ENSR International

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December 30, 2005

Ms. Kasey Ashley
North Coast Water Board
5550 Skylane Boulevard, Suite A
Santa Rosa, CA 94503-2097

**RE: Semiannual Reporting of Quarterly Groundwater Monitoring Results, Third and Fourth Quarters 2005**
**Former Unocal Bulk Plant No. 762248**
359 Main Street, Fortuna, California
RWQCB No. 1NHU248
ENSR Project No. 06940-407-100

Dear Ms. Ashley:

ENSR Corporation (ENSR) has been authorized by Union Oil Company of California (Unocal) to perform quarterly groundwater monitoring at the site located at 359 Main Street, Fortuna, California (Site) (**Figure 1**). The Site, a former bulk plant, is currently vacant with a chain link fence around its perimeter. The locations of former and current site features are illustrated on **Figure 2**. Quarterly groundwater monitoring is intended to evaluate the distribution of petroleum hydrocarbon constituents in groundwater beneath the Site. This report summarizes results of the samples collected from the Site during the third and fourth quarter of 2005. The work was performed in accordance with the field methods and procedures included in **Appendix A**.

## Groundwater Level Measurements

Depths to groundwater were measured on August 17 and November 1, 2005 in monitoring wells MW-1 through MW-10, MW-13 through MW-15, MW-16A, MW-16B, and MW-17 through MW-21 and are presented in **Table 1**. Groundwater elevation measurements were used to construct groundwater elevation contour maps for each measurement date for the shallow water bearing zone and for a deeper water bearing zone. The maps are included as **Figure 3** and **Figure 4**, respectively, for August 17, 2005 and **Figure 5** and **Figure 6**, respectively, for November 1, 2005. The groundwater flow direction was toward the south with a hydraulic gradient of approximately 0.02 feet per foot (ft/ft) in the shallow zone and toward the southeast, with a hydraulic gradient of approximately 0.001 ft/ft in the deep zone for the August 17, 2005 monitoring event. For the November 1, 2005 monitoring event, the groundwater flow direction was toward the south with a hydraulic gradient of approximately 0.018 ft/ft in the shallow zone and toward the southeast with a hydraulic gradient of approximately 0.001 ft/ft in the deep zone. Copies of the groundwater sampling information sheets are included in **Appendix B**. A summary of groundwater elevations measured to date is presented in **Table 1**.

**Third Quarter 2005 Groundwater Sampling and Analytical Results**

On August 18, 2005, third quarter 2005 groundwater samples were collected from monitoring wells MW-1, MW-3 through MW-6, MW-13 through MW-15, MW-16A, MW-16B, and MW-17 through MW-21. Groundwater samples were submitted to California Laboratory Services (CLS) in Rancho Cordova, California (a state-certified laboratory) under chain-of-custody protocols. The samples were analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX) by Environmental Protection Agency (EPA) Method 8021B, total petroleum hydrocarbons as gasoline (TPHg) by EPA Method 8015M, and total petroleum hydrocarbons as diesel (TPHd) by EPA Method 8015M with silica gel treatment (SGT) by EPA Method 3630. Cumulative groundwater sampling results are summarized in **Table 1**. A map depicting dissolved concentrations of TPHd, TPHg, and benzene in groundwater for third quarter 2005 is included as **Figure 7**. Iso-concentration maps of TPHd, TPHg, and benzene in the shallow zone are included as **Figures 9** through **11**. TPHd concentrations are those reported for analysis using SGT. A copy of the certified laboratory analytical report with chain-of-custody documentation is included in **Appendix C**.

During the third quarter 2005, TPHd and TPHg were detected in shallow zone wells MW-3, MW-4, MW-5, MW-6, MW-13, MW-16A, MW-18, MW-19, MW-20 and MW-21 with a maximum concentration of 40,000 micrograms per liter (µg/L) TPHd and 120,000 µg/L TPHg in MW-4. Benzene was detected in the same shallow zone wells with the exception of MW-6. The maximum concentration of benzene was 10,000 µg/L, also in MW-4.

Of the five monitoring wells screened across the deep zone (MW-1, MW-14, MW-15, MW-16B, and MW-17), TPHd, TPHg and benzene were not reported above laboratory reporting limits in the third quarter 2005.

**Fourth Quarter 2005 Groundwater Sampling and Analytical Results**

On November 2, 2005, fourth quarter groundwater samples were collected from monitoring wells MW-13 through MW-15, MW-16A, MW-16B, and MW-17 through MW-21. Groundwater samples were submitted to CLS under chain-of-custody protocols. Samples were analyzed for BTEX by EPA Method 8021B, TPHg by EPA Method 8015M, and TPHd by EPA Method 8015M with SGT by EPA Method 3630.

Cumulative groundwater sampling results are summarized in **Table 1**. A map depicting dissolved concentrations of TPHd, TPHg, and benzene in groundwater for fourth quarter 2005 is included as **Figure 8**. Iso-concentration maps of TPHd, TPHg, and benzene in the shallow zone are included as **Figures 12** through **14.** TPHd concentrations are those reported for analysis using SGT. A copy of the certified laboratory analytical report with chain-of-custody documentation is included in **Appendix C**.

During the fourth quarter 2005, TPHd and TPHg were detected in shallow zone wells MW-13, MW-16A, MW-18, MW-19, MW-20 and MW-21 with a maximum concentration of 13,000 µg/L

TPHd and 24,000 µg/L TPHg in MW-21. Benzene was detected in the same shallow zone wells with a maximum concentration of 5,900 µg/L in MW-18.
Of the four monitoring wells screened across the deep zone (MW-14, MW-15, MW-16B, and MW-17), TPHd, TPHg and benzene were not reported above laboratory reporting limits in the fourth quarter 2005.

**Conclusions/Recommendations**

ENSR recommends continued monitoring and sampling of groundwater at the Site.

**Future Work**

The next semiannual monitoring report will be submitted on or before July 15, 2006 and will report on the quarterly monitoring events scheduled for February and May 2006.

In compliance with the North Coast Water Board's letter dated November 3, 2005, ENSR has distributed copies of the Public Notice for the Corrective Action Plan (CAP) to the property owners adjacent to the site. Additionally, the Public Notice was published in the Eureka Times Standard (a newspaper of general circulation) on November 13, 2005. ENSR is in receipt of the North Coast Water Board's letter dated December 8, 2005, which approves the CAP and requests the submittal of a workplan for the proposed remedial action. The workplan will be submitted on or before February 15, 2006. Contingent on the groundwater elevations, ENSR anticipates implementation of the CAP in the late summer of 2006.

**Remarks/Signatures**

The interpretations in this report represent our professional opinions and are based, in part, on the information supplied by the client. These opinions are based on currently available information and are arrived at in accordance with currently accepted hydrogeologic and engineering practices at this time and location. Other than this, no warranty is implied or intended.

If you have any questions regarding this project, please contact Jennifer Johnston at (916) 362-7100.

Sincerely,
**ENSR Corporation**

Jennifer Johnston
Project Manager

D. N. Peacock, Ph.D., P.G. #7801
Senior Project Manager

PROFESSIONAL GEOLOGIST
DAVID N. PEACOCK
No. 7801
STATE OF CALIFORNIA

JJ/dk

Reference: 06940-407-100

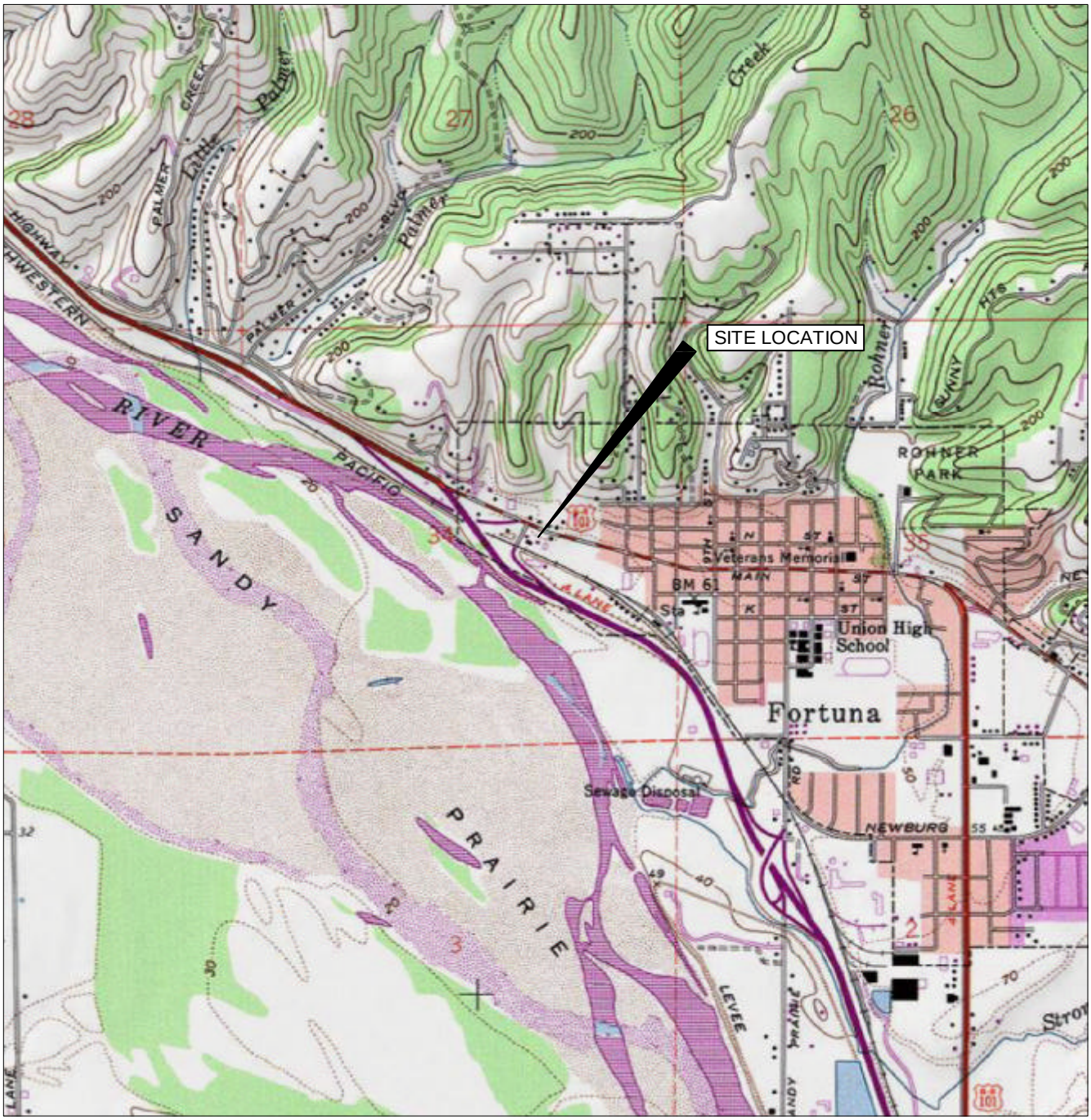
Attachments

Table:
1. Groundwater Monitoring Data and Analytical Results

Figures:
1. Site Location Map
2. Site Map
3. Shallow Zone Groundwater Elevation Contour Map (August 17, 2005)
4. Deep Zone Groundwater Elevation Contour Map (August 17, 2005)
5. Shallow Zone Groundwater Elevation Contour Map (November 2, 2005)
6. Deep Zone Groundwater Elevation Contour Map (November 2, 2005)
7. Petroleum Hydrocarbon Concentration Map (August 17, 2005)
8. Petroleum Hydrocarbon Concentration Map (November 2, 2005)
9. Shallow TPHd Iso-Concentration Map (August 17, 2005)
10. Shallow TPHg Iso-Concentration Map (August 17, 2005)
11. Shallow Benzene Iso-Concentration Map (August 17, 2005)
12. Shallow TPHd Iso-Concentration Map (November 2, 2005)
13. Shallow TPHg Iso-Concentration Map (November 2, 2005)
14. Shallow Benzene Iso-Concentration Map (November 2, 2005)

Appendices:
- A Field Methods and Procedures
- B Groundwater Sampling Information Sheets
- C Laboratory Analytical Results with Chain-of-Custody Documentation

cc: Mr. John Frary, Union Oil Company of California
Mr. Mark Verhey, Humboldt County
Mr. Larry Montgomery




Map created with TOPO - 2003 National Geographic

MAP LOCATION

SOURCE: BASE MAP FROM USGS FORTUNA, CA
7.5 MINUTE TOPOGRAPHIC 1972

N

0 2000

Approximate Scale in Feet

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# SITE LOCATION MAP

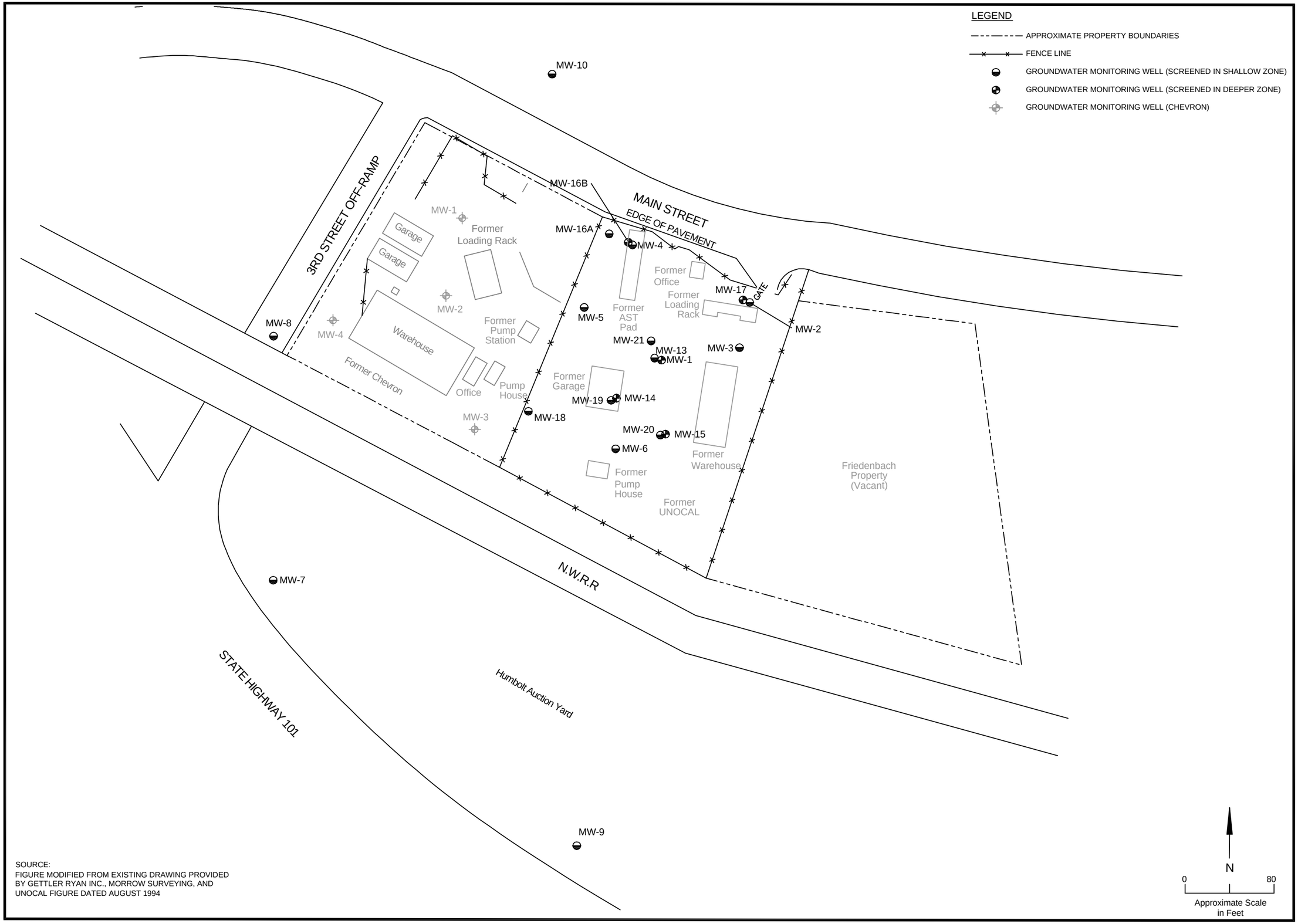
Former UNOCAL Bulk Plant 762248
359 Main Street
Fortuna, California

| DRAWN BY | DATE | PROJECT NUMBER |
|---|---|---|
| G BORCHARDT | 6/13/2005 | 06940-407 |

FIGURE

1

J:\Projects\06940\762248-407\Working\CAD\1Q-2Q05\762248 SITELOC.dwg, 6/30/2005 3:38:58 PM




SOURCE:
FIGURE MODIFIED FROM EXISTING DRAWING PROVIDED BY GETTLER RYAN INC., MORROW SURVEYING, AND UNOCAL FIGURE DATED AUGUST 1994

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APPROVED BY: X

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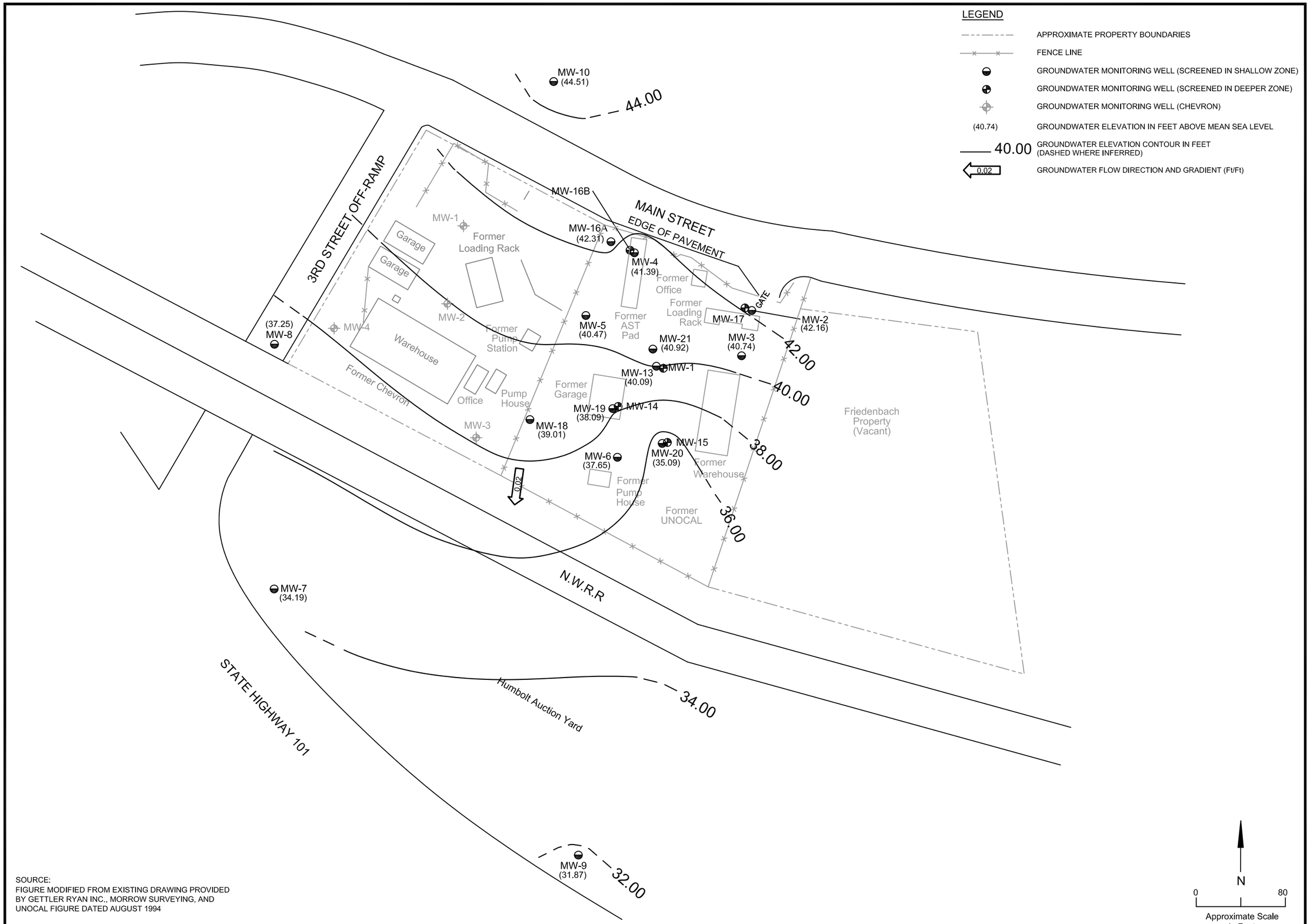
SITE MAP
FORMER UNOCAL BULK PLANT 762248
359 MAIN STREET
FORTUNA, CALIFORNIA

SCALE: 1"=80'
DATE: 11/05 PR
PROJECT NUMBER: 06940-407-100

FIGURE NUMBER: 2

SHEET NUMBER: 1




SOURCE:
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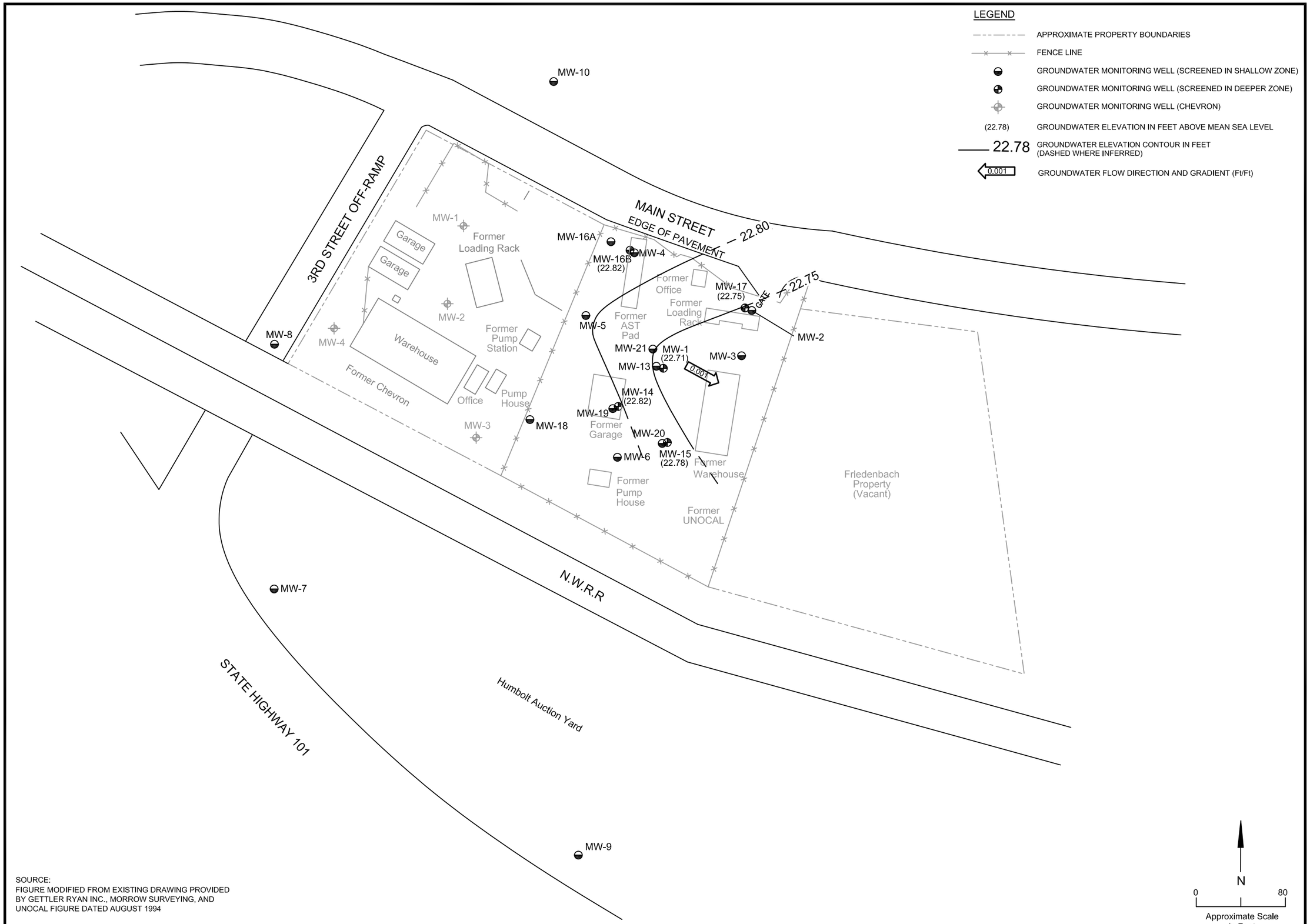
SHALLOW ZONE GROUNDWATER ELEVATION MAP
(AUGUST 17, 2005)
FORMER UNOCAL BULK PLANT 762248
359 MAIN STREET
FORTUNA, CALIFORNIA

| SCALE: | DATE: | PROJECT NUMBER: |
|---|---|---|
| 1"=80' | 11/05 | 06940-407-100 |

FIGURE NUMBER: 3

SHEET NUMBER: 1

\\03DCSACRAMENTO\Projects\Projects\06940\762248-407\CAD\3Q05\762248 GW ELEV SHALLOW 3Q05 FIG3.dwg, 12/16/2005 11:20:18 AM




SOURCE:
FIGURE MODIFIED FROM EXISTING DRAWING PROVIDED BY GETTLER RYAN INC., MORROW SURVEYING, AND UNOCAL FIGURE DATED AUGUST 1994

\\03DCSACRAMENTO\Projects\Projects\06940\762248-407\CAD\3Q05\762248 GW ELEV DEEP 3Q05 FIG4.dwg, 12/16/2005 11:22:16 AM

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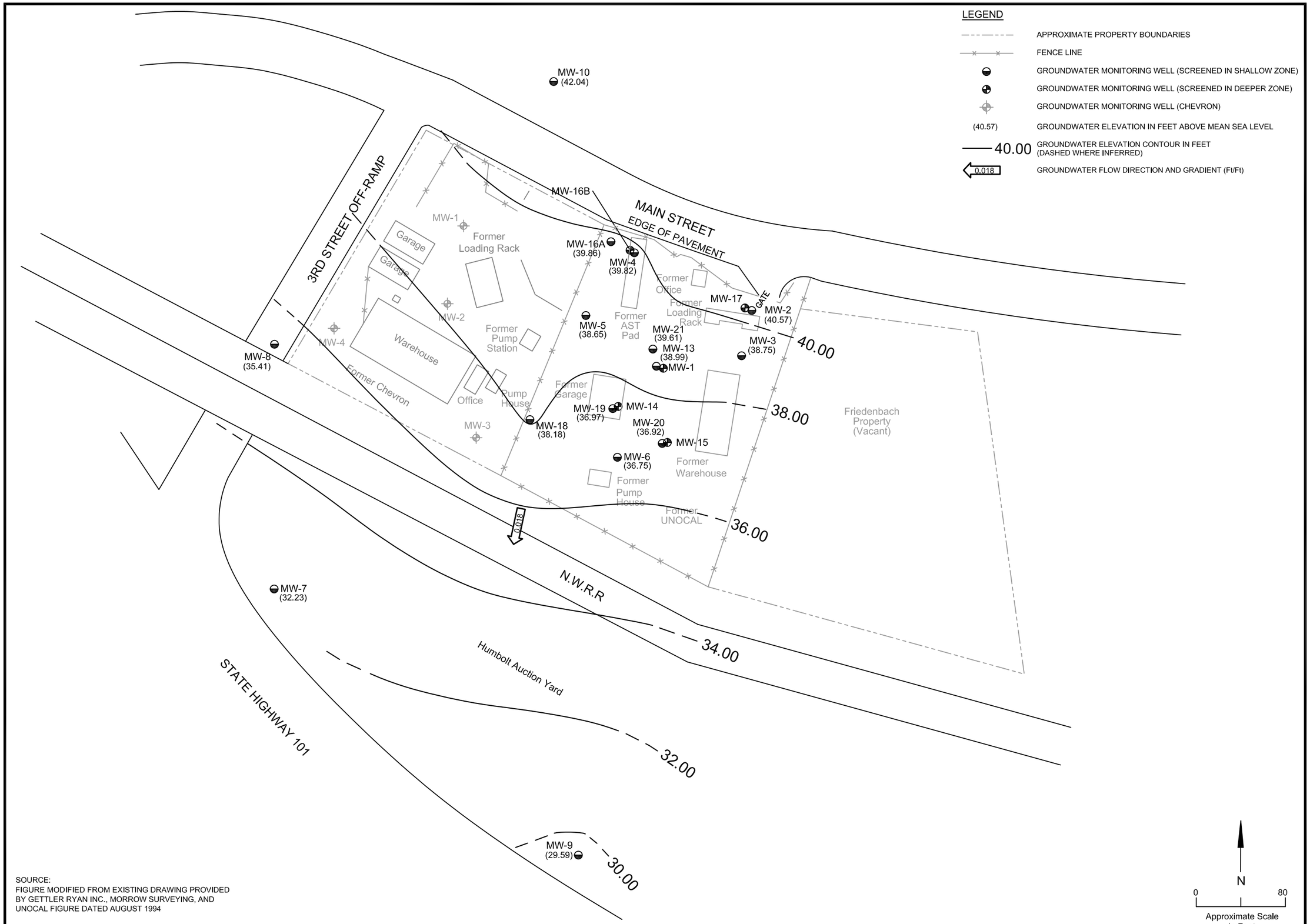
DEEP ZONE GROUNDWATER ELEVATION MAP
(AUGUST 17, 2005)
FORMER UNOCAL BULK PLANT 762248
359 MAIN STREET
FORTUNA, CALIFORNIA

| SCALE: | DATE: | PROJECT NUMBER: |
|---|---|---|
| 1"=80' | 11/05 | 06940-407-100 |

FIGURE NUMBER:
4

SHEET NUMBER:
1

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SHALLOW ZONE GROUNDWATER ELEVATION MAP
(NOVEMBER 1, 2005)
FORMER UNOCAL BULK PLANT 762248
359 MAIN STREET
FORTUNA, CALIFORNIA

| SCALE: | DATE: | PROJECT NUMBER: |
|---|---|---|
| 1"=80' | 11/05 | 06940-407-100 |

FIGURE NUMBER:
5

SHEET NUMBER:
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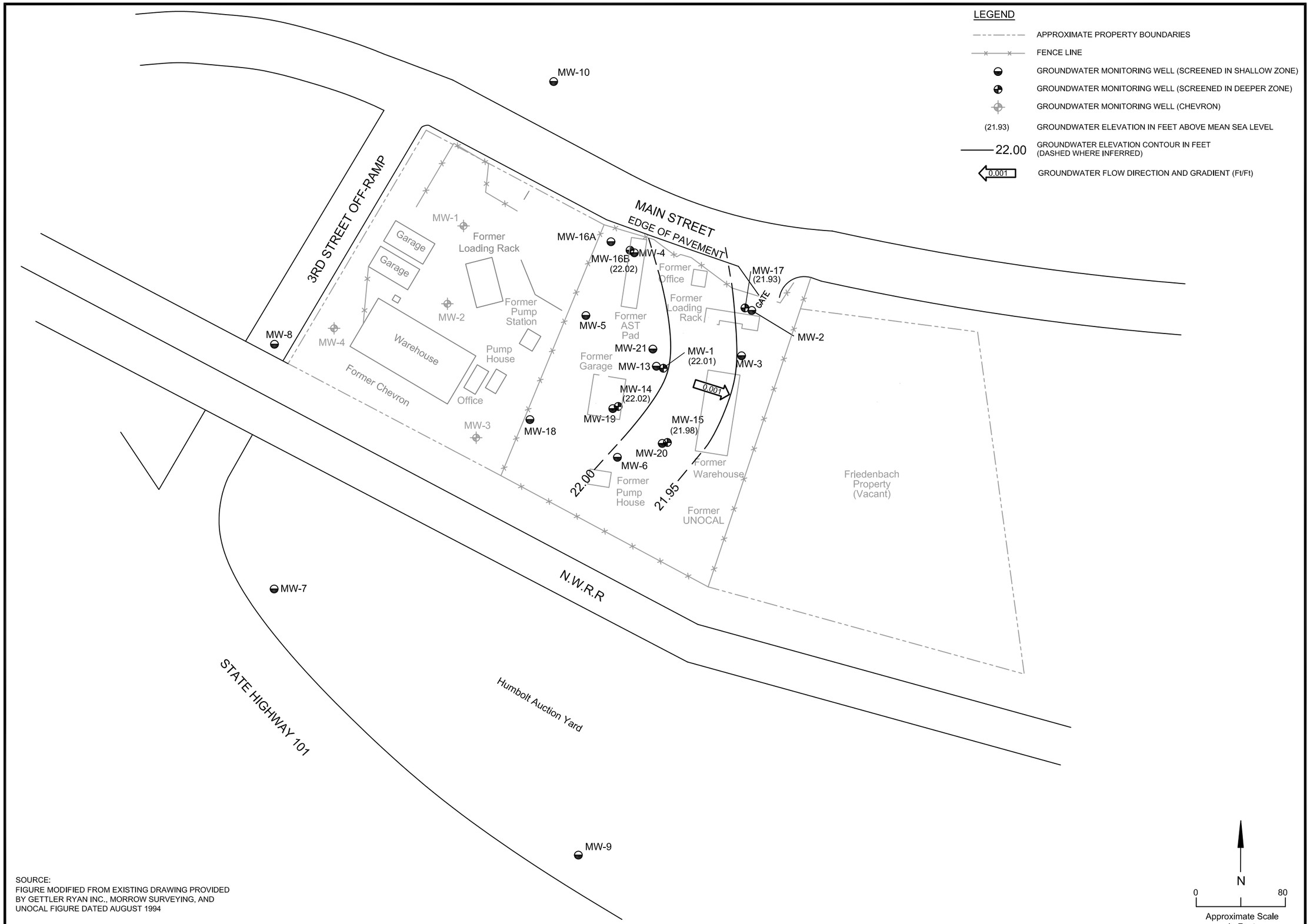
\\03DCSACRAMENTO\Projects\Projects\06940\762248-407\CAD\3Q05\762248 GW ELEV SHALLOW 4Q05 FIG5.dwg, 12/16/2005 11:23:37 AM

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\\03DCSACRAMENTO\Projects\Projects\06940\762248-407\CAD\3Q05\762248 GW ELEV DEEP 4Q05 FIG6.dwg, 12/16/2005 11:24:58 AM

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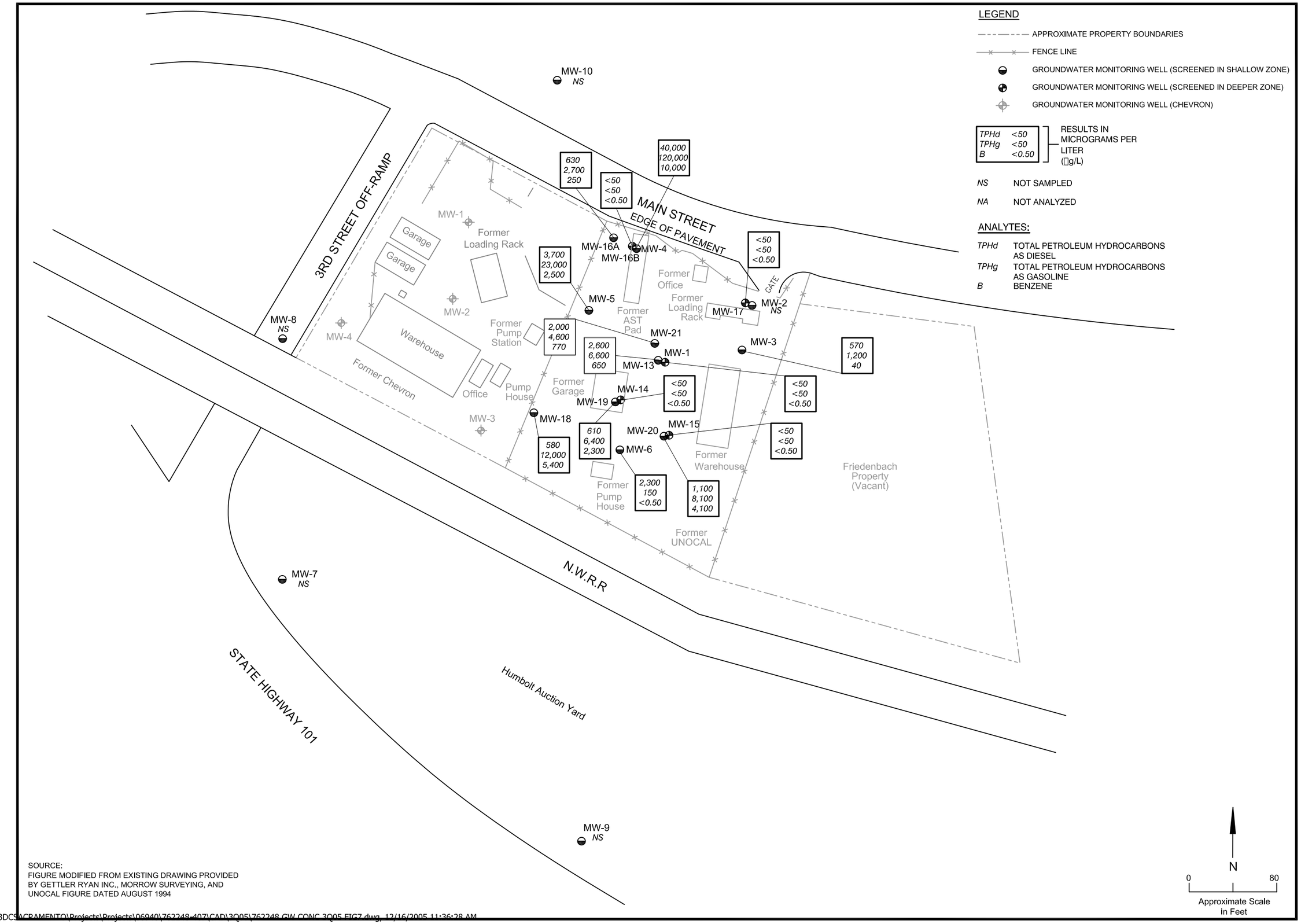
DEEP ZONE GROUNDWATER ELEVATION MAP
(NOVEMBER 1, 2005)
FORMER UNOCAL BULK PLANT 762248
359 MAIN STREET
FORTUNA, CALIFORNIA

SCALE: 1"=80'
DATE: 11/05
PROJECT NUMBER: 06940-407-100

FIGURE NUMBER: 6

SHEET NUMBER: 1




## LEGEND

- APPROXIMATE PROPERTY BOUNDARIES
- FENCE LINE
- GROUNDWATER MONITORING WELL (SCREENED IN SHALLOW ZONE)
- GROUNDWATER MONITORING WELL (SCREENED IN DEEPER ZONE)
- GROUNDWATER MONITORING WELL (CHEVRON)

| | |
|---|---|
| *TPHd* | *<50* |
| *TPHg* | *<50* |
| *B* | *<0.50* |

RESULTS IN MICROGRAMS PER LITER (□g/L)

*NS* NOT SAMPLED

*NA* NOT ANALYZED

## ANALYTES:

*TPHd* TOTAL PETROLEUM HYDROCARBONS AS DIESEL

*TPHg* TOTAL PETROLEUM HYDROCARBONS AS GASOLINE

*B* BENZENE

SOURCE:
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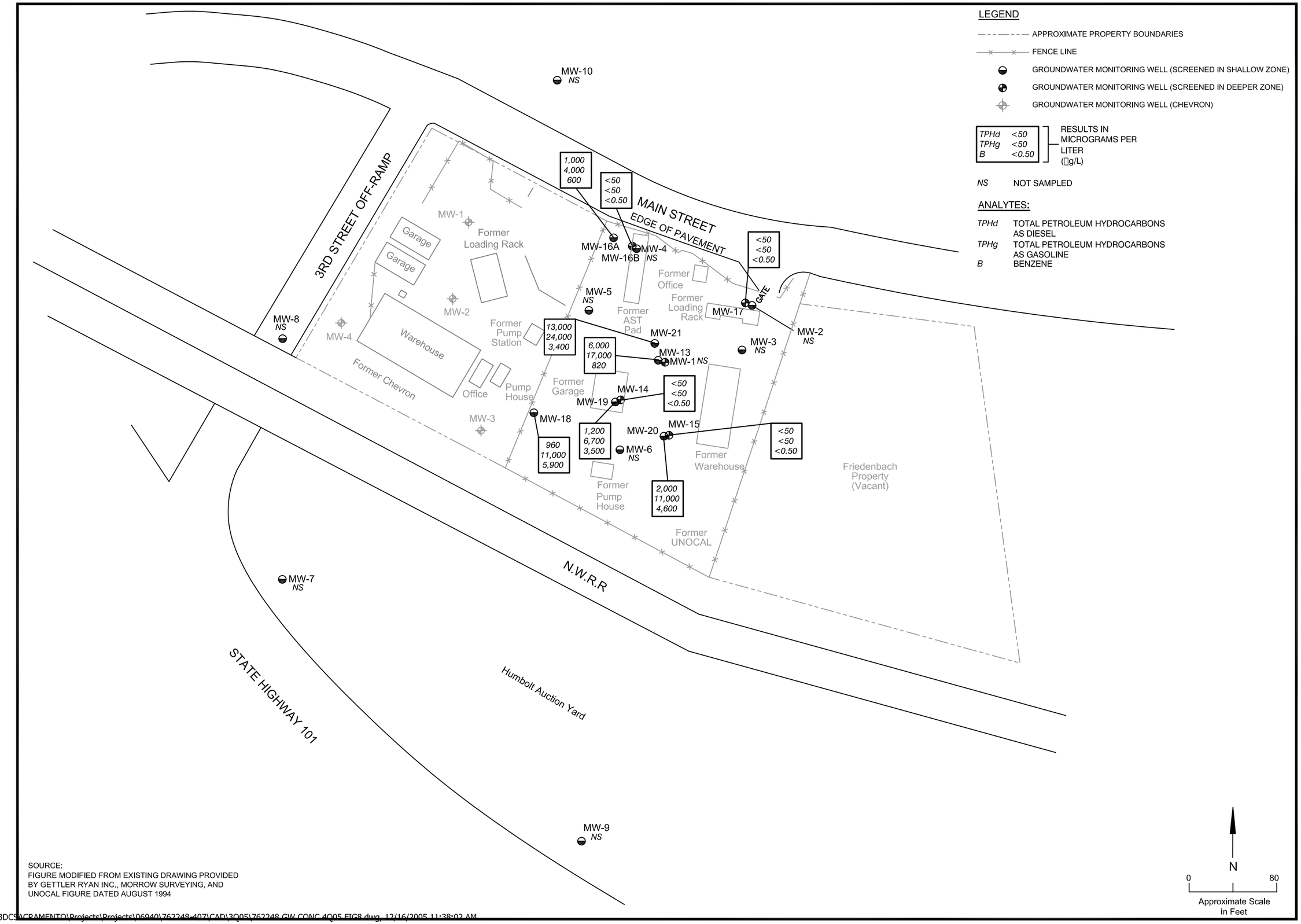
PETROLEUM HYDROCARBON
CONCENTRATION MAP – AUGUST 17, 2005
FORMER UNOCAL BULK PLANT 762248
359 MAIN STREET
FORTUNA, CALIFORNIA

SCALE: 1"=80'
DATE: 11/05
PROJECT NUMBER: 06940-407-100

FIGURE NUMBER: 7

SHEET NUMBER: 1

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\\03DCSACRAMENTO\Projects\Projects\06940\762248-407\CAD\3Q05\762248 GW CONC 4Q05 FIG8.dwg, 12/16/2005 11:38:02 AM

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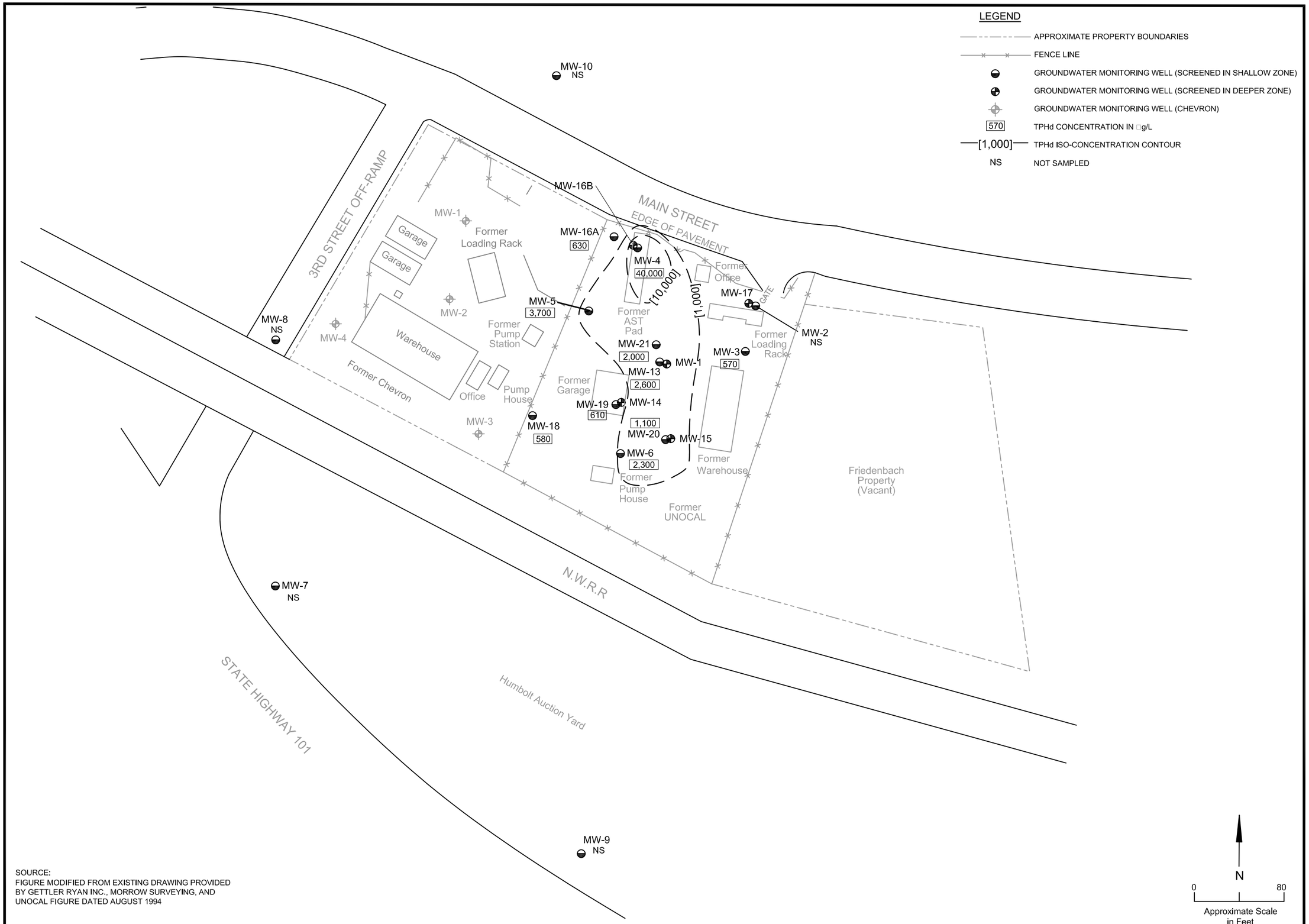
PETROLEUM HYDROCARBON CONCENTRATION MAP – NOVEMBER 2, 2005
FORMER UNOCAL BULK PLANT 762248
359 MAIN STREET
FORTUNA, CALIFORNIA

SCALE: 1"=80'
DATE: 11/05
PROJECT NUMBER: 06940-407-100

FIGURE NUMBER: 8
SHEET NUMBER: 1

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SHALLOW TPHd ISO-CONCENTRATION MAP
(AUGUST 17, 2005)
FORMER UNOCAL BULK PLANT 762248
359 MAIN STREET
FORTUNA, CALIFORNIA

SCALE: 1"=80'
DATE: 11/05 PR
PROJECT NUMBER: 06940-407-100

FIGURE NUMBER: 9
SHEET NUMBER: 1

\\03DCSACRAMENTO\Projects\Projects\06940\762248-407\CAD\3Q05\762248 TPHD SHALLOW 3Q05 FIG9.dwg, 12/16/2005 11:39:16 AM

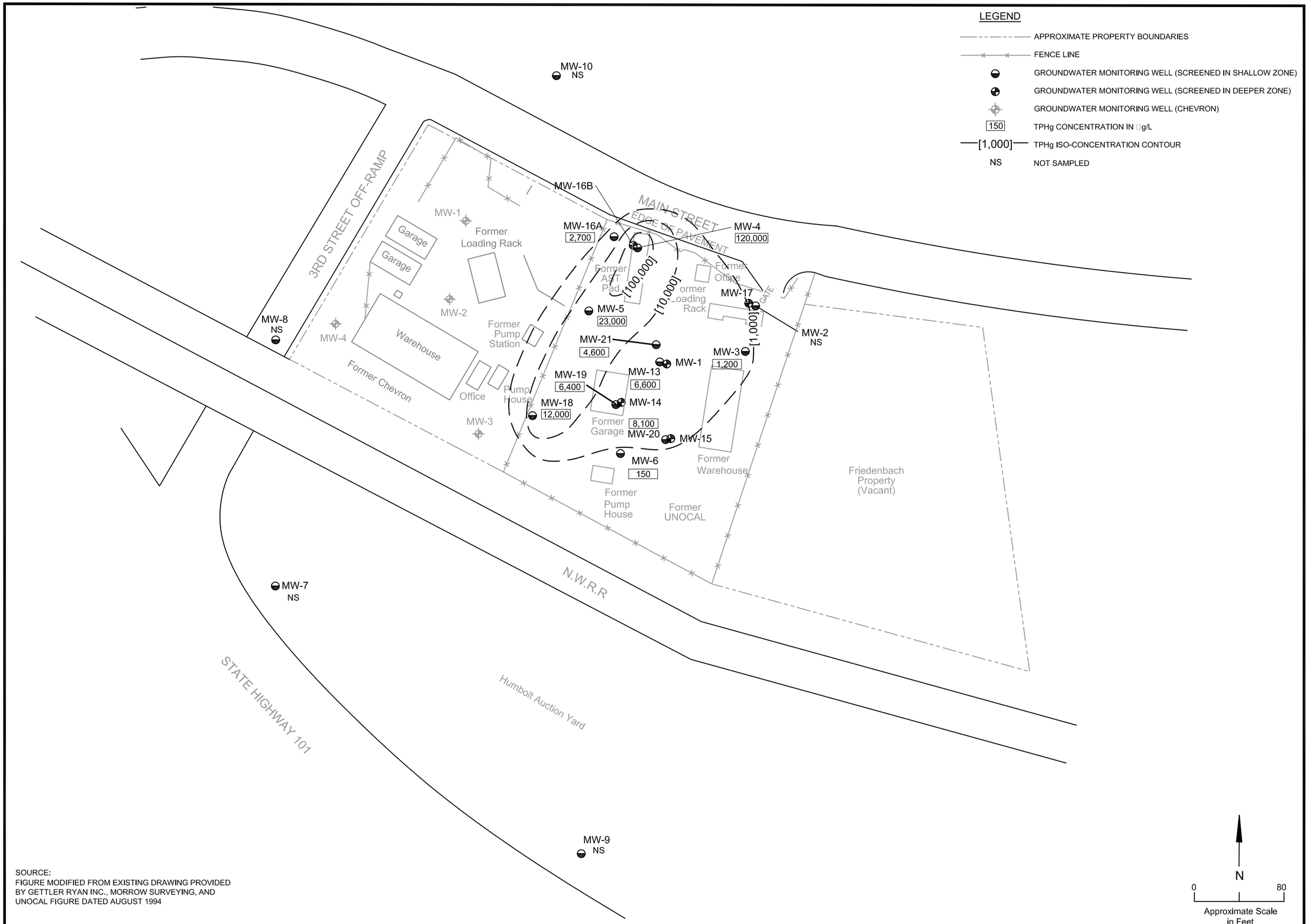


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FIGURE MODIFIED FROM EXISTING DRAWING PROVIDED BY GETTLER RYAN INC., MORROW SURVEYING, AND UNOCAL FIGURE DATED AUGUST 1994

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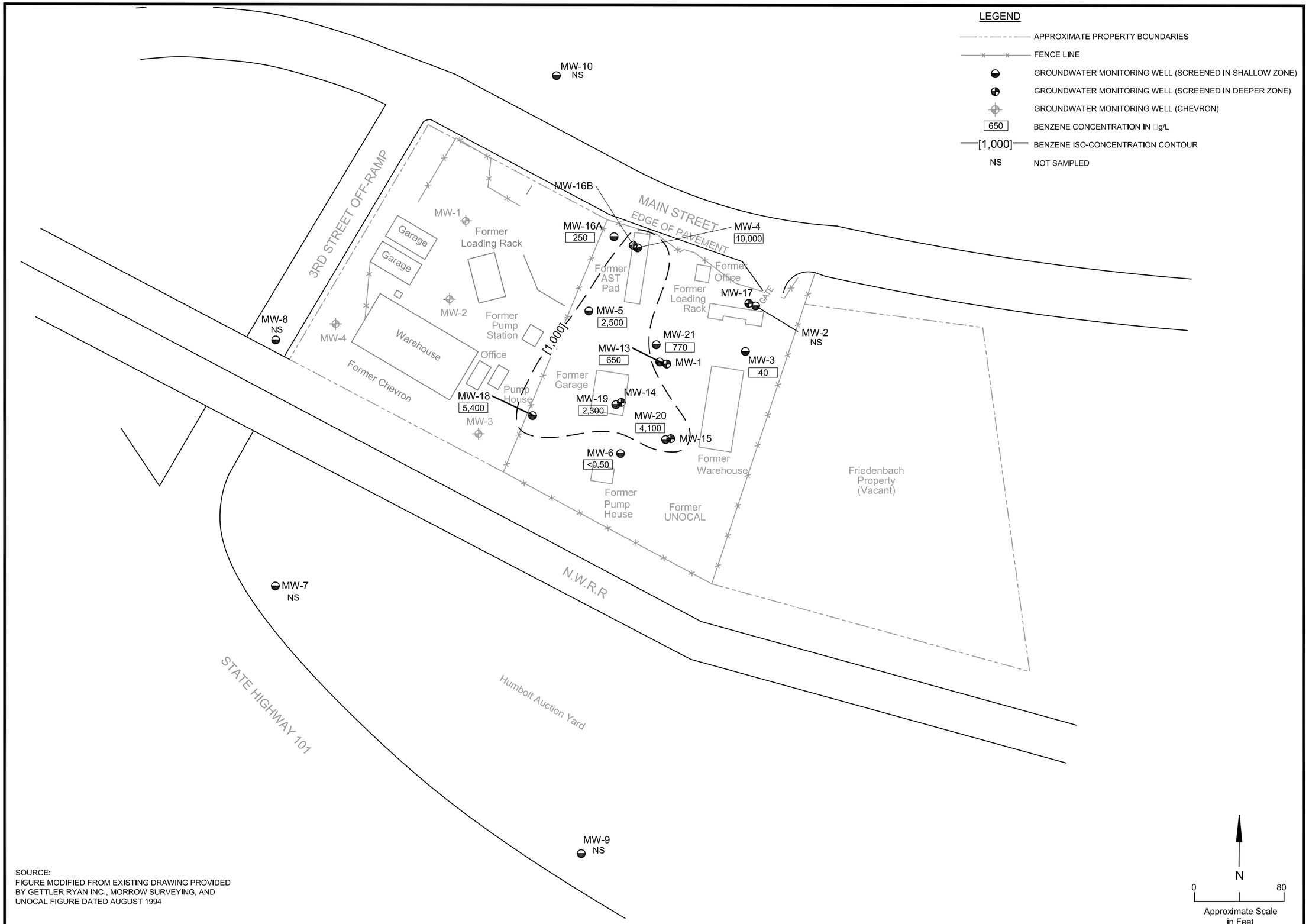
SHALLOW TPHg ISO-CONCENTRATION MAP
(AUGUST 17, 2005)
FORMER UNOCAL BULK PLANT 762248
359 MAIN STREET
FORTUNA, CALIFORNIA

SCALE: 1"=80'
DATE: 11/05 PR
PROJECT NUMBER: 06940-407-100

FIGURE NUMBER: 10
SHEET NUMBER: 1

\\03DCSACRAMENTO\Projects\Projects\06940\762248-407\CAD\3Q05\762248 TPHG SHALLOW 3Q05 FIG110.dwg, 12/16/2005 11:41:39 AM




SOURCE:
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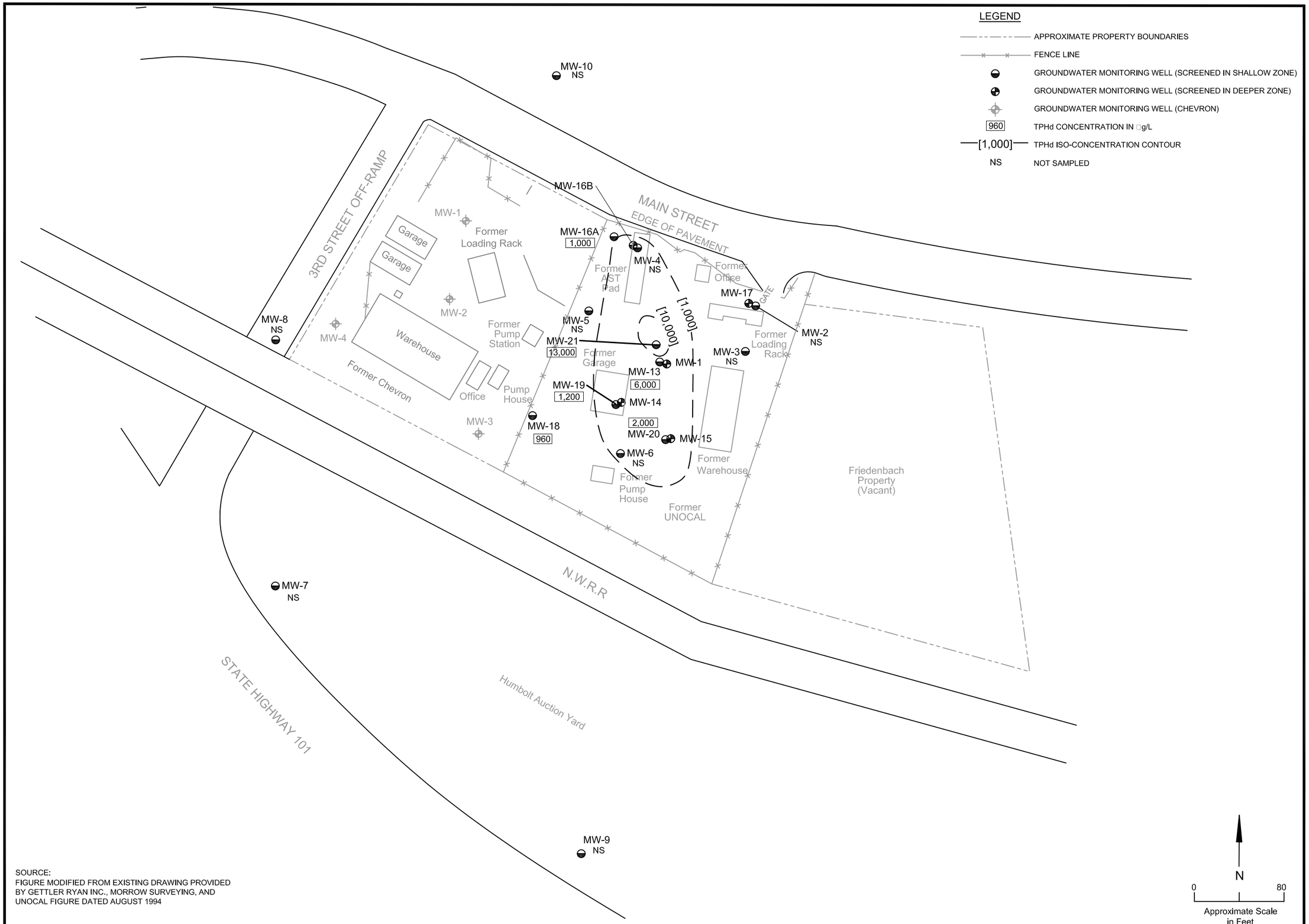
SHALLOW BENZENE ISO-CONCENTRATION MAP
(AUGUST 17, 2005)
FORMER UNOCAL BULK PLANT 762248
359 MAIN STREET
FORTUNA, CALIFORNIA

SCALE: 1"=80'
DATE: 11/05 PR
PROJECT NUMBER: 06940-407-100

FIGURE NUMBER: 11
SHEET NUMBER: 1

\\03DCSACRAMENTO\Projects\Projects\06940\762248-407\CAD\3Q05\762248 BENZENE SHALLOW 3Q05 FIG131.dwg, 12/16/2005 11:43:28 AM

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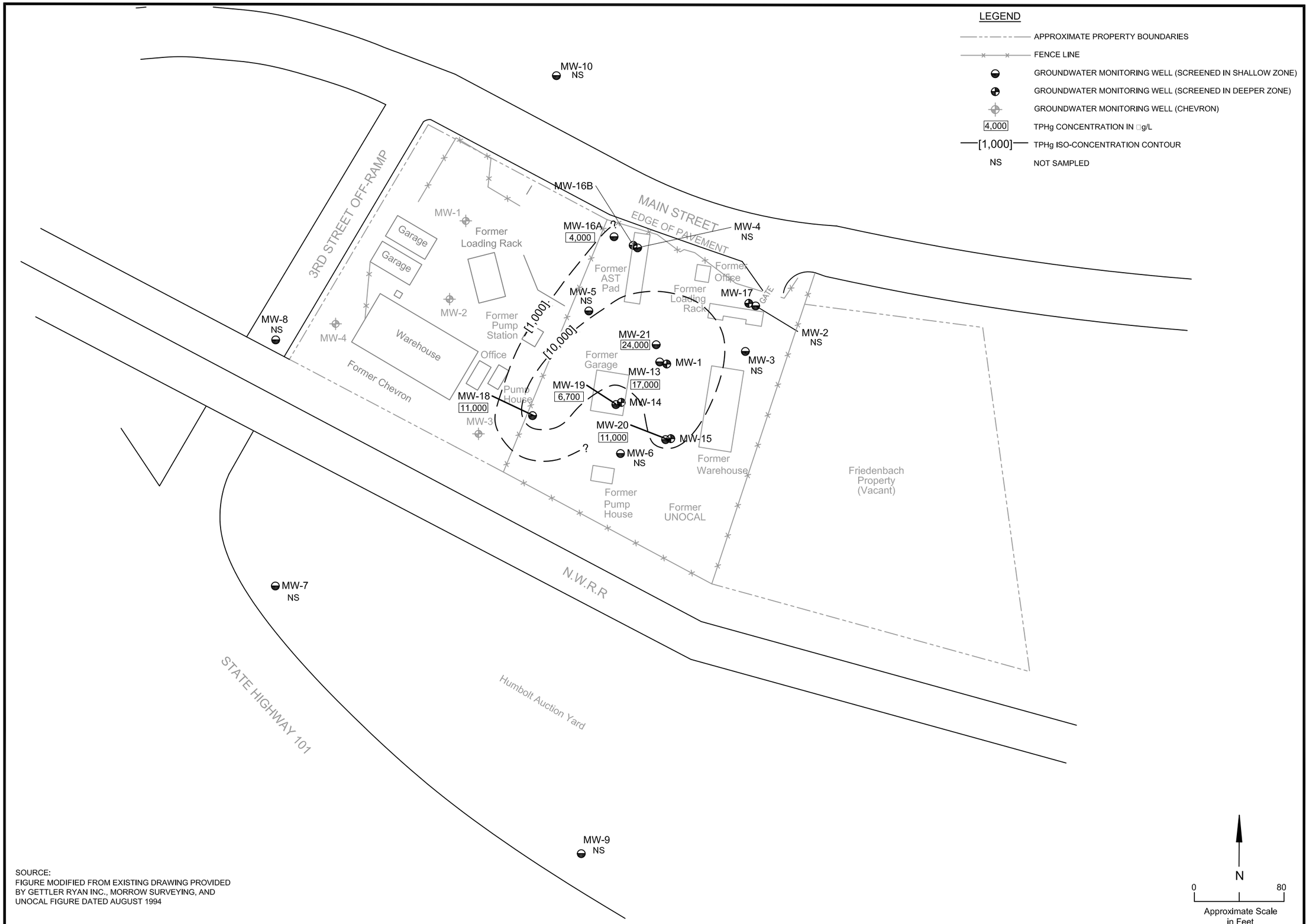
SHALLOW TPHd ISO-CONCENTRATION MAP
(NOVEMBER 2, 2005)
FORMER UNOCAL BULK PLANT 762248
359 MAIN STREET
FORTUNA, CALIFORNIA

SCALE: 1"=80'
DATE: 11/05 PR
PROJECT NUMBER: 06940-407-100

FIGURE NUMBER: 12
SHEET NUMBER: 1

\\03DCSACRAMENTO\Projects\Projects\06940\762248-407\CAD\3Q05\762248 TPHD SHALLOW 4Q05 FIG102.dwg, 12/16/2005 11:40:17 AM




SOURCE:
FIGURE MODIFIED FROM EXISTING DRAWING PROVIDED BY GETTLER RYAN INC., MORROW SURVEYING, AND UNOCAL FIGURE DATED AUGUST 1994

| REVISIONS | | |
|---|---|---|
| NO.: | DESCRIPTION: | DATE: | BY: |

DESIGNED BY: X
DRAWN BY: K.P.B.
CHECKED BY: S.W.
APPROVED BY: X

ENSR
10411 Old Placerville Road
Sacramento, California 95827
Phone: (916) 362-7100
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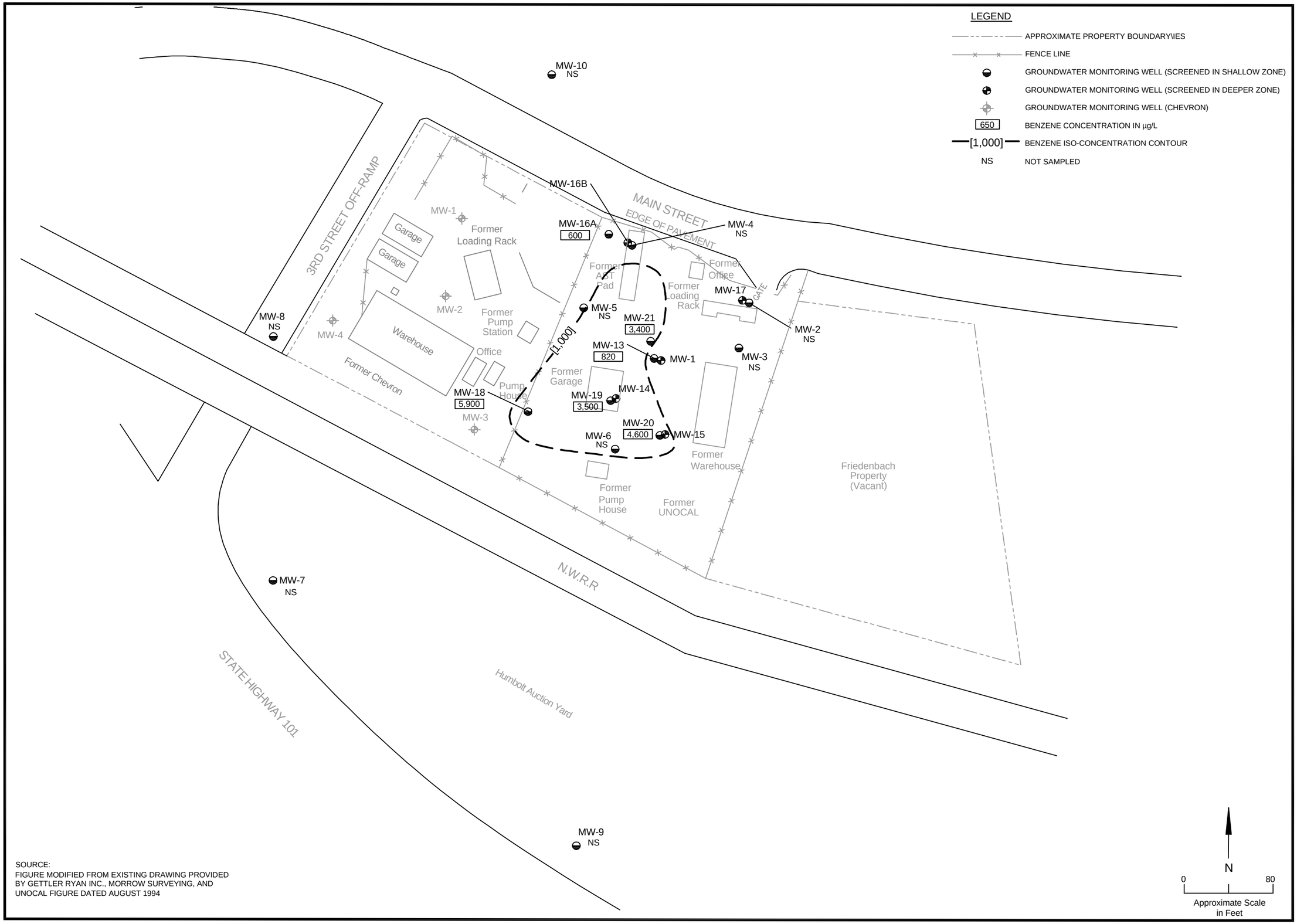
Web: WWW.ENSR.COM

SHALLOW TPHg ISO-CONCENTRATION MAP
(NOVEMBER 2, 2005)
FORMER UNOCAL BULK PLANT 762248
359 MAIN STREET
FORTUNA, CALIFORNIA

SCALE: 1"=80'
DATE: 11/05 PR
PROJECT NUMBER: 06940-407-100

FIGURE NUMBER: 13
SHEET NUMBER: 1

\\03DCSACRAMENTO\Projects\Projects\06940\762248-407\CAD\3Q05\762248 TPHG SHALLOW 4Q05 FIG123.dwg, 12/16/2005 11:42:27 AM




SOURCE:
FIGURE MODIFIED FROM EXISTING DRAWING PROVIDED BY GETTLER RYAN INC., MORROW SURVEYING, AND UNOCAL FIGURE DATED AUGUST 1994

| REVISIONS | | |
|---|---|---|
| NO.: | DESCRIPTION: | DATE: | BY: |

DESIGNED BY: X
DRAWN BY: K.P.B.
CHECKED BY: S.W.
APPROVED BY: X

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SHALLOW BENZENE ISO-CONCENTRATION MAP
(NOVEMBER 2, 2005)
FORMER UNOCAL BULK PLANT 762248
359 MAIN STREET
FORTUNA, CALIFORNIA

SCALE: 1"=80'
DATE: 11/05 PR
PROJECT NUMBER: 06940-407-100

FIGURE NUMBER: 14

SHEET NUMBER: 1

# Table 1

## Groundwater Monitoring Data and Analytical Results

Former Unocal Bulk Plant No. 762248
359 Main Street
Fortuna, California

| WELL ID / TOC*(ft.) | DATE | DTW (ft.) | GWE (msl) | Product Thickness (ft.) | TPHd (ug/L) | TPHg (ug/L) | B (ug/L) | T (ug/L) | E (ug/L) | X (ug/L) | MTBE (ug/L) | VOCs (ug/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MW-1** | | | | | | | | | | | | |
| 45.62 | 03/26/91 | 23.66 | 21.96 | 0.00 | ND | 5,600 | 200 | 750 | 150 | 1,100 | -- | -- |
| | 05/01/91 | 24.54 | 21.08 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 07/08/91 | 25.89 | 19.73 | 0.00 | ND | 150 | 40 | ND | 4.0 | 5.1 | -- | -- |
| | 10/21/91 | 26.90 | 18.72 | 0.00 | ND | 400 | 86 | 5.4 | 5.3 | 15 | -- | -- |
| | 01/23/92 | 26.29 | 19.33 | 0.00 | ND | 390 | 5.7 | 6.8 | 1.6 | 2.9 | -- | -- |
| | 05/01/92 | 25.15 | 20.47 | 0.00 | ND | 3,300 | 1,500 | 570 | 190 | 490 | -- | -- |
| | 07/02/92 | 26.77 | 18.85 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 07/17/92 | 26.95 | 18.67 | 0.00 | 120 | 60 | 10 | 1.7 | ND | 1.6 | -- | -- |
| | 10/02/92 | 27.79 | 17.83 | 0.00 | ND | 60 | 1.0 | 1.4 | ND | 0.7 | -- | ND[3] |
| | 03/03/93 | 23.48 | 22.14 | 0.00 | ND | 11,000 | 1,200 | 410 | 94 | 490 | -- | ND[3] |
| | 06/22-23/93 | 24.54 | 21.08 | 0.00 | 1,500 | 3,800 | 1,300 | 210 | 120 | 390 | -- | -- |
| | 09/22-23/93 | 26.90 | 18.72 | 0.00 | 450 | 58 | ND | ND | ND | ND | -- | -- |
| | 12/22/93 | 26.45 | 19.17 | 0.00 | 68[7] | 56 | 1.9 | 4.2 | 4.3 | 16 | -- | -- |
| | 03/28-29/94 | 25.40 | 20.22 | 0.00 | 150 | ND | 0.72 | 0.54 | ND | 1.1 | -- | -- |
| | 06/23-24/94 | 26.43 | 19.19 | 0.00 | 650[7] | 2,500 | 1,100 | ND | 36 | ND | -- | -- |
| | 09/21/94 | 27.45 | 18.17 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 12/21/94 | 26.13 | 19.49 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 03/02-03/95 | 24.15 | 21.47 | 0.00 | 190[7] | ND | ND | ND | ND | ND | -- | -- |
| | 06/01/95 | 25.05 | 20.57 | 0.00 | 860[7] | 3,000 | 130 | 20 | 76 | 550 | -- | -- |
| | 09/05-06/95 | 26.65 | 18.97 | 0.00 | 130[8] | ND | ND | ND | ND | ND | -- | -- |
| | 12/10-11/95 | 26.62 | 19.00 | 0.00 | 150[8] | ND | ND | ND | ND | ND | -- | -- |
| | 03/11/96 | 24.87 | 20.75 | 0.00 | 140 | 94[9] | 0.78 | ND | ND | ND | -- | -- |
| | 06/03-04/96 | 24.88 | 20.74 | 0.00 | ND | 60[9] | ND | ND | ND | ND | -- | -- |
| | 09/04-05/96 | 26.45 | 19.17 | 0.00 | 90[8] | ND | ND | ND | ND | ND | -- | -- |
| | 12/02-03/96 | 25.65 | 19.97 | 0.00 | 82 | ND | ND | ND | ND | ND | -- | -- |
| | 03/10-11/97 | 22.60 | 23.02 | 0.00 | 410[8] | ND | ND | ND | ND | ND | -- | -- |
| | 06/09-10/97 | 24.00 | 21.62 | 0.00 | 160 | ND | ND | ND | ND | ND | ND | -- |
| | 09/08-09/97 | 25.42 | 20.20 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 12/03-04/97 | 23.86 | 21.76 | 0.00 | 160[8] | ND | ND | ND | ND | ND | -- | -- |

# Table 1

## Groundwater Monitoring Data and Analytical Results

Former Unocal Bulk Plant No. 762248
359 Main Street
Fortuna, California

| WELL ID / TOC*(ft.) | DATE | DTW (ft.) | GWE (msl) | Product Thickness (ft.) | TPHd (ug/L) | TPHg (ug/L) | B (ug/L) | T (ug/L) | E (ug/L) | X (ug/L) | MTBE (ug/L) | VOCs (ug/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-1 | 03/23-24/98 | 19.45 | 26.17 | 0.00 | 140 | 120 | 33 | 1.3 | ND | 5.1 | -- | -- |
| (Cont.) | 06/07-08/98 | 22.47 | 23.15 | 0.00 | 220 | 420 | 180 | ND[11] | ND[11] | 4.7 | -- | -- |
| | 09/16/98 | 24.75 | 20.87 | 0.00 | 170 | ND | ND | ND | ND | 1.1 | ND | -- |
| | 12/16/98 | 23.11 | 22.51 | 0.00 | 150 | ND | ND | ND | ND | ND | -- | -- |
| | 03/23/99 | 21.31 | 24.31 | 0.00 | 150 | 530 | 160 | ND[11] | ND[11] | 22 | ND[22] | --[23] |
| | 06/14/99 | 23.25 | 22.37 | 0.00 | 210[27] | 140 | 79 | ND | ND | 0.93 | -- | -- |
| | 09/13-14/99 | 25.10 | 20.52 | 0.00 | 110[15] | ND | ND | ND | ND | ND | -- | -- |
| | 12/16/99 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 03/16-17/00 | 21.80 | 23.82 | 0.00 | 120[15] | 180[28] | 73 | ND | 1 | 7.1 | -- | -- |
| | 06/26-27/00 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 09/21/00 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 11/08/00 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 02/08/01 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 05/09/01 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 08/07/01 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 11/27/01 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 02/05/02 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 05/07/02 | 23.61 | 22.01 | 0.00 | 5,000/3,700[38,43] | 560 | 41 | 89 | 3.6 | 92 | -- | -- |
| | 08/14/02 | 25.51 | 20.11 | 0.00 | 2,000/1,000[38] | 77 | <0.50 | 3.1 | <0.50 | 3.4 | -- | -- |
| | 11/12/02 | 25.64 | 19.98 | 0.00 | 6,200/91[38] | 3,800 | 160 | 1,400 | 34 | 530 | -- | -- |
| | 02/12/03 | 22.72 | 22.90 | 0.00 | 5,000/130[38] | 2,300 | 25 | 400 | 3.8 | 410 | -- | -- |
| 45.62 | 06/09-10/03 | 23.22 | 22.40 | 0.00 | 4,400/1,700[38] | 14,000[45] | 1,300[45] | 2,800[45] | 41[45] | 2,700[45] | -- | -- |
| | 08/14/03 | 25.00 | 20.62 | 0.00 | 430/150[38] | 550 | 56 | 9.7 | 3.6 | 85 | -- | -- |
| | 12/11/03 | 24.20 | 21.42 | 0.00 | 1,700 | 99 | 2.8 | 18 | 1.8 | 17 | -- | -- |
| | 03/23/04 | 22.40 | 23.22 | 0.00 | 8,100[49]/470[38,49] | 26,000 | 2,400 | 6,700 | 430 | 4,400 | -- | -- |
| | 08/10/04 | 25.60 | 20.02 | 0.00 | 270 [49] | 310 [50] | 40 | 7.2 | 7.2 | 37 | -- | -- |
| 47.41 | 02/08/05 | 23.22 | 24.19 | 0.00 | 87 [49] | 510 | 14 | 90 | 6.3 | 150 | -- | -- |
| | 05/18/05 | 22.08 | 25.33 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| | **08/17-18/05** | **24.70** | **22.71** | **0.00** | **<50 [38]** | **<50** | **<0.50** | **<0.50** | **<0.50** | **<1.0** | -- | -- |
| | **11/01-02/05** | **25.40** | **22.01** | **0.00** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** |

# Table 1

**Groundwater Monitoring Data and Analytical Results**

Former Unocal Bulk Plant No. 762248
359 Main Street
Fortuna, California

| WELL ID / TOC*(ft.) | DATE | DTW (ft.) | GWE (msl) | Product Thickness (ft.) | TPHd (ug/L) | TPHg (ug/L) | B (ug/L) | T (ug/L) | E (ug/L) | X (ug/L) | MTBE (ug/L) | VOCs (ug/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MW-2** | | | | | | | | | | | | |
| 48.59 | 03/26/91 | 7.12 | 41.47 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 05/01/91 | 7.37 | 41.22 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 07/08/91 | 8.28 | 40.31 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 10/21/91 | 10.76 | 37.83 | 0.00 | ND | ND | ND | 0.5 | ND | 1.0 | -- | -- |
| | 01/23/92 | 10.36 | 38.23 | 0.00 | ND | ND | ND | 0.5 | ND | ND | -- | -- |
| | 05/01/92 | 8.80 | 39.79 | 0.00 | ND | ND | ND | 0.9 | ND | ND | -- | -- |
| | 07/02/92 | 8.77 | 39.82 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 07/17/92 | 8.97 | 39.62 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 10/02/92 | 11.29 | 37.30 | 0.00 | ND | ND | ND | ND | ND | ND | -- | ND |
| | 03/03/93 | 8.35 | 40.24 | 0.00 | ND | ND | ND | ND | ND | ND | -- | ND |
| | 06/22-23/93 | 7.20 | 41.39 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 09/22-23/93 | 10.04 | 38.55 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 12/22/93 | 10.45 | 38.14 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 03/28-29/94 | 7.82 | 40.77 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 06/23-24/94 | 8.32 | 40.27 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 09/21/94 | INACCESSIBLE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 12/21/94 | INACCESSIBLE (CONNECTED TO REMEDIATION SYSTEM) | | | | | -- | -- | -- | -- | -- | -- |
| | 03/02-03/95 | INACCESSIBLE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 06/01/95 | INACCESSIBLE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 09/05-06/95 | INACCESSIBLE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 12/10-11/95 | INACCESSIBLE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 03/11/96 | INACCESSIBLE (CONNECTED TO REMEDIATION SYSTEM) | | | | | -- | -- | -- | -- | -- | -- |
| | 06/03-04/96 | 7.48 | 41.11 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 09/04-05/96 | 10.54 | 38.05 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 12/02-03/96 | 10.72 | 37.87 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 03/10-11/97 | 7.13 | 41.46 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 06/09-10/97 | 7.91 | 40.68 | 0.00 | ND | ND | ND | ND | ND | ND | ND | -- |
| | 09/08-09/97 | 11.39 | 37.20 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 12/03-04/97 | 10.09 | 38.50 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |

# Table 1
## Groundwater Monitoring Data and Analytical Results
Former Unocal Bulk Plant No. 762248
359 Main Street
Fortuna, California

| WELL ID / TOC*(ft.) | DATE | DTW (ft.) | GWE (msl) | Product Thickness (ft.) | TPHd (ug/L) | TPHg (ug/L) | B (ug/L) | T (ug/L) | E (ug/L) | X (ug/L) | MTBE (ug/L) | VOCs (ug/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-2 | 03/23-24/98 | 6.25 | 42.34 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| (Cont.) | 06/07-08/98 | 6.49 | 42.10 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 09/16/98 | 9.33 | 39.26 | 0.00 | ND | ND | ND | ND | ND | ND | ND | -- |
| | 12/16/98 | 7.86 | 40.73 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 03/23/99 | 6.22 | 42.37 | 0.00 | ND | ND | ND | 0.54 | ND | ND | 2.6[22] | --[24] |
| | 06/14/99 | 7.34 | 41.25 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 09/13-14/99[31] | 10.18 | 38.41 | 0.00 | 57[15] | ND | ND | ND | ND | ND | -- | -- |
| | 12/16/99 | 9.30 | 39.29 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 03/16-17/00 | 6.84 | 41.75 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 06/26-27/00 | 8.21 | 40.38 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 09/21/00 | 10.42 | 38.17 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 11/08/00 | 10.88 | 37.71 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 02/08/01 | 8.22 | 40.37 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 05/09/01 | 7.22 | 41.37 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 08/07/01 | 9.47 | 39.12 | 0.00 | <50 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 11/27/01 | 10.53 | 38.06 | 0.00 | <50 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 02/05/02 | 7.04 | 41.55 | 0.00 | <50 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 05/07/02 | 7.06 | 41.53 | 0.00 | [43]670/690[38,43] | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 08/14/02 | 9.35 | 39.24 | 0.00 | <56 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 11/12/02 | 11.19 | 37.40 | 0.00 | <50[38,44] | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 02/12/03 | 8.03 | 40.56 | 0.00 | <56 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| 48.80 | 06/09-10/03 | 6.96 | 41.84 | 0.00 | 71/<54[38] | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 08/14/03 | 9.14 | 39.66 | 0.00 | <54 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 12/11/03 | 9.75 | 39.05 | 0.00 | 89/88[38] | <50 | <0.50 | <0.50 | <0.50 | <0.50 | **--** | **--** |
| | 03/23/04 | 7.05 | 41.75 | 0.00 | 360[49]/170[38,49] | -- | -- | -- | -- | -- | -- | -- |
| | 08/10/04 | 9.95 | 38.85 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| 50.60 | 02/08/05 | 7.22 | 43.38 | 0.00 | <50 | -- | -- | -- | -- | -- | -- | -- |
| | 05/18/05 | 4.73 | 45.87 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| | **08/17-18/05** | **8.44** | **42.16** | **0.00** | **--** | -- | -- | -- | -- | -- | -- | -- |
| | **11/01-02/05** | **10.03** | **40.57** | **0.00** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** |

# Table 1

## Groundwater Monitoring Data and Analytical Results

Former Unocal Bulk Plant No. 762248
359 Main Street
Fortuna, California

| WELL ID / TOC*(ft.) | DATE | DTW (ft.) | GWE (msl) | Product Thickness (ft.) | TPHd (ug/L) | TPHg (ug/L) | B (ug/L) | T (ug/L) | E (ug/L) | X (ug/L) | MTBE (ug/L) | VOCs (ug/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MW-3** | | | | | | | | | | | | |
| 46.59 | 03/26/91 | 6.27 | 40.32 | 0.00 | ND | 11,000 | 1,900 | 2,600 | 470 | 2,200 | -- | -- |
| | 05/01/91 | 6.93 | 39.66 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 07/08/91 | 7.62 | 38.97 | 0.00 | ND | 10,000 | 1,600 | 2,000 | 330 | 1,400 | -- | -- |
| | 10/21/91 | 9.95 | 36.64 | 0.00 | ND | 3,100 | 550 | 420 | 77 | 470 | -- | -- |
| | 01/23/92 | 9.20 | 37.39 | 0.00 | ND | 19,000 | 690 | 760 | 180 | 960 | -- | -- |
| | 05/01/92 | 6.52 | 40.07 | 0.00 | ND | 11,000 | 1,700 | 1,800 | 450 | 1,700 | -- | -- |
| | 07/02/92 | 7.86 | 38.73 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 07/17/92 | 7.95 | 38.64 | 0.00 | 680 | 4,600 | 860 | 800 | 200 | 930 | -- | -- |
| | 10/02/92 | 10.70 | 35.89 | 0.00 | 160[4] | 2,000 | 350 | 290 | 52 | 400 | -- | ND[5] |
| | 03/03/93 | 7.12 | 39.47 | Sheen | ND | 27,000 | 820 | 1,700 | 320 | 1,700 | -- | ND[5] |
| | 06/22-23/93 | 6.21 | 40.38 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 09/22-23/93 | 9.40 | 37.19 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 12/22/93 | 9.51 | 37.08 | 0.00 | 1,600[7] | 9,700 | 1,500 | 1,300 | 300 | 2,300 | -- | -- |
| | 03/28-29/94 | 6.78 | 39.81 | Sheen | 1,900[7] | 19,000 | 2,300 | 1,800 | 530 | 3,500 | -- | -- |
| | 06/23-24/94 | 7.42 | 39.17 | 0.00 | 1,700[7] | 14,000 | 1,500 | 760 | 400 | 2,900 | -- | -- |
| | 09/21/94 | 10.50 | 36.09 | 0.00 | 7,800[7] | 13,000 | 1,000 | 860 | 1,800 | 270 | -- | -- |
| | 12/21/94 | INACCESSIBLE (CONNECTED TO REMEDIATION SYSTEM) | | | | | -- | -- | -- | -- | -- | -- |
| | 03/02-03/95 | 1.15 | 45.44 | 0.00 | 490[7] | 2,200 | ND | 9.6 | ND | 230 | -- | -- |
| | 06/01/95 | 6.58 | 40.01 | Sheen | 17,000[7] | 20,000 | 1,400 | 3,300 | 570 | 4,300 | -- | -- |
| | 09/05-06/95 | 9.60 | 36.99 | 0.00 | 4,400[8] | 26,000 | 580 | 740 | 620 | 7,200 | -- | -- |
| | 12/10-11/95 | 9.57 | 37.02 | 0.00 | 200[8] | 260 | 5.8 | ND | ND | ND | -- | -- |
| | 03/11/96 | 3.11 | 43.48 | 0.00 | 1,300[8] | 7,700 | 36 | 15 | ND | 1,700 | -- | -- |
| | 06/03-04/96 | 7.01 | 39.58 | 0.00 | 1,400[7] | 1,000 | 70 | 2.8 | 28 | 140 | -- | -- |
| | 09/04-05/96 | 10.00 | 36.59 | 0.00 | 23,000[8] | 17,000 | 87 | ND | 160 | 1,400 | -- | -- |
| | 12/02-03/96 | 9.90 | 36.69 | 0.00 | 1,600[7] | 3,200 | 68 | 31 | 75 | 1,000 | -- | -- |
| | 03/10-11/97 | 6.35 | 40.24 | 0.00 | 3,000[7] | 11,000 | 190 | 130 | 400 | 2,300 | -- | -- |
| | 06/09-10/97 | 7.15 | 39.44 | 0.00 | 3,000[7] | 10,000 | 120 | ND | 140 | 960 | ND | -- |
| | 09/08-09/97 | 11.80 | 34.79 | 0.00 | 450[7] | 5,300 | 100 | 21 | 97 | 580 | -- | -- |

# Table 1

## Groundwater Monitoring Data and Analytical Results

Former Unocal Bulk Plant No. 762248
359 Main Street
Fortuna, California

| WELL ID / TOC*(ft.) | DATE | DTW (ft.) | GWE (msl) | Product Thickness (ft.) | TPHd (ug/L) | TPHg (ug/L) | B (ug/L) | T (ug/L) | E (ug/L) | X (ug/L) | MTBE (ug/L) | VOCs (ug/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-3 | 12/03-04/97 | 9.34 | 37.25 | 0.00 | 1,100[7] | 6,200 | 120 | ND | 57 | 700 | -- | -- |
| (Cont.) | 03/23-24/98 | 5.51 | 41.08 | 0.00 | 4,400[10] | 4,200 | 21 | ND[11] | 20 | 240 | -- | -- |
| | 06/07-08/98 | 5.99 | 40.60 | 0.00 | 80[14] | 540 | 10 | ND[11] | 5.7 | 41 | -- | -- |
| | 09/16/98 | 8.68 | 37.91 | 0.00 | 3,400[17] | 1,400[18] | 26 | ND[11] | 14 | 130 | ND[11] | -- |
| | 12/16/98 | 7.65 | 38.94 | 0.00 | 9,100[10] | 4,200 | 31 | ND[11] | 17 | 170 | -- | -- |
| | 03/23/99 | 5.65 | 40.94 | 0.00 | 610[21] | 1,900 | 27 | 2.6 | 21 | 130 | ND[22] | --[25] |
| | 06/14/99 | 6.66 | 39.93 | 0.00 | 1,700[21] | 3,500 | 44 | ND[11] | 20 | 170 | -- | -- |
| | 09/13-14/99[31] | 9.91 | 36.68 | 0.00 | 6,500[21] | 1,200[28] | 10 | ND | 3.8 | 35 | -- | -- |
| | 12/16/99 | 8.91 | 37.68 | 0.00 | 4,400[33] | 1,790[28] | 27.3 | ND[11] | 9.55 | 81.4 | -- | -- |
| | 03/16-17/00 | 5.58 | 41.01 | 0.00 | 440[21] | 1,300[28] | ND[11] | ND[11] | ND[11] | 73 | -- | -- |
| | 06/26-27/00 | 8.25 | 38.34 | 0.00 | 470[14] | 2,000[28] | 22 | ND[11] | 10 | 120 | -- | -- |
| | 09/21/00 | 10.92 | 35.67 | 0.00 | 96.2[37] | 210[28] | 2.2 | 0.64 | 0.99 | 8.4 | -- | -- |
| | 11/08/00 | 11.27 | 35.32 | 0.00 | 215[21] | 880[28] | 21 | ND[11] | 8.0 | 52 | -- | -- |
| | 02/08/01 | 7.93 | 38.66 | 0.00 | [21]82/58[14,38] | 933[28] | 41.1 | 14.3 | 7.51 | 38.4 | -- | -- |
| | 05/09/01 | 6.23 | 40.36 | 0.00 | [15]80/ND[38] | 390[28] | 20 | 4.6 | 20 | 68 | -- | -- |
| | 08/07/01 | 8.90 | 37.69 | 0.00 | <50 | 120 | 3.3 | <0.50 | <0.50 | 4.0 | -- | -- |
| | 11/27/01 | 9.95 | 36.64 | 0.00 | [41]100/100[38,41] | 170 | 2.0 | <0.50 | 0.65 | 5.5 | -- | -- |
| | 02/05/02 | 5.51 | 41.08 | 0.00 | [41]510/300[38,41] | 480 | 21 | <0.50 | 2.1 | 29 | -- | -- |
| | 05/07/02 | INACCESSIBLE - TRACTOR OVER WELL | | | | -- | -- | -- | -- | -- | -- | -- |
| | 08/14/02 | 8.37 | 38.22 | 0.00 | [41]2,300/2,000[38,41] | 5,800 | 120 | 11 | 65 | 280 | -- | -- |
| | 11/12/02 | 9.94 | 36.65 | 0.00 | 1,900/570[38] | 1,800 | 70 | 1.1 | 26 | 110 | -- | -- |
| | 02/12/03 | 5.64 | 40.95 | 0.00 | 1,800/410[38] | 1,400 | 54 | 0.67 | 19 | 95 | -- | -- |
| 46.57 | 06/09-10/03 | 5.62 | 40.95 | 0.00 | 2,900/1,600[38] | 5,000 | 320 | 6.9 | 170 | 650 | -- | -- |
| | 08/14/03 | 7.96 | 38.61 | 0.00 | [41]1,900/990[38,41] | 4,000 | 220 | 6.7 | 110 | 460 | -- | -- |
| | 12/11/03 | 8.25 | 38.32 | 0.00 | 1,100 | 340 | 6.8 | <0.50 | 1.4 | 16 | -- | -- |
| | 03/23/04 | 6.00 | 40.57 | 0.00 | 1,200[49]/260[38,49] | 1,800[50] | 150 | 130 | 40 | 310 | -- | -- |
| | 08/10/04 | 9.20 | 37.37 | 0.00 | 610 [49] | 1,300 [50] | 49 | 2.5 | 18 | 140 | -- | -- |
| 48.35 | 02/08/05 | 6.17 | 42.18 | 0.00 | 580 [49] | 2,100 [51] | 150 | 3.1 | 12 | 160 | -- | -- |
| | 05/18/05 | 4.03 | 44.32 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |

# Table 1
## Groundwater Monitoring Data and Analytical Results
Former Unocal Bulk Plant No. 762248
359 Main Street
Fortuna, California

| WELL ID / TOC*(ft.) | DATE | DTW (ft.) | GWE (msl) | Product Thickness (ft.) | TPHd (ug/L) | TPHg (ug/L) | B (ug/L) | T (ug/L) | E (ug/L) | X (ug/L) | MTBE (ug/L) | VOCs (ug/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-3 | **08/17-18/05** | **7.61** | **40.74** | **0.00** | **570 [38, 49]** | **1,200 [51]** | **40** | **0.84** | **13** | **71** | -- | -- |
| (Cont.) | **11/01-02/05** | **9.60** | **38.75** | **0.00** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** |
| **MW-4** | | | | | | | | | | | | |
| 50.31 | 03/26/91 | 9.85 | 40.46 | 0.00 | ND | 55,000 | 13,000 | 16,000 | 2,000 | 13,000 | -- | -- |
| | 05/01/91 | 10.13 | 40.18 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 07/08/91 | 11.08 | 39.23 | 0.00 | ND | 33,000 | 7,900 | 3,900 | 1,400 | 3,900 | -- | -- |
| | 10/21/91 | 13.45 | 36.86 | 0.06 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 01/23/92 | 13.25 | 37.06 | 0.08 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 05/01/92 | 10.41 | 39.90 | 0.00 | 14,000[4] | 29,000 | 5,400 | 12,000 | 1,900 | 750 | -- | -- |
| | 07/02/92 | 11.62 | 38.69 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 07/17/92 | 11.79 | 38.52 | 0.00 | 12,000 | 68,000 | 5,900 | 9,700 | 2,400 | 9,900 | -- | -- |
| | 10/02/92 | 13.67 | 36.64 | 0.25/Sheen | -- | -- | -- | -- | -- | -- | -- | -- |
| | 03/03/93 | 10.69 | 39.62 | 0.54/Sheen | -- | -- | -- | -- | -- | -- | -- | -- |
| | 06/22-23/93 | 7.65 | 42.66 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 09/22-23/93 | 12.85 | 37.46*** | 0.30 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 12/22/93 | 13.20 | 37.30** | 0.25 | NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT | | | | | -- | -- | -- |
| | 03/28-29/94 | 10.31 | 40.00 | <0.01 | NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT | | | | | -- | -- | -- |
| | 06/23-24/94 | 101.96 | -51.65 | <0.01 | NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT | | | | | -- | -- | -- |
| | 09/21/94 | 13.81 | 36.50 | <0.01 | NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT | | | | | -- | -- | -- |
| | 12/21/94 | 12.32 | 38.33** | 0.44 | NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT | | | | | -- | -- | -- |
| | 03/02-03/95 | 10.96 | 39.35 | 0.00 | NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT | | | | | -- | -- | -- |
| | 06/01/95 | 10.38 | 39.93 | Sheen | 2,500[8] | 27,000 | 3,600 | 7,000 | 730 | 400 | -- | -- |
| | 09/05-06/95 | 13.35 | 36.98** | 0.02 | NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT | | | | | -- | -- | -- |
| | 12/10-11/95 | 13.38 | 36.95** | 0.03 | NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT | | | | | -- | -- | -- |
| | 03/11/96 | INACCESSIBLE (CONNECTED TO REMEDIATION SYSTEM) | | | | | -- | -- | -- | -- | -- | -- |
| | 06/03-04/96 | 6.83 | 43.48 | Sheen | 19,000[7] | 81,000 | 4,600 | 15,000 | 2,300 | 13,000 | -- | -- |
| | 09/04-05/96 | 12.80 | 37.51 | Sheen | 4,500[8] | 100,000 | 7,600 | 5,300 | 1,200 | 7,200 | -- | -- |
| | 12/02-03/96 | 12.36 | 37.95 | Sheen | 4,200[7] | 46,000 | 4,500 | 15,000 | 1,900 | 11,000 | -- | -- |
| | 03/10-11/97 | 9.53 | 40.78 | Sheen | 3,400[7] | 36,000 | 1,400 | 7,400 | 1,100 | 8,000 | -- | -- |

# Table 1
## Groundwater Monitoring Data and Analytical Results
Former Unocal Bulk Plant No. 762248
359 Main Street
Fortuna, California

| WELL ID / TOC*(ft.) | DATE | DTW (ft.) | GWE (msl) | Product Thickness (ft.) | TPHd (ug/L) | TPHg (ug/L) | B (ug/L) | T (ug/L) | E (ug/L) | X (ug/L) | MTBE (ug/L) | VOCs (ug/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-4 | 06/09-10/97 | 10.60 | 39.71 | Sheen | 3,900[7] | 94,000 | 1,800 | 7,700 | 1,100 | 9,100 | ND | -- |
| (Cont.) | 09/08-09/97 | 13.76 | 36.55 | Sheen | 8,200[7] | 170,000 | 1,700 | 6,400 | 2,900 | 18,000 | -- | -- |
| | 12/03-04/97 | 12.10 | 38.21 | Sheen | 6,100[7] | 100,000 | 4,800 | 12,000 | 2,300 | 15,000 | -- | -- |
| | 03/23-24/98 | 8.07 | 42.24 | 0.00 | 3,400[10] | 100,000 | 12,000 | 21,000 | 2,000 | 11,000 | -- | -- |
| | 06/07-08/98 | 8.90 | 41.43** | 0.02/Sheen | 4,900[12] | 83,000 | 8,500 | 14,000 | 1,900 | 13,000 | -- | -- |
| | 09/16/98 | 11.34 | 38.99** | 0.02/Sheen | 4,200[12] | 110,000 | 9,000 | 12,000 | 1,900 | 12,000 | ND[11] | -- |
| | 12/16/98 | 9.40 | 40.91 | Sheen | 1,900[10] | 64,000 | 10,000 | 12,000 | 1,500 | 7,900 | -- | -- |
| | 03/23/99 | 8.25 | 42.06 | Sheen | 2,500[21] | 51,000 | 6,600 | 9,100 | 1,100 | 5,500 | ND[22] | --[26] |
| | 06/14/99 | 9.42 | 40.89 | 0.00 | 2,300[21] | 49,000 | 6,400 | 6,700 | 1,100 | 5,200 | -- | -- |
| | 09/13-14/99 | 11.83 | 38.48 | 0.00 | 1,400[21] | 39,000[28,30] | 1,800 | 900 | 220 | 920 | -- | -- |
| | 12/16/99 | 11.01 | 39.30 | 0.00 | 7,700[14] | 61,100[28] | 6,670 | 6,870 | 1,280 | 6,130 | -- | -- |
| | 03/16-17/00 | 8.88 | 41.43 | 0.00 | 2,500[14] | 35,000[28] | 7,100 | 7,500 | 1,400 | 6,400 | -- | -- |
| | 06/26-27/00[36] | 10.89 | 39.42 | 0.00 | 1,400[14] | 19,000[28] | 5,800 | 6,400 | 930 | 4,900 | -- | -- |
| | 09/21/00 | 12.77 | 37.54 | Sheen | 2,160[37] | 30,000[28] | 4,900 | 4,000 | 730 | 3,600 | -- | -- |
| | 11/08/00 | 13.12 | 37.19 | 0.00 | 1,760[21] | 57,000[28] | 6,200 | 7,100 | 1,100 | 6,400 | -- | -- |
| | 02/08/01 | 10.62 | 39.69 | 0.00 | [14]2,800/2,300[14,38] | 48,600[28] | 6,930 | 6,630 | 1,020 | 5,370 | -- | -- |
| | 05/09/01 | 9.73 | 40.58 | 0.00 | [39]4,100/3,700[14,38] | 48,000[28] | 4,800 | 10,000 | 1,400 | 7,200 | -- | -- |
| | 08/07/01 | 11.86 | 38.45 | 0.00 | [41]2,100/2,700[38,41] | 28,000[40] | 9,600[40] | 6,400[40] | 1,000[40] | 5,000[40] | -- | -- |
| | 11/27/01 | 12.03 | 38.28 | 0.00 | [41]1,000/1,000[38,41] | 43,000 | 9,800 | 6,700 | 1,200 | 5,400 | -- | -- |
| | 02/05/02 | 8.56 | 41.75 | 0.00 | --[42] | 56,000 | 9,700 | 10,000 | 1,500 | 7,000 | -- | -- |
| | 05/07/02 | 9.37 | 40.94 | 0.00 | [43]19,000/14,000[38,43] | 81,000 | 2,200 | 6,300 | 1,700 | 13,000 | -- | -- |
| | 08/14/02 | 11.56 | 38.75 | 0.00 | [41]3,100/3,600[38,41] | 56,000 | 3,900 | 10,000 | 1,800 | 12,000 | -- | -- |
| | 11/12/02 | 12.73 | 37.58 | 0.00 | 8,000[38,44] | 110,000 | 7,400 | 22,000 | 3,900 | 22,000 | -- | -- |
| | 02/12/03 | 8.98 | 41.33 | 0.00 | 3,800/2,000[38] | 67,000 | 7,800 | 12,000 | 2,000 | 11,000 | -- | -- |
| 50.29 | 06/09-10/03 | 9.34 | 40.95 | 0.00 | 9,000/6,700[38] | 48,000 | 1,900 | 5,100 | 1,400 | 10,000 | -- | -- |
| | 08/14/03 | 11.26 | 39.03 | 0.00 | [41]2,000/1,900[38,41] | 46,000 | 2,200 | 5,400 | 1,100 | 7,500 | -- | -- |
| | 12/11/03 | 11.54 | 38.75 | 0.00 | 2,800 | 24,000 | 3,900 | 2,800 | 890 | 4,200 | -- | -- |
| | 03/23/04 | 9.10 | 41.19 | 0.00 | 5200[49]/2,000[38,49] | 24,000 | 5,300 | 3,800 | 580 | 2,400 | -- | -- |
| | 08/10/04 | 12.00 | 38.29 | 0.00 | 2,600 [49] | 17,000 [50] | 2,800 | 1,600 | 370 | 2,000 | -- | -- |

# Table 1
## Groundwater Monitoring Data and Analytical Results
Former Unocal Bulk Plant No. 762248
359 Main Street
Fortuna, California

| WELL ID / TOC*(ft.) | DATE | DTW (ft.) | GWE (msl) | Product Thickness (ft.) | TPHd (ug/L) | TPHg (ug/L) | B (ug/L) | T (ug/L) | E (ug/L) | X (ug/L) | MTBE (ug/L) | VOCs (ug/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 52.07 | 02/08/05 | 9.28 | 42.79 | 0.00 | 4,000 [49] | 32,000 | 4,100 | 4,500 | 860 | 5,100 | -- | -- |
| MW-4 | 05/18/05 | 8.02 | 44.05 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| (Cont.) | **08/17-18/05** | **10.68** | **41.39** | **0.00** | **40,000 [38]** | **120,000 [51]** | **10,000** | **18,000** | **3,400** | **23,000** | -- | -- |
| | **11/01-02/05** | **12.25** | **39.82** | **0.00** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** |
| **MW-5** | | | | | | | | | | | | |
| 47.57 | 03/26/91 | 9.22 | 38.35 | 0.00 | ND | 64,000 | 22,000 | 16,000 | 2,000 | 13,000 | -- | -- |
| | 05/01/91 | 9.01 | 38.56 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 07/08/91 | 10.00 | 37.57 | Sheen | ND | 120,000 | 25,000 | 18,000 | 1,400 | 15,000 | -- | -- |
| | 10/21/91 | 12.05 | 35.52*** | 0.25/Sheen | -- | -- | -- | -- | -- | -- | -- | -- |
| | 01/23/92 | 11.05 | 36.52*** | 0.02/Sheen | -- | -- | -- | -- | -- | -- | -- | -- |
| | 05/01/92 | 9.13 | 38.44 | 0.00 | ND | 89,000 | 18,000 | 16,000 | 3,200 | 13,000 | -- | -- |
| | 07/02/92 | 10.23 | 37.34*** | 0.01/Sheen | -- | -- | -- | -- | -- | -- | -- | -- |
| | 07/17/92 | 10.49 | 37.08 | 0.00 | 12,000 | 72,000 | 14,000 | 12,000 | 2,700 | 8,700 | -- | -- |
| | 10/02/92 | 11.97 | 35.60*** | 0.95/Sheen | -- | -- | -- | -- | -- | -- | -- | -- |
| | 03/03/93 | 9.70 | 37.87*** | 1.22/Sheen | -- | -- | -- | -- | -- | -- | -- | -- |
| | 06/22-23/93[6] | 8.06 | 39.51*** | 0.75/Sheen | -- | -- | -- | -- | -- | -- | -- | -- |
| | 09/22-23/93 | 11.35 | 36.22*** | 0.10/Sheen | -- | -- | -- | -- | -- | -- | -- | -- |
| | 12/22/93 | 11.10 | 36.53** | 0.08 | NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT | | | | | -- | -- | -- |
| | 03/28-29/94 | 9.05 | 38.52 | <0.01 | NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT | | | | | -- | -- | -- |
| | 06/23-24/94 | 10.02 | 37.55 | <0.01 | NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT | | | | | -- | -- | -- |
| | 09/21/94 | 11.85 | 35.73** | 0.01 | NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT | | | | | -- | -- | -- |
| | 12/21/94 | 10.32 | 37.50** | 0.32 | NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT | | | | | -- | -- | -- |
| | 03/02-03/95 | 9.02 | 38.55 | 0.00 | NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT | | | | | -- | -- | -- |
| | 06/01/95 | 9.32 | 38.33** | 0.10 | NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT | | | | | -- | -- | -- |
| | 09/05-06/95 | 12.36 | 35.33** | 0.16 | NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT | | | | | -- | -- | -- |
| | 12/10-11/95 | 12.40 | 35.25** | 0.11 | NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT | | | | | -- | -- | -- |
| | 03/11/96 | INACCESSIBLE (CONNECTED TO REMEDIATION SYSTEM) | | | | | -- | -- | -- | -- | -- | -- |
| | 06/03-04/96 | 7.11 | 40.48** | 0.02 | NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT | | | | | -- | -- | -- |

# Table 1
## Groundwater Monitoring Data and Analytical Results
Former Unocal Bulk Plant No. 762248
359 Main Street
Fortuna, California

| WELL ID / TOC*(ft.) | DATE | DTW (ft.) | GWE (msl) | Product Thickness (ft.) | TPHd (ug/L) | TPHg (ug/L) | B (ug/L) | T (ug/L) | E (ug/L) | X (ug/L) | MTBE (ug/L) | VOCs (ug/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-5 | 09/04-05/96 | 11.33 | 36.25** | 0.01 | NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT | | | | | -- | -- | -- |
| (Cont.) | 12/02-03/96 | 10.25 | 37.33** | 0.01 | NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT | | | | | -- | -- | -- |
| | 03/10-11/97 | 8.45 | 39.13** | 0.01 | NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT | | | | | -- | -- | -- |
| | 06/09-10/97 | 9.76 | 37.82** | 0.01 | NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT | | | | | -- | -- | -- |
| | 09/08-09/97 | 12.51 | 35.07** | 0.01 | NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT | | | | | -- | -- | -- |
| | 12/03-04/97 | 10.12 | 37.45 | Sheen | 43,000[7] | 480,000 | 13,000 | 16,000 | 3,700 | 21,000 | -- | -- |
| | 03/23-24/98 | 7.80 | 41.16** | 1.80 | NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT | | | | | -- | -- | -- |
| | 06/07-08/98 | 9.65 | 38.88** | 1.25 | NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT | | | | | -- | -- | -- |
| | 09/16/98 | 12.10 | 35.53** | 0.08 | NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT | | | | | -- | -- | -- |
| | 12/16/98 | 8.25 | 39.35** | 0.04 | NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT | | | | | -- | -- | -- |
| | 03/23/99 | 7.19 | 40.56** | 0.24 | NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT | | | | | -- | -- | -- |
| | 06/14/99 | 8.61 | 39.35** | 0.51 | NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT | | | | | -- | -- | -- |
| | 09/13-14/99 | 10.76 | 36.99** | 0.24 | NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT | | | | | -- | -- | -- |
| | 12/16/99 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 03/16-17/00 | 7.01 | 40.56 | 0.00 | 18,000[34] | 41,000[28] | 720 | 2,700 | 950 | 6,600 | -- | -- |
| | 06/26-27/00 | INACCESSIBLE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 09/21/00 | INACCESSIBLE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 11/08/00 | INACCESSIBLE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 02/08/01 | INACCESSIBLE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 05/09/01 | INACCESSIBLE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 08/07/01 | INACCESSIBLE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 11/27/01 | INACCESSIBLE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 02/05/02 | INACCESSIBLE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 05/07/02 | 7.20 | 40.37 | 0.00 | 25,000/21,000[38] | 84,000 | 6,500 | 7,400 | 1,800 | 15,000 | -- | -- |
| | 08/14/02 | 9.80 | 37.77 | 0.00 | 29,000/15,000[38] | 75,000 | 8,200 | 11,000 | 750 | 16,000 | -- | -- |
| | 11/12/02 | 8.83 | 38.74 | 0.00 | 24,000[38,44] | 57,000 | 5,400 | 6,300 | 410 | 14,000 | -- | -- |
| | 02/12/03 | 5.79 | 41.78 | 0.00 | 36,000/4,600[38] | 30,000 | 2,100 | 2,200 | 230 | 8,300 | -- | -- |
| 47.45 | 06/09-10/03 | 7.03 | 40.42 | 0.00 | 12,000/8,000[38] | 45,000 | 3,300 | 6,500 | 490 | 11,000 | -- | -- |
| | 08/14/03 | 9.33 | 38.12 | 0.00 | [41]9,100/6,100[38,41] | 44,000 | 2,600 | 4,200 | 460 | 8,300 | -- | -- |
| | 12/11/03 | 7.58 | 39.87 | 0.00 | 130,000 | 55,000 | 4,500 | 4,800 | 810 | 14,000 | -- | -- |

# Table 1
## Groundwater Monitoring Data and Analytical Results
Former Unocal Bulk Plant No. 762248
359 Main Street
Fortuna, California

| WELL ID / TOC*(ft.) | DATE | DTW (ft.) | GWE (msl) | Product Thickness (ft.) | TPHd (ug/L) | TPHg (ug/L) | B (ug/L) | T (ug/L) | E (ug/L) | X (ug/L) | MTBE (ug/L) | VOCs (ug/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-5 | 03/23/04 | 6.20 | 41.25 | 0.00 | 19,000[49]/2,200[38,49] | 16,000 | 1,300 | 3,900 | 270 | 8,500 | -- | -- |
| (Cont.) | 08/10/04 | 10.13 | 37.32 | 0.00 | 7,700 [49] | 40,000 | 2,000 | 3,000 | 560 | 9,400 | -- | -- |
| 49.27 | 02/08/05 | 6.09 | 43.18 | 0.00 | 2,200 [49] | 24,000 | 950 | 1,000 | 310 | 5,300 | -- | -- |
| | 05/18/05 | 5.52 | 43.75 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| | **08/17-18/05** | **8.80** | **40.47** | **0.00** | **3,700 [38, 49]** | **23,000 [51]** | **2,500** | **390** | **660** | **8,400** | -- | -- |
| | **11/01-02/05** | **10.62** | **38.65** | **0.00** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** |
| **MW-6** | | | | | | | | | | | | |
| 42.89 | 03/26/91 | 4.61 | 38.28 | 0.00 | ND | 2,400 | 310 | 13 | 63 | 210 | -- | -- |
| | 05/01/91 | 6.58 | 36.31 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 07/08/91 | 7.68 | 35.21 | 0.00 | ND | 410 | 97 | 1.1 | 1.2 | 1.9 | -- | -- |
| | 10/21/91 | 9.65 | 33.24 | 0.00 | ND | ND | 11 | 1.6 | ND | 1.6 | -- | -- |
| | 01/23/92 | 7.60 | 35.29 | 0.00 | ND | 2,900 | 180 | 32 | 6.3 | 32 | -- | -- |
| | 05/01/92 | 4.50 | 38.39 | 0.00 | 870[1] | 2,000 | 94 | 79 | 15 | 79 | -- | -- |
| | 07/02/92 | 6.40 | 36.49 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 07/17/92 | 7.74 | 35.15 | 0.00 | 730[2] | 50 | 5.4 | ND | ND | ND | -- | -- |
| | 10/02/92 | 7.35 | 35.54 | 0.00 | ND | 90 | 7.5 | 1.8 | ND | 2.0 | -- | ND[13] |
| | 03/03/93 | 4.60 | 38.29 | 0.00 | ND | 8,500 | 460 | 2.0 | 130 | 86 | -- | ND[13] |
| | 06/22-23/93 | 6.16 | 36.73 | 0.00 | 2,300 | 1,900 | 300 | ND | 93 | 59 | -- | -- |
| | 09/22-23/93 | 8.00 | 34.89 | 0.00 | 170 | ND | ND | ND | ND | ND | -- | -- |
| | 12/22/93 | 5.70 | 37.19 | 0.00 | 440[7] | 1,200 | 350 | 15 | 120 | 150 | -- | -- |
| | 03/28-29/94 | 5.22 | 37.67 | 0.00 | 2,000[7] | 9,900 | 1,300 | 9.2 | 240 | 410 | -- | -- |
| | 06/23-24/94 | 6.39 | 36.50 | 0.00 | 5,900[7] | 29,000 | 3,500 | 3,000 | 1,000 | 3,400 | -- | -- |
| | 09/21/94 | 9.06 | 33.83 | 0.00 | 200[7] | 220 | 7.2 | ND | 0.83 | 5.8 | -- | -- |
| | 12/21/94 | 5.41 | 37.48 | 0.00 | 1,200[7] | 5,700 | 550 | ND | 70 | 58 | -- | -- |
| | 03/02-03/95 | 5.51 | 37.38 | 0.00 | 2,600[7] | 6,400 | 350 | ND | 38 | 24 | -- | -- |
| | 06/01/95 | 6.03 | 36.86 | 0.00 | 130[8] | 4,100 | 490 | ND | 50 | 14 | -- | -- |
| | 09/05-06/95 | 9.12 | 33.77 | 0.00 | 7,000[8] | 25,000 | 540 | 680 | 600 | 6,900 | -- | -- |
| | 12/10-11/95 | 9.13 | 33.76 | 0.00 | 3,300[7] | 8,900 | 1,600 | ND | 280 | 430 | -- | -- |

# Table 1
## Groundwater Monitoring Data and Analytical Results
Former Unocal Bulk Plant No. 762248
359 Main Street
Fortuna, California

| WELL ID / TOC*(ft.) | DATE | DTW (ft.) | GWE (msl) | Product Thickness (ft.) | TPHd (ug/L) | TPHg (ug/L) | B (ug/L) | T (ug/L) | E (ug/L) | X (ug/L) | MTBE (ug/L) | VOCs (ug/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-6 | 03/11/96 | 6.12 | 36.77 | 0.00 | 2,200[7] | 4,000 | 290 | 0.57 | 66 | 81 | -- | -- |
| (Cont.) | 06/03-04/96 | 6.98 | 35.91 | 0.00 | 1,600[7] | 4,400 | 690 | ND | 100 | 89 | -- | -- |
| | 09/04-05/96 | 8.11 | 34.78 | 0.00 | 580[7] | 720 | 36 | ND | 7.3 | 4.0 | -- | -- |
| | 12/02-03/96 | 4.85 | 38.04 | 0.00 | 2,300[7] | 1,800 | 290 | 8.2 | 50 | 24 | -- | -- |
| | 03/10-11/97 | 5.10 | 37.79 | 0.00 | 2,100[7] | 3,000 | 300 | 5.7 | 56 | 22 | -- | -- |
| | 06/09-10/97 | 6.38 | 36.51 | 0.00 | 1,000[7] | 2,000 | 240 | 10 | 23 | 8.6 | 25 | -- |
| | 09/08-09/97 | 9.12 | 33.77 | 0.00 | 110[7] | 520 | 10 | 0.61 | ND | 6.0 | -- | -- |
| | 12/03-04/97 | 5.99 | 36.90 | 0.00 | 2,900[7] | 11,000 | 990 | 11 | 230 | 430 | -- | -- |
| | 03/23-24/98 | 4.06 | 38.83 | 0.00 | 820[12] | 1,700 | 130 | ND[11] | 23 | 14 | -- | -- |
| | 06/07-08/98 | INACCESSIBLE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 09/16/98 | INACCESSIBLE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 12/16/98 | INACCESSIBLE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 03/23/99 | INACCESSIBLE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 06/14/99 | INACCESSIBLE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 09/13-14/99 | INACCESSIBLE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 12/16/99 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 03/16-17/00 | 4.05 | 38.84 | 0.00 | 2,600[21] | 1,900[28] | 150 | 11 | 10 | ND[11] | -- | -- |
| | 06/26-27/00 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 09/21/00 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 11/08/00 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 02/08/01 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 05/09/01 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 08/07/01 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 11/27/01 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 02/05/02 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 05/07/02 | 8.51 | 34.38 | 0.00 | 3,300/56[38] | 1,900 | 160 | 6.6 | 8.8 | 1.9 | -- | -- |
| | 08/14/02 | 7.15 | 35.74 | 0.00 | 2,100/310[38] | 710 | 36 | 2.7 | 3.6 | <1.2 | -- | -- |
| | 11/12/02 | 6.51 | 36.38 | 0.00 | 3,200[38,44] | 1,900 | 60 | <2.5 | 5.8 | <2.5 | -- | -- |
| | 02/12/03 | 4.60 | 38.29 | 0.00 | 7,300/910[38] | 2,900 | 450 | 6.8 | 26 | 4.7 | -- | -- |
| 42.73 | 06/09-10/03 | 5.75 | 36.98 | 0.00 | 2,300/760[38] | 820 | 98 | 4.1 | 6.0 | 0.90 | -- | -- |

# Table 1
## Groundwater Monitoring Data and Analytical Results
Former Unocal Bulk Plant No. 762248
359 Main Street
Fortuna, California

| WELL ID / TOC*(ft.) | DATE | DTW (ft.) | GWE (msl) | Product Thickness (ft.) | TPHd (ug/L) | TPHg (ug/L) | B (ug/L) | T (ug/L) | E (ug/L) | X (ug/L) | MTBE (ug/L) | VOCs (ug/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-6 | 08/14/03 | 7.07 | 35.66 | 0.00 | 880/510[38,41] | 480 | 21 | 1.6 | 2.8 | 1.5 | -- | -- |
| (Cont.) | 12/11/03 | 5.44 | 37.29 | 0.00 | 4,500 | 350 | 48 | 0.69[46] | 2.0 | <0.50 | -- | -- |
| | 03/23/04 | 5.61 | 37.12 | 0.00 | 610[49]/200[38,49] | 680 | 88 | 16 | 7.4 | 20 | -- | -- |
| | 08/10/04 | 8.00 | 34.73 | 0.00 | 340 [49] | <50 | <0.50 | <0.50 | <0.50 | <1.0 | -- | -- |
| 44.55 | 02/08/05 | 5.19 | 39.36 | 0.00 | 54 [49] | 81 [51] | 6.4 | 0.77 | 0.66 | 1.1 | -- | -- |
| | 05/18/05 | 4.16 | 40.39 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| | **08/17-18/05** | **6.90** | **37.65** | **0.00** | **2,300 [38, 49]** | **150** | **<0.50** | **2.1** | **<0.50** | **<1.0** | -- | -- |
| | **11/01-02/05** | **7.80** | **36.75** | **0.00** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** |
| **MW-7** | | | | | | | | | | | | |
| 35.66 | 07/02/92 | 2.90 | 32.76 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 07/17/92 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 10/02/92 | 5.02 | 30.64 | 0.00 | 220 | ND | ND | ND | ND | ND | -- | -- |
| | 03/03/93 | 0.82 | 34.84 | 0.00 | ND | ND | ND | ND | ND | ND | -- | ND |
| | 06/22-23/93 | 3.07 | 32.59 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 09/22-23/93 | 4.35 | 31.31 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 12/22/93 | 1.70 | 33.96 | 0.00 | 58[7] | ND | ND | ND | ND | 0.66 | -- | -- |
| | 03/28-29/94 | 1.50 | 34.16 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 06/23-24/94 | 3.22 | 32.44 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 09/21/94 | 6.25 | 29.41 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 12/21/94 | 0.69 | 34.97 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 03/02-03/95 | 1.08 | 34.58 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 06/01/95 | 3.45 | 32.21 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 09/05-06/95 | 6.32 | 29.34 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 12/10-11/95 | 6.27 | 29.39 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 03/11/96 | 3.57 | 32.09 | 0.00 | ND | 320 | ND | ND | ND | 0.8 | -- | -- |
| | 06/03-04/96 | 5.77 | 29.89 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 09/04-05/96 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 12/02-03/96 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |

# Table 1

## Groundwater Monitoring Data and Analytical Results

Former Unocal Bulk Plant No. 762248
359 Main Street
Fortuna, California

| WELL ID / TOC*(ft.) | DATE | DTW (ft.) | GWE (msl) | Product Thickness (ft.) | TPHd (ug/L) | TPHg (ug/L) | B (ug/L) | T (ug/L) | E (ug/L) | X (ug/L) | MTBE (ug/L) | VOCs (ug/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-7 | 03/10-11/97 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| (Cont.) | 06/09-10/97 | 2.49 | 33.17 | 0.00 | ND | ND | ND | ND | ND | ND | ND | -- |
| | 09/08-09/97 | 4.25 | 31.41 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 12/03-04/97 | 1.20 | 34.46 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 03/23-24/98 | 0.00 | 35.66 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 06/07-08/98 | 1.60 | 34.06 | 0.00 | 52[15] | ND | ND | ND | ND | ND | -- | -- |
| | 09/16/98 | 3.94 | 31.72 | 0.00 | 58 | ND | ND | 0.84 | ND | 1.2 | ND | -- |
| | 12/16/98 | 0.31 | 35.35 | 0.00 | ND[11] | ND | ND | ND | ND | ND | -- | -- |
| | 03/23/99 | 0.50 | 35.16 | 0.00 | ND | ND | ND | 0.98 | ND | 1.7 | ND[22] | --[24] |
| | 06/14/99 | 2.55 | 33.11 | 0.00 | 67[15] | ND | ND | ND | ND | ND | -- | -- |
| | 09/13-14/99 | 3.95 | 31.71 | 0.00 | 100[15,29] | ND | ND | ND | ND | ND | -- | -- |
| | 12/16/99 | 0.68 | 34.98 | 0.00 | 54[15] | ND | ND | ND | ND | ND | -- | -- |
| | 03/16-17/00 | 0.00 | 35.66 | 0.00 | 120[15] | ND | ND | ND | ND | ND | -- | -- |
| | 06/26-27/00 | 3.41 | 32.25 | 0.00 | 90[15] | ND | ND | ND | ND | ND | -- | -- |
| | 09/21/00 | 4.52 | 31.14 | 0.00 | 134[37] | 82[29] | ND | 38 | ND | ND | -- | -- |
| | 11/08/00 | 2.45 | 33.21 | 0.00 | 149[21] | ND | ND | 0.99 | ND | ND | -- | -- |
| | 02/08/01 | 1.65 | 34.01 | 0.00 | [15]91/ND[38] | ND | ND | ND | ND | ND | -- | -- |
| | 05/09/01 | 2.39 | 33.27 | 0.00 | [15]68/ND[38] | ND | ND | ND | ND | ND | -- | -- |
| | 08/07/01 | 4.86 | 30.80 | 0.00 | [41]78/<50[38] | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| 35.66 | 11/27/01 | 0.97 | 34.69 | 0.00 | [41]69/69[38,41] | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 02/05/02 | 1.13 | 34.53 | 0.00 | [41]180/<50[38] | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 05/07/02 | 1.56 | 34.10 | 0.00 | [41]120/<50[38] | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 08/14/02 | 4.53 | 31.13 | 0.00 | [41]110/<56[38] | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 11/12/02 | 2.50 | 33.16 | 0.00 | 210[38,44] | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 02/12/03 | 1.21 | 34.45 | 0.00 | 240/<50[38] | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 06/09-10/03 | 2.39 | 33.27 | 0.00 | 200/<51[38] | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 08/14/03 | 3.64 | 32.02 | 0.00 | [41]160/75[38,41] | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 12/11/03 | 0.05 | 35.61 | 0.00 | 180/130[38] | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |

# Table 1
## Groundwater Monitoring Data and Analytical Results
Former Unocal Bulk Plant No. 762248
359 Main Street
Fortuna, California

| WELL ID / TOC*(ft.) | DATE | DTW (ft.) | GWE (msl) | Product Thickness (ft.) | TPHd (ug/L) | TPHg (ug/L) | B (ug/L) | T (ug/L) | E (ug/L) | X (ug/L) | MTBE (ug/L) | VOCs (ug/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-7 | 03/23/04 | 1.85 | 33.81 | 0.00 | <50/<50 [38] | -- | -- | -- | -- | -- | -- | -- |
| (Cont.) | 08/10/04 | 3.72 | 31.94 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| 37.41 | 02/08/05 | 1.00 | 36.41 | 0.00 | <50 | -- | -- | -- | -- | -- | -- | -- |
| | 05/18/05 | 0.00 | 37.41 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| | **08/17-18/05** | **3.22** | **34.19** | **0.00** | -- | -- | -- | -- | -- | -- | -- | -- |
| | **11/01-02/05** | **5.18** | **32.23** | **0.00** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** |
| **MW-8** | | | | | | | | | | | | |
| 42.49 | 07/02/92 | 8.50 | 33.99 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 07/17/92 | 9.11 | 33.38 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 10/02/92 | 11.19 | 31.30 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 03/03/93 | 5.55 | 36.94 | 0.00 | ND | ND | ND | ND | ND | ND | -- | ND |
| | 06/22-23/93 | 7.85 | 34.64 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 09/22-23/93 | 10.40 | 32.09 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 12/22/93 | 9.45 | 33.04 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 03/28-29/94 | 7.55 | 34.94 | 0.00 | ND | ND | ND | 0.59 | ND | 0.82 | -- | -- |
| | 06/23-24/94 | 8.86 | 33.63 | 0.00 | 58[7] | ND | ND | ND | ND | ND | -- | -- |
| | 09/21/94 | 11.27 | 31.22 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 12/21/94 | 5.70 | 36.79 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 03/02-03/95 | 6.03 | 36.46 | 0.00 | 73[7] | ND | ND | ND | ND | ND | -- | -- |
| | 06/01/95 | 9.21 | 33.28 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 09/05-06/95 | 12.08 | 30.41 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 12/10-11/95 | 12.10 | 30.39 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 03/11/96 | 7.80 | 34.69 | 0.00 | ND | ND | ND | ND | ND | 0.65 | -- | -- |
| | 06/03-04/96 | 7.96 | 34.53 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 09/04-05/96 | 10.13 | 32.36 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 12/02-03/96 | 5.83 | 36.66 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 03/10-11/97 | 6.37 | 36.12 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 06/09-10/97 | 7.70 | 34.79 | 0.00 | ND | ND | ND | ND | ND | ND | ND | -- |
| | 09/08-09/97 | 10.58 | 31.91 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |

# Table 1
## Groundwater Monitoring Data and Analytical Results
Former Unocal Bulk Plant No. 762248
359 Main Street
Fortuna, California

| WELL ID / TOC*(ft.) | DATE | DTW (ft.) | GWE (msl) | Product Thickness (ft.) | TPHd (ug/L) | TPHg (ug/L) | B (ug/L) | T (ug/L) | E (ug/L) | X (ug/L) | MTBE (ug/L) | VOCs (ug/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-8 | 12/03-04/97 | 6.23 | 36.26 | 0.00 | 70[8] | ND | ND | ND | ND | ND | -- | -- |
| (Cont.) | 03/23-24/98 | 5.33 | 37.16 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 06/07-08/98 | 7.33 | 35.16 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 09/16/98 | 10.16 | 32.33 | 0.00 | ND | ND | ND | ND | ND | ND | ND | -- |
| | 12/16/98 | 6.67 | 35.82 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 03/23/99 | 6.79 | 35.70 | 0.00 | ND | ND | ND | ND | ND | ND | ND[22] | --[24] |
| | 06/14/99 | 9.79 | 32.70 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 09/13-14/99 | 10.30 | 32.19 | 0.00 | 57[15] | ND | ND | ND | ND | ND | -- | -- |
| | 12/16/99 | 6.26 | 36.23 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 03/16-17/00 | 5.64 | 36.85 | 0.00 | 68[15] | ND | ND | ND | ND | ND | -- | -- |
| | 06/26-27/00 | 8.03 | 34.46 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 09/21/00 | 10.32 | 32.17 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 11/08/00 | 9.46 | 33.03 | 0.00 | 91.2[21] | ND | ND | ND | ND | ND | -- | -- |
| | 02/08/01 | 7.27 | 35.22 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 05/09/01 | 9.83 | 32.66 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 08/07/01 | 11.40 | 31.09 | 0.00 | <50 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 11/27/01 | 7.44 | 35.05 | 0.00 | [41]52/52[38,41] | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 02/05/02 | 7.49 | 35.00 | 0.00 | [41]150/<50[38] | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 05/07/02 | 7.02 | 35.47 | 0.00 | [41]73/<50[38] | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 08/14/02 | 10.31 | 32.18 | 0.00 | [41]98/<56[38] | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 11/12/02 | 8.30 | 34.19 | 0.00 | 180/<50[38] | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 02/12/03 | 6.55 | 35.94 | 0.00 | 170/<56[38] | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 06/09-10/03 | 8.25 | 34.24 | 0.00 | 150/<51[38] | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| 42.49 | 08/14/03 | 9.76 | 32.73 | 0.00 | [41]110/120[38,41] | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 12/11/03 | 7.74 | 34.75 | 0.00 | 160/92[38] | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 03/23/04 | 6.42 | 36.07 | 0.00 | <50/<50 [38] | -- | -- | -- | -- | -- | -- | -- |
| | 08/10/04 | 7.25 | 35.24 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| 44.21 | 02/08/05 | 5.42 | 38.79 | 0.00 | <50 | -- | -- | -- | -- | -- | -- | -- |
| | 05/18/05 | 4.44 | 39.77 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |

# Table 1
## Groundwater Monitoring Data and Analytical Results
Former Unocal Bulk Plant No. 762248
359 Main Street
Fortuna, California

| WELL ID / TOC*(ft.) | DATE | DTW (ft.) | GWE (msl) | Product Thickness (ft.) | TPHd (ug/L) | TPHg (ug/L) | B (ug/L) | T (ug/L) | E (ug/L) | X (ug/L) | MTBE (ug/L) | VOCs (ug/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-8 | **08/17-18/05** | **6.96** | **37.25** | **0.00** | -- | -- | -- | -- | -- | -- | -- | -- |
| (Cont.) | **11/01-02/05** | **8.80** | **35.41** | **0.00** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** |
| **MW-9** | | | | | | | | | | | | |
| 35.20 | 07/02/92 | 4.50 | 30.70 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 07/17/92 | 5.45 | 29.75 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 10/02/92 | 5.69 | 29.51 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 03/03/93 | 3.71 | 31.49 | 0.00 | ND | ND | ND | ND | ND | ND | -- | ND |
| | 06/22-23/93 | 4.88 | 30.32 | 0.00 | 120 | ND | ND | ND | ND | ND | -- | -- |
| | 09/22-23/93 | 6.70 | 28.50 | 0.00 | 70 | ND | ND | ND | ND | ND | -- | -- |
| | 12/22/93 | INACCESSIBLE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 03/28-29/94 | 4.39 | 30.81 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 06/23-24/94 | 5.09 | 30.11 | 0.00 | 58[7] | ND | ND | ND | ND | ND | -- | -- |
| | 09/21/94 | 7.12 | 28.08 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 12/21/94 | 3.90 | 31.30 | 0.00 | 140[7] | ND | ND | ND | ND | ND | -- | -- |
| | 03/02-03/95 | 1.35 | 33.85 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 06/01/95 | 3.83 | 31.37 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 09/05-06/95 | 7.04 | 28.16 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 12/10-11/95 | 7.08 | 28.12 | 0.00 | 230[7] | ND | ND | ND | ND | ND | -- | -- |
| | 03/11/96 | 3.69 | 31.51 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 06/03-04/96 | 5.92 | 29.28 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 09/04-05/96 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 12/02-03/96 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 03/10-11/97 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 06/09-10/97 | 4.89 | 30.31 | 0.00 | 62 | ND | ND | ND | ND | ND | ND | -- |
| | 09/08-09/97 | 7.04 | 28.16 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 12/03-04/97 | 3.08 | 32.12 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 03/23-24/98 | 3.31 | 31.89 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 06/07-08/98 | 4.42 | 30.78 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |

# Table 1
## Groundwater Monitoring Data and Analytical Results
Former Unocal Bulk Plant No. 762248
359 Main Street
Fortuna, California

| WELL ID / TOC*(ft.) | DATE | DTW (ft.) | GWE (msl) | Product Thickness (ft.) | TPHd (ug/L) | TPHg (ug/L) | B (ug/L) | T (ug/L) | E (ug/L) | X (ug/L) | MTBE (ug/L) | VOCs (ug/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-9 | 09/16/98 | 7.29 | 27.91 | 0.00 | 75 | ND | ND | ND | ND | ND | ND | -- |
| (Cont.) | 12/16/98 | 4.14 | 31.06 | 0.00 | 83[20] | ND | ND | ND | ND | ND | -- | -- |
| | 03/23/99 | 4.11 | 31.09 | 0.00 | ND | ND | ND | 1.0 | ND | 1.1 | ND[22] | --[24] |
| | 06/14/99 | 5.55 | 29.65 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 09/13-14/99 | 7.85 | 27.35 | 0.00 | 71[15] | ND | ND | ND | ND | ND | -- | -- |
| | 12/16/99 | 3.77 | 31.43 | 0.00 | 440[21] | 63.4[32] | ND | 31.8 | ND | ND | -- | -- |
| | 03/16-17/00 | 3.47 | 31.73 | 0.00 | 180[15] | 120[29] | 0.60 | 160 | ND | ND | -- | -- |
| | 06/26-27/00 | 5.17 | 30.03 | 0.00 | 100[15] | ND | ND | ND | ND | ND | -- | -- |
| | 09/21/00 | 6.90 | 28.30 | 0.00 | 103[37] | ND | ND | ND | ND | ND | -- | -- |
| | 11/08/00 | 4.06 | 31.14 | 0.00 | 159[21] | ND | ND | ND | ND | ND | -- | -- |
| | 02/08/01 | 4.14 | 31.06 | 0.00 | [15]160/ND[38] | 436[29] | ND[11] | 274 | ND[11] | ND[11] | -- | -- |
| | 05/09/01 | 4.71 | 30.49 | 0.00 | [15]85/53[15,38] | ND | ND | ND | ND | ND | -- | -- |
| | 08/07/01 | 7.16 | 28.04 | 0.00 | [41]150/<50[38] | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 11/27/01 | 3.85 | 31.35 | 0.00 | [41]200/200[38,41] | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 02/05/02 | 4.23 | 30.97 | 0.00 | [41]420/170[38,41] | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 05/07/02 | 4.01 | 31.19 | 0.00 | [41]100/<50[38] | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 08/14/02 | 7.02 | 28.18 | 0.00 | [41]130/<56[38] | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 11/12/02 | 3.78 | 31.42 | 0.00 | 240[38,44] | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 02/12/03 | 4.15 | 31.05 | 0.00 | 570/160[38] | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 06/09-10/03 | 4.87 | 30.33 | 0.00 | 300/120[38] | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| 35.20 | 08/14/03 | 5.87 | 29.33 | 0.00 | [41]98/98[38,41] | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 12/11/03 | 4.75 | 30.45 | 0.00 | 1,500 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 03/23/04 | 4.05 | 31.15 | 0.00 | <50/<50 [38] | -- | -- | -- | -- | -- | -- | -- |
| | 08/10/04 | 6.45 | 28.75 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| 37.03 | 02/08/05 | 3.99 | 33.04 | 0.00 | <50 | -- | -- | -- | -- | -- | -- | -- |
| | 05/18/05 | 3.55 | 33.48 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| | **08/17-18/05** | **5.16** | **31.87** | **0.00** | -- | -- | -- | -- | -- | -- | -- | -- |
| | **11/01-02/05** | **7.44** | **29.59** | **0.00** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** |

# Table 1
## Groundwater Monitoring Data and Analytical Results
Former Unocal Bulk Plant No. 762248
359 Main Street
Fortuna, California

| WELL ID / TOC*(ft.) | DATE | DTW (ft.) | GWE (msl) | Product Thickness (ft.) | TPHd (ug/L) | TPHg (ug/L) | B (ug/L) | T (ug/L) | E (ug/L) | X (ug/L) | MTBE (ug/L) | VOCs (ug/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MW-10** | | | | | | | | | | | | |
| 49.43 | 07/02/92 | 7.67 | 41.76 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 07/17/92 | 7.95 | 41.48 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 10/02/92 | 10.73 | 38.70 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 03/03/93 | 1.89 | 47.54 | 0.00 | ND | ND | ND | ND | ND | ND | -- | ND |
| | 06/22-23/93 | 2.65 | 46.78 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 09/22-23/93 | 9.20 | 40.23 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 12/22/93 | 7.09 | 42.34 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 03/28-29/94 | 2.03 | 47.40 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 06/23-24/94 | 6.51 | 42.92 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 09/21/94 | 10.31 | 39.12 | 0.00 | ND | ND | ND | 0.92 | ND | 1.3 | -- | -- |
| | 12/21/94 | 3.57 | 45.86 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 03/02-03/95 | 2.08 | 47.35 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 06/01/95 | 6.95 | 42.48 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 09/05-06/95 | 10.11 | 39.32 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 12/10-11/95 | 10.05 | 39.38 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 03/11/96 | 1.97 | 47.46 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 06/03-04/96 | 3.30 | 46.13 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 09/04-05/96 | 8.99 | 40.44 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 12/02-03/96 | 5.51 | 43.92 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 03/10-11/97 | 1.23 | 48.20 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 06/09-10/97 | 4.80 | 44.63 | 0.00 | ND | ND | ND | ND | ND | ND | ND | -- |
| | 09/08-09/97 | 9.20 | 40.23 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 12/03-04/97 | 3.26 | 46.17 | 0.00 | 58[8] | ND | ND | ND | ND | ND | -- | -- |
| | 03/23-24/98 | 0.04 | 49.39 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 06/07-08/98 | 1.23 | 48.20 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 09/16/98 | 7.18 | 42.25 | 0.00 | ND | ND | ND | ND | ND | ND | ND | -- |
| | 12/16/98 | 1.47 | 47.96 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 03/23/99 | 0.68 | 48.75 | 0.00 | ND | ND | ND | 1.6 | ND | 1.5 | ND[22] | --[24] |
| | 06/14/99 | 2.92 | 46.51 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |

# Table 1
## Groundwater Monitoring Data and Analytical Results
Former Unocal Bulk Plant No. 762248
359 Main Street
Fortuna, California

| WELL ID / TOC*(ft.) | DATE | DTW (ft.) | GWE (msl) | Product Thickness (ft.) | TPHd (ug/L) | TPHg (ug/L) | B (ug/L) | T (ug/L) | E (ug/L) | X (ug/L) | MTBE (ug/L) | VOCs (ug/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-10 | 09/13-14/99 | 8.24 | 41.19 | 0.00 | 62[15] | ND | ND | ND | ND | ND | -- | -- |
| (Cont.) | 12/16/99 | 3.06 | 46.37 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 03/16-17/00 | 1.29 | 48.14 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 06/26-27/00 | 5.55 | 43.88 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 09/21/00 | 8.97 | 40.46 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 11/08/00 | 9.87 | 39.56 | 0.00 | 63.6[21] | ND | ND | ND | ND | ND | -- | -- |
| | 02/08/01 | 2.31 | 47.12 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 05/09/01 | 2.71 | 46.72 | 0.00 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 08/07/01 | 7.93 | 41.50 | 0.00 | <50 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 11/27/01 | 9.15 | 40.28 | 0.00 | [41]78/78[38,41] | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 02/05/02 | 1.76 | 47.67 | 0.00 | [41]100/53[38,41] | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 05/07/02 | 2.16 | 47.27 | 0.00 | <50 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 08/14/02 | 8.30 | 41.13 | 0.00 | <56 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 11/12/02 | 10.78 | 38.65 | 0.00 | 60[38,44] | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 02/12/03 | 1.67 | 47.76 | 0.00 | 370/220[38] | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| 49.43 | 06/09-10/03 | 3.30 | 46.13 | 0.00 | 280/190[38] | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 08/14/03 | 8.15 | 41.28 | 0.00 | <55 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 12/11/03 | 8.00 | 41.43 | 0.00 | 110 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 03/23/04 | 1.95 | 47.48 | 0.00 | <50/<50 [38] | -- | -- | -- | -- | -- | -- | -- |
| | 08/10/04 | 8.58 | 40.85 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| 51.26 | 02/08/05 | 1.55 | 49.71 | 0.00 | <50 | -- | -- | -- | -- | -- | -- | -- |
| | 05/18/05 | 1.48 | 49.78 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| | **08/17-18/05** | **6.75** | **44.51** | **0.00** | -- | -- | -- | -- | -- | -- | -- | -- |
| | **11/01-02/05** | **9.22** | **42.04** | **0.00** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** |
| **MW-11** | 12/22/93 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 03/28/94 | 7.22 | -- | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- |
| | **NOT MONITORED/SAMPLED** | | | | | | | | | | | |

# Table 1
## Groundwater Monitoring Data and Analytical Results
Former Unocal Bulk Plant No. 762248
359 Main Street
Fortuna, California

| WELL ID / TOC*(ft.) | DATE | DTW (ft.) | GWE (msl) | Product Thickness (ft.) | TPHd (ug/L) | TPHg (ug/L) | B (ug/L) | T (ug/L) | E (ug/L) | X (ug/L) | MTBE (ug/L) | VOCs (ug/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MW-12** | 12/22/93 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 03/28/94 | 7.35 | -- | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| | **NOT MONITORED/SAMPLED** | | | | | | | | | | | |
| **MW-13** | | | | | | | | | | | | |
| 45.99 | 06/09-10/03 | 6.55 | 39.44 | 0.00 | 6,400/5,000[38] | 32,000 | 1,600 | 400 | 1,500 | 4,100 | -- | -- |
| | 08/14/03 | 7.87 | 38.12 | 0.00 | [41]3,300/2,600[38,41] | 28,000 | 1,000 | 540 | 1,300 | 5,100 | -- | -- |
| | 12/11/03 | 7.00 | 38.99 | 0.00 | 4,900 | 18,000 | 800 | 360 | 1,300 | 4,900 | -- | -- |
| | 03/23/04 | 6.32 | 39.67 | 0.00 | 6,900[49]/410[38,49] | 14,000 | 930 | 320 | 1,100 | 4,100 | -- | -- |
| | 05/18/04 | 7.05 | 38.94 | 0.00 | 10 [49] | 14,000 | 840 | 200 | 970 | 4,700 | -- | -- |
| | 08/10/04 | 8.68 | 37.31 | 0.00 | 1,500 [49] | 16,000 [50] | 850 | 130 | 920 | 3,400 | -- | -- |
| | 11/09/04 | 8.03 | 37.96 | 0.00 | 4,400 [49] | 24,000 [50] | 1,200 | 290 | 1,300 | 4,500 | -- | -- |
| 47.79 | 02/08/05 | 6.20 | 41.59 | 0.00 | 4,500 [49] | 17,000 [51] | 1,000 | 210 | 1,100 | 3,800 | -- | -- |
| | 05/18/05 | 5.23 | 42.56 | 0.00 | 3,900 [49] | 12,000 | 830 | 220 | 780 | 3,400 | -- | -- |
| | **08/17-18/05** | **7.70** | **40.09** | **0.00** | **2,600 [38, 49]** | **6,600 [51]** | **650** | **96** | **440** | **1,800** | -- | -- |
| | **11/01-02/05** | **8.80** | **38.99** | **0.00** | **6,000 [38, 49]** | **17,000 [51]** | **820** | **76** | **1,100** | **3,700** | -- | -- |
| **MW-14** | | | | | | | | | | | | |
| 44.24 | 06/09-10/03 | 21.90 | 22.34 | 0.00 | 200/83[38] | <50 | 1.2 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 08/14/03 | 23.92 | 20.32 | 0.00 | [41]93/<58[38] | <50 | 0.54 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 12/11/03 | 22.65 | 21.59 | 0.00 | 230 | <50 | <0.50 | <0.50 | <0.50 | 1.7 | -- | -- |
| | 03/23/04 | 21.15 | 23.09 | 0.00 | <50/<50 [38] | <50 | <0.50 | <0.50 | 0.71 | 1.3 | -- | -- |
| | 05/18/04 | 22.55 | 21.69 | 0.00 | <50 | 68 | 1.8 | 1.2 | 4.6 | 14 | -- | -- |
| | 08/10/04 | 24.20 | 20.04 | 0.00 | <50 | <50 | <0.50 | <0.50 | <0.50 | 1.1 | -- | -- |
| | 11/09/04 | 24.11 | 20.13 | 0.00 | <50 | <50 | 0.88 | <0.50 | 0.91 | 2.0 | -- | -- |
| 46.02 | 02/08/05 | 21.97 | 24.05 | 0.00 | <50 | <50 | <0.50 | 0.57 | <0.50 | <1.0 | -- | -- |
| | 05/18/05 | 20.84 | 25.18 | 0.00 | <50 [49] | <50 | <0.50 | <0.50 | <0.50 | <1.0 | -- | -- |

# Table 1
## Groundwater Monitoring Data and Analytical Results
Former Unocal Bulk Plant No. 762248
359 Main Street
Fortuna, California

| WELL ID / TOC*(ft.) | DATE | DTW (ft.) | GWE (msl) | Product Thickness (ft.) | TPHd (ug/L) | TPHg (ug/L) | B (ug/L) | T (ug/L) | E (ug/L) | X (ug/L) | MTBE (ug/L) | VOCs (ug/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-14 | **08/17-18/05** | **23.20** | **22.82** | **0.00** | **<50 [38]** | **<50** | **<0.50** | **<0.50** | **<0.50** | **1.2** | -- | -- |
| (Cont.) | **11/01-02/05** | **24.00** | **22.02** | **0.00** | **<50 [38]** | **<50** | **<0.50** | **<0.50** | **<0.50** | **<1.0** | -- | -- |
| **MW-15** | | | | | | | | | | | | |
| 41.79 | 06/09-10/03 | 19.47 | 22.32 | 0.00 | 220/73[38] | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 08/14/03 | 21.18 | 20.61 | 0.00 | [41]120/70[38,41] | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 12/11/03 | 20.23 | 21.56 | 0.00 | 230 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 03/23/04 | 18.75 | 23.04 | 0.00 | <50/<50 [38] | <50 | <0.50 | <0.50 | 0.76 | 1.3 | -- | -- |
| | 05/18/04 | 20.11 | 21.68 | 0.00 | <50 | 100 | 2.2 | 2.1 | 7.7 | 22 | -- | -- |
| | 08/10/04 | 21.80 | 19.99 | 0.00 | <50 | <50 | <0.50 | <0.50 | <0.50 | 1.3 | -- | -- |
| | 11/09/04 | 21.77 | 20.02 | 0.00 | <50 | <50 | 0.83 | 0.71 | <0.50 | <1.0 | -- | -- |
| 43.58 | 02/08/05 | 19.56 | 24.02 | 0.00 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | -- | -- |
| | 05/18/05 | 18.34 | 25.24 | 0.00 | <50 [49] | <50 | <0.50 | <0.50 | <0.50 | <1.0 | -- | -- |
| | **08/17-18/05** | **20.80** | **22.78** | **0.00** | **<50 [38]** | **<50** | **<0.50** | **<0.50** | **<0.50** | **<1.0** | -- | -- |
| | **11/01-02/05** | **21.60** | **21.98** | **0.00** | **<50 [38]** | **<50** | **<0.50** | **<0.50** | **<0.50** | **<1.0** | -- | -- |
| **MW-16A** | | | | | | | | | | | | |
| 51.66 | 02/08/05 | 8.88 | 42.78 | 0.00 | 490 [49] | 3,000 [51] | 200 | 220 | 68 | 520 | -- | -- |
| | 05/18/05 | 8.71 | 42.95 | 0.00 | <50 | 670 | 61 | 33 | 24 | 140 | -- | -- |
| | **08/17-18/05** | **9.35** | **42.31** | **0.00** | **630 [38, 49]** | **2,700 [51]** | **250** | **120** | **120** | **570** | -- | -- |
| | **11/01-02/05** | **11.80** | **39.86** | **0.00** | **1,000 [38, 49]** | **4,000 [50]** | **600** | **69** | **180** | **1,400** | -- | -- |
| **MW-16B** | | | | | | | | | | | | |
| 51.72 | 02/08/05 | 27.65 | 24.07 | 0.00 | <50 | <50 | <0.50 | 0.58 | <0.50 | 1.7 | -- | -- |
| | 05/18/05 | 26.49 | 25.23 | 0.00 | <50 [49] | <50 | <0.50 | <0.50 | <0.50 | <1.0 | -- | -- |
| | **08/17-18/05** | **28.90** | **22.82** | **0.00** | **<50 [38]** | **<50** | **<0.50** | **<0.50** | **<0.50** | **<1.0** | -- | -- |
| | **11/01-02/05** | **29.70** | **22.02** | **0.00** | **<50 [38]** | **<50** | **<0.50** | **<0.50** | **<0.50** | **<1.0** | -- | -- |

# Table 1
## Groundwater Monitoring Data and Analytical Results
Former Unocal Bulk Plant No. 762248
359 Main Street
Fortuna, California

| WELL ID / TOC*(ft.) | DATE | DTW (ft.) | GWE (msl) | Product Thickness (ft.) | TPHd (ug/L) | TPHg (ug/L) | B (ug/L) | T (ug/L) | E (ug/L) | X (ug/L) | MTBE (ug/L) | VOCs (ug/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MW-17** | | | | | | | | | | | | |
| 50.41 | 02/08/05 | 26.42 | 23.99 | 0.00 | 53 [49] | 60 [51] | 3.0 | 2.7 | 1.9 | 7.0 | -- | -- |
| | 05/18/05 | 25.22 | 25.19 | 0.00 | <50 [49] | <50 | 1.2 | <0.50 | <0.50 | <1.0 | -- | -- |
| | **08/17-18/05** | **27.66** | **22.75** | **0.00** | **<50 [38]** | **<50** | **<0.50** | **<0.50** | **<0.50** | **<1.0** | -- | -- |
| | **11/01-02/05** | **28.48** | **21.93** | **0.00** | **<50 [38]** | **<50** | **<0.50** | **<0.50** | **<0.50** | **<1.0** | -- | -- |
| **MW-18** | | | | | | | | | | | | |
| 43.81 | 02/08/05 | 3.33 | 40.48 | 0.00 | <50 | 4,500 [51] | 2,300 | 4.5 | 47 | 89 | -- | -- |
| | 05/18/05 | 2.51 | 41.30 | 0.00 | 1,100 [49] | 9,200 [51] | 6,500 | 20 | 510 | 1,400 | -- | -- |
| | **08/17-18/05** | **4.80** | **39.01** | **0.00** | **580 [38,49]** | **12,000 [51]** | **5,400** | **14** | **350** | **540** | -- | -- |
| | **11/01-02/05** | **5.63** | **38.18** | **0.00** | **960 [38,49]** | **11,000 [50]** | **5,900** | **<100** | **210** | **<200** | -- | -- |
| **MW-19** | | | | | | | | | | | | |
| 45.77 | 02/08/05 | 5.94 | 39.83 | 0.00 | 310 [49] | 4,400 [51] | 1,500 | 2.0 | 43 | 150 | -- | -- |
| | 05/18/05 | 5.12 | 40.65 | 0.00 | 2,000 [49] | 13,000 [51] | 980 | 240 | 430 | 1,900 | -- | -- |
| | **08/17-18/05** | **7.68** | **38.09** | **0.00** | **610 [38, 49]** | **6,400 [51]** | **2,300** | **3.6** | **87** | **400** | -- | -- |
| | **11/01-02/05** | **8.80** | **36.97** | **0.00** | **1,200 [38,49]** | **6,700 [51]** | **3,500** | **<50** | **62** | **310** | -- | -- |
| **MW-20** | | | | | | | | | | | | |
| 43.87 | 02/08/05 | 3.30 | 40.57 | 0.00 | 510 [49] | 4,200 [51] | 700 | 220 | 110 | 590 | -- | -- |
| | 05/18/05 | 2.11 | 41.76 | 0.00 | 120 [49] | 2,000 [51] | 420 | 110 | 110 | 330 | -- | -- |
| | **08/17-18/05** | **8.78** | **35.09** | **0.00** | **1,100 [38,49]** | **8,100 [51]** | **4,100** | **390** | **920** | **660** | -- | -- |
| | **11/01-02/05** | **6.95** | **36.92** | **0.00** | **2,000 [38,49]** | **11,000 [51]** | **4,600** | **79** | **770** | **320** | -- | -- |
| **MW-21** | | | | | | | | | | | | |
| 48.46 | 02/08/05 | 6.08 | 42.38 | 0.00 | 2,500 [49] | 29,000 [51] | 2,800 | 1,300 | 1,300 | 5,200 | -- | -- |
| | 05/18/05 | 6.60 | 41.86 | 0.00 | 610 [49] | 3,500 [51] | 2,600 | 4.0 | 120 | 430 | -- | -- |

# Table 1
## Groundwater Monitoring Data and Analytical Results
Former Unocal Bulk Plant No. 762248
359 Main Street
Fortuna, California

| WELL ID / TOC*(ft.) | DATE | DTW (ft.) | GWE (msl) | Product Thickness (ft.) | TPHd (ug/L) | TPHg (ug/L) | B (ug/L) | T (ug/L) | E (ug/L) | X (ug/L) | MTBE (ug/L) | VOCs (ug/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-21 | **08/17-18/05** | **7.54** | **40.92** | **0.00** | **2,000 [38,49]** | **4,600 [51]** | **770** | **220** | **230** | **920** | -- | -- |
| (Cont.) | **11/01-02/05** | **8.85** | **39.61** | **0.00** | **13,000 [38,49]** | **24,000 [51]** | **3,400** | **430** | **1,400** | **4,600** | -- | -- |
| **PZ-1** | 06/23-24/94 | 8.61 | -- | 0.70 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 09/21/94 | 10.58 | -- | 1.10 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 12/21/94 | 8.90 | -- | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 03/02-03/95 | 8.45 | -- | --[16] | NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT | | | | | -- | -- | -- |
| | 05/31/95 | 9.58 | -- | 0.40 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 09/05-06/95 | 12.56 | -- | 0.30 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 12/10-11/95 | 12.55 | -- | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 03/11/96 | 8.21 | -- | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 06/03-04/96 | 8.46 | -- | 0.05 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 09/04-05/96 | 9.55 | -- | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 12/02-03/96 | 7.84 | -- | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 03/10-11/97 | 6.30 | -- | 0.02 | NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT | | | | | -- | -- | -- |
| | 06/09-10/97 | 7.74 | -- | 0.01 | NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT | | | | | -- | -- | -- |
| | 09/08-09/97 | INACCESSIBLE DUE TO CONSTRUCTION | | | | -- | -- | -- | -- | -- | -- | -- |
| | 12/03-04/97 | INACCESSIBLE DUE TO CONSTRUCTION | | | | -- | -- | -- | -- | -- | -- | -- |
| | 03/23-24/98 | INACCESSIBLE DUE TO CONSTRUCTION | | | | -- | -- | -- | -- | -- | -- | -- |
| | 06/07-08/98 | INACCESSIBLE DUE TO CONSTRUCTION | | | | -- | -- | -- | -- | -- | -- | -- |
| | 09/16/98[19] | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 12/16/98 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 03/23/99 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 06/14/99 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 09/13-14/99 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 12/16/99 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 03/16-17/00 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 06/26-27/00 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 09/21/00 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |

# Table 1
## Groundwater Monitoring Data and Analytical Results
Former Unocal Bulk Plant No. 762248
359 Main Street
Fortuna, California

| WELL ID / TOC*(ft.) | DATE | DTW (ft.) | GWE (msl) | Product Thickness (ft.) | TPHd (ug/L) | TPHg (ug/L) | B (ug/L) | T (ug/L) | E (ug/L) | X (ug/L) | MTBE (ug/L) | VOCs (ug/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PZ-1 | 11/08/00 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| (Cont.) | 02/08/01 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 05/09/01 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 08/07/01 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 11/27/01 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 02/05/02 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 05/07/02 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 08/14/02 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 11/12/02 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | **UNABLE TO LOCATE** | | | | | | | | | | | |
| **PZ-2** | 06/23-24/94 | 8.68 | -- | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 09/21/94 | 10.65 | -- | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 12/21/94 | 7.67 | -- | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 03/02-03/95 | 7.60 | -- | 0.00 | 1,900[7] | 1,600 | 16 | 44 | 20 | 100 | -- | -- |
| | 05/31/95 | 8.64 | -- | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 09/05-06/95 | 11.58 | -- | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 12/10-11/95 | 11.53 | -- | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 03/11/96 | 7.38 | -- | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 06/03-04/96 | 7.61 | -- | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 09/04-05/96 | 10.18 | -- | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 12/02-03/96 | 7.67 | -- | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 03/10-11/97 | 6.55 | -- | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 06/09-10/97 | 8.05 | -- | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 09/08-09/97 | 11.13 | -- | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 12/03-04/97 | 8.25 | -- | 0.00 | 4,500[7] | 8,500 | 69 | 400 | 150 | 1,000 | -- | -- |
| | 03/23-24/98 | 5.01 | -- | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 06/07-08/98 | 6.11 | -- | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 09/16/98 | 8.54 | -- | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |

# Table 1
## Groundwater Monitoring Data and Analytical Results
Former Unocal Bulk Plant No. 762248
359 Main Street
Fortuna, California

| WELL ID / TOC*(ft.) | DATE | DTW (ft.) | GWE (msl) | Product Thickness (ft.) | TPHd (ug/L) | TPHg (ug/L) | B (ug/L) | T (ug/L) | E (ug/L) | X (ug/L) | MTBE (ug/L) | VOCs (ug/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PZ-2 | 12/16/98 | 5.68 | -- | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| (Cont.) | 03/23/99 | 5.35 | -- | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 06/14/99 | 6.60 | -- | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 09/13-14/99 | 9.03 | -- | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 12/16/99 | UNABLE TO LOCATE | | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 03/16-17/00 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 06/26-27/00 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 09/21/00 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 11/08/00 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 02/08/01 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 05/09/01 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 08/07/01 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 11/27/01 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 02/05/02 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 05/07/02 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 08/14/02 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 11/12/02 | UNABLE TO LOCATE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | **UNABLE TO LOCATE** | | | | | | | | | | | |
| **Trip Blank** | | | | | | | | | | | | |
| TB-LB | | | | | | | | | | | | |
| | 03/23-24/98 | -- | -- | -- | ND | ND | ND | ND | ND | ND | -- | -- |
| | 06/07-08/98 | -- | -- | -- | -- | ND | ND | ND | ND | ND | -- | -- |
| | 09/16/98 | -- | -- | -- | -- | ND | ND | ND | ND | ND | ND | -- |
| | 12/16/98 | -- | -- | -- | -- | ND | ND | ND | ND | ND | -- | -- |
| | 03/23/99 | -- | -- | -- | -- | ND | ND | ND | ND | ND | -- | -- |
| | 06/14/99 | -- | -- | -- | -- | ND | ND | ND | ND | ND | -- | -- |
| | 09/13-14/99 | -- | -- | -- | -- | ND | ND | ND | ND | ND | -- | -- |
| | 12/16/99 | -- | -- | -- | -- | ND | ND | ND | ND | ND | -- | -- |
| | 03/16-17/00 | -- | -- | -- | -- | ND | ND | ND | ND | ND | -- | -- |

# Table 1
## Groundwater Monitoring Data and Analytical Results
Former Unocal Bulk Plant No. 762248
359 Main Street
Fortuna, California

| WELL ID / TOC*(ft.) | DATE | DTW (ft.) | GWE (msl) | Product Thickness (ft.) | TPHd (ug/L) | TPHg (ug/L) | B (ug/L) | T (ug/L) | E (ug/L) | X (ug/L) | MTBE (ug/L) | VOCs (ug/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QA | 06/26-27/00[35] | -- | -- | -- | -- | ND | ND | ND | ND | ND | -- | -- |
| (Cont.) | 09/21/00 | -- | -- | -- | -- | ND | ND | ND | ND | ND | -- | -- |
| | 11/08/00 | -- | -- | -- | -- | ND | ND | ND | ND | ND | -- | -- |
| | 02/08/01 | -- | -- | -- | -- | ND | ND | ND | ND | ND | -- | -- |
| | 05/09/01 | -- | -- | -- | -- | ND | ND | ND | ND | ND | -- | -- |
| | 08/07/01 | -- | -- | -- | -- | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 11/27/01 | -- | -- | -- | -- | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 02/05/02 | -- | -- | -- | -- | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| **QA** | 05/07/02 | -- | -- | -- | -- | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 08/14/02 | -- | -- | -- | -- | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 11/12/02 | -- | -- | -- | -- | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 02/12/03 | -- | -- | -- | -- | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 06/09-10/03 | -- | -- | -- | -- | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 08/14/03 | -- | -- | -- | -- | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 12/11/03 | -- | -- | -- | -- | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- |
| | 05/18/04 | -- | -- | -- | -- | <50 | <0.50 | <0.50 | <0.50 | <1.0 | -- | -- |
| | 08/10/04 | -- | -- | -- | -- | <50 | <0.50 | <0.50 | <0.50 | <1.0 | -- | -- |
| | 11/09/04 | -- | -- | -- | -- | <50 | <0.50 | <0.50 | <0.50 | <1.0 | -- | -- |
| | 02/08/05 | -- | -- | -- | -- | <50 | <0.50 | <0.50 | <0.50 | <1.0 | -- | -- |
| | 5/18/05[40] | -- | -- | -- | -- | <50 | 1.6 | <0.50 | <0.50 | <1.0 | -- | -- |
| | **08/17-18/05** | **--** | **--** | **--** | **--** | **<50** | **<0.50** | **<0.50** | **<0.50** | **<1.0** | **--** | **--** |
| | **11/01-02/05** | **--** | **--** | **--** | **--** | **<50** | **<0.50** | **<0.50** | **<0.50** | **<1.0** | **--** | **--** |

# Table 1

## Groundwater Monitoring Data and Analytical Results

Former Unocal Bulk Plant No. 762248
359 Main Street
Fortuna, California

**EXPLANATIONS:**

Groundwater monitoring data and laboratory analytical results prior to December 11, 2003, were compiled from reports prepared by Gettler-Ryan, Inc.

TOC = Top of Casing
(ft.) = Feet
DTW = Depth to Water
GWE = Groundwater Elevation
(msl) = Mean sea level
TPHd = Total Petroleum Hydrocarbons as Diesel by EPA Method 8015B-SVOA
MtBE = Methyl tertiary butyl ether

TPHg = Total Petroleum Hydrocarbons as Gasoline by EPA Method 8015B/8021B
B = Benzene by EPA Method 8015B/8021B
T = Toluene by EPA Method 8015B/8021B
E = Ethylbenzene by EPA Method 8015B/8021B
X = Xylenes by EPA Method 8015B/8021B

VOCs = Volatile Organic Compounds
(ug/L) = Micrograms per Liter
ND = Not Detected
-- = Not Measured/Not Analyzed
QA = Quality Assurance/Trip Blank

* TOC elevations for the following wells (MW-1 through MW-6 and MW-13, MW-14, & MW-15) were surveyed on 05/14/03, by Oscar Larsen & Associates. TOC elevations have been surveyed relative to msl. Data provided by RESNA, Inc.

** GWE was corrected for the presence of free product; correction factor: (TOC - DTW) + (Product Thickness x 0.77).

*** GWE was not corrected for the presence of free product.

[1] Hydrocarbons detected as TPHd appear to be both heavier and lighter hydrocarbons than diesel.
[2] Hydrocarbons detected as TPHd appear to be heavier hydrocarbons than diesel.
[3] On 10/02/92 and 03/03/93, 1,2-Dichloroethane (1,2-DCA) was detected at 94 ppb and 300 ppb, respectively.
[4] Hydrocarbons detected as TPHd appear to be lighter hydrocarbons than diesel.
[5] On 10/02/92, acetone was detected at 46 ppb and on 03/03/93 1,2-DCA was detected at 13 ppb.
[6] Skimmers installed. Could not get accurate product thickness.
[7] Laboratory report indicates the hydrocarbons detected appeared to be a diesel and non-diesel mixture.
[8] Laboratory report indicates the hydrocarbons detected did not appear to be diesel.
[9] Laboratory report indicates the hydrocarbons detected did not appear to be gasoline.
[10] Laboratory report indicates diesel and unidentified hydrocarbons <C16.
[11] Detection limit raised. Refer to analytical reports.
[12] Laboratory report indicates diesel and unidentified hydrocarbons <C14.
[13] On 10/02/92, acetone was detected at 11 ppb and on 03/03/93, 1,2-DCA was detected at 2.2 ppb.
[14] Laboratory report indicates unidentified hydrocarbons <C16.
[15] Laboratory report indicates unidentified hydrocarbons >C16.
[16] Product was present but thickness could not be measured.
[17] Laboratory report indicates diesel and unidentified hydrocarbons <C15.
[18] Laboratory report indicates gasoline and unidentified hydrocarbons C6-C12.
[19] Unable to locate well (with metal detector).
[20] Laboratory report indicates unidentified hydrocarbons >C14.

# Table 1
## Groundwater Monitoring Data and Analytical Results
Former Unocal Bulk Plant No. 762248
359 Main Street
Fortuna, California

**EXPLANATIONS:** (cont)

21 Laboratory report indicates unidentified hydrocarbons C9-C24.

22 MtBE by EPA Method 8260.

23 All Volatile Organic Compounds (VOCs) by EPA Method 8260 were ND except for the following: benzene at 220 ppb; 1,2-DCA at 13 ppb; total Xylenes at 22 ppb; and 1-ethyl-2-methyl-benzene at 16 ppb.

24 All VOCs by EPA Method 8260 were ND.

25 All VOCs by EPA Method 8260 were ND except for the following: benzene at 30 ppb; n-Butylbenzene at 12 ppb; sec-Butylbenzene at 5.2 ppb; 1,2-DCA at 7.3 ppb; Ethyl Benzene at 21 ppb; Isopropylbenzene at 8.7 ppb; Naphthalene at 27 ppb; n-Propylbenzene at 17 ppb; 1,2-4-Trimethylbenzene at 160 ppb; 1,3-5 Trimethylbenzene at 54 ppb; Total-Xylenes at 130 ppb; methyl-cyclohexane at 17 ppb; 1-ethyl-3-methyl-Benzene at 130 ppb; 1-ethyl-4-methyl-Benzene at 65 ppb; 1-ethyl-2-methyl-Benzene at 95 ppb; 1-ethyl-2,3-dimethyl-Benzene at 43 ppb; 1-ethyl-1,3-dimethyl-Benzene at 45 ppb; 2,3-Dihydro-1-methylindene at 24 ppb; 1,2,3,5-tetramethyl-Benzene at 29 ppb.

26 All VOCs by EPA Method 8260 were ND except for the following: benzene at 8,100 ppb; 1,2-DCA at 110 ppb; Ethyl Benzene at 1,500 ppb; Naphthalene at 310 ppb; n-Propylbenzene at 220 ppb; Toluene at 11,000 ppb; 1,2,4-Trimethylbenzene at 1,200 ppb; 1,3,5-Trimethylbenzene at 340 ppb; Total-Xylenes at 7,700 ppb; 2-methyl-Propane at 340 ppb; Butane at 360 ppb; 2-methyl-Butane at 380 ppb; 1-ethyl-2-methyl-Benzene at 910 ppb; 1-ethyl-4-methyl-Benzene at 310 ppb.

27 Laboratory report indicates unidentified hydrocarbons >C12.

28 Laboratory report indicates gasoline C6-C12.

29 Laboratory report indicates discrete peaks.

30 Laboratory 24.2

31 Initial results reported by laboratory did not correlate with historical data. Requested sample be re-analyzed (past hold time).

32 Laboratory report indicates unidentified hydrocarbons C6-C12.

33 Laboratory report indicates diesel C9-C24.

34 Laboratory report indicates diesel C9-C24 + unidentified hydrocarbons <C16.

35 Laboratory report indicates that this sample was analyzed outside of the EPA recommended holding time.

36 Laboratory report indicates that this sample was originally analyzed within EPA recommended holding time above maximum calibration range. The sample was re-analyzed past EPA recommended holding time.

37 Laboratory report indicates unidentified hydrocarbons C10-C24.

38 TPHd with silica gel cleanup.

39 Laboratory report indicates unidentified hydrocarbons C9-C40.

40 Laboratory report indicates sample was originally analyzed within holding time. Re-analysis for confirmation or dilution was performed past the recommended holding time.

# Table 1
## Groundwater Monitoring Data and Analytical Results
Former Unocal Bulk Plant No. 762248
359 Main Street
Fortuna, California

**EXPLANATIONS:** (cont)

41 Laboratory report indicates hydrocarbon pattern is present in the requested fuel quantitation range but does not resemble the pattern of the requested fuel.

42 TPHd results for MW-4 are unavailable due to loss of extract during extraction process.

43 Laboratory report indicates diesel + unidentified hydrocarbons C10-C28.

44 Laboratory report indicates sample was analyzed as TPHd with silica gel cleanup on the original extraction, although the chain of custody indicated otherwise.

45 Laboratory confirmed results.

46 Primary and confirmation results varied by greater than 40% RPD. The results may still be useful for their intended purpose.

47 The surrogate recovery for this sample cannot be accuratley quantified due to interference from coeluting organic compounds present in the sample extract.

48 The surrogate recovery was outside control limits. The result may still be useful for its intended purpose.

49 Although sample contains compounds in the retention time range associated with diesel, the chromatogram was not consistent with the expected chromatographic pattern or "fingerprint". However, the reported concentration is based on diesel.

50 Although sample contains compounds in the retention time range associated with gasoline, the chromatogram was not consistent with the expected chromatographic pattern or "fingerprint". However, the reported concentration is based on gasoline.

51 Weathered gasoline.

NOTE: All EPA Method 8010 constituents were ND, except as noted above.

# APPENDIX A

# FIELD METHODS AND PROCEDURES

**FIELD METHODS AND PROCEDURES**
**Unocal Site #762248, 359 Main Street, Fortuna, CA (Site)**
**ENSR Project # 06940-407**

The following section describes field procedures that are to be used by ENSR personnel in the performance and quality management of the field work and data evaluation tasks involved with this project.

## 1. HEALTH AND SAFETY PLAN

The performance of fieldwork and other project services by ENSR and ENSR's subcontractors will be conducted according to guidelines established in the most current, Site-specific Health and Safety Plan (HASP). The HASP describes the hazards that may be encountered in the field and specifies protective equipment, work procedures, and emergency information. A copy of the HASP is maintained at the Site. Prior to performing work at the Site, personnel will have read the HASP, and sign that they have read the HASP and will perform work at the Site in accordance with the HASP.

## 2. DECONTAMINATION

Decontamination of equipment brought to and used at the Site is performed in accordance with ENSR SOP No. 7600. The soap solution and rinse water used for decontamination are collected and properly disposed of as described in Section 7.

## 3. GROUNDWATER DEPTH ASSESSMENT

Initially, all wells for groundwater depth assessment are opened and allowed to equilibrate to atmospheric pressure. Measuring the thickness of liquid-phase hydrocarbons (LPH), if present, and the depth to groundwater are performed in accordance with the applicable sections of ENSR SOP No. 7130. The water level measurement probe is subjectively analyzed for LPH sheen after each measurement.

## 4. SUBJECTIVE ANALYSIS OF GROUNDWATER

Prior to purging for groundwater monitoring, a groundwater sample is collected from the monitoring well for subjective assessment. The sample is retrieved by gently lowering a clean, disposable bailer to approximately one-half the bailer length past the air/liquid interface. The bailer is then retrieved and the sample contained within the bailer is examined for floating LPH and the appearance of a LPH sheen.

## 5. GROUNDWATER SAMPLE COLLECTION

### 5.1 Purged Groundwater Sample

The purging and collection of a groundwater sample are performed in accordance with ENSR SOP No. 7130. Well purging completion standards include minimum purge volumes, and the stabilization of specific groundwater parameters prior to sample collection. Typical groundwater parameters used to measure stability are electrical conductivity, pH, and temperature as described in ENSR SOP Nos. 7124, 7121, and 7123, respectively. Groundwater parameter readings are obtained at regular intervals during the purging process (no less than once per case volume).

### 5.2 Dissolved Oxygen Measurement

Dissolved oxygen (D.O.) readings are collected in accordance with ENSR SOP No. 7122 using HORIBA meters (e.g. HORIBA Model U-22 or equivalent D.O. meter). These meters are equipped with a stirring device that enables the collection of in-situ readings.

### 5.3 Oxidation Reduction Potential (Redox Potential) Measurement

Redox potential readings are obtained with HORIBA meters (e.g. HORIBA Models U-22 or equivalent ORP meter). The meter is cleaned between wells as described above. The meter is calibrated at the start of each day according to the manufacturer's instruction manual.

## 6. PACKAGING AND SHIPMENT OF SAMPLES

Soil, groundwater, and/or gas samples from field work are packaged and shipped in accordance with ENSR SOP No. 7510.

## 7. INVESTIGATION-DERIVED WASTE MANAGEMENT

The purge water, decontamination residuals, and aqueous-based, liquid wastes from field work are placed in 55-gallon drums and temporarily stored on-site pending evaluation of disposal options. Solid wastes, such as disposable bailers and paper wipes, generated during field work are packaged in an appropriate container and separately from liquid wastes. Final disposal is performed consistent with accepted regulatory requirements and consistent with requirements specified by Unocal.

## 8. QUALITY CONTROL

Quality control samples are collected and submitted for analysis. The quality control samples may include field blanks, rinsate blanks, duplicate sample(s), and matrix spike/matrix spike duplicate samples as described in Section 5.0 of ENSR SOP No. 7130.

## 9. DOCUMENTATION

Documentation of field work is performed consistent with Section 6.0 of ENSR SOP No. 7130 and ENSR SOP No. 7515.

# APPENDIX B

## GROUNDWATER SAMPLING INFORMATION SHEETS

Third Quarter (dated August 17-18, 2005)
Fourth Quarter (dated November 1-2, 2005)

ENSR

## GROUNDWATER/LIQUID LEVEL DATA
**(measurements in feet below TOC)**

Site Address: 359 Main St., Fortuna, CA
ENSR No. 06940-407-100
Unocal No. 762248

**Date:** 8-17-05
**Recorded by:** Troy Wenham, Jody

| Well No. Sampling Order | Time Opened | CGI | PID | O2 | Time Measured | Depth to Gr. Water | Measured Total Depth | Depth to Product | Product Thickness | Comments (TOC/TOB) (product skimmer in well) |
|---|---|---|---|---|---|---|---|---|---|---|
| **MW-2** | 1830 | — | — | — | 1900 | ~~8.45~~ | 22.50 | — | — | Monitor Only Broken lid 12"D |
| **MW-7** | 1831 | — | — | — | 1902 | 7.22 | 10.50 | — | — | Monitor Only |
| **MW-8** | 1832 | — | — | — | 1904 | 6.96 | 20.55 | — | — | Monitor Only |
| **MW-9** | 1833 | | — | — | 1907 | 5.76 | 15.51 | — | — | Monitor Only |
| **MW-10** | 1834 | — | — | — | 1909 | 6.75 | 19.69 | — | — | (First Sample) |
| **MW-14** | 1836 | — | — | — | 1911 | 23.20 | 37.20 | — | — | |
| **MW-15** | 1838 | — | — | — | 1914 | 20.80 | 38.35 | — | — | |
| **MW-16B** | 1840 | — | — | — | 1916 | 28.90 | 40.68 | — | — | |
| **MW-17** | 1841 | — | — | — | 1919 | 27.66 | 40.29 | — | — | |
| **MW-6** | 1842 | — | — | — | 1921 | 6.90 | 16.70 | — | — | |
| **MW-1** | 1843 | — | — | — | 1924 | 24.70 | 40.40 38.50 | — | — | |
| **MW-16A** | 1845 | — | — | — | 1928 | 9.35 | 20.27 | — | — | |
| **MW-20** | 1847 | — | — | — | 1932 | 8.78 | 20.15 | — | — | |
| **MW-3** | 1850 | — | — | — | 1940 | 7.61 | 24.70 | — | — | |
| **MW-21** | 1851 | — | — | — | 1944 | 7.54 | 20.35 | — | — | |
| **MW-18** | 1853 | — | — | — | 1950 | 4.80 | 20.24 | — | — | |
| **MW-13** | 1855 | — | — | — | 1958 | 7.70 | 17.96 | — | — | |
| **MW-19** | 1856 | — | — | — | 2004 | 7.68 | 20.32 | — | — | |
| **MW-5** | 1857 | — | — | — | 2008 | 8.80 | 14.55 | — | — | |
| **MW-4** | 1858 | — | — | — | 2015 | 10.68 | 19.95 | — | — | (Last Sample) |

**Notes:**

ENSR

**GROUNDWATER SAMPLING DATA SHEET**
Site Address: 359 Main St., Fortuna, CA
ENSR No. 06940-407-100
Unocal No. 762248

Well/Piezo ID: **MW-1**

Well [X] Piezometer [ ]

**Well Purging:**
Date Purged: 8-18-05
Purge Method: Disposable bailer/other Grundfos pump

Field Tech(s): Troy Walker
Weather Conditions: Sunny (84°F)

Casing Material: PVC
Well Diameter: 4.00 in.
Total Depth: 38.50 ft from TOC
Depth to Water: 24.70 ft from TOC
Water Column: 13.8 ft.
Water Column Volume: 9.11 gal (WC X VF)

| Volume Factor (VF) | | | | |
|---|---|---|---|---|
| | 3/4" = 0.02 | 1" = 0.04 | 2" = .16 | 3" = .38 |
| | 4" = .66 | 5" = 1.02 | 6" = 1.50 | 12" = 5.80 |

38.50 - 11.0

80% Recovery from TOC: = Total Depth - (Water Column X .8) = 27.5'

| Time | | Volume Removed (gal) | DO (mg/L) | Redox Potential (ORP) (mVolts) | Temperature (°C) | Specific Conductivity (~~uS/cm~~) mS/cm | pH | Turbidity (NTUs) | Color/Clarity | Other | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 14:47 | 0 | 0.5 | 7.4 | -94 | 16.0 | 46.1 | 6.7 | 869 | Clear | none | |
| 14:52 | 1 | 10.0 | 2.8 | -86 | 15.8 | 33.3 | 7.0 | 118 | " | " | |
| 14:57 | 2 | 20.0 | 2.4 | -92 | 15.8 | 40.7 | 6.9 | 436 | " | " | |
| 15:02 | 3 | 30.0 | 5.0 | -45 | 15.9 | 47.1 | 7.0 | 958 | " | " | |
| | 4 | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

**Sample Collection:**
Date Sampled: 8-18-05
Sampling Method: Disposable Bailer/Other Bailed
Sample Type: Grab

| Sample ID | # of containers | Container Type | Preservation | Analysis | Time |
|---|---|---|---|---|---|
| MW-1 | 3 | 40 mL glass vial | Ice/HCl | TPHg (8015), BTEX (8021) | 15:15 |
| MW-1 | 1 | 250 mL Amber | Ice | TPHd (8015M) | 15:15 |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

Comments

Signature

Date 8-18-05

ENSR

**GROUNDWATER SAMPLING DATA SHEET**
Site Address: 359 Main St., Fortuna, CA
ENSR No. 06940-407-100
Unocal No. 762248

Well/Piezo ID: **MW-3**

Well [x] Piezometer [ ]

Field Tech(s): JDR

**Well Purging:** 8-18-05
Date Purged:
Purge Method: Disposable bailer/other DC PUMP + TBG
Weather Conditions: PARTY CLOUDY

Casing Material: PVC
Well Diameter: 4.00 in.
Total Depth: 24.70 ft from TOC
Depth to Water: 7.61 ft from TOC
Water Column: 17.09 ft.
Water Column Volume: 11.38 gal (WC X VF)

| Volume Factor (VF) | | | | |
|---|---|---|---|---|
| | 3/4" = 0.02 | 1" = 0.04 | 2" = .16 | 3" = .38 |
| | 4" = .66 | 5" = 1.02 | 6" = 1.50 | 12" = 5.80 |

80% Recovery from TOC: = Total Depth - (Water Column X .8) = 24.70 - 13.67 = 11.03

| Time | Volume Removed (gal) | DO (mg/L) | Redox Potential (ORP) (mVolts) | Temperature (°C) | Specific Conductivity (uS/cm) | pH | Turbidity (NTUs) | Color/Clarity | Other | Other |
|---|---|---|---|---|---|---|---|---|---|---|
| 1020 | 0 0.2 | 6.93 | -42 | 15.1 | 78.3 | 6.23 | 190 | CLR | | |
| 1033 | 1 12.0 | 9.5 | 1 | 15.7 | 70.4 | 6.02 | 448 | LT GREY | | |
| 1106 | 2 25.0 | 8.3 | 7 | 16.1 | 70.1 | 6.05 | -5 | LT GREY | | |
| | 3 | | | | | | | | | |
| | 4 | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

**Sample Collection:**
Date Sampled: 8-18-05
Sampling Method: Disposable Bailer/Other DC PUMP + TBG
Sample Type: Grab

| Sample ID | # of containers | Container Type | Preservation | Analysis | Time |
|---|---|---|---|---|---|
| | 3 | 40 mL glass vial | Ice/HCl | TPHg (8015), BTEX (8021) | 1110 |
| | 1 | 250 mL Amber | Ice | TPHd (8015M) | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

Comments WELL 3 WEAT DRY @ 30 GAL PURGE. BAILED A SAMPLE

Signature

Date 8-18-05

ENSR

**GROUNDWATER SAMPLING DATA SHEET**
Site Address: 359 Main St., Fortuna, CA
ENSR No. 06940-407-100
Unocal No. 762248

Well/Piezo ID: **MW-4**

Well [x] Piezometer [ ]

**Well Purging:**
Date Purged: 8-18-05
Purge Method: Disposable bailer/other ES-120 pump

Field Tech(s): Troy Weakley

Weather Conditions: partly cloudy, foggy, windy (78°F)

Casing Material: PVC
Well Diameter: 4.00 in.
Total Depth: 19.95 ft from TOC
Depth to Water: 10.68 ft from TOC
Water Column: 9.27 ft.
Water Column Volume: 6.12 gal (WC X VF)

| Volume Factor (VF) | | | | |
|---|---|---|---|---|
| | 3/4" = 0.02 | 1" = 0.04 | 2" = .16 | 3" = .38 |
| | 4" = .66 | 5" = 1.02 | 6" = 1.50 | 12" = 5.80 |

19.95 - 7.42

80% Recovery from TOC: = Total Depth - (Water Column X .8) = 12.53'

| Time | Volume Removed (gal) | DO (mg/L) | Redox Potential (ORP) (mVolts) | Temperature (°C) | Specific Conductivity ~~(uS/cm)~~ mS/cm | pH | Turbidity (NTUs) | Color/Clarity | Other | Other |
|---|---|---|---|---|---|---|---|---|---|---|
| 15:35 | 0 0.5 | 5.1 | -92 | 16.8 | 48.6 | 6.8 | 00 | clear | odor present | |
| 15:39 | 1 8.0 | 3.4 | -92 | 17.4 | 17.9 | 6.7 | -50 | gray/cloudy | " " | |
| 15:43 | 2 16.0 | 3.5 | 10 | 17.4 | 17.1 | 6.7 | -50 | gray/cloudy | " " | |
| 15:47 | 3 24.0 | 3.5 | -94 | 17.4 | 16.8 | 6.8 | -50 | " " | " " | |
| | 4 | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

**Sample Collection:**
Date Sampled: ~~8-18-05~~
Sampling Method: ~~Disposable Bailer/Other~~ Bailed
Sample Type: Grab

| Sample ID | # of containers | Container Type | Preservation | Analysis | Time |
|---|---|---|---|---|---|
| MW-4 | 3 | 40 mL glass vial | Ice/HCl | TPHg (8015), BTEX (8021) | 16:08 |
| MW-4 | 1 | 250 mL Amber | Ice | TPHd (8015M) | 16:08 |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

Comments possible product in side well

Signature [signature] Date 8-18-05

ENSR

**GROUNDWATER SAMPLING DATA SHEET**
Site Address: 359 Main St., Fortuna, CA
ENSR No. 06940-407-100
Unocal No. 762248

Well/Piezo ID: **MW-5**

Well [x] Piezometer [ ]

**Well Purging:**
Date Purged: 8.18.05
Purge Method: Disposable bailer/other DC PUMP

Field Tech(s): JDR

Weather Conditions: CLOUDY

Casing Material: PVC
Well Diameter: 4.00 in.
Total Depth: 14.55 ft from TOC
Depth to Water: 8.80 ft from TOC
Water Column: 5.75 ft.
Water Column Volume: 3.80 gal (WC X VF)

| Volume Factor (VF) | | | | |
|---|---|---|---|---|
| | 3/4" = 0.02 | 1" = 0.04 | 2" = .16 | 3" = .38 |
| | 4" = .66 | 5" = 1.02 | 6" = 1.50 | 12" = 5.80 |

80% Recovery from TOC: = Total Depth - (Water Column X .8) = 14.55 - 4.6 = 9.95

| Time | Volume Removed (gal) | DO (mg/L) | Redox Potential (ORP) (mVolts) | Temperature (°C) | Specific Conductivity (uS/cm) | pH | Turbidity (NTUs) | Color/Clarity | Other | Other |
|---|---|---|---|---|---|---|---|---|---|---|
| 1538 | 0 0.5 | 7.16 | -81 | 18.3 | 99.9 | 6.55 | 7330 | DRK GREY | | |
| 1549 | 1 4.5 | 4.00 | -98 | 18.6 | .090 | 6.51 | 261.0 | GREY | | |
| | 2 | | | | | | | | | |
| | 3 | | | | | | | | | |
| | 4 | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

**Sample Collection:**
Date Sampled: 8.18.05
Sampling Method: Disposable Bailer/Other
Sample Type: Grab

| Sample ID | # of containers | Container Type | Preservation | Analysis | Time |
|---|---|---|---|---|---|
| MW-5 | 3 | 40 mL glass vial | Ice/HCl | TPHg (8015), BTEX (8021) | 1616 |
| MW-5 | 1 | 250 mL Amber | Ice | TPHd (8015M) | 1616 |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

Comments WELL PUMPED DRY @ APPROX. 6 GAL., BAILED SAMPLE NOT RECHARGING VERY FAST.

Signature [signature] Date 8.18.05

ENSR

**GROUNDWATER SAMPLING DATA SHEET**
Site Address: 359 Main St., Fortuna, CA
ENSR No. 06940-407-100
Unocal No. 762248

Well/Piezo ID: **MW-6**

Well ☒ Piezometer ☐

Field Tech(s): Troy Walker

Weather Conditions: Sunny (69°F)

**Well Purging:**
Date Purged: 8-18-05
Purge Method: Disposable bailer/other ES-100 pump (DC)

Casing Material: PVC
Well Diameter: 4.00 in.
Total Depth: 16.70 ft from TOC
Depth to Water: 6.90 ft from TOC
Water Column: 9.80 ft.
Water Column Volume: 6.47 gal (WC X VF)

| Volume | 3/4" = 0.02 | 1" = 0.04 | 2" = .16 | 3" = .38 |
|---|---|---|---|---|
| Factor (VF) | 4" = .66 | 5" = 1.02 | 6" = 1.50 | 12" = 5.80 |

80% Recovery from TOC: = Total Depth - (Water Column X .8) = 16.7 - 7.84 = 8.86'

| Time | | Volume Removed (gal) | DO (mg/L) | Redox Potential (ORP) (mVolts) | Temperature (°C) | Specific Conductivity (uS/cm) | pH | Turbidity (NTUs) | Color/Clarity | Other | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 14:14 | 0 | 0.5 | 8.8 | -88 | 16.1 | 48.3 | 6.5 | 810 | clear | none | |
| 14:17 | 1 | 7.0 | 6.8 | -102 | 16.0 | 51.3 | 6.9 | 805 | " | " | |
| | 2 | | | | | | | | Well went dry. Purged to | | |
| | 3 | | | | | | | | Bottom of well. Wait for | | |
| | 4 | | | | | | | | Well to recharge, then sample | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

**Sample Collection:**
Date Sampled: 8-18-05
Sampling Method: Disposable Bailer/Other Bailed
Sample Type: Grab

| Sample ID | # of containers | Container Type | Preservation | Analysis | Time |
|---|---|---|---|---|---|
| MW-6 | 3 | 40 mL glass vial | Ice/HCl | TPHg (8015), BTEX (8021) | 14:28 |
| MW-6 | 1 | 250 mL Amber | Ice | TPHd (8015M) | 14:28 |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

Comments

Signature [signature] Date 8-18-05

ENSR

**GROUNDWATER SAMPLING DATA SHEET**
Site Address: 359 Main St., Fortuna, CA
ENSR No. 06940-407-100
Unocal No. 762248

Well/Piezo ID: **MW-13**

Well [x] Piezometer [ ]

Field Tech(s): JDR

Weather Conditions: SUNNY

**Well Purging:**
Date Purged: 8.18.05
Purge Method: Disposable bailer/other DC PUMP

Casing Material: PVC
Well Diameter: 2.00 in.
Total Depth: 17.96 ft from TOC
Depth to Water: 7.70 ft from TOC
Water Column: 10.26 ft.
Water Column Volume: 1.64 gal (WC X VF)

| Volume Factor (VF) | | | | |
|---|---|---|---|---|
| | 3/4" = 0.02 | 1" = 0.04 | 2" = .16 | 3" = .38 |
| | 4" = .66 | 5" = 1.02 | 6" = 1.50 | 12" = 5.80 |

80% Recovery from TOC: = Total Depth - (Water Column X .8) = 17.96 - 8.2 = 9.76'

| Time | Volume Removed (gal) | DO (mg/L) | Redox Potential (ORP) (mVolts) | Temperature (°C) | Specific Conductivity (uS/cm) | pH | Turbidity (NTUs) | Color/Clarity | Other | Other |
|---|---|---|---|---|---|---|---|---|---|---|
| 1355 | 0 | 7.92 | -61 | 18.3 | 99.9 | 6.64 | 207.0 | CLR | | |
| 1403 | 1 | 7.29 | -50 | 17.4 | 92.8 | 6.33 | -5.0 | CLR | | |
| 1409 | 2 | 9.04 | -34 | 18.0 | 83.1 | 6.27 | 318 | CLR | | |
| 1416 | 3 | 10.40 | -22 | 18.1 | 83.4 | 6.19 | 207 | | | |
| | 4 | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

**Sample Collection:**
Date Sampled: 08/18/05
Sampling Method: Disposable Bailer/Other DC PUMP
Sample Type: Grab

| Sample ID | # of containers | Container Type | Preservation | Analysis | Time |
|---|---|---|---|---|---|
| MW-13 | 3 | 40 mL glass vial | Ice/HCl | TPHg (8015), BTEX (8021) | 1416 |
| MW-13 | 1 | 250 mL Amber | Ice | TPHd (8015M) | 1416 |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

Comments

Signature

Date 8.18.05

ENSR

**GROUNDWATER SAMPLING DATA SHEET**
Site Address: 359 Main St., Fortuna, CA
ENSR No. 06940-407-100
Unocal No. 762248

Well/Piezo ID: **MW-14**

Well [X] Piezometer [ ]

**Well Purging:**
Date Purged: 8-18-05
Purge Method: Disposable bailer/other Grundfos

Field Tech(s): Troy Wenham
Weather Conditions: partly cloudy (65°F) (Foggy)

Casing Material: PVC
Well Diameter: 2.00 in.
Total Depth: 37.20 ft from TOC
Depth to Water: 23.20 ft from TOC
Water Column: 14.00 ft.
Water Column Volume: 2.24 gal (WC X VF)

| Volume Factor (VF) | 3/4" = 0.02 | 1" = 0.04 | 2" = .16 | 3" = .38 |
|---|---|---|---|---|
| | 4" = .66 | 5" = 1.02 | 6" = 1.50 | 12" = 5.80 |

80% Recovery from TOC: = Total Depth - (Water Column X .8) = 26.0'
37.2 11.2

| Time | | Volume Removed (gal) | DO (mg/L) | Redox Potential (ORP) (mVolts) | Temperature (°C) | Specific Conductivity ~~(uS/cm)~~ mS/cm | pH | Turbidity (NTUs) | Color/Clarity | Other | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11:28 | 0 | 0.5 | 5.7 | 149 | 15.8 | 47.6 | 5.2 | -5.0 | gray/cloudy | none | |
| 11:29 | 1 | 3.0 | 4.0 | 130 | 15.7 | 46.8 | 5.3 | 408 | clear | " | |
| 11:30 | 2 | 6.0 | 0.8 | 126 | 15.7 | 46.6 | 5.4 | 194 | " | " | |
| 11:31 | 3 | 9.0 | 0.7 | 123 | 15.8 | 46.5 | 5.4 | 180 | " | " | |
| | 4 | | | | | | | | | | |
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**Sample Collection:**
Date Sampled: ~~8-18-05~~
Sampling Method: Disposable Bailer/Other Bailed
Sample Type: Grab

| Sample ID | # of containers | Container Type | Preservation | Analysis | Time |
|---|---|---|---|---|---|
| MW-14 | 3 | 40 mL glass vial | Ice/HCl | TPHg (8015), BTEX (8021) | 11:45 |
| MW-14 | 1 | 250 mL Amber | Ice | TPHd (8015M) | 11:45 |
| | | | | | |
| | | | | | |
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| | | | | | |

Comments Grundfos pump malfunction, switch to back-up pump which is a ES-120 (DC) pump

Signature [signature] Date 8-18-05

ENSR

**GROUNDWATER SAMPLING DATA SHEET**
Site Address: 359 Main St., Fortuna, CA
ENSR No. 06940-407-100
Unocal No. 762248

Well/Piezo ID: **MW-15**

Well [x] Piezometer [ ]

**Well Purging:**
Date Purged: 8-18-05 (DC)
Purge Method: Disposable bailer/other ES-120 pump

Field Tech(s): Troy Wenham

Weather Conditions: Sunny, Partly cloudy, (82°F)

Casing Material: PVC
Well Diameter: 2.00 in.
Total Depth: 38.35 ft from TOC
Depth to Water: 20.80 ft from TOC
Water Column: 17.55 ft.
Water Column Volume: 2.81 gal (WC X VF)

| Volume | 3/4" = 0.02 | 1" = 0.04 | 2" = .16 | 3" = .38 |
|---|---|---|---|---|
| Factor (VF) | 4" = .66 | 5" = 1.02 | 6" = 1.50 | 12" = 5.80 |

80% Recovery from TOC: = Total Depth - (Water Column X .8) = 38.35 - 14.04 = 24.31'

| Time | Volume Removed (gal) | DO (mg/L) | Redox Potential (ORP) (mVolts) | Temperature (°C) | Specific Conductivity (uS/cm) mS/cm | pH | Turbidity (NTUs) | Color/Clarity | Other | Other |
|---|---|---|---|---|---|---|---|---|---|---|
| 12:16 | 0 0.5 | 5.1 | 161 | 15.4 | 400 | 5.4 | -5.0 | gray/cloudy | none | |
| 12:18 | 1 4.0 | 0.7 | 164 | 15.2 | 45.2 | 5.2 | 159 | clear | none | |
| 12:20 | 2 8.0 | 0.6 | 162 | 15.2 | 45.9 | 5.2 | 109 | " | " | |
| 12:22 | 3 12.0 | 0.8 | 160 | 15.2 | 46.1 | 5.2 | 96 | " | " | |
| | 4 | | | | | | | | | |
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**Sample Collection:**
Date Sampled: 8-18-05
Sampling Method: Disposable Bailer/Other Bailed
Sample Type: Grab

| Sample ID | # of containers | Container Type | Preservation | Analysis | Time |
|---|---|---|---|---|---|
| MW-15 | 3 | 40 mL glass vial | Ice/HCl | TPHg (8015), BTEX (8021) | 12:35 |
| MW-15 | 1 | 250 mL Amber | Ice | TPHd (8015M) | 12:35 |
| | | | | | |
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Comments

Signature

Date 8-18-05

ENSR

**GROUNDWATER SAMPLING DATA SHEET**
Site Address: 359 Main St., Fortuna, CA
ENSR No. 06940-407-100
Unocal No. 762248

Well/Piezo ID: **MW-16A**

Well [x] Piezometer [ ]

**Well Purging:**
Date Purged: 8-18-05
Purge Method: Disposable bailer/other Bailed

Field Tech(s): Troy Wenham
Weather Conditions: Partly cloudy, foggy (65°F)

Casing Material: PVC
Well Diameter: 2.00 in.
Total Depth: 20.27 ft from TOC
Depth to Water: 9.35 ft from TOC
Water Column: 10.92 ft.
Water Column Volume: 1.75 gal (WC X VF)

| Volume | 3/4" = 0.02 | 1" = 0.04 | 2" = .16 | 3" = .38 |
|---|---|---|---|---|
| Factor (VF) | 4" = .66 | 5" = 1.02 | 6" = 1.50 | 12" = 5.80 |

20.27 - 8.74

80% Recovery from TOC: = Total Depth - (Water Column X .8) = 11.54

| Time | | Volume Removed (gal) | DO (mg/L) | Redox Potential (ORP) (mVolts) | Temperature (°C) | Specific Conductivity (~~µS/cm~~) mS/m | pH | Turbidity (NTUs) | Color/Clarity | Other | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10:18 | 0 | 0.5 | 4.7 | -44 | 16.8 | 21.1 | 6.6 | 950 | slightly cloudy | none | |
| 10:16 | 1 | 2.5 | 1.4 | -11 | 16.1 | 25.6 | 6.6 | 975.0 | clear | " | |
| 10:22 | 2 | 5.0 | 1.9 | -16 | 16.1 | 20.7 | 6.3 | 990.0 | " | " | |
| 10:28 | 3 | 7.5 | 2.2 | -28 | 16.1 | 20.7 | 6.0 | 880 | " | " | |
| | 4 | | | | | | | | | | |
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**Sample Collection:**
Date Sampled: 8-18-05
Sampling Method: Disposable Bailer/Other Bailed
Sample Type: Grab

| Sample ID | # of containers | Container Type | Preservation | Analysis | Time |
|---|---|---|---|---|---|
| MW-16A | 3 | 40 mL glass vial | Ice/HCl | TPHg (8015), BTEX (8021) | 10:40 |
| MW-16A | 1 | 250 mL Amber | Ice | TPHd (8015M) | 10:40 |
| | | | | | |
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| | | | | | |
| | | | | | |

Comments

Signature [signature] Date 8-18-05

ENSR

**GROUNDWATER SAMPLING DATA SHEET**
Site Address: 359 Main St., Fortuna, CA
ENSR No. 06940-407-100
Unocal No. 762248

Well/Piezo ID: **MW-16B**

Well [x] Piezometer [ ]

**Well Purging:**
Date Purged: 8-18-05
Purge Method: Disposable bailer/other (DC) ES-120 pump

Field Tech(s): Troy Wenham
Weather Conditions: Sunny, Partly cloudy, windy (94°F)

Casing Material: PVC
Well Diameter: 2.00 in.
Total Depth: 40.68 ft from TOC
Depth to Water: 28.90 ft from TOC
Water Column: 11.78 ft.
Water Column Volume: 1.88 gal (WC X VF)

| Volume Factor (VF) | 3/4" = 0.02 | 1" = 0.04 | 2" = .16 | 3" = .38 |
|---|---|---|---|---|
| | 4" = .66 | 5" = 1.02 | 6" = 1.50 | 12" = 5.80 |

80% Recovery from TOC: = Total Depth - (Water Column X .8) = 31.26" (40.68 9.43)

| Time | | Volume Removed (gal) | DO (mg/L) | Redox Potential (ORP) (mVolts) | Temperature (°C) | Specific Conductivity ~~(uS/cm)~~ mS/m | pH | Turbidity (NTUs) | Color/Clarity | Other | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 13:04 | 0 | 0.5 | 3.5 | 128 | 16.1 | 28.3 | 6.1 | -5.0 | Brown/cloudy | none | |
| 13:05 | 1 | 2.5 | 1.2 | 149 | 16.0 | 28.6 | 5.2 | -5.0 | " | " | |
| 13:06 | 2 | 5.0 | 1.1 | 150 | 16.0 | 29.2 | 5.1 | 538 | Clear | none | |
| 13:07 | 3 | 7.5 | 1.1 | 150 | 16.0 | 29.2 | 5.1 | 357 | " | " | |
| | 4 | | | | | | | | | | |
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**Sample Collection:**
Date Sampled: 8-18-05
Sampling Method: Disposable Bailer/Other Bailed
Sample Type: Grab

| Sample ID | # of containers | Container Type | Preservation | Analysis | Time |
|---|---|---|---|---|---|
| MW-16B | 3 | 40 mL glass vial | Ice/HCl | TPHg (8015), BTEX (8021) | 13:20 |
| MW-16B | 1 | 250 mL Amber | Ice | TPHd (8015M) | 13:20 |
| | | | | | |
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Comments

Signature [signature] Date 8-18-05

ENSR

**GROUNDWATER SAMPLING DATA SHEET**
Site Address: 359 Main St., Fortuna, CA
ENSR No. 06940-407-100
Unocal No. 762248

Well/Piezo ID: **MW-17**

Well [x] Piezometer [ ]

**Well Purging:**
Date Purged: 8-18-05 (06)
Purge Method: Disposable bailer/other ~~ESS-120 pump~~

Field Tech(s): Troy Wheelman

Weather Conditions: Sunny (90°F)

Casing Material: PVC
Well Diameter: 2.00 in.
Total Depth: 40.29 ft from TOC
Depth to Water: 27.66 ft from TOC
Water Column: 12.63 ft.
Water Column Volume: 2.02 gal (WC X VF)

| Volume Factor (VF) | | | | |
|---|---|---|---|---|
| | 3/4" = 0.02 | 1" = 0.04 | 2" = .16 | 3" = .38 |
| | 4" = .66 | 5" = 1.02 | 6" = 1.50 | 12" = 5.80 |

80% Recovery from TOC: = Total Depth - (Water Column X .8) = 10.10 30.19'

| Time | | Volume Removed (gal) | DO (mg/L) | Redox Potential (ORP) (mVolts) | Temperature (°C) | Specific Conductivity (uS/cm) | pH | Turbidity (NTUs) | Color/Clarity | Other | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 13:33 | 0 | 0.5 | 5.2 | 165 | 15.9 | 34.8 | 5.5 | -50 | Brown/cloudy | none | |
| 13:36 | 1 | 2.5 | 2.3 | 174 | 15.7 | 35.8 | 4.9 | 245 | clear/ | none | |
| 13:39 | 2 | 5.0 | 2.3 | 174 | 15.8 | 35.8 | 4.9 | 114 | " | " | |
| 13:40 | 3 | 7.5 | 2.5 | 173 | 15.7 | 35.9 | 4.9 | 94.6 | " | " | |
| | 4 | | | | | | | | | | |
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**Sample Collection:**
Date Sampled: 8-18-05
Sampling Method: ~~Disposable Bailer/Other~~ Bailer
Sample Type: Grab

| Sample ID | # of containers | Container Type | Preservation | Analysis | Time |
|---|---|---|---|---|---|
| MW-17 | 3 | 40 mL glass vial | Ice/HCl | TPHg (8015), BTEX (8021) | 13:55 |
| MW-17 | 1 | 250 mL Amber | Ice | TPHd (8015M) | |
| | | | | | |
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Comments

Signature [signature] Date 8-18-05

ENSR

**GROUNDWATER SAMPLING DATA SHEET**
Site Address: 359 Main St., Fortuna, CA
ENSR No. 06940-407-100
Unocal No. 762248

Well/Piezo ID: **MW-18**

Well [x] Piezometer [ ]

**Well Purging:**
Date Purged: 8-18-05
Purge Method: Disposable bailer/other DC PUMP

Field Tech(s): JDR

Weather Conditions: SUNNY

Casing Material: PVC
Well Diameter: 2.00 in.
Total Depth: 20.24 ft from TOC
Depth to Water: 4.80 ft from TOC
Water Column: 15.44 ft.
Water Column Volume: 2.47 gal (WC X VF)

| Volume Factor (VF) | | | | |
|---|---|---|---|---|
| | 3/4" = 0.02 | 1" = 0.04 | 2" = .16 | 3" = .38 |
| | 4" = .66 | 5" = 1.02 | 6" = 1.50 | 12" = 5.80 |

80% Recovery from TOC: = Total Depth - (Water Column X .8) = 7.94'

| Time | | Volume Removed (gal) | DO (mg/L) | Redox Potential (ORP) (mVolts) | Temperature (°C) | Specific Conductivity (uS/cm) | pH | Turbidity (NTUs) | Color/Clarity | Other | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1310 | 0 | 0.5 | 7.15 | 58 | 18.8 | 99.9 | 6.03 | -5.0 | | | |
| 1316 | 1 | 3.0 | 5.20 | 53 | 16.7 | .090 | 5.87 | 751 | | | |
| 1323 | 2 | 6.0 | 6.67 | 53 | 15.0 | .090 | 5.81 | -5.00 | | | |
| 1330 | 3 | 9.0 | 9.77 | 66 | 15.8 | .090 | 6.15 | 345.0 | | | |
| | 4 | | | | | | | | | | |
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**Sample Collection:**
Date Sampled: 08/18/05
Sampling Method: Disposable Bailer/Other PC PUMP
Sample Type: Grab

| Sample ID | # of containers | Container Type | Preservation | Analysis | Time |
|---|---|---|---|---|---|
| MW-18 | 3 | 40 mL glass vial | Ice/HCl | TPHg (8015), BTEX (8021) | 1330 |
| MW-18 | 1 | 250 mL Amber | Ice | TPHd (8015M) | 1330 |
| | | | | | |
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Comments

Signature [signature] Date 8-18-05

ENSR

**GROUNDWATER SAMPLING DATA SHEET**
Site Address: 359 Main St., Fortuna, CA
ENSR No. 06940-407-100
Unocal No. 762248

Well/Piezo ID: **MW-19**

Well [x] Piezometer [ ]

Field Tech(s): JDR

Weather Conditions: SUNNY

**Well Purging:** 8.18.05
Date Purged:
Purge Method: Disposable bailer/other DC PUMP

Casing Material: PVC
Well Diameter: 2.00 in.
Total Depth: 20.32 ft from TOC
Depth to Water: 7.68 ft from TOC
Water Column: 12.64 ft.
Water Column Volume: 2.02 gal (WC X VF)

| Volume | 3/4" = 0.02 | 1" = 0.04 | 2" = .16 | 3" = .38 |
|---|---|---|---|---|
| Factor (VF) | 4" = .66 | 5" = 1.02 | 6" = 1.50 | 12" = 5.80 |

80% Recovery from TOC: = Total Depth - (Water Column X .8) = 20.32 - 10.11 = 10.21'

| Time | Volume Removed (gal) | DO (mg/L) | Redox Potential (ORP) (mVolts) | Temperature (°C) | Specific Conductivity (uS/cm) | pH | Turbidity (NTUs) | Color/Clarity | Other | Other |
|---|---|---|---|---|---|---|---|---|---|---|
| 1445 | 0 | 7.31 | 24 | 17.7 | 86.3 | 6.18 | -5.0 | GREY/CLEAR | | |
| 1452 | 1 | 4.61 | 20 | 17.2 | 95.8 | 5.64 | -5.0 | MILKY TAN | | |
| 1459 | 2 | 4.18 | 14 | 17.1 | 99.9 | 5.93 | -5.0 | LT. GREY | | |
| 1506 | 3 | 3.88 | -2 | 17.0 | .090 | 5.90 | 456.0 | CLR TO LT GREY | | |
| | 4 | | | | | | | | | |
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**Sample Collection**
Date Sampled: 8.18.05
Sampling Method: Disposable Bailer/Other DC PUMP
Sample Type: Grab

| Sample ID | # of containers | Container Type | Preservation | Analysis | Time |
|---|---|---|---|---|---|
| | 3 | 40 mL glass vial | Ice/HCl | TPHg (8015), BTEX (8021) | 1506 |
| | 1 | 250 mL Amber | Ice | TPHd (8015M) | 1506 |
| | | | | | |
| | | | | | |
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Comments

Signature Date 8.18.05

ENSR

**GROUNDWATER SAMPLING DATA SHEET**
Site Address: 359 Main St., Fortuna, CA
ENSR No. 06940-407-100
Unocal No. 762248

Well/Piezo ID: **MW-20**

Well [x] Piezometer [ ]

**Well Purging:**
Date Purged: 8-18-05
Purge Method: Disposable bailer/other Bailed

Field Tech(s): Troy Wendryn
Weather Conditions: partly cloudy, Foggy (65F)

Casing Material:
Well Diameter: 2.00 in.
Total Depth: 20.15 ft from TOC
Depth to Water: 8.78 ft from TOC
Water Column: 11.37 ft.
Water Column Volume: 1.82 gal (WC X VF)

| Volume Factor (VF) | 3/4" = 0.02 | 1" = 0.04 | 2" = .16 | 3" = .38 |
|---|---|---|---|---|
| | 4" = .66 | 5" = 1.02 | 6" = 1.50 | 12" = 5.80 |

80% Recovery from TOC: = Total Depth - (Water Column X .8) = 9.10 11.05

| Time | | Volume Removed (gal) | DO (mg/L) | Redox Potential (ORP) (mVolts) | Temperature (°C) | Specific Conductivity (uS/cm) mS/cm | pH | Turbidity (NTUs) | Color/Clarity | Other | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10:50 | 0 | 0.5 | 8.2 | -62 | 17.2 | 69.2 | 6.7 | 845 | Clear | odor present | |
| 10:56 | 1 | 2.5 | 2.7 | -62 | 18.1 | 63.7 | 6.6 | 264 | | | |
| 11:02 | 2 | 5.0 | 1.6 | -71 | 19.3 | 63.8 | 6.5 | 304 | | | |
| 11:08 | 3 | 7.5 | 1.2 | -55 | 17.9 | 62.9 | 6.6 | 844 | | | |
| | 4 | | | | | | | | | | |
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**Sample Collection:**
Date Sampled: 8-18-05
Sampling Method: Disposable Bailer/Other Bailed
Sample Type: Grab

| Sample ID | # of containers | Container Type | Preservation | Analysis | Time |
|---|---|---|---|---|---|
| MW-20 | 3 | 40 mL glass vial | Ice/HCl | TPHg (8015), BTEX (8021) | 11:18 |
| MW-20 | 1 | 250 mL Amber | Ice | TPHd (8015M) | 11:18 |
| | | | | | |
| | | | | | |
| | | | | | |
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Comments

Signature [signature] Date 8-18-05

ENSR

**GROUNDWATER SAMPLING DATA SHEET**
Site Address: 359 Main St., Fortuna, CA
ENSR No. 06940-407-100
Unocal No. 762248

Well/Piezo ID: **MW-21**

Well [x] Piezometer [ ]

**Well Purging:**
Date Purged: DC PUMP 8·18·05
Purge Method: Disposable bailer/other DC PUMP

Field Tech(s): JPR
Weather Conditions: SUNNY

Casing Material: PVC
Well Diameter: 2.00 in.
Total Depth: 20.35 ft from TOC
Depth to Water: 7.54 ft from TOC
Water Column: 12.81 ft.
Water Column Volume: 2.05 gal (WC X VF)

| Volume | 3/4" = 0.02 | 1" = 0.04 | 2" = .16 | 3" = .38 |
|---|---|---|---|---|
| Factor (VF) | 4" = .66 | 5" = 1.02 | 6" = 1.50 | 12" = 5.80 |

20.35 - 10.25
80% Recovery from TOC: = Total Depth - (Water Column X .8) = 10.1'

| Time | | Volume Removed (gal) | DO (mg/L) | Redox Potential (ORP) (mVolts) | Temperature (°C) | Specific Conductivity (uS/cm) | pH | Turbidity (NTUs) | Color/Clarity | Other | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1214 | 0 | 0.5 | 5.25 | -44 | 19.1 | 85.5 | 6.29 | 301 | CLR | | |
| 1224 | 1 | 2.8 | 6.62 | -40 | 18.7 | .099 | 6.28 | 563 | SLIGHT GREY | | |
| 1235 | 2 | 5.0 | 7.93 | -31 | 17.5 | 93.7 | 6.26 | 413 | " | | |
| 1246 | 3 | 7.5 | 9.73 | -27 | 17.9 | 90.8 | 6.22 | 350 | CLRING | | |
| | 4 | | | | | | | | | | |
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**Sample Collection:**
Date Sampled: 8·18·05
Sampling Method: Disposable Bailer/Other DC PUMP
Sample Type: Grab

| Sample ID | # of containers | Container Type | Preservation | Analysis | Time |
|---|---|---|---|---|---|
| MW-21 | 3 | 40 mL glass vial | Ice/HCl | TPHg (8015), BTEX (8021) | 1246 |
| MW-21 | 1 | 250 mL Amber | Ice | TPHd (8015M) | 1246 |
| | | | | | |
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| | | | | | |

Comments

Signature [signature] Date 8·18·05

# APPENDIX C

## LABORATORY ANALYTICAL RESULTS WITH CHAIN-OF-CUSTODY DOCUMENTATION

Third Quarter Data (CLS report dated August 29, 2005)
Fourth Quarter Data (CLS report dated November 10, 2005)

# CALIFORNIA LABORATORY SERVICES

**3249 Fitzgerald Road Rancho Cordova, CA 95742**

August 29, 2005

**CLS Work Order #: COH0736**
**COC #: No Number**

Margret Riggin
ENSR - Sacramento
10411 Old Placerville Rd., Suite 210
Sacramento, CA 95827-2508

**Project Name: Frmr. Unocal 762248-359 Main St.**
**Fortuna,CA**

Enclosed are the results of analyses for samples received by the laboratory on 08/20/05 13:15. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

James Liang, Ph.D.
Laboratory Director

CA DOHS ELAP Accreditation/Registration number 1233

# CALIFORNIA LABORATORY SERVICES

08/29/05 10:34

| | | |
|---|---|---|
| ENSR - Sacramento | Project: | Frmr. Unocal 762248-359 Main St. Fortuna,CA |
| 10411 Old Placerville Rd., Suite 210 | Project Number: | 06940-407-100 |
| Sacramento, CA 95827-2508 | Project Manager: | Margret Riggin |

**CLS Work Order #: COH0736**

## Extractable Petroleum Hydrocarbons by EPA Method 8015M

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **MW-1 (COH0736-01) GW** | **Sampled: 08/18/05 15:15** | **Received: 08/20/05 13:15** | | | | | | | |
| Diesel | ND | 0.050 | mg/L | 1 | CO06325 | 08/22/05 | 08/23/05 | EPA 8015M | |
| **MW-3 (COH0736-02) GW** | **Sampled: 08/18/05 11:10** | **Received: 08/20/05 13:15** | | | | | | | **C-03C** |
| **Diesel** | **0.57** | 0.050 | mg/L | 1 | CO06325 | 08/22/05 | 08/23/05 | EPA 8015M | DSL-1 |
| **MW-4 (COH0736-03) GW** | **Sampled: 08/18/05 16:08** | **Received: 08/20/05 13:15** | | | | | | | **C-03C** |
| **Diesel** | **40** | 0.50 | mg/L | 10 | CO06325 | 08/22/05 | 08/23/05 | EPA 8015M | |
| **MW-5 (COH0736-04) GW** | **Sampled: 08/18/05 16:16** | **Received: 08/20/05 13:15** | | | | | | | **C-03C** |
| **Diesel** | **3.7** | 0.050 | mg/L | 1 | CO06325 | 08/22/05 | 08/23/05 | EPA 8015M | DSL-1 |
| **MW-6 (COH0736-05) GW** | **Sampled: 08/18/05 14:28** | **Received: 08/20/05 13:15** | | | | | | | **C-03C** |
| **Diesel** | **2.3** | 0.050 | mg/L | 1 | CO06325 | 08/22/05 | 08/23/05 | EPA 8015M | DSL-1 |
| **MW-13 (COH0736-06) GW** | **Sampled: 08/18/05 14:16** | **Received: 08/20/05 13:15** | | | | | | | **C-03C** |
| **Diesel** | **2.6** | 0.050 | mg/L | 1 | CO06325 | 08/22/05 | 08/23/05 | EPA 8015M | DSL-1 |
| **MW-14 (COH0736-07) GW** | **Sampled: 08/18/05 11:45** | **Received: 08/20/05 13:15** | | | | | | | **C-03C** |
| Diesel | ND | 0.050 | mg/L | 1 | CO06325 | 08/22/05 | 08/23/05 | EPA 8015M | |
| **MW-15 (COH0736-08) GW** | **Sampled: 08/18/05 12:35** | **Received: 08/20/05 13:15** | | | | | | | **C-03C** |
| Diesel | ND | 0.050 | mg/L | 1 | CO06325 | 08/22/05 | 08/23/05 | EPA 8015M | |
| **MW-16A (COH0736-09) GW** | **Sampled: 08/18/05 10:40** | **Received: 08/20/05 13:15** | | | | | | | **C-03C** |
| **Diesel** | **0.63** | 0.050 | mg/L | 1 | CO06325 | 08/22/05 | 08/23/05 | EPA 8015M | DSL-1 |

# CALIFORNIA LABORATORY SERVICES

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| 10411 Old Placerville Rd., Suite 210 | Project Number: | 06940-407-100 |
| Sacramento, CA 95827-2508 | Project Manager: | Margret Riggin |

**CLS Work Order #: COH0736**

## Extractable Petroleum Hydrocarbons by EPA Method 8015M

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **MW-16B (COH0736-10) GW** | **Sampled: 08/18/05 13:20** | **Received: 08/20/05 13:15** | | | | | | | **C-03C** |
| Diesel | ND | 0.050 | mg/L | 1 | CO06325 | 08/22/05 | 08/23/05 | EPA 8015M | |
| **MW-17 (COH0736-11) GW** | **Sampled: 08/18/05 13:50** | **Received: 08/20/05 13:15** | | | | | | | **C-03C** |
| Diesel | ND | 0.050 | mg/L | 1 | CO06325 | 08/22/05 | 08/23/05 | EPA 8015M | |
| **MW-18 (COH0736-12) GW** | **Sampled: 08/18/05 13:30** | **Received: 08/20/05 13:15** | | | | | | | **C-03C** |
| **Diesel** | **0.58** | 0.050 | mg/L | 1 | CO06325 | 08/22/05 | 08/23/05 | EPA 8015M | DSL-1 |
| **MW-19 (COH0736-13) GW** | **Sampled: 08/18/05 15:06** | **Received: 08/20/05 13:15** | | | | | | | **C-03C** |
| **Diesel** | **0.61** | 0.050 | mg/L | 1 | CO06325 | 08/22/05 | 08/23/05 | EPA 8015M | DSL-1 |
| **MW-20 (COH0736-14) GW** | **Sampled: 08/18/05 11:18** | **Received: 08/20/05 13:15** | | | | | | | **C-03C** |
| **Diesel** | **1.1** | 0.050 | mg/L | 1 | CO06325 | 08/22/05 | 08/23/05 | EPA 8015M | DSL-1 |
| **MW-21 (COH0736-15) GW** | **Sampled: 08/18/05 12:46** | **Received: 08/20/05 13:15** | | | | | | | **C-03C** |
| **Diesel** | **2.0** | 0.050 | mg/L | 1 | CO06325 | 08/22/05 | 08/23/05 | EPA 8015M | DSL-1 |

# CALIFORNIA LABORATORY SERVICES

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| Sacramento, CA 95827-2508 | Project Manager: | Margret Riggin |

**CLS Work Order #: COH0736**

## Gas/BTEX by GC PID/FID

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **MW-1 (COH0736-01) GW Sampled: 08/18/05 15:15 Received: 08/20/05 13:15** | | | | | | | | | |
| Gasoline | ND | 50 | µg/L | 1 | CO06461 | 08/23/05 | 08/23/05 | 8015M/8021B | |
| Benzene | ND | 0.50 | " | " | " | " | " | " | |
| Toluene | ND | 0.50 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 0.50 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 1.0 | " | " | " | " | " | " | |
| *Surrogate: o-Chlorotoluene (Gas)* | | *94.5 %* | *65-135* | | " | " | " | " | |
| **MW-3 (COH0736-02) GW Sampled: 08/18/05 11:10 Received: 08/20/05 13:15** | | | | | | | | | |
| **Gasoline** | **1200** | 50 | µg/L | 1 | CO06461 | 08/23/05 | 08/23/05 | 8015M/8021B | GC-25 |
| **Benzene** | **40** | 0.50 | " | " | " | " | " | " | |
| **Toluene** | **0.84** | 0.50 | " | " | " | " | " | " | |
| **Ethylbenzene** | **13** | 0.50 | " | " | " | " | " | " | |
| **Xylenes (total)** | **71** | 1.0 | " | " | " | " | " | " | |
| *Surrogate: o-Chlorotoluene (Gas)* | | *89.0 %* | *65-135* | | " | " | " | " | |
| **MW-4 (COH0736-03) GW Sampled: 08/18/05 16:08 Received: 08/20/05 13:15** | | | | | | | | | |
| **Gasoline** | **120000** | 10000 | µg/L | 200 | CO06461 | 08/23/05 | 08/23/05 | 8015M/8021B | GC-25 |
| **Benzene** | **10000** | 500 | " | 1000 | " | " | " | " | |
| **Toluene** | **18000** | 500 | " | " | " | " | " | " | |
| **Ethylbenzene** | **3400** | 500 | " | " | " | " | " | " | |
| **Xylenes (total)** | **23000** | 1000 | " | " | " | " | " | " | |
| *Surrogate: o-Chlorotoluene (Gas)* | | *95.0 %* | *65-135* | | " | " | " | " | |
| **MW-5 (COH0736-04) GW Sampled: 08/18/05 16:16 Received: 08/20/05 13:15** | | | | | | | | | |
| **Gasoline** | **23000** | 500 | µg/L | 10 | CO06461 | 08/23/05 | 08/23/05 | 8015M/8021B | GC-25 |
| **Benzene** | **2500** | 50 | " | 100 | " | " | " | " | |
| **Toluene** | **390** | 5.0 | " | 10 | " | " | " | " | |
| **Ethylbenzene** | **660** | 50 | " | 100 | " | " | " | " | |
| **Xylenes (total)** | **8400** | 100 | " | " | " | " | " | " | |
| *Surrogate: o-Chlorotoluene (Gas)* | | *92.5 %* | *65-135* | | " | " | " | " | |

# CALIFORNIA LABORATORY SERVICES

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| Sacramento, CA 95827-2508 | Project Manager: | Margret Riggin |

**CLS Work Order #: COH0736**

## Gas/BTEX by GC PID/FID

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **MW-6 (COH0736-05) GW Sampled: 08/18/05 14:28 Received: 08/20/05 13:15** | | | | | | | | | |
| **Gasoline** | **150** | 50 | µg/L | 1 | CO06461 | 08/23/05 | 08/23/05 | 8015M/8021B | GC-25 |
| Benzene | ND | 0.50 | " | " | " | " | " | " | |
| **Toluene** | **2.1** | 0.50 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 0.50 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 1.0 | " | " | " | " | " | " | |
| *Surrogate: o-Chlorotoluene (Gas)* | | *90.5 %* | *65-135* | | " | " | " | " | |
| **MW-13 (COH0736-06) GW Sampled: 08/18/05 14:16 Received: 08/20/05 13:15** | | | | | | | | | |
| **Gasoline** | **6600** | 2500 | µg/L | 50 | CO06462 | 08/24/05 | 08/24/05 | 8015M/8021B | GC-25 |
| **Benzene** | **650** | 25 | " | " | " | " | " | " | |
| **Toluene** | **96** | 25 | " | " | " | " | " | " | |
| **Ethylbenzene** | **440** | 25 | " | " | " | " | " | " | |
| **Xylenes (total)** | **1800** | 50 | " | " | " | " | " | " | |
| *Surrogate: o-Chlorotoluene (Gas)* | | *93.0 %* | *65-135* | | " | " | " | " | |
| **MW-14 (COH0736-07) GW Sampled: 08/18/05 11:45 Received: 08/20/05 13:15** | | | | | | | | | |
| Gasoline | ND | 50 | µg/L | 1 | CO06461 | 08/23/05 | 08/23/05 | 8015M/8021B | |
| Benzene | ND | 0.50 | " | " | " | " | " | " | |
| Toluene | ND | 0.50 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 0.50 | " | " | " | " | " | " | |
| **Xylenes (total)** | **1.2** | 1.0 | " | " | " | " | " | " | |
| *Surrogate: o-Chlorotoluene (Gas)* | | *95.0 %* | *65-135* | | " | " | " | " | |
| **MW-15 (COH0736-08) GW Sampled: 08/18/05 12:35 Received: 08/20/05 13:15** | | | | | | | | | |
| Gasoline | ND | 50 | µg/L | 1 | CO06461 | 08/23/05 | 08/23/05 | 8015M/8021B | |
| Benzene | ND | 0.50 | " | " | " | " | " | " | |
| Toluene | ND | 0.50 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 0.50 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 1.0 | " | " | " | " | " | " | |
| *Surrogate: o-Chlorotoluene (Gas)* | | *67.5 %* | *65-135* | | " | " | " | " | |

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| 10411 Old Placerville Rd., Suite 210 | Project Number: | 06940-407-100 |
| Sacramento, CA 95827-2508 | Project Manager: | Margret Riggin |

**CLS Work Order #: COH0736**

## Gas/BTEX by GC PID/FID

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **MW-16A (COH0736-09) GW Sampled: 08/18/05 10:40 Received: 08/20/05 13:15** | | | | | | | | | |
| **Gasoline** | **2700** | 1000 | µg/L | 20 | CO06462 | 08/24/05 | 08/24/05 | 8015M/8021B | GC-25 |
| **Benzene** | **250** | 10 | " | " | " | " | " | " | |
| **Toluene** | **120** | 10 | " | " | " | " | " | " | |
| **Ethylbenzene** | **120** | 10 | " | " | " | " | " | " | |
| **Xylenes (total)** | **570** | 20 | " | " | " | " | " | " | |
| *Surrogate: o-Chlorotoluene (Gas)* | | *90.5 %* | *65-135* | | *"* | *"* | *"* | *"* | |
| **MW-16B (COH0736-10) GW Sampled: 08/18/05 13:20 Received: 08/20/05 13:15** | | | | | | | | | |
| Gasoline | ND | 50 | µg/L | 1 | CO06461 | 08/23/05 | 08/23/05 | 8015M/8021B | |
| Benzene | ND | 0.50 | " | " | " | " | " | " | |
| Toluene | ND | 0.50 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 0.50 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 1.0 | " | " | " | " | " | " | |
| *Surrogate: o-Chlorotoluene (Gas)* | | *84.0 %* | *65-135* | | *"* | *"* | *"* | *"* | |
| **MW-17 (COH0736-11) GW Sampled: 08/18/05 13:50 Received: 08/20/05 13:15** | | | | | | | | | |
| Gasoline | ND | 50 | µg/L | 1 | CO06461 | 08/23/05 | 08/23/05 | 8015M/8021B | |
| Benzene | ND | 0.50 | " | " | " | " | " | " | |
| Toluene | ND | 0.50 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 0.50 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 1.0 | " | " | " | " | " | " | |
| *Surrogate: o-Chlorotoluene (Gas)* | | *79.0 %* | *65-135* | | *"* | *"* | *"* | *"* | |
| **MW-18 (COH0736-12) GW Sampled: 08/18/05 13:30 Received: 08/20/05 13:15** | | | | | | | | | |
| **Gasoline** | **12000** | 2500 | µg/L | 50 | CO06461 | 08/23/05 | 08/24/05 | 8015M/8021B | GC-25 |
| **Benzene** | **5400** | 500 | " | 1000 | " | " | 08/26/05 | " | |
| **Toluene** | **14** | 0.50 | " | 1 | " | " | 08/23/05 | " | |
| **Ethylbenzene** | **350** | 25 | " | 50 | " | " | 08/24/05 | " | |
| **Xylenes (total)** | **540** | 50 | " | " | " | " | " | " | |
| *Surrogate: o-Chlorotoluene (Gas)* | | *90.5 %* | *65-135* | | *"* | *"* | *08/23/05* | *"* | |

# CALIFORNIA LABORATORY SERVICES

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| Sacramento, CA 95827-2508 | Project Manager: | Margret Riggin |

**CLS Work Order #: COH0736**

## Gas/BTEX by GC PID/FID

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **MW-19 (COH0736-13) GW Sampled: 08/18/05 15:06 Received: 08/20/05 13:15** | | | | | | | | | |
| **Gasoline** | **6400** | 1000 | µg/L | 20 | CO06461 | 08/23/05 | 08/24/05 | 8015M/8021B | GC-25 |
| **Benzene** | **2300** | 50 | " | 100 | " | " | 08/25/05 | " | |
| **Toluene** | **3.6** | 0.50 | " | 1 | " | " | 08/23/05 | " | |
| **Ethylbenzene** | **87** | 10 | " | 20 | " | " | 08/24/05 | " | |
| **Xylenes (total)** | **400** | 20 | " | " | " | " | " | " | |
| *Surrogate: o-Chlorotoluene (Gas)* | | *90.5 %* | *65-135* | | " | " | " | " | |
| **MW-20 (COH0736-14) GW Sampled: 08/18/05 11:18 Received: 08/20/05 13:15** | | | | | | | | | |
| **Gasoline** | **8100** | 500 | µg/L | 10 | CO06461 | 08/23/05 | 08/23/05 | 8015M/8021B | GC-25 |
| **Benzene** | **4100** | 50 | " | 100 | " | " | 08/24/05 | " | |
| **Toluene** | **390** | 5.0 | " | 10 | " | " | 08/23/05 | " | |
| **Ethylbenzene** | **920** | 50 | " | 100 | " | " | 08/24/05 | " | |
| **Xylenes (total)** | **660** | 10 | " | 10 | " | " | 08/23/05 | " | |
| *Surrogate: o-Chlorotoluene (Gas)* | | *70.0 %* | *65-135* | | " | " | " | " | |
| **MW-21 (COH0736-15) GW Sampled: 08/18/05 12:46 Received: 08/20/05 13:15** | | | | | | | | | |
| **Gasoline** | **4600** | 1000 | µg/L | 20 | CO06462 | 08/24/05 | 08/24/05 | 8015M/8021B | GC-25 |
| **Benzene** | **770** | 10 | " | " | " | " | " | " | |
| **Toluene** | **220** | 10 | " | " | " | " | " | " | |
| **Ethylbenzene** | **230** | 10 | " | " | " | " | " | " | |
| **Xylenes (total)** | **920** | 20 | " | " | " | " | " | " | |
| *Surrogate: o-Chlorotoluene (Gas)* | | *88.5 %* | *65-135* | | " | " | " | " | |
| **QA (COH0736-16) Water Sampled: 08/18/05 00:00 Received: 08/20/05 13:15** | | | | | | | | | |
| Gasoline | ND | 50 | µg/L | 1 | CO06437 | 08/24/05 | 08/24/05 | 8015M/8021B | |
| Benzene | ND | 0.50 | " | " | " | " | " | " | |
| Toluene | ND | 0.50 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 0.50 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 1.0 | " | " | " | " | " | " | |
| *Surrogate: o-Chlorotoluene (Gas)* | | *106 %* | *65-135* | | " | " | " | " | |

# CALIFORNIA LABORATORY SERVICES

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| Sacramento, CA 95827-2508 | Project Manager: | Margret Riggin |

**CLS Work Order #: COH0736**

## Extractable Petroleum Hydrocarbons by EPA Method 8015M - Quality Control

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch CO06325 - EPA 3510B GCNV** | | | | | | | | | | |
| **Blank (CO06325-BLK1)** | | | | Prepared: 08/22/05 | Analyzed: 08/23/05 | | | | | |
| Diesel | ND | 0.050 | mg/L | | | | | | | |
| Motor Oil | ND | 0.050 | " | | | | | | | |
| Hydraulic Oil | ND | 0.050 | " | | | | | | | |
| Mineral Oil | ND | 0.050 | " | | | | | | | |
| Kerosene | ND | 0.050 | " | | | | | | | |
| **LCS (CO06325-BS1)** | | | | Prepared: 08/22/05 | Analyzed: 08/23/05 | | | | | |
| Diesel | 2.61 | 0.050 | mg/L | 2.50 | | 104 | 65-135 | | | |
| **LCS Dup (CO06325-BSD1)** | | | | Prepared: 08/22/05 | Analyzed: 08/23/05 | | | | | |
| Diesel | 2.76 | 0.050 | mg/L | 2.50 | | 110 | 65-135 | 5.59 | 30 | |

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**CLS Work Order #: COH0736**

## Gas/BTEX by GC PID/FID - Quality Control

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch CO06437 - EPA 5030 Water GC** | | | | | | | | | | |
| **Blank (CO06437-BLK1)** | | | | Prepared & Analyzed: 08/24/05 | | | | | | |
| Gasoline | ND | 50 | µg/L | | | | | | | |
| Benzene | ND | 0.50 | " | | | | | | | |
| Toluene | ND | 0.50 | " | | | | | | | |
| Ethylbenzene | ND | 0.50 | " | | | | | | | |
| Xylenes (total) | ND | 1.0 | " | | | | | | | |
| *Surrogate: o-Chlorotoluene (BTEX)* | *23.8* | | *"* | *20.0* | | *119* | *65-135* | | | |
| *Surrogate: o-Chlorotoluene (Gas)* | *22.2* | | *"* | *20.0* | | *111* | *65-135* | | | |
| **LCS (CO06437-BS1)** | | | | Prepared & Analyzed: 08/24/05 | | | | | | |
| Gasoline | 439 | 50 | µg/L | 500 | | 87.8 | 65-135 | | | |
| *Surrogate: o-Chlorotoluene (Gas)* | *22.2* | | *"* | *20.0* | | *111* | *65-135* | | | |
| **LCS Dup (CO06437-BSD1)** | | | | Prepared & Analyzed: 08/24/05 | | | | | | |
| Gasoline | 430 | 50 | µg/L | 500 | | 86.0 | 65-135 | 2.07 | 30 | |
| *Surrogate: o-Chlorotoluene (Gas)* | *22.0* | | *"* | *20.0* | | *110* | *65-135* | | | |
| **Batch CO06461 - EPA 5030 Water GC** | | | | | | | | | | |
| **Blank (CO06461-BLK1)** | | | | Prepared & Analyzed: 08/23/05 | | | | | | |
| Gasoline | ND | 50 | µg/L | | | | | | | |
| Benzene | ND | 0.50 | " | | | | | | | |
| Toluene | ND | 0.50 | " | | | | | | | |
| Ethylbenzene | ND | 0.50 | " | | | | | | | |
| Xylenes (total) | ND | 1.0 | " | | | | | | | |
| *Surrogate: o-Chlorotoluene (BTEX)* | *24.0* | | *"* | *20.0* | | *120* | *65-135* | | | |
| *Surrogate: o-Chlorotoluene (Gas)* | *22.6* | | *"* | *20.0* | | *113* | *65-135* | | | |

# CALIFORNIA LABORATORY SERVICES

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| Sacramento, CA 95827-2508 | Project Manager: | Margret Riggin |

**CLS Work Order #: COH0736**

## Gas/BTEX by GC PID/FID - Quality Control

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch CO06461 - EPA 5030 Water GC** | | | | | | | | | | |
| **LCS (CO06461-BS1)** | | | | Prepared & Analyzed: 08/23/05 | | | | | | |
| Gasoline | 451 | 50 | µg/L | 500 | | 90.2 | 65-135 | | | |
| *Surrogate: o-Chlorotoluene (Gas)* | *20.1* | | *"* | *20.0* | | *100* | *65-135* | | | |
| **LCS Dup (CO06461-BSD1)** | | | | Prepared & Analyzed: 08/23/05 | | | | | | |
| Gasoline | 453 | 50 | µg/L | 500 | | 90.6 | 65-135 | 0.442 | 30 | |
| *Surrogate: o-Chlorotoluene (Gas)* | *20.2* | | *"* | *20.0* | | *101* | *65-135* | | | |
| **Batch CO06462 - EPA 5030 Water GC** | | | | | | | | | | |
| **Blank (CO06462-BLK1)** | | | | Prepared & Analyzed: 08/24/05 | | | | | | |
| Gasoline | ND | 50 | µg/L | | | | | | | |
| Benzene | ND | 0.50 | " | | | | | | | |
| Toluene | ND | 0.50 | " | | | | | | | |
| Ethylbenzene | ND | 0.50 | " | | | | | | | |
| Xylenes (total) | ND | 1.0 | " | | | | | | | |
| *Surrogate: o-Chlorotoluene (BTEX)* | *21.3* | | *"* | *20.0* | | *106* | *65-135* | | | |
| *Surrogate: o-Chlorotoluene (Gas)* | *19.0* | | *"* | *20.0* | | *95.0* | *65-135* | | | |
| **LCS (CO06462-BS1)** | | | | Prepared & Analyzed: 08/24/05 | | | | | | |
| Gasoline | 459 | 50 | µg/L | 500 | | 91.8 | 65-135 | | | |
| *Surrogate: o-Chlorotoluene (Gas)* | *20.3* | | *"* | *20.0* | | *102* | *65-135* | | | |
| **LCS Dup (CO06462-BSD1)** | | | | Prepared & Analyzed: 08/24/05 | | | | | | |
| Gasoline | 481 | 50 | µg/L | 500 | | 96.2 | 65-135 | 4.68 | 30 | |
| *Surrogate: o-Chlorotoluene (Gas)* | *19.8* | | *"* | *20.0* | | *99.0* | *65-135* | | | |

# CALIFORNIA LABORATORY SERVICES

08/29/05 10:34

| | | |
|---|---|---|
| ENSR - Sacramento | Project: | Frmr. Unocal 762248-359 Main St. Fortuna,CA |
| 10411 Old Placerville Rd., Suite 210 | Project Number: | 06940-407-100 |
| Sacramento, CA 95827-2508 | Project Manager: | Margret Riggin |

**CLS Work Order #: COH0736**

## Notes and Definitions

| | |
|---|---|
| GC-25 | Weathered gasoline. |
| DSL-1 | Although sample contains compounds in the retention time range associated with diesel, the chromatogram was not consistent with the expected chromatographic pattern or "fingerprint". However, the reported concentration is based on diesel. |
| C-03C | Per customer request, the sample extract has undergone silica-gel clean-up, EPA Method 3630, which is specific to polar compound contamination. |
| DET | Analyte DETECTED |
| ND | Analyte NOT DETECTED at or above the reporting limit |
| NR | Not Reported |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |

ENSR INTERNATIONAL

# CHAIN OF CUSTODY



Lab: CLS

COH0736

TAT: Standard

**Report results to:**

Name: Margret Riggin
Company: ENSR
Mailing Address: 10411 Old Placerville Road, Suite 210
City, State, Zip: Sacramento, CA 95827-2508
Telephone No.: 916-362-7100
Fax No.: 916-362-8100

**Project Information**

Site Address: 359 Main St., Fortuna, CA
ENSR No.: 06940-407-100
Unocal No.: 762248
Global ID No.: T0602393213

Special instructions and/or specific regulatory requirements:
***Run TPHd w/ Silica Gel Cleanup on ALL TPHd HITS**

Analyses Requested

| Sample Identification | Date Sampled | Time Sampled | Matrix/ Media | No. of Conts. | TPHg 8015 | BTEX 8021 | TPHd 8015 w/SGC | | | | | | | | Sample Condition/Comments | Preservative |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-1 | 8-18-05 | 15:15 | GW | 4 | X | X | X | | | | | | | | | Ice/HCL |
| MW-3 | 8-18-05 | 11:10 | GW | 4 | X | X | X | | | | | | | | | Ice/HCL |
| MW-4 | 8-18-05 | 16:08 | GW | 4 | X | X | X | | | | | | | | | Ice/HCL |
| MW-5 | 8-18-05 | 16:16 | GW | 4 | X | X | X | | | | | | | | | Ice/HCL |
| MW-6 | 8-18-05 | 14:28 | GW | 4 | X | X | X | | | | | | | | | Ice/HCL |
| MW-13 | 8-18-05 | 14:16 | GW | 4 | X | X | X | | | | | | | | | Ice/HCL |
| MW-14 | 8-18-05 | 11:45 | GW | 4 | X | X | X | | | | | | | | | Ice/HCL |
| MW-15 | 8-18-05 | 12:35 | GW | 4 | X | X | X | | | | | | | | | Ice/HCL |
| MW-16A | 8-18-05 | 10:40 | GW | 4 | X | X | X | | | | | | | | | Ice/HCL |
| MW-16B | 8-18-05 | 13:20 | GW | 4 | X | X | X | | | | | | | | | Ice/HCL |
| MW-17 | 8-18-05 | 13:50 | GW | 4 | X | X | X | | | | | | | | | Ice/HCL |
| MW-18 | 8-18-05 | 13:30 | GW | 4 | X | X | X | | | | | | | | | Ice/HCL |
| MW-19 | 8-18-05 | 15:06 | GW | 4 | X | X | X | | | | | | | | | Ice/HCL |
| MW-20 | 8-18-05 | 11:18 | GW | 4 | X | X | X | | | | | | | | | Ice/HCL |
| MW-21 | 8-18-05 | 12:46 | GW | 4 | X | X | X | | | | | | | | | Ice/HCL |
| Trip Blank | | | water | 1 | X | X | | | | | | | | | | Ice |

*Collected by:* Troy Wenham *Date/Time* 8-18-05 *Collector's Signature:* [signature] *Date/Time* 8-18-05

*Relinquished by:* Troy Wenham *Date/Time* 8-20-05/11:00 *Received by:* [signature] *Date/Time* 08 2005 11:00

*Relinquished by:* [signature] *Date/Time* 08 2005/1315 *Received by:* [signature] *Date/Time* 8/20/05 1315

*Method of Shipment:* OCS Courier *Sample Condition on Rcpt:* [illegible]

# CALIFORNIA LABORATORY SERVICES

**3249 Fitzgerald Road Rancho Cordova, CA 95742**

November 10, 2005

**CLS Work Order #: COK0160**
**COC #: No Number**

Margret Riggin
ENSR - Sacramento
10411 Old Placerville Rd., Suite 210
Sacramento, CA 95827-2508

**Project Name: Frmr. Unocal 762248-359 Main St.**
**Fortuna,CA**

Enclosed are the results of analyses for samples received by the laboratory on 11/04/05 08:15. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

James Liang, Ph.D.
Laboratory Director

CA DOHS ELAP Accreditation/Registration number 1233

# CALIFORNIA LABORATORY SERVICES



11/10/05 16:11

ENSR - Sacramento
10411 Old Placerville Rd., Suite 210
Sacramento, CA 95827-2508

Project: Frmr. Unocal 762248-359 Main St. Fortuna,CA
Project Number: 06940-407-100
Project Manager: Margret Riggin

**CLS Work Order #: COK0160**

## Extractable Petroleum Hydrocarbons by EPA Method 8015M

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **MW-13 (COK0160-01) Water** | **Sampled: 11/02/05 12:58** | **Received: 11/04/05 08:15** | | | | | | | **C-03C** |
| **Diesel** | **6.0** | 0.050 | mg/L | 1 | CO08504 | 11/07/05 | 11/10/05 | EPA 8015M | DSL-1 |
| **MW-14 (COK0160-02) Water** | **Sampled: 11/02/05 10:28** | **Received: 11/04/05 08:15** | | | | | | | **C-03C** |
| Diesel | ND | 0.050 | mg/L | 1 | CO08504 | 11/07/05 | 11/10/05 | EPA 8015M | |
| **MW-15 (COK0160-03) Water** | **Sampled: 11/02/05 09:58** | **Received: 11/04/05 08:15** | | | | | | | **C-03C** |
| Diesel | ND | 0.050 | mg/L | 1 | CO08504 | 11/07/05 | 11/10/05 | EPA 8015M | |
| **MW-16A (COK0160-04) Water** | **Sampled: 11/02/05 11:28** | **Received: 11/04/05 08:15** | | | | | | | **C-03C** |
| **Diesel** | **1.0** | 0.050 | mg/L | 1 | CO08504 | 11/07/05 | 11/10/05 | EPA 8015M | DSL-1 |
| **MW-16B (COK0160-05) Water** | **Sampled: 11/02/05 10:58** | **Received: 11/04/05 08:15** | | | | | | | **C-03C** |
| Diesel | ND | 0.050 | mg/L | 1 | CO08504 | 11/07/05 | 11/10/05 | EPA 8015M | |
| **MW-17 (COK0160-06) Water** | **Sampled: 11/02/05 09:28** | **Received: 11/04/05 08:15** | | | | | | | **C-03C** |
| Diesel | ND | 0.050 | mg/L | 1 | CO08504 | 11/07/05 | 11/10/05 | EPA 8015M | |
| **MW-18 (COK0160-07) Water** | **Sampled: 11/02/05 13:58** | **Received: 11/04/05 08:15** | | | | | | | **C-03C** |
| **Diesel** | **0.96** | 0.050 | mg/L | 1 | CO08504 | 11/07/05 | 11/10/05 | EPA 8015M | DSL-1 |
| **MW-19 (COK0160-08) Water** | **Sampled: 11/02/05 13:28** | **Received: 11/04/05 08:15** | | | | | | | **C-03C** |
| **Diesel** | **1.2** | 0.050 | mg/L | 1 | CO08504 | 11/07/05 | 11/10/05 | EPA 8015M | DSL-1 |
| **MW-20 (COK0160-09) Water** | **Sampled: 11/02/05 12:28** | **Received: 11/04/05 08:15** | | | | | | | **C-03C** |
| **Diesel** | **2.0** | 0.050 | mg/L | 1 | CO08504 | 11/07/05 | 11/10/05 | EPA 8015M | DSL-1 |

# CALIFORNIA LABORATORY SERVICES

 11/10/05 16:11

ENSR - Sacramento
10411 Old Placerville Rd., Suite 210
Sacramento, CA 95827-2508

Project: Frmr. Unocal 762248-359 Main St. Fortuna,CA
Project Number: 06940-407-100
Project Manager: Margret Riggin

**CLS Work Order #: COK0160**

## Extractable Petroleum Hydrocarbons by EPA Method 8015M

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **MW-21 (COK0160-10) Water** | **Sampled: 11/02/05 11:58** | **Received: 11/04/05 08:15** | | | | | | | **C-03C** |
| **Diesel** | **13** | 0.25 | mg/L | 5 | CO08504 | 11/07/05 | 11/10/05 | EPA 8015M | DSL-1 |

# CALIFORNIA LABORATORY SERVICES

 11/10/05 16:11

ENSR - Sacramento
10411 Old Placerville Rd., Suite 210
Sacramento, CA 95827-2508

Project: Frmr. Unocal 762248-359 Main St. Fortuna,CA
Project Number: 06940-407-100
Project Manager: Margret Riggin

**CLS Work Order #: COK0160**

## Gas/BTEX by GC PID/FID

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **MW-13 (COK0160-01) Water Sampled: 11/02/05 12:58 Received: 11/04/05 08:15** | | | | | | | | | |
| **Gasoline** | **17000** | 1200 | µg/L | 25 | CO08441 | 11/04/05 | 11/04/05 | 8015M/8021B | GC-25 |
| **Benzene** | **820** | 12 | " | " | " | " | " | " | |
| **Toluene** | **76** | 12 | " | " | " | " | " | " | |
| **Ethylbenzene** | **1100** | 12 | " | " | " | " | " | " | |
| **Xylenes (total)** | **3700** | 250 | " | 250 | " | " | " | " | |
| *Surrogate: o-Chlorotoluene (Gas)* | | *93.5 %* | *65-135* | | " | " | " | " | |
| **MW-14 (COK0160-02) Water Sampled: 11/02/05 10:28 Received: 11/04/05 08:15** | | | | | | | | | |
| Gasoline | ND | 50 | µg/L | 1 | CO08441 | 11/04/05 | 11/04/05 | 8015M/8021B | |
| Benzene | ND | 0.50 | " | " | " | " | " | " | |
| Toluene | ND | 0.50 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 0.50 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 1.0 | " | " | " | " | " | " | |
| *Surrogate: o-Chlorotoluene (Gas)* | | *95.0 %* | *65-135* | | " | " | " | " | |
| **MW-15 (COK0160-03) Water Sampled: 11/02/05 09:58 Received: 11/04/05 08:15** | | | | | | | | | |
| Gasoline | ND | 50 | µg/L | 1 | CO08441 | 11/04/05 | 11/04/05 | 8015M/8021B | |
| Benzene | ND | 0.50 | " | " | " | " | " | " | |
| Toluene | ND | 0.50 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 0.50 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 1.0 | " | " | " | " | " | " | |
| *Surrogate: o-Chlorotoluene (Gas)* | | *96.5 %* | *65-135* | | " | " | " | " | |
| **MW-16A (COK0160-04) Water Sampled: 11/02/05 11:28 Received: 11/04/05 08:15** | | | | | | | | | |
| **Gasoline** | **4000** | 1000 | µg/L | 20 | CO08441 | 11/04/05 | 11/04/05 | 8015M/8021B | GAS-1 |
| **Benzene** | **600** | 10 | " | " | " | " | " | " | |
| **Toluene** | **69** | 10 | " | " | " | " | " | " | |
| **Ethylbenzene** | **180** | 10 | " | " | " | " | " | " | |
| **Xylenes (total)** | **1400** | 20 | " | " | " | " | " | " | |
| *Surrogate: o-Chlorotoluene (Gas)* | | *91.0 %* | *65-135* | | " | " | " | " | |

# CALIFORNIA LABORATORY SERVICES

 11/10/05 16:11

ENSR - Sacramento
10411 Old Placerville Rd., Suite 210
Sacramento, CA 95827-2508

Project: Frmr. Unocal 762248-359 Main St. Fortuna,CA
Project Number: 06940-407-100
Project Manager: Margret Riggin

**CLS Work Order #: COK0160**

## Gas/BTEX by GC PID/FID

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **MW-16B (COK0160-05) Water Sampled: 11/02/05 10:58 Received: 11/04/05 08:15** | | | | | | | | | |
| Gasoline | ND | 50 | µg/L | 1 | CO08441 | 11/04/05 | 11/04/05 | 8015M/8021B | |
| Benzene | ND | 0.50 | " | " | " | " | " | " | |
| Toluene | ND | 0.50 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 0.50 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 1.0 | " | " | " | " | " | " | |
| *Surrogate: o-Chlorotoluene (Gas)* | | *97.0 %* | *65-135* | | " | " | " | " | |
| **MW-17 (COK0160-06) Water Sampled: 11/02/05 09:28 Received: 11/04/05 08:15** | | | | | | | | | |
| Gasoline | ND | 50 | µg/L | 1 | CO08441 | 11/04/05 | 11/04/05 | 8015M/8021B | |
| Benzene | ND | 0.50 | " | " | " | " | " | " | |
| Toluene | ND | 0.50 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 0.50 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 1.0 | " | " | " | " | " | " | |
| *Surrogate: o-Chlorotoluene (Gas)* | | *94.5 %* | *65-135* | | " | " | " | " | |
| **MW-18 (COK0160-07) Water Sampled: 11/02/05 13:58 Received: 11/04/05 08:15** | | | | | | | | | |
| **Gasoline** | **11000** | 10000 | µg/L | 200 | CO08441 | 11/04/05 | 11/04/05 | 8015M/8021B | GAS-1 |
| **Benzene** | **5900** | 100 | " | " | " | " | " | " | |
| Toluene | ND | 100 | " | " | " | " | " | " | |
| **Ethylbenzene** | **210** | 100 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 200 | " | " | " | " | " | " | |
| *Surrogate: o-Chlorotoluene (Gas)* | | *90.5 %* | *65-135* | | " | " | " | " | |
| **MW-19 (COK0160-08) Water Sampled: 11/02/05 13:28 Received: 11/04/05 08:15** | | | | | | | | | |
| **Gasoline** | **6700** | 5000 | µg/L | 100 | CO08441 | 11/04/05 | 11/04/05 | 8015M/8021B | GC-25 |
| **Benzene** | **3500** | 50 | " | " | " | " | " | " | |
| Toluene | ND | 50 | " | " | " | " | " | " | |
| **Ethylbenzene** | **62** | 50 | " | " | " | " | " | " | |
| **Xylenes (total)** | **310** | 100 | " | " | " | " | " | " | |
| *Surrogate: o-Chlorotoluene (Gas)* | | *88.5 %* | *65-135* | | " | " | " | " | |

# CALIFORNIA LABORATORY SERVICES

 11/10/05 16:11

ENSR - Sacramento
10411 Old Placerville Rd., Suite 210
Sacramento, CA 95827-2508

Project: Frmr. Unocal 762248-359 Main St. Fortuna,CA
Project Number: 06940-407-100
Project Manager: Margret Riggin

**CLS Work Order #: COK0160**

## Gas/BTEX by GC PID/FID

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **MW-20 (COK0160-09) Water Sampled: 11/02/05 12:28 Received: 11/04/05 08:15** | | | | | | | | | |
| **Gasoline** | **11000** | 5000 | µg/L | 100 | CO08441 | 11/04/05 | 11/04/05 | 8015M/8021B | GC-25 |
| **Benzene** | **4600** | 50 | " | " | " | " | " | " | |
| **Toluene** | **79** | 50 | " | " | " | " | " | " | |
| **Ethylbenzene** | **770** | 50 | " | " | " | " | " | " | |
| **Xylenes (total)** | **320** | 100 | " | " | " | " | " | " | |
| *Surrogate: o-Chlorotoluene (Gas)* | | *88.0 %* | *65-135* | | " | " | " | " | |
| **MW-21 (COK0160-10) Water Sampled: 11/02/05 11:58 Received: 11/04/05 08:15** | | | | | | | | | |
| **Gasoline** | **24000** | 5000 | µg/L | 100 | CO08441 | 11/04/05 | 11/04/05 | 8015M/8021B | GC-25 |
| **Benzene** | **3400** | 50 | " | " | " | " | " | " | |
| **Toluene** | **430** | 50 | " | " | " | " | " | " | |
| **Ethylbenzene** | **1400** | 50 | " | " | " | " | " | " | |
| **Xylenes (total)** | **4600** | 100 | " | " | " | " | " | " | |
| *Surrogate: o-Chlorotoluene (Gas)* | | *90.0 %* | *65-135* | | " | " | " | " | |
| **Trip Blank (COK0160-11) Water Sampled: 11/02/05 00:00 Received: 11/04/05 08:15** | | | | | | | | | |
| Gasoline | ND | 50 | µg/L | 1 | CO08441 | 11/04/05 | 11/04/05 | 8015M/8021B | |
| Benzene | ND | 0.50 | " | " | " | " | " | " | |
| Toluene | ND | 0.50 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 0.50 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 1.0 | " | " | " | " | " | " | |
| *Surrogate: o-Chlorotoluene (Gas)* | | *91.0 %* | *65-135* | | " | " | " | " | |

# CALIFORNIA LABORATORY SERVICES

 11/10/05 16:11

ENSR - Sacramento
10411 Old Placerville Rd., Suite 210
Sacramento, CA 95827-2508

Project: Frmr. Unocal 762248-359 Main St. Fortuna,CA
Project Number: 06940-407-100
Project Manager: Margret Riggin

**CLS Work Order #: COK0160**

## Extractable Petroleum Hydrocarbons by EPA Method 8015M - Quality Control

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch CO08504 - EPA 3510B GCNV** | | | | | | | | | | |
| **Blank (CO08504-BLK1)** | | | | Prepared: 11/07/05 | Analyzed: 11/10/05 | | | | | |
| Diesel | ND | 0.050 | mg/L | | | | | | | |
| Motor Oil | ND | 0.050 | " | | | | | | | |
| Hydraulic Oil | ND | 0.050 | " | | | | | | | |
| Mineral Oil | ND | 0.050 | " | | | | | | | |
| Kerosene | ND | 0.050 | " | | | | | | | |
| JP-5/JP-8 | ND | 0.050 | " | | | | | | | |
| Total Extractable Hydrocarbons | ND | 0.050 | " | | | | | | | |
| Stoddard Solvent | ND | 0.050 | " | | | | | | | |
| Transformer Oil | ND | 0.050 | " | | | | | | | |
| **LCS (CO08504-BS1)** | | | | Prepared: 11/07/05 | Analyzed: 11/10/05 | | | | | |
| Diesel | 2.46 | 0.050 | mg/L | 2.50 | | 98.4 | 65-135 | | | |
| **LCS Dup (CO08504-BSD1)** | | | | Prepared: 11/07/05 | Analyzed: 11/10/05 | | | | | |
| Diesel | 2.46 | 0.050 | mg/L | 2.50 | | 98.4 | 65-135 | 0.00 | 30 | |

# CALIFORNIA LABORATORY SERVICES

 11/10/05 16:11

ENSR - Sacramento
10411 Old Placerville Rd., Suite 210
Sacramento, CA 95827-2508

Project: Frmr. Unocal 762248-359 Main St. Fortuna,CA
Project Number: 06940-407-100
Project Manager: Margret Riggin

**CLS Work Order #: COK0160**

## Gas/BTEX by GC PID/FID - Quality Control

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch CO08441 - EPA 5030 Water GC** | | | | | | | | | | |
| **Blank (CO08441-BLK1)** | | | | Prepared & Analyzed: 11/04/05 | | | | | | |
| Gasoline | ND | 50 | µg/L | | | | | | | |
| Benzene | ND | 0.50 | " | | | | | | | |
| Toluene | ND | 0.50 | " | | | | | | | |
| Ethylbenzene | ND | 0.50 | " | | | | | | | |
| Xylenes (total) | ND | 1.0 | " | | | | | | | |
| *Surrogate: o-Chlorotoluene (BTEX)* | *22.0* | | *"* | *20.0* | | *110* | *65-135* | | | |
| *Surrogate: o-Chlorotoluene (Gas)* | *19.4* | | *"* | *20.0* | | *97.0* | *65-135* | | | |
| **LCS (CO08441-BS1)** | | | | Prepared & Analyzed: 11/04/05 | | | | | | |
| Gasoline | 487 | 50 | µg/L | 500 | | 97.4 | 65-135 | | | |
| *Surrogate: o-Chlorotoluene (Gas)* | *20.5* | | *"* | *20.0* | | *102* | *65-135* | | | |
| **LCS Dup (CO08441-BSD1)** | | | | Prepared & Analyzed: 11/04/05 | | | | | | |
| Gasoline | 406 | 50 | µg/L | 500 | | 81.2 | 65-135 | 18.1 | 30 | |
| *Surrogate: o-Chlorotoluene (Gas)* | *20.4* | | *"* | *20.0* | | *102* | *65-135* | | | |
| **Matrix Spike (CO08441-MS1)** | | **Source: COK0160-05** | | Prepared & Analyzed: 11/04/05 | | | | | | |
| Gasoline | 623 | 50 | µg/L | 500 | ND | 125 | 65-135 | | | |
| *Surrogate: o-Chlorotoluene (Gas)* | *20.2* | | *"* | *20.0* | | *101* | *65-135* | | | |
| **Matrix Spike Dup (CO08441-MSD1)** | | **Source: COK0160-05** | | Prepared & Analyzed: 11/04/05 | | | | | | |
| Gasoline | 475 | 50 | µg/L | 500 | ND | 95.0 | 65-135 | 27.0 | 30 | |
| *Surrogate: o-Chlorotoluene (Gas)* | *20.1* | | *"* | *20.0* | | *100* | *65-135* | | | |

# CALIFORNIA LABORATORY SERVICES

 11/10/05 16:11

| | | |
|---|---|---|
| ENSR - Sacramento | Project: | Frmr. Unocal 762248-359 Main St. Fortuna,CA |
| 10411 Old Placerville Rd., Suite 210 | Project Number: | 06940-407-100 |
| Sacramento, CA 95827-2508 | Project Manager: | Margret Riggin |

**CLS Work Order #: COK0160**

## Notes and Definitions

| | |
|---|---|
| GC-25 | Weathered gasoline. |
| GAS-1 | Although sample contains compounds in the retention time range associated with gasoline, the chromatogram was not consistent with the expected chromatographic pattern or "fingerprint". However, the reported concentration is based on gasoline. |
| DSL-1 | Although sample contains compounds in the retention time range associated with diesel, the chromatogram was not consistent with the expected chromatographic pattern or "fingerprint". However, the reported concentration is based on diesel. |
| C-03C | Per customer request, the sample extract has undergone silica-gel clean-up, EPA Method 3630, which is specific to polar compound contamination. |
| DET | Analyte DETECTED |
| ND | Analyte NOT DETECTED at or above the reporting limit |
| NR | Not Reported |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |

ENSR INTERNATIONAL

# CHAIN OF CUSTODY



Cok a/6a

Lab: CLS

TAT: Standard

**Report results to:**

Name: Margret Riggin
Company: ENSR
Mailing Address: 10411 Old Placerville Road, Suite 210
City, State, Zip: Sacramento, CA 95827-2508
Telephone No.: 916-362-7100
Fax No.: 916-362-8100

**Project Information**

Site Address: 359 Main St., Fortuna
ENSR No.: 06940-407-100
Unocal No.: 762248
Global ID No.: T0602393213

Special instructions and/or specific regulatory requirements:
***Run TPHd w/ Silica Gel Cleanup on ALL TPHd HITS**

| | Sample Identification | Date Sampled | Time Sampled | Matrix/ Media | No. of Conts. | TPHg 8015 | BTEX 8021 | TPHd 8015 w/SGC | | | | | | | | Sample Condition/Comments | Preservative |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ~~MW-1~~ | | | GW | 4 | | | | | | | | | | | | Ice/HCL |
| | ~~MW-3~~ | | | GW | 4 | | | | | | | | | | | | Ice/HCL |
| | ~~MW-4~~ | | | GW | 4 | | | | | | | | | | | | Ice/HCL |
| | ~~MW-5~~ | | | GW | 4 | | | | | | | | | | | | Ice/HCL |
| | ~~MW-6~~ | | | GW | 4 | | | | | | | | | | | | Ice/HCL |
| 1 | MW-13 | 11-2-05 | 12:58 | GW | 4 | X | X | X | | | | | | | | | Ice/HCL |
| 2 | MW-14 | 11-2-05 | 10:28 | GW | 4 | X | X | X | | | | | | | | | Ice/HCL |
| 3 | MW-15 | 11-2-05 | 09:58 | GW | 4 | X | X | X | | | | | | | | | Ice/HCL |
| 4 | MW-16A | 11-2-05 | 11:28 | GW | 4 | X | X | X | | | | | | | | | Ice/HCL |
| 5 | MW-16B | 11-2-05 | 10:58 | GW | 4 | X | X | X | | | | | | | | | Ice/HCL |
| 6 | MW-17 | 11-2-05 | 09:28 | GW | 4 | X | X | X | | | | | | | | | Ice/HCL |
| 7 | MW-18 | 11-2-05 | 13:58 | GW | 4 | X | X | X | | | | | | | | | Ice/HCL |
| 8 | MW-19 | 11-2-05 | 13:28 | GW | 4 | X | X | X | | | | | | | | | Ice/HCL |
| 9 | MW-20 | 11-2-05 | 12:28 | GW | 4 | X | X | X | | | | | | | | | Ice/HCL |
| 10 | MW-21 | 11-2-05 | 11:58 | GW | 4 | X | X | X | | | | | | | | | Ice/HCL |
| | Trip Blank | 11-2-05 | — | water | 2 TB | X | X | | | | | | | | | | Ice |

**Collected by:** Troy Wachmann **Date/Time** 11-2-05 **Collector's Signature:** [signature] **Date/Time** 11-2-05

**Relinquished by:** Troy Wachmann **Date/Time** 11-4-05/05:13 **Received by:** [signature] **Date/Time**

**Relinquished by:** **Date/Time** **Received by:** [signature] **Date/Time** 11-4-5 0815

**Method of Shipment:** **Sample Condition on Rcpt:**

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