dispatch prepreserved sample containers for collection of samples. It is essential that the samples be maintained at 4 degrees centigrade until delivery to the laboratory facility. A notation must be made on the Chain of Custody form (COC) as well as in the logbook concerning sample preservation.

**SAMPLE HANDLING :**

It is critical that proper custody procedures be followed throughout all phases of sample collection and handling. Some specific points of concern are as follows: The samples from a particular site must never be commingled with samples from another site. Samples from several sites must never be combined in the same sample cooler. Each sample group must also be under separate documentation ( i.e., A COC must be generated for each site and for each sampling event). The Site Manager as well as the individual who releases the samples to the transporter must follow up to see if the samples were received at the laboratory facility.

**QUALITY ASSURANCE QUALITY CONTROL :**

- Trip Blanks will be utilized to verify that handling and transportation activities of the empty sample containers and collected samples has not contaminated the groundwater samples. Trip blanks will be prepared and dispatched by the analyzing Laboratory. Trip blanks will accompany the empty sample containers through sampling and return shipment of samples to the Laboratory.

- Equipment Blanks will be collected, in field, to assess the completeness of decontamination procedures for precleaned equipment and field cleaned equipment. Equipment blanks will consist of pouring analyte-free water over decontaminated sampling equipment and collecting the rinsate into the appropriate prepreserved containers.

- Duplicates will be collected to assess the representativeness and variability inherent in the sampling process. They shall be obtained by DUPLICATING (simultaneously or in rapid succession) the entire sample acquisition technique that was used to obtain the first sample.

**DOCUMENTATION :**

Documentation is an essential part of sample collection therefore field logbook, field forms, sample labels, and COC records must be complete and accurate. At a minimum, the following information must be included in the logbook :

- Equipment used to purge the well; include pump type and flow-rate if applicable.

- Volume of water purged from the well.

- Complete description of the decontamination procedures used to clean the sampling equipment. If the equipment was pre-cleaned at the warehouse or laboratory the lot associated with this cleaning must be recorded in the logbook.

- The source of the analyte free water utilized on site. Include any lot numbers or batch numbers in the logbook.

- Note which well was sampled using the equipment blank bailer.

- Any observable physical characteristics of the groundwater (e.g., color, sheen, odor,) as it is being sampled.

- Sample temperature, pH, and specific conductance will be recorded for each sample.

- Weather conditions (e.g., air temperature, wind conditions, recent heavy rainfall, conditions) at the time of sampling will be recorded.

- The exact time of sample collection and the person who collected the sample.

- If any field forms are utilized the forms must be referenced in the logbook. For example following should be written in the logbook to reference a form : Refer to the water quality sheets for information concerning.....

**SAMPLE IDENTIFICATION :**
Sample nomenclature must be unique and must always include the date of sample collection. All samples must be identified utilizing the following format :

project #/ sample id/ date (e.g. MJ50/MW-3/122094, MJ53/INF/122094, etc.)

For example, a sample collected for project site MJ50 for monitoring well MW-3 on December 20, 1994 would have the following sample id : **MJ50-MW-3-122094.**

**CONTAINMENT AND DISPOSAL OF PURGE WATER :**
Purge water will be collected into DOT 17-H 55 gallon drums. The drums will be transported to an appropriate treatment facility and properly disposed of. Drum removal and disposal practices shall be thoroughly documented.

# APPENDIX B

WELL PURGING AND SAMPLING
DOCUMENTATION LOGS

# BROWN & ROOT ENVIRONMENTAL

## GROUNDWATER SAMPLE COLLECTION RECORD

| | | | |
|---|---|---|---|
| **Site Name:** | E-Z Serve #100877 | **BRE Project No.:** | MY40 |
| **Location:** | 525 West "A" Street, Hayward, CA | | |
| **Sampler(s):** | Terry Palmer/Arnold Lamb | **Date:** | 12/4/96 |
| **Weather:** | Clear ~57 deg. F | **Purge Method:** | 2" Grundfros Pump |

| Sample I.D. | Dia. | DTW | TD | Time | Purge Vol. | Temp. | pH | Cond. | Description |
|---|---|---|---|---|---|---|---|---|---|
| MY40\MW-1 | 4" | 15.61 | 32.10 | 12:55 | 12 gal. | 20 c | 6.20 | * | clear |
| | | | | 1:04 | 30 gal. | 20 c | 6.10 | * | clear |
| | | | | 1:10 | 60 gal. | 20 c | 6.10 | * | clear |
| MY40/MW-1A | 2" | 16.55 | 28.40 | 2:41 | 3 gal. | 19 c | 6.50 | * | turbid |
| | | | | 2:46 | 8 gal. | 19 c | 6.40 | * | turbid |
| | | | | 2:50 | 15 gal. | 19 c | 6.40 | * | turbid |
| MY40\MW-2 | 4" | 17.19 | 32.30 | 1:25 | 12 gal. | 20 c | 6.50 | * | clear |
| | | | | 1:31 | 35 gal. | 20 c | 6.50 | * | clear |
| | | | | 1:44 | 60 gal. | 20 c | 6.50 | * | clear |
| MY40\MW-3 | 4" | 16.63 | 32.10 | 2:00 | 12 gal. | 20 c | 6.30 | * | clear |
| | | | | 2:04 | 35 gal. | 20 c | 6.30 | * | clear |
| | | | | 2:10 | 58 gal. | 20 c | 6.30 | * | clear |
| MY40\MW-4 | 4" | 16.11 | 32.11 | 12:03 | 8 gal. | 19 c | 6.60 | * | clear |
| | | | | 12:14 | 40 gal. | 19 c | 6.50 | * | clear |
| | | | | 12:21 | 60 gal. | 19 c | 6.50 | * | clear |
| MY40\MW-5 | 4" | 15.78 | 32.48 | 12:29 | 10 gal. | 20.5 c | 6.10 | * | clear |
| | | | | 12:37 | 40 gal. | 20.5 c | 6.10 | * | clear |
| | | | | 12:46 | 60 gal. | 20 c | 6.10 | * | clear |
| MY40\MW-6 | 4" | 16.06 | 32.10 | 2:20 | 13 gal. | 19 c | 6.20 | * | clear |
| | | | | 2:28 | 37 gal. | 19.5 c | 6.20 | * | clear |
| | | | | 2:35 | 60 gal. | 19 c | 6.20 | * | clear |
| MY40\MW-7 | 2" | 16.43 | 30.06 | 4:21 | 2 gal. | 19.5 c | 6.40 | * | clear |
| | | | | 4:25 | 5 gal | 20 c | 6.40 | * | clear |
| | | | | 4:30 | 13 gal. | 20 c | 6.40 | * | clear |
| MY40\MW-8 | | | | | | | | | |
| | Construction activity - well may be destroyed | | | | | | | | |
| MY40\MW-9 | | | | | | | | | |
| | Construction activity - well may be destroyed | | | | | | | | |
| MY40\MW-10 | 2" | 17.06 | 30.00 | 4:42 | 2 gal. | 19 c | 6.60 | * | clear |
| | | | | 4:46 | 5 gal. | 19 c | 6.50 | * | clear |
| | | | | 4:50 | 12 gal. | 19 c | 6.50 | * | clear |

# BROWN & ROOT ENVIRONMENTAL

## GROUNDWATER SAMPLE COLLECTION RECORD

| | | | |
|---|---|---|---|
| **Site Name:** | E-Z Serve #100877 | **BRE Project No.:** | MY40 |
| **Location:** | 525 West "A" Street, Hayward, CA | | |
| **Sampler(s):** | Terry Palmer/Arnold Lamb | **Date:** | 12/4/96 |
| **Weather:** | Clear ~57 deg. F | **Purge Method:** | 2" Grundfros Pump |

| Sample I.D. | Dia. | DTW | TD | Time | Purge Vol. | Temp. | pH | Cond. | Description |
|---|---|---|---|---|---|---|---|---|---|
| MY40\MW-11 | | | | | | | | | |
| | Construction activity - well may be destroyed | | | | | | | | |
| | | | | | | | | | |
| MY40\MW-12 | 2" | 17.19 | 32.30 | 3:12 | 3 gal. | 18.5 c | 6.60 | * | turbid |
| | | | | 3:20 | 8 gal. | 19 c | 6.50 | * | turbid |
| | | | | 3:25 | 12 gal. | 19 c | 6.50 | * | turbid |
| MY40\MW-13 | | | | | | | | | |
| | Car parked on well - could not access | | | | | | | | |
| | | | | | | | | | |
| MY40/MW-14 | 2" | 17.06 | 30.00 | 3:42 | 4 gal. | 19 c | 6.40 | * | clear |
| | | | | 3:49 | 7 gal. | 19 c | 6.40 | * | clear |
| | | | | 3:56 | 12 gal. | 19 c | 6.40 | * | clear |
| MY40\Trip Blk. | | | | lab | | | | | |
| MY40\Eq. Blk | | | | 12:30 | | | | | |
| MY40\Dup. | | | | 4:33 | | | | | |

Notes: Duplicate sample collected from MW-7.

* Sample not collected, or information not available.

FP = Free Product or sheen present in the well.

# APPENDIX C

LABORATORY ANALYTICAL REPORT AND
CHAIN OF CUSTODY

# Centrum Analytical Laboratories, Inc.

*CERTIFIED HAZARDOUS WASTE TESTING LABORATORY • CHEMICAL AND BIOLOGICAL ANALYSES*


Client: Brown and Root
455 Fairway Dr., Ste. 200
Deerfield Beach, FL 33441

Date Sampled: 12/04/96
Date Received: 12/09/96
Job Number: 11178

Project: E-Z Serve 100877

## CASE NARRATIVE

The following information applies to samples which were received on 12/09/96 :

The samples were received at the laboratory chilled and sample containers were intact.

Unless otherwise noted below, the Quality Control acceptance criteria were met for all samples for every analysis requested.

Report approved by:

Robert R. Clark, Ph.D.
Laboratory Director

ELAP # 1184

DL : Detection Limit -- The lowest level at which the compound can reliably be detected under normal laboratory conditions.
ND : Not Detected -- The compound was analyzed for but was not found to be present at or above the detection limit
NA : Not Analyzed -- Per client request, this analyte was not on the list of compounds to be analyzed for.

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## Modified 8015 - Total Volatile Hydrocarbons as Gasoline

| | | | |
|---|---|---|---|
| Client: | Brown and Root | Date Sampled: | 12/04/96 |
| Project: | E-Z Serve 100877 | Date Received: | 12/09/96 |
| Job No.: | 11178 | Date Analyzed: | 12/8-10/96 |
| Matrix: | Water | Batch Number: | 8015GW108 |
| Analyst: | MBH | | |

| | Detection Limit | **Petroleum Hydrocarbons as Gasoline** |
|---|---|---|
| **Sample ID** | ug/L | ug/L |
| **Method Blank** | 100 | ND |
| **MW-1/MY40** | 100 | **17,000** |
| **MW-1A/MY40** | 100 | **52,000** |
| **MW-2/MY40** | 100 | **31,000** |
| **MW-3/MY40** | 100 | **13,000** |
| **MW-4/MY40** | 100 | **23,000** |
| **MW-5/MY40** | 100 | **10,000** |
| **MW-6/MY40** | 100 | **11,000** |
| **MW-7/MY40** | 100 | **7,800** |
| **MW-7DUP/MY40** | 100 | **8,100** |
| **MW-10/MY40** | 100 | **4,600** |
| **MW-12/MY40** | 100 | ND |
| **MW-14/MY40** | 100 | **9,500** |
| **TripBlk./MY40** | 100 | ND |
| **EQBlk./MY40** | 100 | ND |

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# QC Sample Report - EPA 8015M Gasoline

Matrix: Water
Batch #: 8015GW1080

## Batch Accuracy Results

Sample ID: Laboratory Control Sample

| Analyte | Spike Concentration mg/L | % Recovery LCS | Acceptance Limits % Recovery | Pass/Fail |
|---|---|---|---|---|
| Gasoline | 5.0 | 89 | 70 - 130 | Pass |

Analytical Notes:

## Batch Precision Results

MS/MSD Sample ID: Laboratory Control Sample

| Analyte | Spike Sample Recovery mg/L | Spike Duplicate Recovery mg/L | Relative Percent Difference (RPD) | Upper Control Limit RPD | Pass/Fail |
|---|---|---|---|---|---|
| Gasoline | 4.47 | 4.49 | 0% | 25% | Pass |

Analytical Notes:

MS: Matrix Spike Sample
MSD: Matrix Spike Duplicate

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## EPA 8020 - BTEX and MtBE

Client: Brown and Root
Project: E-Z Serve 100877
Job No.: 11178
Matrix: Water
Analyst: MBH

Date Sampled: 12/04/96
Date Received: 12/09/96
Date Analyzed 12/8-10/96
Batch Number: 8020W1250

| | Methyl-tert Butyl Ether | Benzene | Toluene | Ethyl Benzene | Total Xylenes | Surrogate (BFB) |
|---|---|---|---|---|---|---|
| **Detection Limit:** | 0.5 | 0.5 | 0.5 | 0.5 | 1.5 | Limit: >50% |
| **Sample ID** | ug/L | ug/L | ug/L | ug/L | ug/L | |
| **Method Blank** | ND | ND | ND | ND | ND | 95 % |
| **MW-1/MY40** | **280** | **3,100** | **64** | **610** | **1,200** | 96 % |
| **MW-1A/MY40** | **130** | **420** | **140** | **1,000** | **3,500** | 101 % |
| **MW-2/MY40** | **690** | **3,800** | **140** | **2,000** | **5,100** | 96 % |
| **MW-3/MY40** | **67** | **1,100** | **25** | **1,000** | **1,100** | 102 % |
| **MW-4/MY40** | **1,900** | **7,800** | **140** | **1,200** | **1,200** | 104 % |
| **MW-5/MY40** | **70** | **2,200** | **9.0** | **550** | **430** | 97 % |
| **MW-6/MY40** | **130** | **390** | **25** | **680** | **170** | 94 % |
| **MW-7/MY40** | **22** | **67** | ND | **600** | **350** | 100 % |
| **MW-7DUP/MY40** | **30** | **68** | ND | **590** | **340** | 102 % |
| **MW-10/MY40** | **20** | **1.6** | **7.7** | **260** | **150** | 101 % |
| **MW-12/MY40** | ND | **3.2** | ND | **1.9** | **3.4** | 97 % |
| **MW-14/MY40** | **30** | **6.3** | ND | **1,100** | **400** | 93 % |
| **TripBlk./MY40** | ND | ND | ND | ND | ND | 98 % |
| **EQBlk./MY40** | ND | ND | ND | ND | ND | 115 % |

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# QC Sample Report - EPA 8020

Matrix: Water
Batch #: 8020W1250

## Batch Accuracy Results

Sample ID: Laboratory Control Sample

| Analyte | Spike Concentration mg/L | % Recovery LCS | Acceptance Limits % Recovery | Pass/Fail |
|---|---|---|---|---|
| Benzene | 0.10 | **93** | 70 - 130 | **Pass** |
| Toluene | 0.10 | **93** | 70 - 130 | **Pass** |
| Ethyl Benzene | 0.10 | **94** | 70 - 130 | **Pass** |
| m-, p-Xylene | 0.20 | **91** | 70 - 130 | **Pass** |
| o-Xylene | 0.10 | **92** | 70 - 130 | **Pass** |

Analytical Notes:

## Batch Precision Results

MS/MSD Sample ID: Laboratory Control Sample

| Analyte | Spike Sample Recovery mg/L | Spike Duplicate Recovery mg/L | Relative Percent Difference (RPD) | Upper Control Limit RPD | Pass/Fail |
|---|---|---|---|---|---|
| Benzene | 0.093 | 0.098 | **5%** | 25% | **Pass** |
| Toluene | 0.093 | 0.099 | **6%** | 25% | **Pass** |
| Ethyl Benzene | 0.094 | 0.100 | **6%** | 25% | **Pass** |
| m-, p-Xylene | 0.182 | 0.194 | **6%** | 25% | **Pass** |
| o-Xylene | 0.092 | 0.097 | **5%** | 25% | **Pass** |

Analytical Notes:

MS: Matrix Spike Sample
MSD: Matrix Spike Duplicate

# Centrum Analytical Laboratories, Inc.

290 TENNESSEE STREET
REDLANDS, CA 92373

(909) 798-9336 • (800) 798-9336
FAX (909) 793-1559

## Chain of Custody Record

Centrum Job # 11178 ~~1478~~

Page 1 of 2

| Project No | Project Name |
|---|---|
| MY40 | EZ Serve #100877 |

| Project Manager | Phone | Fax |
|---|---|---|
| Arnold C. Lamb | (954) 570-5885 | (954) 570-5974 |

| Client Name: (Company) | Address: |
|---|---|
| BRE | 455 Fairway Drive, Suite 200 Deerfield Beach FL 33441 |

Analyses Requested

| Centrum ID (Lab use only) | Sample ID (As it should appear on report) | Date sampled | Time sampled | Sample matrix | Site location | Containers # and type | GCMS: 8260 8240 8010 524.2 | 8080: Pesticides PCBs Pest/PCB | 8015M: Diesel Fuel Screen | 8015M: Gasoline 8020 Gas/BTEX + MTBE | 418.1 (TRPH) | Semivolatiles 8270 625 | Metals: TTLC(CAM) PP RCRA | Lead Only | pH TDS TSS Conductivity COD | Flashpoint Fluoride Hex Chrome | Remarks/ Special Instructions |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | MW-1/MY40 | 12/4/96 | 1:25 | GW | EZ Serve #100877 | 3-VOA | | | | X | | | | | | | |
| 2 | MW-1A/MY40 | 12/4/96 | 3:01 | GW | | 3-VOA | | | | X | | | | | | | Very Hot |
| 3 | MW-2/MY40 | 12/4/96 | 1:50 | GW | | 3-VOA | | | | X | | | | | | | |
| 4 | MW-3/MY40 | 12/4/96 | 2:14 | GW | | 3-VOA | | | | X | | | | | | | All samples |
| 5 | MW-4/MY40 | 12/4/96 | 12:35 | GW | | 3-VOA | | | | X | | | | | | | packed on |
| 6 | MW-5/MY40 | 12/4/96 | 12:50 | GW | | 3-VOA | | | | X | | | | | | | ICE to |
| 7 | MW-6/MY40 | 12/4/96 | 2:40 | GW | | 3-VOA | | | | X | | | | | | | 4°C. |
| 8 | MW-7/MY40 | 12/4/96 | 4:33 | GW | | 3-VOA | | | | X | | | | | | | |
| 9 | MW-7DUP/MY40 | 12/4/96 | 4:33 | GW | | 3-VOA | | | | X | | | | | | | |
| 10 | MW-10/MY40 | 12/4/96 | 4:55 | GW | | 3-VOA | | | | X | | | | | | | |

Turn-around time
- ☐ 24 Hr RUSH*
- ☐ 48 Hr RUSH*
- ☒ Normal TAT

* Requires prior approval additional charges apply

| Relinquished by: (Sampler's Signature) | Date | Time | Relinquished by: | Date | Time |
|---|---|---|---|---|---|
| [signature] | 12/6/96 | 4:50 | | | |
| **Received by** | **Date** | **Time** | **Received by.** | **Date** | **Time** |
| [signature] | | | | | |
| | | | **Relinquished by:** | **Date** | **Time** |
| | | | **Received for Laboratory by:** Jon Wilson | **Date** 12/9 | **Time** 0900 |

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Terms and Conditions set forth on the back hereof.

To be completed by laboratory personnel:
- Samples chilled? ☒ Yes ☐ No
- Custody seals? ☐ Yes ☒ No
- All sample containers intact? ☒ Yes ☐ No
- ☐ Courier ☒ UPS/Fed Ex ☐ Hand carried

Sample Disposal
- ☐ Client will pick up
- ☐ Return to client
- ☒ Lab disposal ~~fee $5~~

Laboratory Notes:

Sample Locator No
4-1

White Copy - Original (Accompanies Samples)

Yellow Copy - Centrum Files

Pink Copy - Client Copy

# Centrum Analytical Laboratories, Inc.

290 TENNESSEE STREET
REDLANDS, CA 92373

(909) 798-9336 • (800) 798-9336
FAX (909) 793-1559

## Chain of Custody Record

Centrum Job # 11178



| Project No.: | Project Name: |
|---|---|
| MY40 | EZ Serve #100877 |
| **Project Manager:** | **Phone:** / **Fax:** |
| Arnold C. Lamb | (954) 570-5885 / (954) 570-5974 |
| **Client Name (Company):** | **Address:** |
| BRE | 455 Fairway Drive, Suite 200 Deerfield Beach, FL 33441 |

Analyses Requested

| Centrum ID (Lab use only) | Sample ID (As it should appear on report) | Date sampled | Time sampled | Sample matrix | Site location | Containers # and type | GCMS: 8260 8240 8010 524.2 | 8080: Pesticides PCBs Pest/PCB | 8015M. Diesel Fuel Screen | 8015M. Gasoline 8020 Gas/BTEX 1418E | 418.1 (TRPH) | Semivolatiles: 8270 625 | Metals: TTLC(CAM) PP RCRA | Lead Only | pH TDS TSS Conductivity COD | Flashpoint Fluoride Hex Chrome | Remarks/ Special Instructions |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | MW-12/MY40 | 12/4/96 | 3:30 | GW | E-Z Serve #100877 | 3-VOA | | | | X | | | | | | | |
| 12 | MW-14/MY40 | 12/4/96 | 4:03 | GW | " | 3-VOA | | | | X | | | | | | | All samples preserved with ICE to 4°C. |
| 13 | Trip Blk./MY40 | — | — | W | " | 3-VOA | | | | X | | | | | | | |
| 14 | EQ Blk./MY40 | 12/4/96 | 12:30 | W | " | 3-VOA | | | | X | | | | | | | |

Turn-around time
- ☐ 24 Hr RUSH*
- ☐ 48 Hr. RUSH*
- ☒ Normal TAT

*Requires prior approval additional charges apply

| Relinquished by: (Sampler's Signature) | Date | Time | Relinquished by: | Date | Time |
|---|---|---|---|---|---|
| | 12/6/96 | 4:50 | | | |
| **Received by:** | **Date** | **Time** | **Received by:** | **Date** | **Time** |
| | | | | | |
| The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Terms and Conditions set forth on the back hereof. | | | **Relinquished by** | **Date** | **Time** |
| | | | **Received for Laboratory by:** Tom Wilson | 12/7 | 0900 |

To be completed by laboratory personnel.
- Samples chilled? ☒ Yes ☐ No
- Custody seals? ☐ Yes ☒ No
- All sample containers intact? ☒ Yes ☐ No
- ☐ Courier ☒ UPS/Fed Ex ☐ Hand carried

Sample Disposal
- ☐ Client will pick up
- ☐ Return to client
- ☒ Lab disposal ~~fee $5~~

Laboratory Notes

Sample Locator No
A-1

White Copy - Original (Accompanies Samples) Yellow Copy - Centrum Files Pink Copy - Client Copy