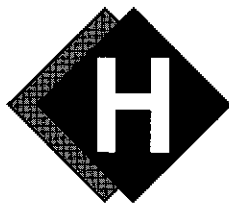


W 127 ✓



# erSchy Environmental, Inc.

September 27, 2004  
Project A51-01

Mr. Barney Chan  
Alameda County  
Health Care Services Agency  
Environmental Health Services  
1131 Harbor Bay Parkway, Ste. 250  
Alameda, CA 94502-6577

Alameda County  
SEP 30 2004  
Environmental Health

**Re: Results of September, 2004 Quarterly Groundwater Monitoring, Alaska Gasoline Company, Oakland, California, Case #RO0000127**

Dear Mr. Chan:

HerSchy Environmental is pleased to present the results of the most recent quarterly groundwater monitoring event for the above-referenced site. The site is located at 6211 San Pablo Avenue, which is on the northwest corner of San Pablo Avenue and 62<sup>nd</sup> Street in Oakland, Alameda County, California (Figure 1). Previous work includes the drilling, sampling, and laboratory analysis of soil and groundwater. Details of this investigation are contained in the April 22, 1999 report titled, "*Results of Underground Storage Tank (UST) Site Assessment, Alaska Gasoline Company, Oakland, California*", prepared by HerSchy Environmental.

## **METHODS OF INVESTIGATION**

### Groundwater Sampling Procedures:

The depth to groundwater in each well was measured to the nearest 0.01 feet using an electric sounder prior to initiating groundwater sampling activities. The groundwater elevation was determined for each well by subtracting the depth to groundwater from the surveyed well elevation. The depth to groundwater, total depth of the well, and the well diameter were used to calculate the volume of groundwater within the well casing. At least three casing volumes were purged from each well prior to collecting a groundwater sample using a Waterra electric pump and dedicated hoses. Physical characteristics (temperature, electrical conductivity, and pH), were measured at the initiation of purging and then again just prior to collection of the groundwater sample. These characteristics were recorded on field sampling data sheets which are presented in Appendix A. One sample from each well was collected and contained in three 40-milliliter vials. Each of the sample containers were filled

completely to form a positive meniscus, capped, and checked to ensure no air bubbles were present.

Samples were sealed in a ziplock bag and placed in a cooler chest with frozen gel packs ("blue ice") immediately after sampling. Samples were maintained at or below four degrees Celsius until delivered to the laboratory. Groundwater samples were handled under chain-of-custody documentation until delivered to a California certified laboratory.

#### Laboratory Analysis:

Groundwater samples were analyzed for gasoline-range total petroleum hydrocarbons (TPHg), benzene, toluene, ethylbenzene, and xylenes (BTEX), and methyl tertiary butyl ether (MTBE). Samples were analyzed using EPA method 8020 for BTEX and MTBE. Groundwater samples were also analyzed for the fuel oxygenates and additives MTBE, diisopropyl ether (DIPE), ethyl tertiary butyl ether (ETBE), tertiary amyl methyl ether (TAME), tertiary butanol (TBA), 1,2-dichloroethane (1,2-DCA) and ethylene dibromide (EDB) using EPA method 8260.

### **RESULTS OF INVESTIGATION**

#### Groundwater Conditions:

Because wells MW-4 and EX-1 contained floating product, no samples were collected from these wells, and groundwater data from these wells was not used in determining the groundwater flow direction or gradient. Groundwater was present beneath the site at an average depth of 8.07 feet below the surveyed well elevations during the September, 2004 monitoring event. Based upon a new survey performed on July 8, 2004, the elevation of groundwater averaged 27.80 feet above mean sea level. Groundwater flow direction was South 55 degrees West at a gradient of .0075 during the September, 2004 monitoring event. Groundwater conditions are summarized in Table 1 and presented graphically in Figure 2.

**Table 1**  
**Groundwater Conditions, Alaska Gasoline, Oakland**

| <u>Well Number</u>       | <u>Elevation</u> | <u>Depth to GW</u> | <u>GW Elevation</u> |
|--------------------------|------------------|--------------------|---------------------|
| <b>November 17, 2001</b> |                  |                    |                     |
| MW-1                     | 34.70            | 8.09               | 26.61               |
| MW-2                     | 34.94            | 7.75               | 27.19               |
| MW-3                     | 33.74            | 7.18               | 26.56               |
| MW-4                     | 32.38            | 5.75               | 26.63               |
| MW-5                     | 33.75            | 6.22               | 27.53               |
| MW-6                     | 34.68            | 7.19               | 27.49               |

Flow Direction = S. 50 W.; Gradient = .0091

**Table 1  
(Continued)**

| Well Number                                 | Elevation    | Depth to GW        | GW Elevation |
|---|--------------|--------------------|--------------|
| <b>March 31, 2002</b>                       |              |                    |              |
| MW-1  | 34.70        | 7.18               | 27.52        |
| MW-2  | 34.94        | 6.68               | 28.26        |
| MW-3  | 33.74        | 6.27               | 27.47        |
| MW-4  | 32.38        | 5.40               | 26.98        |
| MW-5  | 33.75        | 6.35               | 27.40        |
| MW-6  | 34.68        | 6.58               | 28.10        |
| Flow Direction = S. 26 W.; Gradient = .0108 |              |                    |              |
| <b>September 9, 2003</b>                    |              |                    |              |
| MW-1  | 34.70        | 8.54               | 26.16        |
| MW-2  | 34.94        | 8.26               | 26.68        |
| MW-3  | 33.74        | 7.52               | 26.22        |
| MW-4  | 32.38        | 0.51' free product | -----        |
| MW-5  | 33.75        | 7.08               | 26.67        |
| MW-6  | 34.68        | 8.21               | 26.47        |
| Flow Direction = S. 50 W; Gradient = .0031  |              |                    |              |
| <b>December 9, 2003</b>                     |              |                    |              |
| MW-1  | 34.70        | 7.50               | 27.20        |
| MW-2  | 34.94        | 7.20               | 27.74        |
| MW-3  | 33.74        | 6.45               | 27.29        |
| MW-4  | 32.38        | 0.25' free product | -----        |
| MW-5  | 33.75        | 6.13               | 27.62        |
| MW-6  | 34.68        | 7.11               | 27.57        |
| Flow Direction = S. 56 W; Gradient = .0075  |              |                    |              |
| <b>February 19-20, 2004</b>                 |              |                    |              |
| MW-1R                                       | Not Surveyed | 5.45               | -----        |
| MW-2  | 34.94        | 5.81               | 29.13        |
| MW-3  | 33.74        | 5.56               | 28.18        |
| MW-4  | 32.38        | 0.25' free product | -----        |
| MW-5  | 33.75        | 5.11               | 28.64        |
| MW-6  | 34.68        | 5.61               | 29.07        |
| EX-1  | Not Surveyed | 3.96               | -----        |
| Flow Direction = S. 42 W; Gradient = .0154  |              |                    |              |

**Table 1  
(Continued)**

| Well Number                                 | Elevation    | Depth to GW        | GW Elevation  |
|---|--------------|--------------------|---------------|
| <b>May 24-25, 2004</b>                      |              |                    |               |
| MW-1R                                       | Not Surveyed | 8.58               | ----          |
| MW-2  | 34.94        | 7.79               | 27.15         |
| MW-3  | 33.74        | 6.99               | 26.75         |
| MW-4  | 32.38        | 0.33' free product | ----          |
| MW-5  | 33.75        | 6.57               | 27.18         |
| MW-6  | 34.68        | Not Available      | Not Available |
| EX-1  | Not Surveyed | 0.76' free product | ----          |
| Flow Direction = S. 71 W; Gradient = .0081  |              |                    |               |
| <b>September 3, 2004*</b>                   |              |                    |               |
| MW-1R                                       | 36.67        | 9.15               | 27.52         |
| MW-2  | 36.33        | 8.43               | 27.90         |
| MW-3  | 35.12        | 7.53               | 27.59         |
| MW-4  | 34.11        | 0.7' free product  | ----          |
| MW-5  | 35.17        | 7.01               | 28.16         |
| MW-6  | 36.07        | 8.25               | 27.82         |
| EX-1  | 33.28        | 1.2' free product  | ----          |
| Flow Direction = S. 55 W.; Gradient = .0075 |              |                    |               |

Elevations in feet

\* new survey (7/8/04)

Based on the data gathered from MW-1R, MW-2, MW-3, and MW-5, the groundwater flow direction is toward San Francisco Bay, located approximately 0.75 miles southwest of the site. Regional groundwater flow appears to parallel the surface grade in the area.

Groundwater Quality:

Groundwater samples were submitted to the laboratory and analyzed for the above-mentioned fuel constituents. Certified analytical reports and chain-of-custody documentation are presented in Appendix B and summarized in Table 2 below:

**Table 2  
Laboratory Analytical Results for Groundwater, Alaska Gasoline, Oakland**

| Well No.                 | TPHg    | Benzene | Toluene | Ethylbenzene | Xylenes | MTBE    |
|--------------------------|---------|---------|---------|--------------|---------|---------|
| <b>November 17, 2001</b> |         |         |         |              |         |         |
| MW-1                     | 10,000  | 230     | 210     | 60           | 250     | 22,000  |
| MW-2                     | 18,000  | 3,700   | 180     | 610          | 640     | 16,000  |
| MW-3                     | 110,000 | 1,600   | ND      | ND           | ND      | 300,000 |
| MW-4                     | 64,000  | 960     | 1,400   | 360          | 1,600   | 140,000 |
| MW-5                     | 210     | 15      | 12      | 11           | 23      | 4.8     |
| MW-6                     | 3,500   | 160     | 260     | 95           | 420     | 1,500   |

**Table 2  
(Continued)**

| Well No.                    | TPHg    | Benzene | Toluene | Ethylbenzene | Xylenes | MTBE      |
|-----------------------------|---------|---------|---------|--------------|---------|-----------|
| <b>March 31, 2002</b>       |         |         |         |              |         |           |
| MW-1                        | 12,000  | 61      | ND      | ND           | 29      | 35,000    |
| MW-2                        | 32,000  | 6,500   | 270     | 1,700        | 2,700   | 19,000    |
| MW-3                        | 130,000 | 2,400   | 670     | 300          | 390     | 300,000   |
| MW-4                        | 78,000  | 4,400   | 4,700   | 690          | 2,700   | 150,000   |
| MW-5                        | 120     | 11      | 7.4     | 6.1          | 16      | 4.2       |
| MW-6                        | 3,200   | 410     | 170     | 82           | 280     | 3,000     |
| <b>September 9, 2003</b>    |         |         |         |              |         |           |
| MW-1                        | 19,000  | ND      | ND      | ND           | ND      | 50,000    |
| MW-2                        | 24,000  | 4,600   | ND      | 1200         | 440     | 19,000    |
| MW-3                        | 190,000 | 1,600   | ND      | ND           | ND      | 420,000   |
| MW-4                        | NA      | NA      | NA      | NA           | NA      | NA        |
| MW-5                        | ND      | 1.5     | ND      | ND           | ND      | 1.7       |
| MW-6                        | 800     | 49      | ND      | 7.4          | ND      | 1,700     |
| <b>December 9, 2003</b>     |         |         |         |              |         |           |
| MW-1                        | 22,000  | 150     | ND      | ND           | ND      | 66,000    |
| MW-2                        | 31,000  | 6,200   | 170     | 1,600        | 2,700   | 19,000    |
| MW-3                        | 170,000 | 2,000   | ND      | ND           | ND      | 4,500,000 |
| MW-4                        | NA      | NA      | NA      | NA           | NA      | NA        |
| MW-5                        | 130     | 32      | ND      | 2.6          | 0.57    | 5.0       |
| MW-6                        | 970     | 150     | 9.9     | 31           | 83      | 1,200     |
| <b>February 19-20, 2004</b> |         |         |         |              |         |           |
| MW-1R                       | 1,800   | 95      | 130     | 44           | 200     | 220       |
| MW-2                        | 21,000  | 4,600   | 120     | 970          | 2,000   | 15,000    |
| MW-3                        | 86,000  | 1,800   | 630     | ND           | ND      | 160,000   |
| MW-4                        | NA      | NA      | NA      | NA           | NA      | NA        |
| MW-5                        | ND      | ND      | ND      | ND           | ND      | 1.5       |
| MW-6                        | 1,900   | 280     | 58      | 17           | 160     | 2,700     |
| EX-1                        | 120,000 | 9,500   | 4,300   | 840          | 3,900   | 150,000   |
| <b>May 24-25, 2004</b>      |         |         |         |              |         |           |
| MW-1R                       | 210     | 12      | 10      | 5.4          | 23      | 79        |
| MW-2                        | 1,200   | 120     | 3.0     | 63           | 67      | 1,900     |
| MW-3                        | 120,000 | 2,200   | ND      | 180          | 220     | 400,000   |
| MW-4                        | NA      | NA      | NA      | NA           | NA      | NA        |
| MW-5                        | ND      | ND      | ND      | ND           | ND      | 0.55      |
| MW-6                        | NA      | NA      | NA      | NA           | NA      | NA        |
| EX-1                        | NA      | NA      | NA      | NA           | NA      | NA        |

**Table 2  
(Continued)**

| Well No.                 | TPHg    | Benzene | Toluene | Ethylbenzene | Xylenes | MTBE    |
|--------------------------|---------|---------|---------|--------------|---------|---------|
| <b>September 3, 2004</b> |         |         |         |              |         |         |
| MW-1R                    | 300     | 1.5     | 7.1     | 9.4          | 42      | 81      |
| MW-2                     | 2,300   | 120     | ND      | 51           | 70      | 1,700   |
| MW-3                     | 180,000 | 2,000   | ND      | ND           | ND      | 510,000 |
| MW-4                     | NA      | NA      | NA      | NA           | NA      | NA      |
| MW-5                     | 100     | 6.4     | ND      | ND           | 0.79    | 4.2     |
| MW-6                     | 1,100   | 27      | ND      | 14           | 27      | 2,200   |
| EX-1                     | NA      | NA      | NA      | NA           | NA      | NA      |

All results presented in parts per billion (ppb)

MTBE results by EPA method 8260

NA= no analysis

ND= below detectable limits

As requested by your office, groundwater samples were also analyzed for the fuel oxygenates and additives MTBE, di-isopropyl ether (DIPE), ethyl tertiary butyl ether (ETBE), tertiary amyl methyl ether (TAME), tertiary butanol (TBA), 1,2-dichloroethane (1,2-DCA), ethylene dibromide (EDB), methanol, and ethanol. Laboratory analytical results are presented in Appendix B and summarized in Table 3 below:

**Table 3  
Laboratory Analytical Results for Groundwater, Alaska Gasoline, Oakland**

| Sample                   | TAME          | TBA | Methanol | Ethanol |
|--------------------------|---------------|-----|----------|---------|
| <b>May 24-25, 2004</b>   |               |     |          |         |
| MW-1R                    | 2.1           | 37  | ND       | ND      |
| MW-2                     | ND            | ND  | ND       | ND      |
| MW-3                     | <u>15,000</u> | ND  | ND       | ND      |
| MW-5                     | ND            | ND  | ND       | ND      |
| <b>September 3, 2004</b> |               |     |          |         |
| MW-1R                    | 1.6           | ND  | NA       | NA      |
| MW-2                     | 26            | ND  | NA       | NA      |
| MW-3                     | <u>14,000</u> | ND  | NA       | NA      |
| MW-5                     | ND            | ND  | NA       | NA      |
| MW-6                     | 85            | ND  | NA       | NA      |

All results in parts per billion (ppb)

ND = below detectable concentrations

NA = no analysis

There was no EDB, 1,2-DCA, DIPE, ETBE, or TBA detected in the groundwater samples during the September, 2004 monitoring event. Ethanol and methanol were not detected in any of the groundwater samples during the May, 2004 monitoring event and are no longer being analyzed.

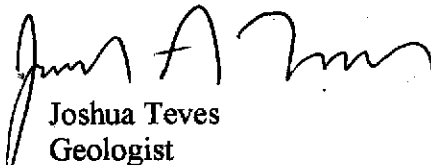
All of the on-site monitoring wells sampled during the September, 2004 event are impacted with gasoline constituents. No samples were collected from MW-4 and EX-1 due to the presence of floating product. Other than MW-4 and EX-1, concentrations are highest in the down gradient well MW-3. Concentrations are significantly lower in MW-5 than any of the other wells, reflecting its distance from, and up gradient location relative to, the USTs.

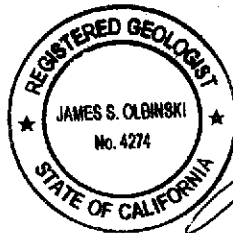
## CONCLUSIONS AND RECOMMENDATIONS

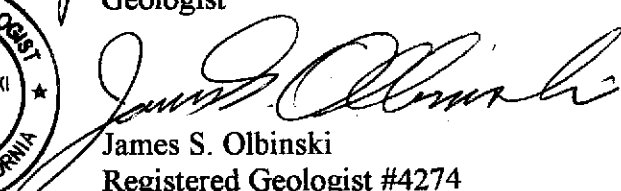
A remedial action plan (RAP) was sent to your office on September 17, 2004. Implementation of the RAP will begin upon approval. Quarterly groundwater monitoring will continue at the site. Efforts are being made to install up to two groundwater monitoring wells off site to delineate the gasoline product plume. A work plan for the installation of off site monitoring wells was submitted and subsequently approved in correspondence from your office. The next quarterly monitoring event is currently scheduled for December, 2004.

If you have any questions or need additional information, please contact me at the letterhead address or at (559) 641-7320.

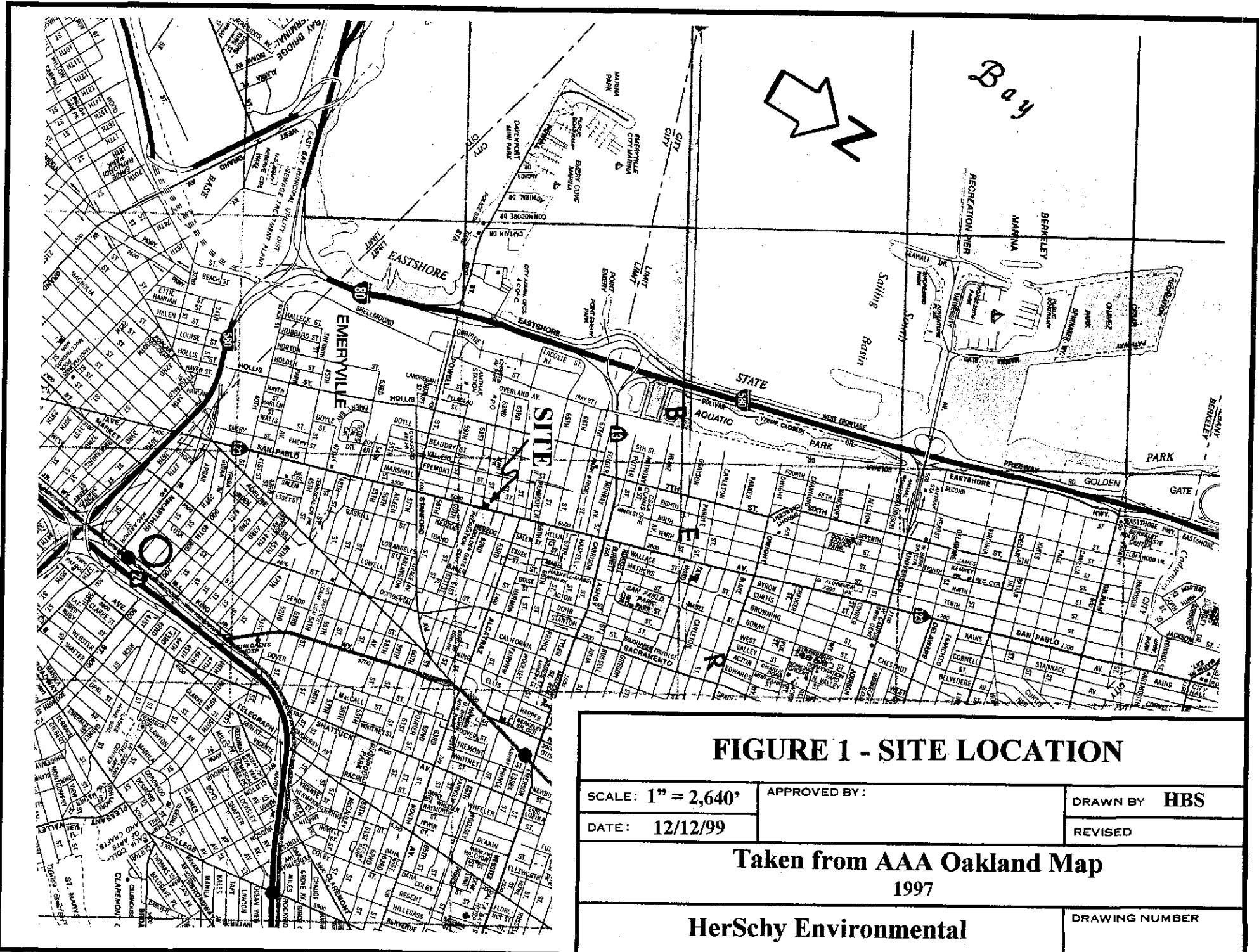
With best regards,  
HerSchy Environmental, Inc.

  
Joshua Teves  
Geologist



  
James S. Olbinski  
Registered Geologist #4274

pc: Mr. Pritpaul Sappal  
Mr. Syed Nawab, Alaska Gasoline Company  
Mr. Hernan Gomez, Oakland Fire Services Agency  
Mrs. Susan M. Torrence, Deputy District Attorney



**FIGURE 1 - SITE LOCATION**

SCALE: 1" = 2,640'  
 DATE: 12/12/99

APPROVED BY:

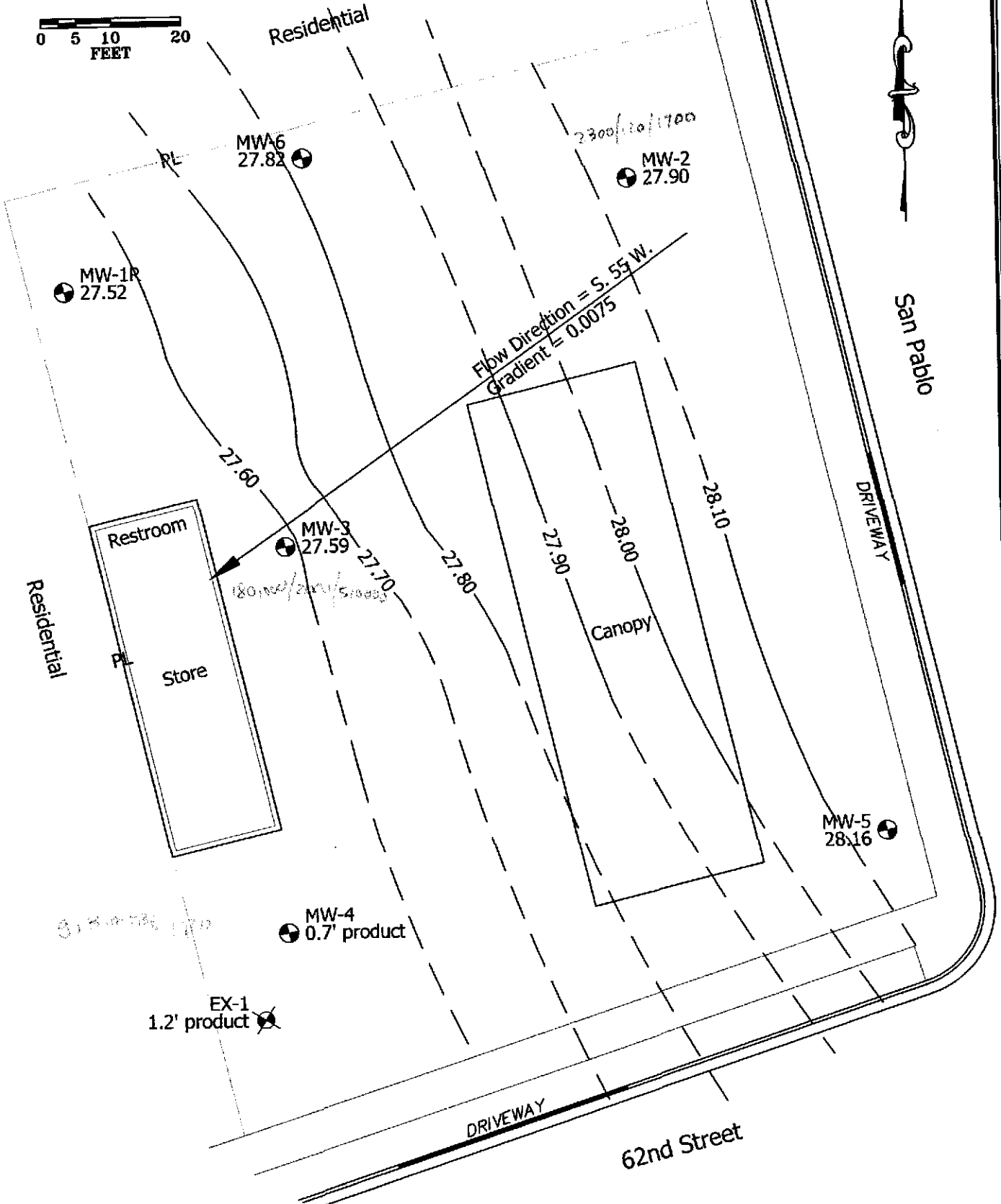
DRAWN BY HBS  
 REVISED

Taken from AAA Oakland Map  
 1997

HerSchy Environmental

DRAWING NUMBER





**HerSchy Environmental, Inc.**  
Environmental Consulting and Remediation

P. O. Box 229  
Bass Lake, California 93604-0229  
Tel. (559) 641-7320, Fax (559) 641-7340

Sept., 2004 GROUNDWATER CONDITIONS

ALASKA GASOLINE COMPANY

6211 San Pablo Avenue, Oakland, California

DATE: Sept. 2004  
FILE NO.: A51-01  
DRAWN BY: JSO

FIGURE  
2

APPENDIX A

GROUNDWATER SAMPLING

FIELD DATA SHEETS

HerSchy Environmental WATER SAMPLE FIELD DATA SHEET

Client Name: Alaska Gas Location: Oakland

Purged By: Oscar Sampled by: Oscar

Sample ID: MW-1R Type: Groundwater  Surface Water  Other

Casing Diameter (inches): 2  3  4  5  6  Other

Casing Elevation (feet/MSL): \_\_\_\_\_ Volume in Casing (gal.): 2.3

Depth of Well (feet): 23.4 Calculate Purge Volume (gal.): 6.9

Depth to Water (feet): 9.15 Actual Purge Volume (gal.): 8.0

Date Purged: 9-3-04 Date Sampled: 9-3-04

| TIME        | VOLUME       | pH          | E. C.      | TEMP.       | TURBIDITY    |
|-------------|--------------|-------------|------------|-------------|--------------|
| <u>7:15</u> | <u>—</u>     | <u>5.68</u> | <u>477</u> | <u>62.6</u> | <u>Murky</u> |
| <u>7:30</u> | <u>8 gal</u> | <u>5.73</u> | <u>432</u> | <u>65.3</u> | <u>Murky</u> |
|             |              |             |            |             |              |
|             |              |             |            |             |              |

Other Observations: none Odor: Petroleum

Purging Equipment: Wasterra

Sampling Equipment: 11

Remarks: \_\_\_\_\_

Sampler's Signature: [Signature]

HerSchy Environmental **WATER SAMPLE FIELD DATA SHEET**

Client Name: Alaska Coas Location: Oakland

Purged By: Oscar Sampled by: Oscar

Sample ID: MW-2 Type: Groundwater  Surface Water  Other

Casing Diameter (inches): 2  3  4  5  6  Other

Casing Elevation (feet/MSL): \_\_\_\_\_ Volume in Casing (gal.): 2.0

Depth of Well (feet): 20.9 Calculate Purge Volume (gal.): 6.1

Depth to Water (feet): 8.43 Actual Purge Volume (gal.): 7.0

Date Purged: 9-3-04 Date Sampled: 9-3-04

| TIME        | VOLUME       | pH          | E. C.      | TEMP.       | TURBIDITY   |
|-------------|--------------|-------------|------------|-------------|-------------|
| <u>8:42</u> | <u>—</u>     | <u>5.78</u> | <u>480</u> | <u>68.6</u> | <u>Grey</u> |
| <u>8:54</u> | <u>7 gal</u> | <u>5.80</u> | <u>466</u> | <u>67.9</u> | <u>Grey</u> |
|             |              |             |            |             |             |
|             |              |             |            |             |             |

Other Observations: none Odor: Petroleum

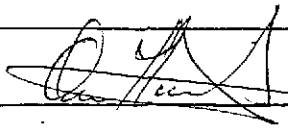
Purging Equipment: water

Sampling Equipment: 4

Remarks: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Sampler's Signature: 

HerSchy **WATER SAMPLE FIELD DATA SHEET**  
 Environmental

Client Name: Alaska Gas Location: Oakland

Purged By: Oscar Sampled by: Oscar

Sample ID: MW-3 Type: Groundwater  Surface Water  Other

Casing Diameter (inches): 2  3  4  5  6  Other

Casing Elevation (feet/MSL): \_\_\_\_\_ Volume in Casing (gal.): 2.2

Depth of Well (feet): 21.2 Calculate Purge Volume (gal.): 6.6

Depth to Water (feet): 7.53 Actual Purge Volume (gal.): 7.0

Date Purged: 9-3-04 Date Sampled: 9-3-04

| TIME        | VOLUME       | pH          | E. C.      | TEMP.       | TURBIDITY   |
|-------------|--------------|-------------|------------|-------------|-------------|
| <u>8:10</u> | <u>—</u>     | <u>5.54</u> | <u>714</u> | <u>67.0</u> | <u>Grey</u> |
| <u>8:25</u> | <u>7 gal</u> | <u>5.51</u> | <u>717</u> | <u>68.1</u> | <u>Grey</u> |
|             |              |             |            |             |             |
|             |              |             |            |             |             |

Other Observations: none Odor: Petroleum

Purging Equipment: waterra

Sampling Equipment: 4

Remarks: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Sampler's Signature: [Signature]

HerSchy Environmental WATER SAMPLE FIELD DATA SHEET

Client Name: Alaska Gas Location: Oakland

Purged By: \_\_\_\_\_ Sampled by: \_\_\_\_\_

Sample ID: MW-4 Type: Groundwater  Surface Water \_\_\_\_\_ Other \_\_\_\_\_

Casing Diameter (inches): 2  3 \_\_\_\_\_ 4 \_\_\_\_\_ 5 \_\_\_\_\_ 6 \_\_\_\_\_ Other \_\_\_\_\_

Casing Elevation (feet/MSL): \_\_\_\_\_ Volume in Casing (gal.): \_\_\_\_\_

Depth of Well (feet): \_\_\_\_\_ Calculate Purge Volume (gal.): \_\_\_\_\_

Depth to Water (feet): \_\_\_\_\_ Actual Purge Volume (gal.): \_\_\_\_\_

Date Purged: \_\_\_\_\_ Date Sampled: \_\_\_\_\_

| TIME  | VOLUME | pH    | E. C. | TEMP. | TURBIDITY |
|-------|--------|-------|-------|-------|-----------|
| _____ | _____  | _____ | _____ | _____ | _____     |
| _____ | _____  | _____ | _____ | _____ | _____     |
| _____ | _____  | _____ | _____ | _____ | _____     |
| _____ | _____  | _____ | _____ | _____ | _____     |

Other Observations: \_\_\_\_\_ Odor: \_\_\_\_\_

Purging Equipment: \_\_\_\_\_

Sampling Equipment: \_\_\_\_\_

Remarks: Floating Product 7 inches  
well cover for well need to be replace

Sampler's Signature: [Signature] 9-3-04

HerSchy Environmental WATER SAMPLE FIELD DATA SHEET

Client Name: Alaska Gas Location: Oakland

Purged By: Oscar Sampled by: Oscar

Sample ID: MW-5 Type: Groundwater  Surface Water  Other

Casing Diameter (inches): 2  3  4  5  6  Other

Casing Elevation (feet/MSL): \_\_\_\_\_ Volume in Casing (gal.): 2.9

Depth of Well (feet): 24.9 Calculate Purge Volume (gal.): 8.7

Depth to Water (feet): 7.01 Actual Purge Volume (gal.): 10.0

Date Purged: 9-3-04 Date Sampled: 9-3-04

| TIME        | VOLUME        | pH          | E. C.      | TEMP.       | TURBIDITY    |
|-------------|---------------|-------------|------------|-------------|--------------|
| <u>9:22</u> | <u>—</u>      | <u>5.70</u> | <u>550</u> | <u>70.6</u> | <u>Brown</u> |
| <u>9:41</u> | <u>10-gal</u> | <u>5.70</u> | <u>522</u> | <u>69.1</u> | <u>clear</u> |
|             |               |             |            |             |              |
|             |               |             |            |             |              |

Other Observations: none Odor: no broken

Purging Equipment: watering

Sampling Equipment: 11

Remarks: \_\_\_\_\_

Sampler's Signature: [Signature]

HerSchy Environmental WATER SAMPLE FIELD DATA SHEET

Client Name: Alaska Gas Location: Oakland

Purged By: Oscar Sampled by: Oscar

Sample ID: MW-6 Type: Groundwater  Surface Water  Other

Casing Diameter (inches): 2  3  4  5  6  Other

Casing Elevation (feet/MSL): \_\_\_\_\_ Volume in Casing (gal.): 2.4

Depth of Well (feet): 23.10 Calculate Purge Volume (gal.): 7.3

Depth to Water (feet): 8.25 Actual Purge Volume (gal.): 8.0

Date Purged: 9-3-04 Date Sampled: 9-3-04

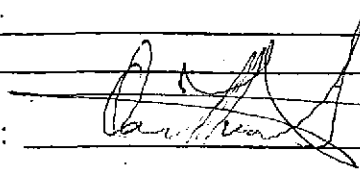
| TIME        | VOLUME       | pH          | E. C.      | TEMP.       | TURBIDITY   |
|-------------|--------------|-------------|------------|-------------|-------------|
| <u>7:45</u> | <u>—</u>     | <u>5.76</u> | <u>467</u> | <u>64.7</u> | <u>Grey</u> |
| <u>7:56</u> | <u>8 gal</u> | <u>5.80</u> | <u>448</u> | <u>66.3</u> | <u>Grey</u> |
|             |              |             |            |             |             |
|             |              |             |            |             |             |

Other Observations: none Odor: Petroleum

Purging Equipment: water

Sampling Equipment: U

Remarks: \_\_\_\_\_

Sampler's Signature: 



HerSchy Environmental WATER SAMPLE FIELD DATA SHEET

Client Name: Alaska Gas Location: Oakland

Purged By: [Signature] Sampled by:

Sample ID: EX-1 Type: Groundwater [X] Surface Water Other

Casing Diameter (inches): 2 3 4 [X] 5 6 Other

Casing Elevation (feet/MSL): Volume in Casing (gal.):

Depth of Well (feet): Calculate Purge Volume (gal.):

Depth to Water (feet): Actual Purge Volume (gal.):

Date Purged: Date Sampled:

Table with 6 columns: TIME, VOLUME, pH, E. C., TEMP., TURBIDITY. Multiple rows of data entry lines.

Other Observations: Odor:

Purging Equipment:

Sampling Equipment:

Remarks: Floating Product 14 Patches

Sampler's Signature: [Signature] 9-3-04

APPENDIX B

CERTIFIED ANALYTICAL RESULTS--GROUNDWATER

WITH CHAIN OF CUSTODY

# CASTLE ANALYTICAL LABORATORY

Environmental Testing Services  
Certificate #2480

2333 Shuttle Drive, Atwater, CA 95301

Phone: (209) 384-2930  
Fax: (209) 384-1507

HerSchy Environmental  
P.O. Box 229  
Bass Lake, CA 93604  
Attn: Joshua Teves

Client Project ID: Ataska Gasoline - Oakland  
Reference Number: 7332  
Sample Description: Water  
Sample Prep/Analysis Method: EPA 5030/8015M, 8020  
Lab Numbers: 7332-1W, 2W, 3W, 4W, 5W

Sampled: 09-03-04  
Received: 09-03-04  
Extracted: 09-08-04  
Analyzed: 09-08-04  
Reported: 09-20-04

## TOTAL PETROLEUM HYDROCARBONS - GASOLINE WITH BTEX DISTINCTION

| ANALYTE   | REPORTING LIMIT<br>µg/L | SAMPLE ID       | SAMPLE ID      | SAMPLE ID      | SAMPLE ID      | SAMPLE ID      |
|---|-------------------------|-----------------|----------------|----------------|----------------|----------------|
|   |                         | MW-1R<br>(µg/L) | MW-2<br>(µg/L) | MW-3<br>(µg/L) | MW-5<br>(µg/L) | MW-6<br>(µg/L) |
| MTBE  | 0.50                    | 62              | 1200           | 410000         | 3.7            | 2000           |
| BENZENE   | 0.50                    | 1.5             | 120            | 2000           | 6.4            | 27             |
| TOLUENE   | 0.50                    | 7.1             | ND             | ND             | ND             | ND             |
| ETHYLBENZENE                                      | 0.50                    | 9.4             | 51             | ND             | ND             | 14             |
| TOTAL XYLENES                                     | 0.50                    | 42              | 70             | ND             | 0.79           | 27             |
| GASOLINE RANGE<br>HYDROCARBONS                    | 50                      | 300             | 2300           | 180000         | 100            | 1100           |
| Report Limit Multiplication Factor:               |                         | 2               | 20             | 250            | 1              | 5              |
| Report Limit Multiplication Factor for MTBE only: |                         |                 |                | 10000          |                | 100            |

Surrogate % Recovery:

FD: 94.3% / PID: 93.3%    FD: 95.0% / PID: 91.0%    FD: 93.1% / PID: 90.3%    FD: 104% / PID: 102%    FD: 95.7% / PID: 93.1%

Instrument ID:

VAR-GC1    VAR-GC1    VAR-GC1    VAR-GC1    VAR-GC1

Analytes reported as ND were not detected or below the Practical Quantitation Limit  
Practical Quantitation Limit = Reporting Limit x Report Limit Multiplication Factor

ANALYST:

*Clay J. Cone*  
Clay J. Cone

APPROVED BY:

*James C. Phillips*  
James C. Phillips  
Laboratory Director

# CASTLE ANALYTICAL LABORATORY

Environmental Testing Services  
Certificate #2480

2333 Shuttle Drive, Atwater, CA 95301

Phone: (209) 384-2930  
Fax: (209) 384-1507

|  |   |  |
|--|---|--|
| HerSchy Environmental<br>P.O. Box 229<br>Bass Lake, CA 93604<br>Attn: Joshua Teves | Client Project ID: Alaska Gasoline - Oakland<br>Reference Number: 7332<br>Sample Description: Water<br>Sample Prep/Analysis Method: EPA 5030/8280<br>Lab Numbers: 7332-1W, 2W, 3W, 4W, 5W | Sampled: 09-03-04<br>Received: 09-03-04<br>Extracted: 09-10-04<br>Analyzed: 09-10-04<br>Reported: 09-20-04 |
|--|---|--|

## GASOLINE ADDITIVES BY EPA METHOD 8260 GC/MS

| ANALYTE                                      | REPORTING       | SAMPLE ID       | SAMPLE ID      | SAMPLE ID      | SAMPLE ID      | SAMPLE ID      |
|--|-----------------|-----------------|----------------|----------------|----------------|----------------|
|  | LIMIT<br>(µg/L) | MW-1R<br>(µg/L) | MW-2<br>(µg/L) | MW-3<br>(µg/L) | MW-5<br>(µg/L) | MW-6<br>(µg/L) |
| <b>FUEL OXYGENATES</b>                       |                 |                 |                |                |                |                |
| Methyl tert-Butyl Ether (MTBE)               | 0.50            | 81              | 1700           | 510000         | 4.2            | 2200           |
| Di-Isopropyl Ether (DIPE)                    | 0.50            | ND              | ND             | ND             | ND             | ND             |
| Ethyl tert-Butyl Ether (ETBE)                | 0.50            | ND              | ND             | ND             | ND             | ND             |
| tert-Amyl Methyl Ether (TAME)                | 0.50            | 1.6             | 26             | 14000          | ND             | 85             |
| tert-Butanol (TBA)                           | 20              | ND              | ND             | ND             | ND             | ND             |
| <b>VOLATILE HALOCARBONS</b>                  |                 |                 |                |                |                |                |
| 1,2-Dichloroethane (1,2-DCA)                 | 0.50            | ND              | ND             | ND             | ND             | ND             |
| Ethylene Dibromide (EDB)                     | 0.50            | ND              | ND             | ND             | ND             | ND             |
| Report Limit Multiplication Factor:          |                 | 2*              | 10*            | 2000*          | 1              | 10*            |
| Report Limit Multiplication Factor for MTBE: |                 |                 | 100            | 10000          |                | 100            |

\* Report limit raised due to matrix interference

### Surrogate Recoveries

|                       |      |       |      |      |      |
|-----------------------|------|-------|------|------|------|
| 1,2-Dichloroethane-d4 | 103% | 97.1% | 101% | 104% | 102% |
| Toluene-d8            | 108% | 108%  | 109% | 111% | 108% |

Instrument ID: HP 5972 MS

Analytes reported as ND were not detected or below the Practical Quantitation Limit

Practical Quantitation Limit = Reporting Limit x Report Limit Multiplication Factor

(µg/L) = micrograms per liter or parts per billion (ppb)

ANALYST:

*Clari J. Cone*  
Clari J. Cone

APPROVED BY:

*James C. Phillips*  
James C. Phillips  
Laboratory Director

# CASTLE ANALYTICAL LABORATORY

# CHAIN OF CUSTODY

Location: 2333 Shuttle Drive, Bldg 908/909, Atwater, CA 95301

Certificate No. 2480

Mailing Address: 2333 Shuttle Drive, Atwater, CA 95301

PAGE \_\_\_\_\_ OF \_\_\_\_\_

Phone: (209) 384-2930 - Fax: (209) 384-1507

| Customer: <u>Masker Coors</u><br>Address: _____<br>City/State/ZIP: <u>Oakland</u><br>Phone / FAX: _____<br>Proj # / P.O. #: _____<br>Report Attention: <u>Joshua Reeves</u><br>Sampler Signature: <u>[Signature]</u><br>Printed: <u>[Signature]</u> |           |        |      |                      | SAMPLE TYPE (g) grab<br>(c) composite (d) discrete<br>SAMPLE MATRIX<br>(s) solid (l) liquid (o) other |   | REQUESTED ANALYSES<br>BTEX/PH-GAS<br>MTBE<br>TPH-DIESEL<br>TRPH 418.1M<br>Oxy's / EDB / DCA by 8260<br>8260<br>Electronic Deliverables (EDF) |   |                     |  |  |  | Method of Shipment:<br>Notes:<br>OBSERVATIONS/REMARKS  |  |  |  |  |  |  |  |
|---|-----------|--------|------|----------------------|---|---|--|---|---------------------|--|--|--|--|--|--|--|--|--|--|--|
| Lab ID#   | SAMPLE ID | DATE   | TIME | DESCRIPTION/LOCATION | g   | l | Y  | Y | X                   |  |  |  |  |  |  |  |  |  |  |  |
|   | MW-1R     | 9-3-04 | 7:35 |                      | g   | l | Y  | Y | X                   |  |  |  |  |  |  |  |  |  |  |  |
|   | MW-2      | 9-3-04 | 7:00 |                      | g   | l | Y  | Y | X                   |  |  |  |  |  |  |  |  |  |  |  |
|   | MW-3      | 9-3-04 | 8:25 |                      | g   | l | Y  | Y | X                   |  |  |  |  |  |  |  |  |  |  |  |
|   | MW-5      | 9-3-04 | 9:45 |                      | g   | l | Y  | Y | X                   |  |  |  |  |  |  |  |  |  |  |  |
|   | MW-6      | 9-3-04 | 8:00 |                      | g   | l | Y  | Y | X                   |  |  |  |  |  |  |  |  |  |  |  |
|   |           |        |      |                      |   |   |  |   |                     |  |  |  | Total number of containers submitted to the laboratory |  |  |  |  |  |  |  |
| Relinquished by: <u>[Signature]</u>   |           |        |      |                      | Printed Name: <u>Joshua Reeves</u>  |   |  |   | Date: <u>9-3-04</u> |  |  |  | Time: <u>1:00</u>                                      |  |  |  | Company Name: <u>Hershey Environmental</u> |  |  |  |
| Received by:  |           |        |      |                      |   |   |  |   |                     |  |  |  |  |  |  |  |  |  |  |  |
| Relinquished by:  |           |        |      |                      |   |   |  |   |                     |  |  |  |  |  |  |  |  |  |  |  |
| Received by:  |           |        |      |                      |   |   |  |   |                     |  |  |  |  |  |  |  |  |  |  |  |
| Relinquished by: <u>[Signature]</u>   |           |        |      |                      | Printed Name: <u>Quentin Ambrose</u>  |   |  |   | Date: <u>9/3/04</u> |  |  |  | Time: <u>1:30</u>                                      |  |  |  | Company Name: <u>Castle Analytical</u>     |  |  |  |
| Received by:  |           |        |      |                      |   |   |  |   |                     |  |  |  |  |  |  |  |  |  |  |  |
| Note: All special requests (e.g. quick turn times) must be cleared through authorized laboratory personnel.   |           |        |      |                      |   |   |  |   |                     |  |  |  |  |  |  |  |  |  |  |  |
| RESULTS DUE : _____<br><input type="checkbox"/> VERBAL <input type="checkbox"/> WRITTEN   |           |        |      |                      |   |   |  |   |                     |  |  |  |  |  |  |  |  |  |  |  |