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April 11, 2006

4870.00

Humboldt County Department of Health and Human Services
Division of Environmental Health
100 H Street, Suite 100
Eureka, California 95501

Attention: Mr. Mark Verhey, C.E.G.

Subject: Fourth Quarter 2005 and First Quarter 2006 Groundwater Monitoring Report, and Request for Closure; Dibble's Campton Heights Service Station 1500 Ronald Avenue, Fortuna, California; LOP No. 12729

Dear Mr. Verhey:

LACO ASSOCIATES (LACO) presents to the Humboldt County Department of Health and Human Services (HCDEH) the results of groundwater monitoring for the fourth quarter of 2005 and the first quarter of 2006, and a request for closure. This report has been prepared for Mr. Ronald Kendall. The elements included are:

- Introduction, site chronology, and site history;
- Hydraulic gradient and hydrogeology;
- Tabular summary of analytical data;
- Discussion of quarterly analytical results;
- Request for closure, conclusions, and recommendations; and
- Location map, site map, and hydraulic gradient and/or head maps.

Please call (707) 443-5054 if you have any questions or concerns.

Sincerely,
LACO ASSOCIATES

Caroline Levenda
Staff Geologist

Christopher J. Watt
PG 7586, Exp. 3/31/08

PROFESSIONAL GEOLOGIST
CHRISTOPHER JOHN WATT
No. 7586
Exp.03/31/
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CJL:jg

Attachments

cc: Mr. Ronald Kendall, Dibble's Campton Heights Service Station

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21 W. 4th Street • P.O. Box 1023 • Eureka, California 95502 • 707-443-5054 • 1-800-515-5054 • FAX 707-443-0553
www.lacoassociates.us

# FOURTH QUARTER 2005 AND FIRST QUARTER 2006 GROUNDWATER MONITORING REPORT, AND REQUEST FOR CLOSURE

Dibble's Campton Heights Service Station
1500 Ronald Avenue, Fortuna, California
LOP No. 12729; LACO Project No. 4870.00

## INTRODUCTION

Field activities were conducted on December 23, 2005, January 26, 2006, February 23, 2006, and March 7, 2006, in accordance with generally accepted practices at this or similar locations. Monthly sampling at monitoring well MW1 was conducted during the first quarter of 2006 in pursuit of site closure. Please refer below to Tables A through D for the current groundwater monitoring regime and to the updated Standard Operating Procedures, on file at your office, for sampling details. A location and site map are provided as Figures 1 and 2, respectively. A key to abbreviations is included as Attachment 1.

**Table A: Monitoring Well Sampling Parameters for December 23, 2005**

| MONITORING WELL ID | SCREENED INTERVAL (feet) | DTW (feet) | PURGE METHOD | WATER QUALITY PARAMETERS | ANALYTICALS | | SAMPLING SCHEDULE |
|---|---|---|---|---|---|---|---|
| | | | | | ORGANICS | INORGANICS | |
| MW1 | 5-15 | 12.88 | 3/4"Bailer | NA | TPHg, TPHd, TPHmo, BTEX, MTBE, TBA, DIPE, ETBE, TAME | NA | Monthly |
| MW2 | 5-15 | 13.05 | | | | | Quarterly |
| MW3 | 5-15 | 12.75 | | | | | |

**Table B: Monitoring Well Sampling Parameters for January 26, 2006**

| MONITORING WELL ID | SCREENED INTERVAL (feet) | DTW (feet) | PURGE METHOD | WATER QUALITY PARAMETERS | ANALYTICALS | | SAMPLING SCHEDULE |
|---|---|---|---|---|---|---|---|
| | | | | | ORGANICS | INORGANICS | |
| MW1 | 5-15 | 10.72 | DHP | NA | TPHg, TPHd, TPHmo, BTEX, MTBE, TBA, DIPE, ETBE, TAME | NA | Monthly |
| MW2 | 5-15 | NA | NA | | NA | | Quarterly |
| MW3 | 5-15 | | | | | | |

| Table C: Monitoring Well Sampling Parameters for February 23, 2006 | | | | | | | |
|---|---|---|---|---|---|---|---|
| MONITORING WELL ID | SCREENED INTERVAL (feet) | DTW (feet) | PURGE METHOD | WATER QUALITY PARAMETERS | ANALYTICALS | | SAMPLING SCHEDULE |
| | | | | | ORGANICS | INORGANICS | |
| MW1 | 5-15 | 13.92 | 3/4" B | NA | TPHg, BTEX, MTBE, TBA, DIPE, ETBE, TAME | NA | Quarterly |
| MW2 | 5-15 | 12.92 | NA | | NA | | |
| MW3 | 5-15 | 13.62 | | | | | |

| Table D: Monitoring Well Sampling Parameters for March 7, 2006 | | | | | | | |
|---|---|---|---|---|---|---|---|
| MONITORING WELL ID | SCREENED INTERVAL (feet) | DTW (feet) | PURGE METHOD | WATER QUALITY PARAMETERS | ANALYTICALS | | SAMPLING SCHEDULE |
| | | | | | ORGANICS | INORGANICS | |
| MW1 | 5-15 | 10.25 | DHP | Temp, ORP, DO, Ecw | TPHg, BTEX, MTBE, TBA, DIPE, ETBE, TAME | NA | Monthly |
| MW2 | 5-15 | 9.61 | | | | | Quarterly |
| MW3 | 5-15 | 9.50 | | | | | |

## SITE CHRONOLOGY

- **December 29, 1999**: One 250-gallon, single-walled steel waste oil underground storage tank (UST) and two 3,000-gallon, single-walled steel USTs were removed from the site.
- **2000**: Seven temporary soil borings were installed.
- **2001**: *Additional Subsurface Investigation Workplan* was submitted and five temporary soil borings were installed.
- **2003**: Temporary soil borings B8 through B11 were installed.
- **2004**: Three monitoring wells were installed onsite.
- **2004 through present**: Groundwater monitoring was conducted onsite.
- **2005**: *Subsurface Investigation Status Report* was submitted to the HCDEH.

## SITE HISTORY SUMMARY

The USTs removed in December 1999 were operated for approximately 45 years and were last operated in 1991. According to field notes obtained at the HCDEH, no groundwater was pumped from the tank cavity and excavated soils were used to backfill the cavities. The three USTs were single-walled steel, and only the waste oil UST was observed to have been compromised. Laboratory analytical results from samples collected during boring installation in March 2003 identified sorbed- and dissolved-phase total petroleum hydrocarbons as motor oil (TPHmo) in

the southwest portion of the subject property and total petroleum hydrocarbons as gasoline (TPHg) north of the former UST cavity.

## HYDRAULIC GRADIENT AND HYDROGEOLOGY

The site comprises a shallow aquifer with sandy silts, clayey silty sands, and gravels. Sandy, gravely silts comprise the deeper, saturated zone on-site. Silts and clays comprise the shallower subsurface geology on-site. Groundwater flows in a northerly direction. Potentiometric surface contours for the site were generated using Surfer 7.0 software and the hydraulic head elevations were calculated for each monitoring event.

### Hydraulic Gradients

- The hydraulic gradient for the December 23, 2005, monitoring event, using monitoring wells MW1, MW2, MW3, and the three-point method, was determined to have a N36°W trend with a 0.01 foot per foot slope.
- The hydraulic gradient for the February 23, 2006, monitoring event, using monitoring wells MW1, MW2, MW3, and the three-point method, was determined to have a N36°E trend with a 0.02 foot per foot slope.
- The hydraulic gradient for the March 7, 2006, monitoring event, using monitoring wells MW1, MW2, MW3, and the three-point method, was determined to have a N7°W trend with a 0.02 foot per foot slope.

The hydraulic gradients and potentiometric surfaces and for the December, February and March monitoring events are presented as Figures 3, 5, and 6, respectively. Figure 4 presents the hydraulic head of the January 26, 2006, monitoring event. The hydraulic gradients for the December 23, 2005, February 23, 2006, and March 7, 2006, monitoring events are consistent with historic hydraulic gradient data. Historic hydraulic gradient data are presented in Table 1, and copies of the field sampling data sheets are included as Attachment 2.

## LABORATORY RESULTS

Laboratory analytical results from the December 23, 2005, January 6, 2006, February 23, 2006, and March 7, 2006, are included as Table 2, and copies of the laboratory analytical reports are included as Attachment 3. Results from sampling events are included below in Tables E through H.

| Table E: Laboratory Analytical Results for December 23, 2005 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| WELL | TPHg (µg/l) | TPHd (µg/l) | TPHmo (µg/l) | Benzene (µg/l) | Toluene (µg/l) | Ethylbenzene (µg/l) | Total Xylenes (µg/l) | MTBE (µg/l) | Other Analytes (µg/l) |
| MW1 | ND<50 | ND<50 | ND<170 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | **4.5** | **TAME = 1.5** ND<1.0 - 10 |
| MW2 | ND<50 | ND<50 | ND<170 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0 | ND<1.0 - 10 |
| MW3 | ND<50 | ND<50 | ND<170 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0 | ND<1.0 - 10 |

| Table F: Laboratory Analytical Results for January 26, 2006 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| WELL | TPHg (µg/l) | TPHd (µg/l) | TPHmo (µg/l) | Benzene (µg/l) | Toluene (µg/l) | Ethylbenzene (µg/l) | Total Xylenes (µg/l) | MTBE (µg/l) | Other Analytes (µg/l) |
| MW1 | ND<50 | ND<50 | ND<170 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0 | ND<1.0 - 10 |

| Table G: LaboratoryAnalytical Results for February 23, 2006 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| WELL | TPHg (µg/l) | TPHd (µg/l) | TPHmo (µg/l) | Benzene (µg/l) | Toluene (µg/l) | Ethylbenzene (µg/l) | Total Xylenes (µg/l) | MTBE (µg/l) | Other Analytes (µg/l) |
| MW1 | ND<50 | ND<50 | ND<170 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0 | ND<1.0 - 10 |

| Table H: Laboratory Analytical Results for March 7, 2006 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| WELL | TPHg (µg/l) | TPHd (µg/l) | TPHmo (µg/l) | Benzene (µg/l) | Toluene (µg/l) | Ethylbenzene (µg/l) | Total Xylenes (µg/l) | MTBE (µg/l) | Other Analytes (µg/l) |
| MW1 | ND<50 | ND<50 | ND<170 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | **1.5** | ND<1.0 - 10 |
| MW2 | ND<50 | ND<50 | ND<170 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0 | ND<1.0 - 10 |
| MW3 | ND<50 | ND<50 | ND<170 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0 | ND<1.0 - 10 |

## DISCUSSION OF QUARTERLY ANALYTICAL RESULTS

Groundwater samples collected from monitoring wells MW2 and MW3 have been non-detect (ND) and/or below the California Regional Water Quality Control Board's (CRWQCB's) water quality objective (WQO) for TPHg; total petroleum hydrocarbons as diesel (TPHd); TPHmo; benzene, toluene, ethylbenzene, and total xylenes (BTEX); methyl tertiary butyl either (MTBE); and other fuel oxygenates since sampling was initiated in March 2004. Groundwater samples were collected monthly at monitoring well MW1. TPHg, TPHd, TPHmo, and BTEX were reported as non-detect since the June 2005 sampling event at monitoring well MW1. MTBE concentrations have decreased two orders of magnitude to below the CRWQCB WQO of 13 ug/L since the March sampling event of 2005 to present (Chart 1).

## REQUEST FOR CLOSURE

Per HCDEH correspondence in a letter dated November 5, 2005, monitoring well MW1 was sampled monthly since December 2005. The concentrations of MTBE at monitoring well MW1

were ND for the December 2005 through February 2006 monthly sampling events, and below the WQO of 13 µg/L for the March sampling event. LACO's report entitled *Groundwater Monitoring Report: First, Second, and Third Quarters of 2005 and Request for Closure,* submitted on October 26, 2005, includes estimates required for site closure, decay rate analyses and migration and bulk attenuation rates, evaluation of vertical and horizontal extents evaluated, and mass calculations. Elements requested for closure have been met and are included below.

**Request for Closure Checklist**

The following checklist addresses the delineation, monitoring, and remediation of site soils and groundwater impacted by the historical release of petroleum hydrocarbons at the subject site. This checklist was adapted from a draft of the HCDEH request for closure guidelines.

| REQUEST FOR CLOSURE CHECKLIST | | |
|---|---|---|
| **Subject** | **Item Completed** | **Reference** |
| 1: Provide a history or overview of what has been done at the site to date. | yes | This report, Site Chronology and Site History Summary Section |
| 2: Confirm source destruction has occurred to the extent practicable. | yes | *Groundwater Monitoring Report; First, Second and Third Quarters 2005 and Request for Closure*, Decay rate, Attenuation and Mass Calculations Sections |
| 3: Delineate remaining soil impact. | yes | *Groundwater Monitoring Report; First, Second and Third Quarters 2005 and Request for Closure*, Migration and Bulk Attenuation-Horizontal and Vertical Extent Sections |
| 4: Delineate groundwater impact. | yes | *Groundwater Monitoring Report; First, Second and Third Quarters 2005 and Request for Closure*, Fate and Transport of MTBE section |
| 5: Comment on concentration trends observed in monitoring wells. | yes | *Groundwater Monitoring Report; First, Second and Third Quarters 2005 and Request for Closure*, Decay Rates, Migration and Bulk Attenuation Analyses, Fate and Transport of MTBE, Mass Calculations |
| 6: Comment on the suitability of monitoring well screen intervals with respect to site conditions. | yes | *Groundwater Monitoring Report; First, Second and Third Quarters 2005 and Request for Closure*, Migration and bulk attenuation analyses -Vertical Extent Section |

| REQUEST FOR CLOSURE CHECKLIST, CONTINUED | | |
|---|---|---|
| **Subject** | **Item Completed** | **Reference** |
| 7: Estimate the amount of time to reach water quality objectives. | yes | *Groundwater Monitoring Report; First, Second and Third Quarters 2005 and Request for Closure*, Decay Rates Section |
| 8: Comment on whether or not the location of monitoring wells is sufficient to evaluate the potential for groundwater impact in each measured groundwater direction. | yes | *Groundwater Monitoring Report; First, Second and Third Quarters 2005 and Request for Closure*, Migration and bulk attenuation analyses - Horizontal Extent Section |
| 9: Description of soil and groundwater conditions. | yes | *Groundwater Monitoring Report; First, Second and Third Quarters 2005 and Request for Closure*, Decay Rates, Migration and Bulk Attenuation Analyses, Fate and Transport of MTBE, Mass Calculations |
| 10: Demonstrate how natural attenuation applies to the site. | yes | *Groundwater Monitoring Report; First, Second and Third Quarters 2005 and Request for Closure*, Migration and Bulk Attenuation Analyses Section |

## CONCLUSIONS

Delineation of vertical and horizontal extents of sorbed- and dissolved-phase impacts are defined and complete. The WQOs for TPHg, benzene, and MTBE appear to be met by natural attenuation in a reasonable amount of time. Based on monthly sampling during the months of December 2005 through March 2006 at monitoring well MW1, MTBE concentrations are below the WQO of 13 µg/L and meet the requirements for closure. A contingency plan will be developed for the former waste oil area for sorbed-phase TPHd and TPHmo.

## RECOMMENDATIONS

Based on the conclusions presented above, LACO recommends site closure. LACO will continue with quarterly groundwater monitoring, with the next sampling event scheduled for May 2006, until HCDEH correspondence is received. LACO proposes a contingency plan to identify if any human health hazards exist in the surface layers (0.5 to 1.0 foot) of soil near the waste oil tank area on the southwest corner of the site in the vicinity of boring B8.

## LIMITATIONS

LACO has exercised a standard of care equal to that generated for this industry to ensure that the information contained in this report is current and accurate. LACO disclaims any and all liability

for any errors, omissions, or inaccuracies in the information and data presented in this report and/or any consequences arising there from, whether attributable to inadvertence or otherwise. LACO makes no representations or warranties of any kind, including, but not limited to, any implied warranties with respect to the accuracy or interpretations of the data furnished. LACO assumes no responsibility of any third party reliance on the data presented and that data generated for this report represents information gathered at that time and at the indicated locations. It should not be utilized by any third party to represent data for any other time or location. This report is valid solely for the purpose, site, and project described in this document. Any alteration, unauthorized distribution, or deviation from this description will invalidate this report.

**LIST OF FIGURES, TABLES, CHARTS, AND ATTACHMENTS**

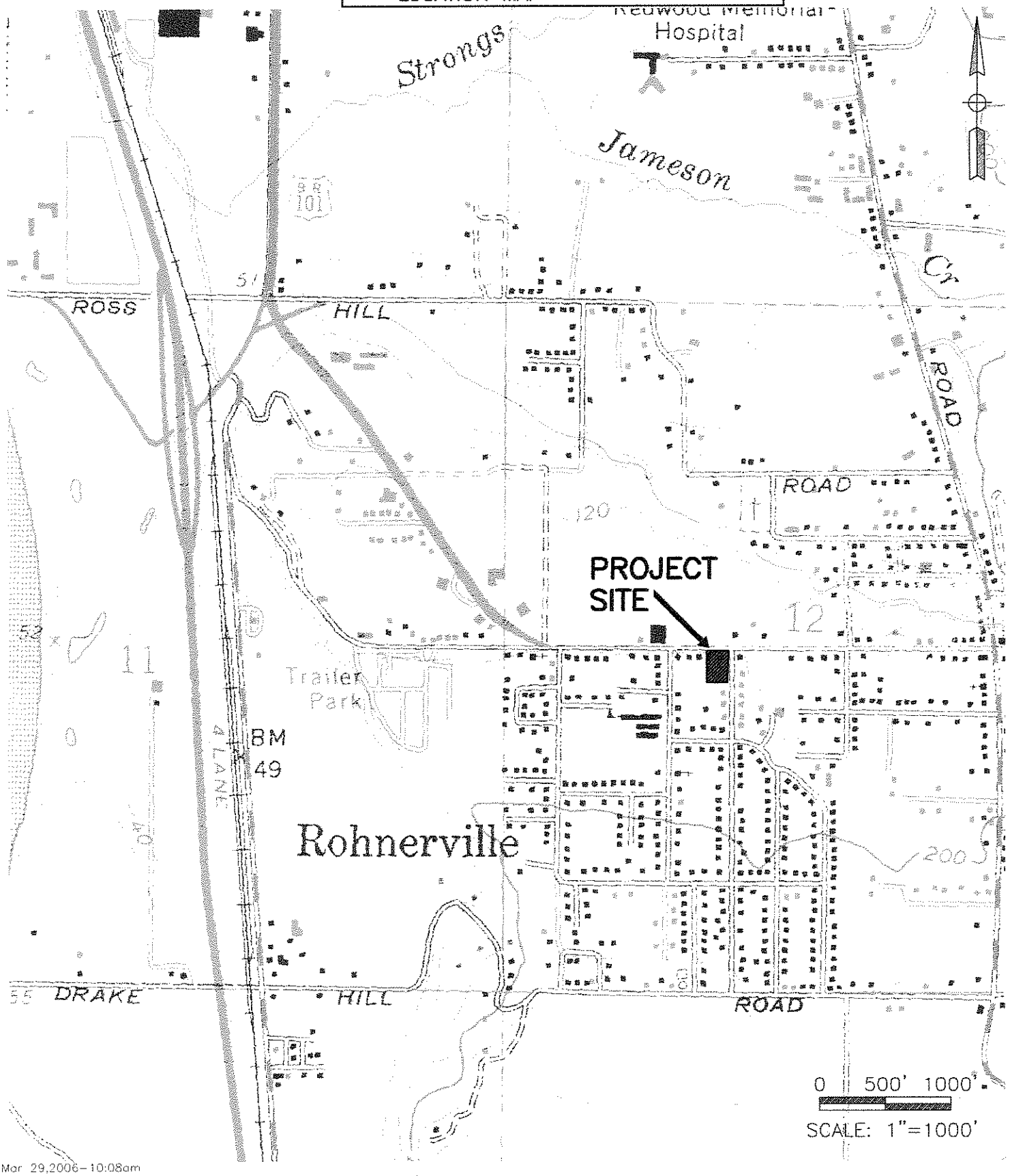

Figure 1: Location Map
Figure 2: Site Map
Figure 3: Hydraulic Gradient Map (12/23/05)
Figure 4: Hydraulic Head Map (1/26/06)
Figure 5: Hydraulic Gradient Map (2/23/06)
Figure 6: Hydraulic Gradient Map (3/07/06)

Table 1: Historic Hydraulic Gradient Data
Table 2: Historical Groundwater Monitoring Results

Chart 1: MTBE Concentrations at Monitoring Well MW1

Attachment 1: Key to Abbreviations
Attachment 2: Groundwater Sampling Field Data Sheets
Attachment 3: Laboratory Analytical Reports

| LACO ASSOCIATES<br>CONSULTING ENGINEERS<br>21 W 4TH ST. EUREKA, CA 95501 (707)443-5054 | PROJECT GROUNDWATER MONITORING REPORT & REQUEST FOR CLOSURE | BY RJM | FIGURE 1 |
|---|---|---|---|
| | CLIENT RON KENDALL | DATE 3/29/06 | |
| | LOCATION 1500 RONALD AVENUE, FORTUNA | CHECK | JOB NO. 4870.00 |
| | LOCATION MAP | SCALE 1"=1000' | |

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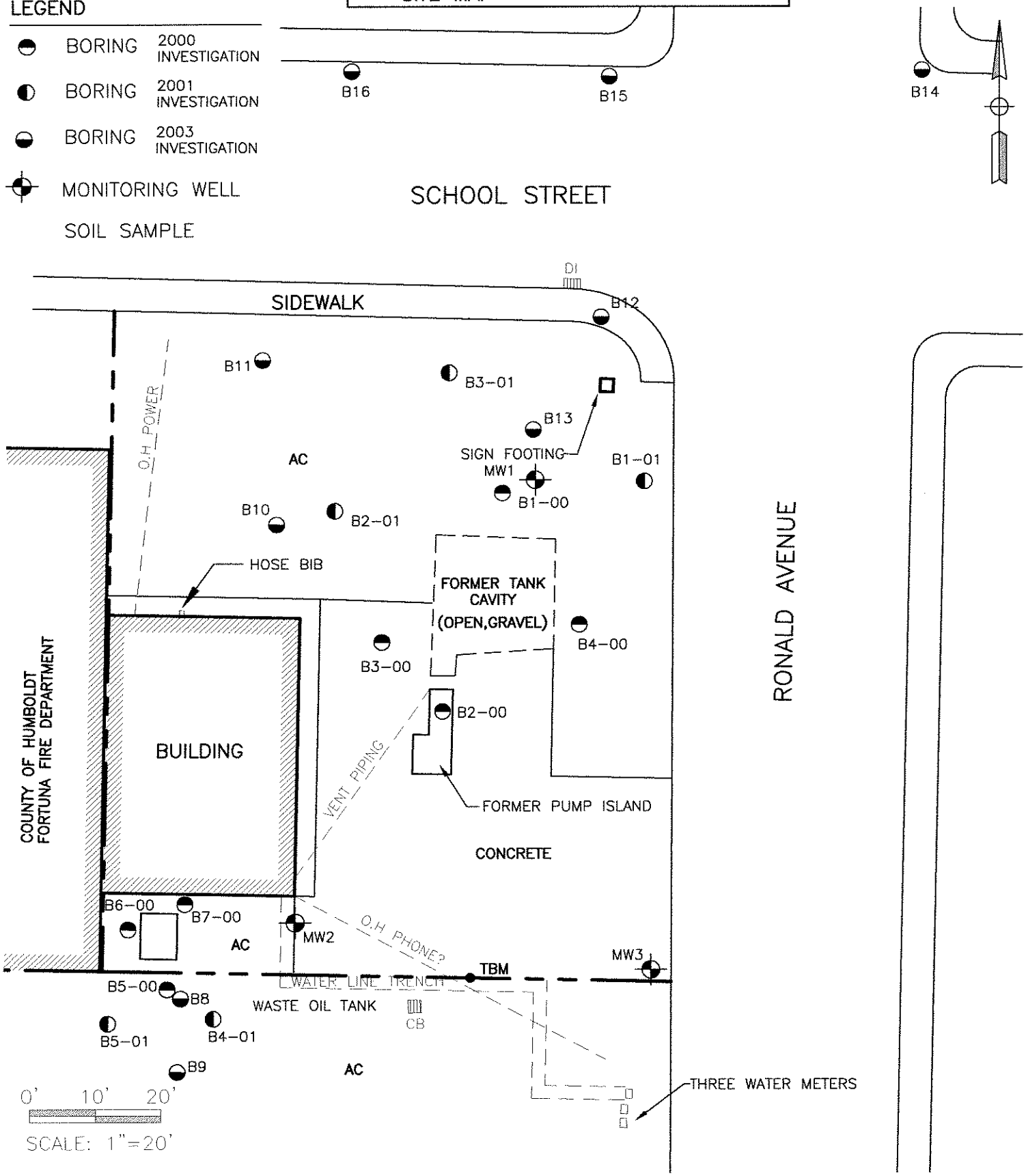
| LACO ASSOCIATES<br>CONSULTING ENGINEERS<br>21 W 4TH ST. EUREKA, CA 95501 (707)443-5054 | PROJECT GROUNDWATER MONITORING REPORT & REQUEST FOR CLOSURE | BY RJM | FIGURE 2 |
|---|---|---|---|
| | CLIENT RON KENDALL | DATE 3/29/06 | |
| | LOCATION 1500 RONALD AVENUE, FORTUNA | CHECK | JOB NO. 4870.00 |
| | SITE MAP | SCALE 1=20' | |

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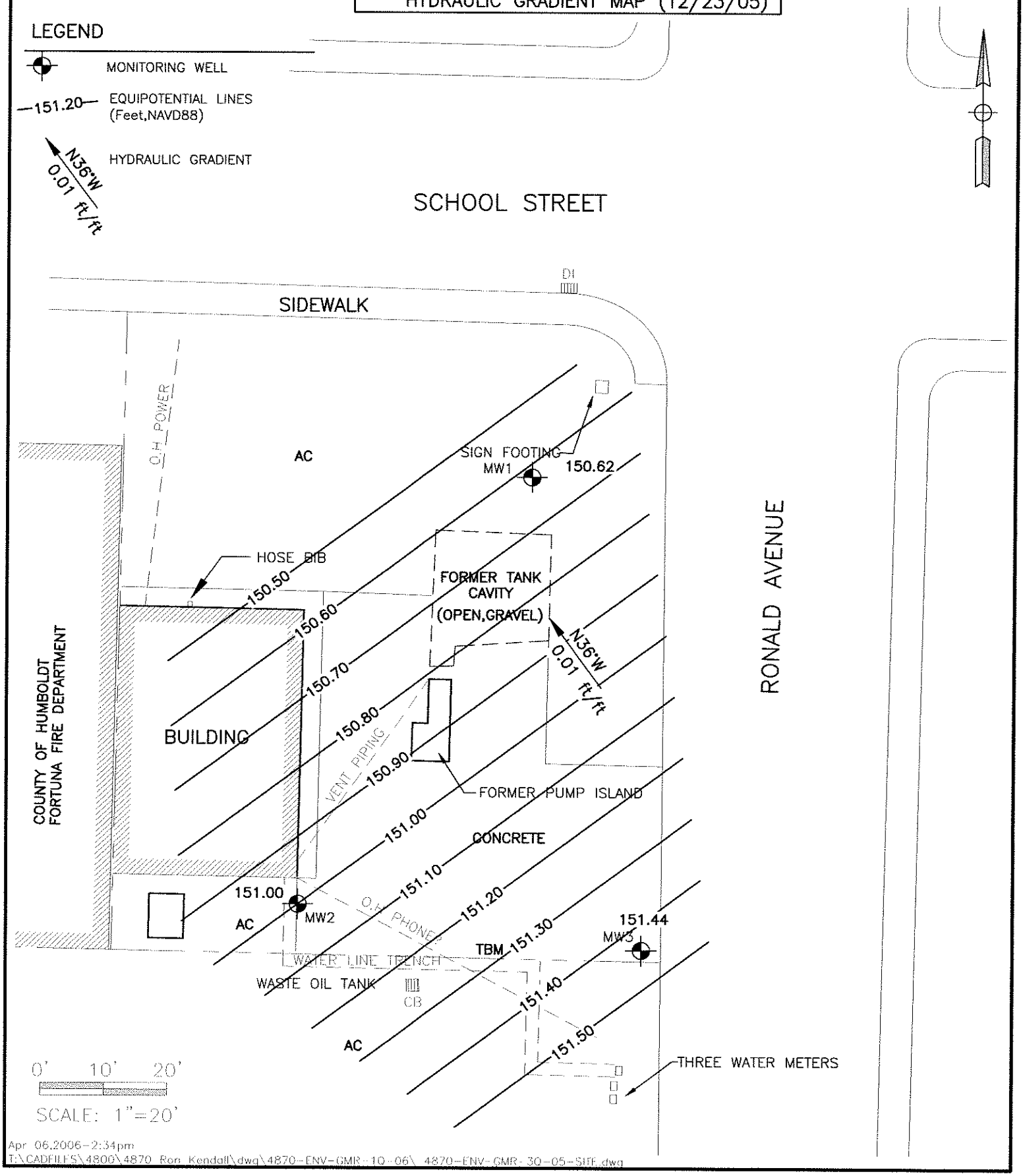
| LACO ASSOCIATES CONSULTING ENGINEERS 21 W 4TH ST. EUREKA, CA 95501 (707)443-5054 | PROJECT GROUNDWATER MONITORING REPORT & REQUEST FOR CLOSURE | BY RJM | FIGURE 3 |
|---|---|---|---|
| | CLIENT RON KENDALL | DATE 4/06/06 | |
| | LOCATION 1500 RONALD AVENUE, FORTUNA | CHECK a | JOB NO. 4870.00 |
| | HYDRAULIC GRADIENT MAP (12/23/05) | SCALE 1=20' | |

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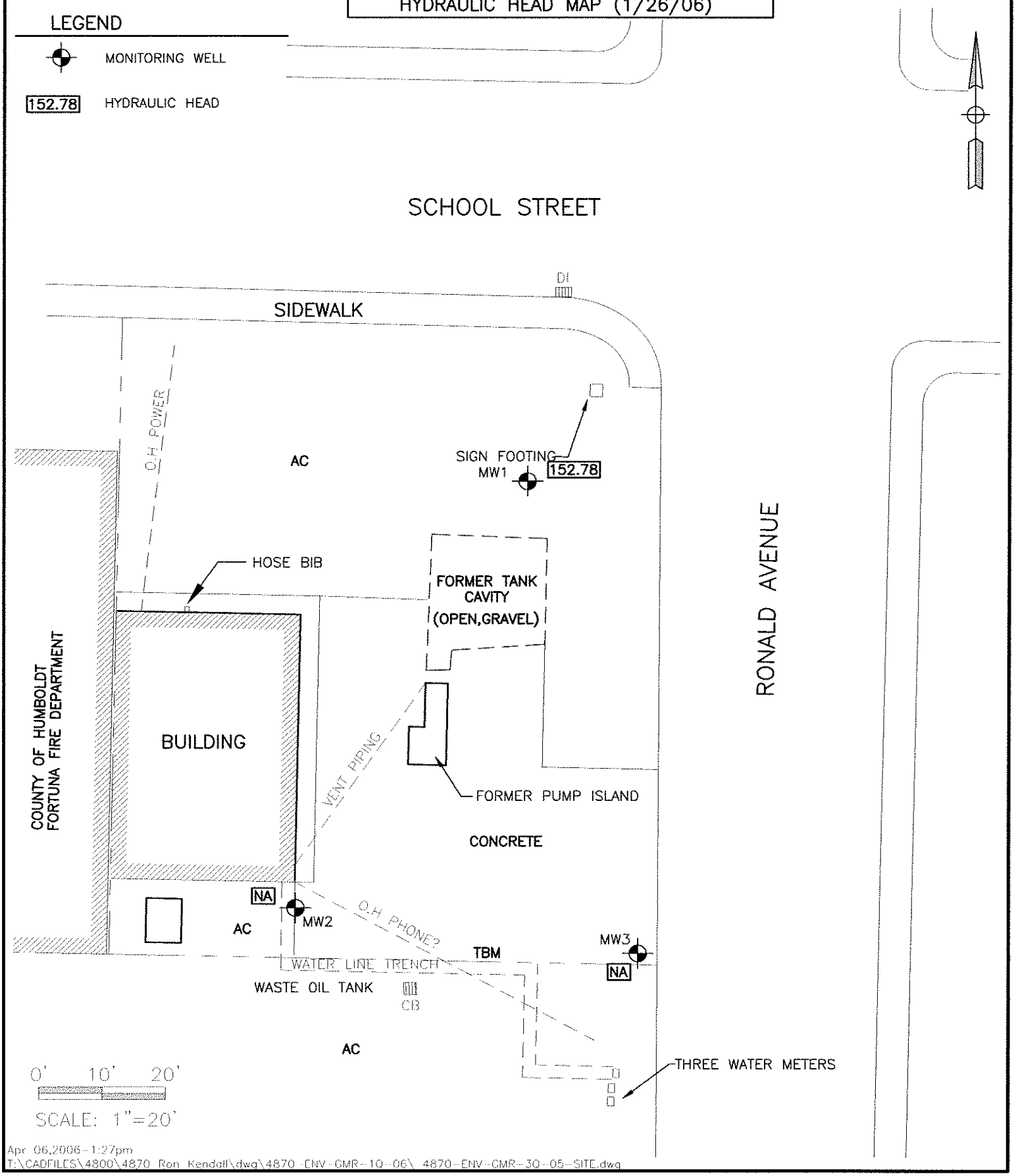
| LACO ASSOCIATES<br>CONSULTING ENGINEERS<br>21 W 4TH ST. EUREKA, CA 95501 (707)443-5054 | PROJECT GROUNDWATER MONITORING REPORT & REQUEST FOR CLOSURE | BY RJM | FIGURE 4 |
|---|---|---|---|
| | CLIENT RON KENDALL | DATE 4/06/06 | |
| | LOCATION 1500 RONALD AVENUE, FORTUNA | CHECK | JOB NO. 4870.00 |
| | HYDRAULIC HEAD MAP (1/26/06) | SCALE 1=20' | |

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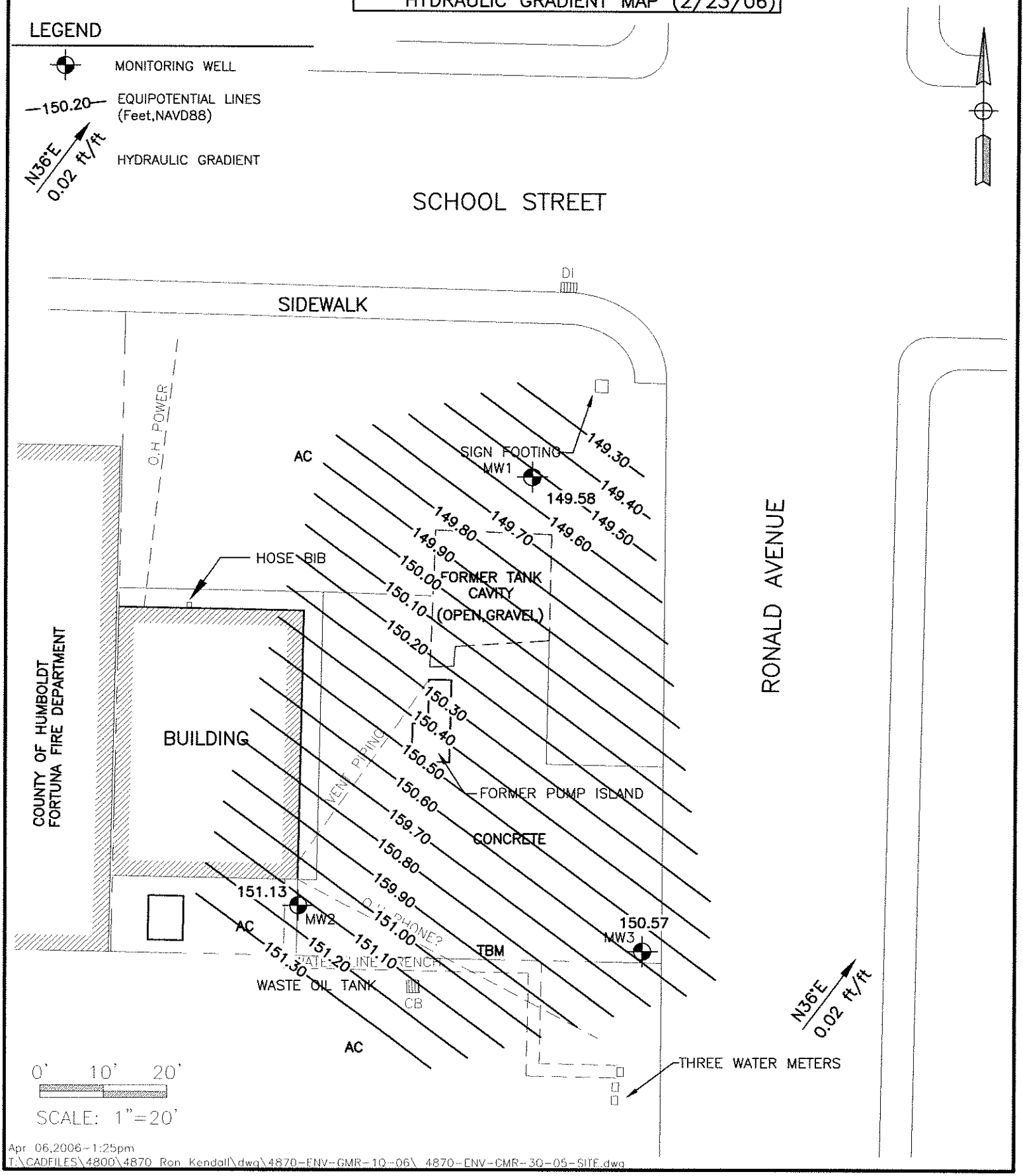
| LACO ASSOCIATES CONSULTING ENGINEERS 21 W 4TH ST. EUREKA, CA 95501 (707)443-5054 | PROJECT GROUNDWATER MONITORING REPORT & REQUEST FOR CLOSURE | BY RJM | FIGURE 5 |
|---|---|---|---|
| | CLIENT RON KENDALL | DATE 4/06/06 | |
| | LOCATION 1500 RONALD AVENUE, FORTUNA | CHECK | JOB NO. 4870.00 |
| | HYDRAULIC GRADIENT MAP (2/23/06) | SCALE 1=20' | |

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| LACO ASSOCIATES CONSULTING ENGINEERS 21 W 4TH ST. EUREKA, CA 95501 (707)443-5054 | PROJECT GROUNDWATER MONITORING REPORT & REQUEST FOR CLOSURE | BY RJM | FIGURE 6 |
|---|---|---|---|
| | CLIENT RON KENDALL | DATE 3/30/06 | |
| | LOCATION 1500 RONALD AVENUE, FORTUNA | CHECK | JOB NO. 4870.00 |
| | HYDRAULIC GRADIENT MAP (3/07/06) | SCALE 1=20' | |

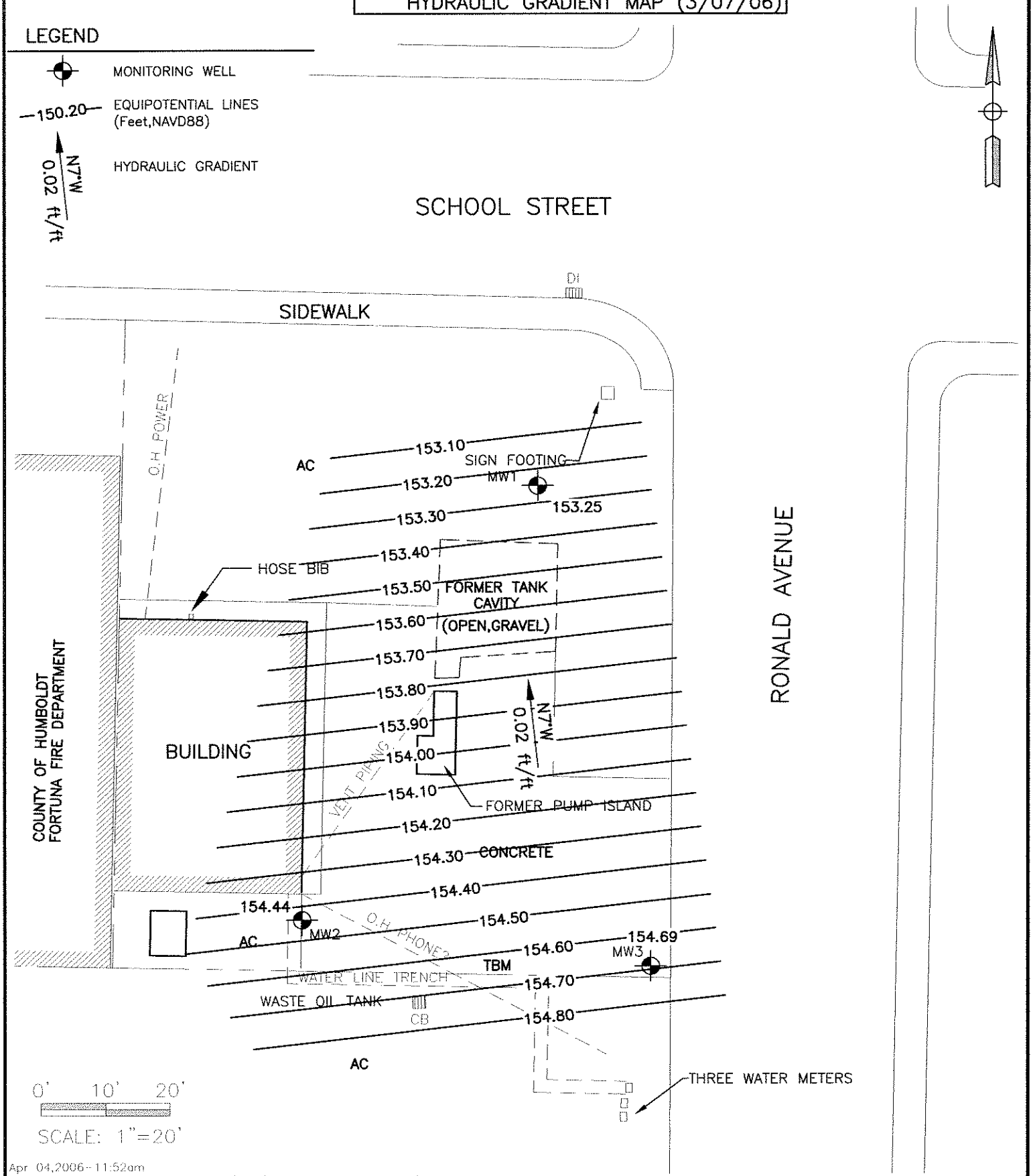


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**Table 1. Historic Hydraulic Gradient Data**
Dibble's Campton Heights Service Station, 1500 Ronald Avenue, Fortuna, CA
LACO Project No. 4870.00; LOP No. 12729

## Groundwater Gradient

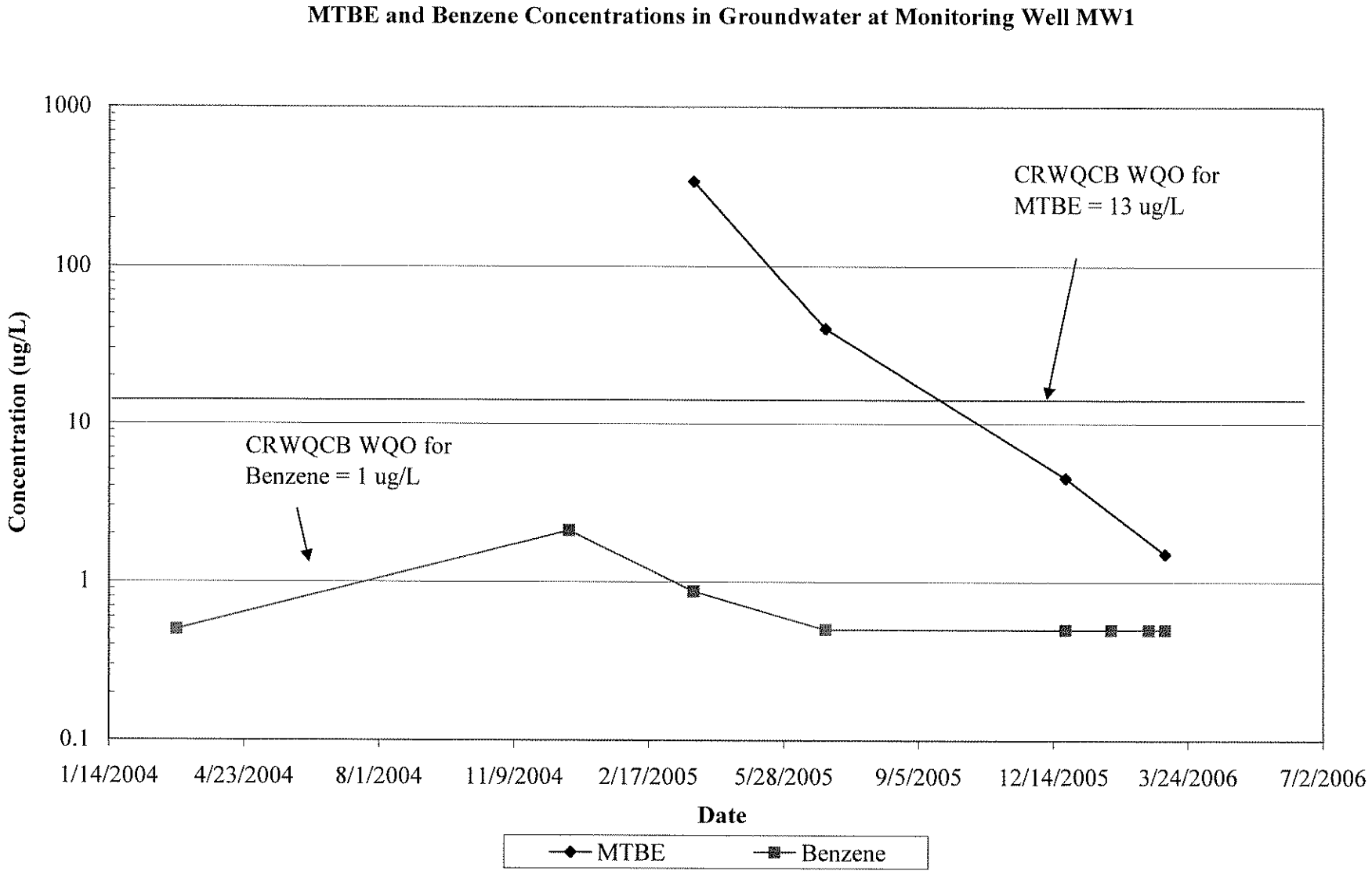
| Date | Flow Direction | Gradient Slope (foot/foot) |
|---|---|---|
| 3/4/2004 | N80°E | 0.01 |
| 4/7/2004 | N30°W | 0.01 |
| 5/6/2004 | N28°W | 0.02 |
| 3/22/2005 | N12°E | 0.01 |
| 6/28/2005 | N43°W | 0.04 |
| 9/15/2005 | NA | NA |
| 12/23/2005 | N36°W | 0.01 |
| 1/26/2006 | NA | NA |
| 2/23/2006 | N36°E | 0.02 |
| 3/7/2006 | N7°W | 0.02 |

**Table 2: Historical Groundwater Monitoring Results**
Dibble's Campton Heights Service Stations, 1500 Ronald Avenue, Fortuna CA
LACO Project No. 4870.00; LOP No. 12729

| Well (Screened Interval)/ Date | Hydraulic Head (NAVD88) | Top of Casing (NAVD88) | Depth-to-Water (feet bgs) | TPHg (µg/L) | TPHd (µg/L) | TPHmo (µg/L) | Benzene (µg/L) | Toluene (µg/L) | Ethylbenzene (µg/L) | Total Xylenes (µg/L) | Fuel Oxygenates (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **MW1 (5-15 feet bgs)** | | 163.50 | | | | | | | | | |
| 3/4/2004 | 152.33 | | 11.17 | ND<50 | ND<50 | ND<170 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0-10.0 |
| 4/7/2004 | 149.54 | | 13.96 | --- | --- | --- | --- | --- | --- | --- | --- |
| 5/6/2004 | 148.96 | | 14.54 | --- | --- | --- | --- | --- | --- | --- | --- |
| 6/11/2004 | --- | | Dry | Sample not collected due to dry well | | | | | | | |
| 7/12/2004 | --- | | Dry | --- | --- | --- | --- | --- | --- | --- | --- |
| 8/10/2004 | | | Dry | --- | --- | --- | --- | --- | --- | --- | --- |
| 12/13/2004 | --- | | | Well not accessible | | | | | | | |
| **12/20/2004** | 149.28 | | 14.22 | **350** | ND<50 | ND<170 | **2.1** | **1.8** | ND<0.50 | **70** | ND<1.0-10.0 |
| **3/22/2005** | 149.92 | | 13.58 | **340** | ND<50 | ND<170 | **0.87** | **0.56** | ND<0.50 | **7.5** | **MTBE=340; TAME = 140**; Other analytes NA<1.0-10 |
| **6/28/2005** | 149.08 | | 14.42 | ND<50 | NA | NA | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | **MTBE = 40, TAME = 14**; Other Analytes = ND<1.0-10 |
| 9/15/2005 | --- | | Dry | --- | --- | --- | --- | --- | --- | --- | --- |
| **12/23/2005** | 150.62 | | 12.88 | ND<50 | ND<50 | ND<170 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | **MTBE = 4.5**; **TAME - 1.5**; ND<1.0-10 |
| 1/26/2006 | 152.78 | | 10.72 | ND<50 | ND<50 | ND<170 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0-10 |
| 2/23/2006 | 149.58 | | 13.92 | ND<50 | ND<50 | ND<170 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0-10 |
| **3/7/2006** | 153.25 | | 10.25 | ND<50 | ND<50 | ND<170 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | **MTBE = 1.5**; ND<1.0-10 |
| **MW2 (5-15 feet bgs)** | | 164.05 | | | | | | | | | |
| 3/4/2004 | 153.80 | | 10.25 | ND<50 | ND<50 | ND<170 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0-10.0 |
| 4/7/2004 | 150.08 | | 13.97 | --- | --- | --- | --- | --- | --- | --- | --- |
| 5/6/2004 | 149.84 | | 14.21 | --- | --- | --- | --- | --- | --- | --- | --- |
| 6/11/2004 | 149.35 | | 14.70 | Sample not collected due to presence of mud | | | | | | | |
| 7/12/2004 | --- | | Dry | --- | --- | --- | --- | --- | --- | --- | --- |
| 8/10/2004 | --- | | Dry | --- | --- | --- | --- | --- | --- | --- | --- |
| 12/13/2004 | 150.40 | | 13.65 | ND<50 | ND<50 | ND<170 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0-240 |
| 3/22/2005 | 150.87 | | 13.18 | ND<50 | ND<50 | ND<170 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0-10 |
| 6/28/2005 | 149.91 | | 14.14 | ND<50 | NA | NA | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0-10 |
| 9/15/2005 | --- | | Dry | --- | --- | --- | --- | --- | --- | --- | --- |
| 12/23/2005 | 151.00 | | 13.05 | ND<50 | ND<50 | ND<170 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0-10 |
| 1/26/2006 | --- | | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2/23/2006 | 151.13 | | 12.92 | --- | --- | --- | --- | --- | --- | --- | --- |
| 3/7/2006 | 154.44 | | 9.61 | ND<50 | ND<50 | ND<170 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0-10 |
| **MW3 (5-15 feet bgs)** | | 164.19 | | | | | | | | | |
| 3/4/2004 | 152.92 | | 11.27 | ND<50 | ND<50 | ND<170 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0-10.0 |
| 4/7/2004 | 150.55 | | 13.64 | --- | --- | --- | --- | --- | --- | --- | --- |
| 5/6/2004 | 150.54 | | 13.65 | --- | --- | --- | --- | --- | --- | --- | --- |
| 6/11/2004 | 150.54 | | 13.65 | ND<50 | --- | --- | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0-10.0 |
| 7/12/2004 | 150.23 | | 13.96 | --- | --- | --- | --- | --- | --- | --- | --- |
| 8/10/2004 | 150.20 | | 13.99 | --- | --- | --- | --- | --- | --- | --- | --- |
| 12/13/2004 | 150.45 | | 13.74 | ND<50 | ND<50 | ND<170 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0-45 |
| **3/22/2005** | 150.83 | | 13.36 | ND<50 | ND<50 | ND<170 | ND<0.50 | ND<0.50 | ND<0.50 | **0.50** | ND<1.0-10 |
| 6/28/2005 | 151.46 | | 12.73 | ND<50 | NA | NA | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0-10 |
| 9/15/2005 | 150.01 | | 14.18 | --- | --- | --- | --- | --- | --- | --- | --- |
| 12/23/2005 | 151.44 | | 12.75 | ND<50 | ND<50 | ND<170 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0-10 |
| 1/26/2006 | --- | | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2/23/2006 | 150.57 | | 13.62 | --- | --- | --- | --- | --- | --- | --- | --- |
| 3/7/2006 | 154.69 | | 9.50 | ND<50 | ND<50 | ND<170 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0-10 |

Notes:
Fuel Oxygenates include MTBE, TAME, DIPE, TBA, ETBE
**Bold** indicates analyte detection

**Chart 1. MTBE Concentrations at Monitoring Well MW1**
Dibble's Camption Heights Service Station, 1500 Ronald Avenue, Fortuna, CA
LACO Project No. 4870.00; LOP No. 12729



# Attachment 1

**Key to Abbreviations**
Dibble's Campton Heights Service Station, 1500 Ronald Avenue, Fortuna, CA
LACO Project No. 4870.00; LOP No. 12729

| KEY TO ABBREVIATIONS | | |
|---|---|---|
| Alk | -- | Alkalinity |
| BTEX | -- | Benzene; Toluene; Ethylbenzene; m,p- and o- Xylenes |
| $CO_2$ | -- | Carbon dioxide |
| COC | -- | Chain of custody |
| Cr | -- | Chromium |
| DHP | -- | Down-hole-pump (submersible pump) |
| DIPE | -- | Di-isopropyl Ether |
| Dis | -- | Dissolved |
| DO | -- | Dissolved Oxygen |
| DTW | -- | Depth-to-Water |
| ECw | -- | Electrical Conductivity in water |
| ETBE | -- | Ethyl Tertiary Butyl Ether |
| Fe | -- | Iron |
| FP | -- | Free Product |
| LNAPL | -- | Light Non-Aqueous Phase Liquid |
| Mn | -- | Manganese |
| MTBE | -- | Methyl Tertiary Butyl Ether |
| N | -- | Nitrogen |
| NA | -- | Not Applicable |
| ND<50 | -- | non-detect at reporting limits shown |
| $NO_3$ | -- | Nitrate |
| NOT ACTIVE | -- | Sample not analyzed for parameter during current sampling event |
| ORP | -- | Oxidation Reduction Potential |
| P | -- | Phosphorous |
| PCP/TCP | -- | penta- tetra- tri- chlorophenols |
| pH | -- | Potential of hydrogen |
| SGC | -- | Silica gel cleanup |
| $SO_4$ | -- | Sulfate |
| T | -- | Temperature |
| T&P | -- | Tape and Paste |
| TAME | -- | Tertiary Amyl Methyl Ether |
| TBA | -- | Tetiary Butyl Alcohol |
| TBF | -- | Tertiary Butyl Formate |
| TIC | -- | Total Inorganic Carbon |
| TOC | -- | Total Organic Carbon |
| Tot | -- | Total |
| TPHd | -- | Total Petroluem Hydrocarbons as Diesel |
| TPHg | -- | Total Petroluem Hydrocarbons as Gasoline |
| TPHk | -- | Total Petroluem Hydrocarbons as Kerosene |
| TPHmo | -- | Total Petroluem Hydrocarbons as Motor Oil |
| TPHs | -- | Total Petroluem Hydrocarbons as Solvent |
| µg/L | -- | Micro grams per liter (parts per billion) |

Note: Not all abbreviations in this key are used in the report.

# Attachment 2

LACO ASSOCIATES
CONSULTING ENGINEERS
21 West Fourth Street, Eureka, CA 95501
TEL 707.443.5054
FAX 707.443.0553



Project Name: Dibbles
Project No.: 4870.00
Date: 12/23/05
Golbal ID No.: T0602300517
PM: GLM

Tech: SJD/RLD
Mob/Demob time: .25/.50
Travel time: 1.0
Time on site: 10:50
Time off site: 1:00
Mileage: 39

| WELL No.: | MW1 | | MW2 | | MW3 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| DIAMETER (in) | 2.00 | | 2.00 | | 2.00 | | | | | |
| SCREENED INTERVAL (ft) | 5-15 | | 5-15 | | 5-15 | | | | | |
| DEPTH TO WATER (ft) | 12.88 | | 13.05 | | 12.75 | | | | | |
| | INITIAL | FINAL | INITIAL | FINAL | INITIAL | FINAL | INITIAL | FINAL | INITIAL | FINAL |
| FIELD INTRINSICS: pH | | | | | | | | | | |
| TEMP (°C) | | | | | | | | | | |
| Ecw (µmohs) | | | | | | | | | | |
| ORP (mV) | | | | | | | | | | |
| DO (mg/L) | | | | | | | | | | |
| OTHER (units) | | | | | | | | | | |
| PURGE: TIME | 11:50 | 12:00 | 12:10 | 12:15 | 12:25 | 12:30 | | | | |
| METHOD (DHP/CB/B) | 3/4" B | | 3/4" B | | 3/4" B | | | | | |
| RATE (Lpm) | | | | | | | | | | |
| VOLUME (L) | | | | | | | | | | |
| COLOR | TAN TINT | TAN TURBID | CLEAR | TAN TINT | TAN TINT | TAN TINT | | | | |
| ODOR | NONE | | NONE | | | | | | | |
| INTAKE DEPTH (FEET) | | | | | | | | | | |
| SAMPLE: TIME | 12:03 | | 12:17 | | 12:32 | | | | | |
| METHOD (DHP/CB/B) | 3/4" B | | 3/4" B | | 3/4" B | | | | | |
| ANALYTES | 8260 List 1; TPHd/mo w/SGC | | 8260 List 1; TPHd/mo w/SGC | | 8260 List 1; TPHd/mo w/SGC | | | | | |
| TOTAL DRAWDOWN (FEET) | | | | | | | | | | |
| REMARKS | NOT ENOUGH TO DO INTRINSICS | | NOT ENOUGH TO DO INTRINSICS | | NOT ENOUGH TO DO INTRINSICS | | | | | |
| WELL CONDITION | GOOD | | GOOD | | GOOD | | | | | |

DEPTH MEASUREMENTS ARE REFERENCED TO TOP OF CASING

WASTE DRUMS: 4 - LABELED DOT DRUMS ONSITE 3-SOIL 1 - SOIL & TRASH 0 - PURGE H2O

DHP=DOWN HOLE PUMP CB=CHECK BALL B=BAILER FD=FIELD DUPLICATE MB=METHOD BLANK FF=FIELD FILTERED

LACO ASSOCIATES
CONSULTING ENGINEERS

21 West Fourth Street, Eureka, CA 95501
TEL 707.443.5054
FAX 707.443.0553

Project Name: DIBBLES

Project No.: 4870.00

Tech: RLD

Date: 12-23-05

| WELL ID: MW1 | | WELL ID: MW2 | | WELL ID: MW3 | | WELL ID: | | WELL ID: | | WELL ID: | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TIME | DTW (ft) | TIME | DTW (ft) | TIME | DTW (ft) | TIME | DTW (ft) | TIME | DTW (ft) | TIME | DTW (ft) |
| 11:00 | 12.88 | 11:10 | 13.05 | 11:15 | 12.75 | | | | | | |
| :25 | 12.88 | 11:30 | 13.05 | 11:35 | 12.75 | | | | | | |

| WELL ID: | | WELL ID: | | WELL ID: | | WELL ID: | | WELL ID: | | WELL ID: | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TIME | DTW (ft) | TIME | DTW (ft) | TIME | DTW (ft) | TIME | DTW (ft) | TIME | DTW (ft) | TIME | DTW (ft) |

| WELL ID: | | WELL ID: | | WELL ID: | | WELL ID: | | WELL ID: | | WELL ID: | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TIME | DTW (ft) | TIME | DTW (ft) | TIME | DTW (ft) | TIME | DTW (ft) | TIME | DTW (ft) | TIME | DTW (ft) |

# ZANZI SITE INVESTIGATION; SUMMARY OF WORK PERFORMED

**TO:** LACO ASSOCIATES

**FROM:** BRIAN HODGSON

**SUBJECT:** SUMMARY OF WORK PERFORMED

**DATE:** 2/6/06

---

11:40: BRH, CJW, Dennis Lake, JLS, and Ken Zanzi on-site. Meet with Mark from Eureka Ready Mix (ERM) to discuss entry location from ERM property to Zanzi property. Discuss boring locations with Ken Zanzi.

11.45: Discuss site safety plan and hold health and safety meeting.

12:00: Install B1 to depth of 8 feet (ft). Log Soil. PID at 4.0 ft (0 ppm) and 8.0 ft (0 ppm). Sample at 4.0 ft and 6.0 ft.

12:30: Install B2 to a depth of 12 ft. Log Soil. PID at 2.9 (3 ppm) and 11.0 ft (4 ppm). Sample at 3.5, 7.5, and 11.5 ft. CJW off-site.

1:30: Install B3 to a depth of 12 ft. Log Soil. PID at 3.5 (11 ppm) and 11.0 ft (11 ppm). Sample at 3.5, 9.5, and 10.5 ft.

2:15: Install B4 to a depth of 12 ft. Log Soil. PID at 3.5 (0 ppm) and 7.0 ft (2 ppm). Sample at 2.5, 7.5, and 10.5 ft.

3:00: Install B5 to a depth of 12 ft. Log Soil. PID at 3.5 (2 ppm) and 11.5 ft (2 ppm). Sample at 2.5, 6.5, 9.5, and 11.5 ft.

3:30: BRH, JLS, and Dennis Lake off-site.

NORTH COAST LABORATORIES LTD.
5680 West End Road • Arcata • CA 95521-9202
707-822-4649 Fax 707-822-6831

# Chain of Custody

LABORATORY NUMBER:

Attention:
Results & Invoice to: Ron Kendall
Address: PO BOX 838, Fortuna, CA 95540

Phone: (707) 725-5626
Copies of Report to: LACO; Gary Manhart

Sampler (Sign & Print): SJD-RED

TAT: ☐ 24 Hr ☐ 48 Hr ☐ 5 Day ☐ 5–7 Day
☑ STD (2–3 Wk) ☐ Other:
PRIOR AUTHORIZATION IS REQUIRED FOR RUSHES

REPORTING REQUIREMENTS: State Forms ☐
Preliminary: FAX ☑ Verbal ☐ By:
Final Report: FAX ☐ Verbal ☐ By:

**CONTAINER CODES:** 1—½ gal. pl; 2—250 ml pl; 3—500 ml pl; 4—1 L Nalgene; 5—250 ml BG; 6—500 ml BG; 7—1 L BG; 8—1 L cg; 9—40 ml VOA; 10—125 ml VOA; 11—4 oz glass jar; 12—8 oz glass jar; 13—brass tube; 14—other

**PRESERVATIVE CODES:** a—$HNO_3$; b—HCl; c—$H_2SO_4$; d—$Na_2S_2O_3$; e—NaOH; f—$C_2H_3O_2Cl$; g—other

## PROJECT INFORMATION

Project Number: 4870.00
Project Name: Dibbles
Purchase Order Number: Task 3030

| LAB ID | SAMPLE ID | DATE | TIME | MATRIX* | ANALYSIS: 8260 List 1 (CONTAINER 9, PRESERVATIVE B) | ANALYSIS: TPHd/mo w/SGC (CONTAINER 7, PRESERVATIVE ------) | SAMPLE CONDITION/SPECIAL INSTRUCTIONS |
|---|---|---|---|---|---|---|---|
| | 4870-MW1-W | 12-23-05 | AM | GW | 3 | 1 | GEOTRACKER |
| | 4870-MW2-W | ↓ | ↑ | ↓ | 3 | 1 | |
| | 4870-MW3-W | | ↓ | | 3 | 1 | |
| | 4870-QCTB-W | | PM | | 1 | | |

| RELINQUISHED BY (Sign & Print) | DATE/TIME | RECEIVED BY (Sign) | DATE/TIME |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

**SAMPLE DISPOSAL**
☑ NCL Disposal of Non-Contaminated
☐ Return ☐ Pickup

**CHAIN OF CUSTODY SEALS Y/N/NA**
**SHIPPED VIA:** UPS Air-Ex Fed-Ex Bus Hand

***MATRIX:** DW=Drinking Water; Eff=Effluent; Inf=Influent; SW=Surface Water; GW=Ground Water; S=Soil; O=Other.

**ALL CONTAMINATED NON-AQUEOUS SAMPLES WILL BE RETURNED TO CLIENT**

LACO ASSOCIATES
CONSULTING ENGINEERS
21 West Fourth Street, Eureka, CA 95501
TEL 707.443.5054
FAX 707.443.0553



Project Name: Dibbles
Project No.: 4870.00
Date: 1-26-06
Golbal ID No.: T0602300517
PM: GLM

Tech: RLD
Mob/Demob time: .25/.50
Travel time: 1.0
Time on site: 11:40
Time off site: 12:40
Mileage: 38

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WELL No.: | MW1 | | | | | | | | | | | |
| DIAMETER (in) | 2.00 | | | | | | | | | | | |
| SCREENED INTERVAL (ft) | 5-15 | | | | | | | | | | | |
| DEPTH TO WATER (ft) | 10.72 | | | | | | | | | | | |
| | INITIAL | FINAL | INITIAL | FINAL | INITIAL | FINAL | INITIAL | FINAL | INITIAL | FINAL | INITIAL | FINAL |
| FIELD INTRINSICS: pH | 7.6 | 6.0 | | | | | | | | | | |
| FIELD INTRINSICS: TEMP (°C) | 12.3 | 13.4 | | | | | | | | | | |
| FIELD INTRINSICS: Ecw (µmohs) | 160 | 160 | | | | | | | | | | |
| FIELD INTRINSICS: ORP (mV) | -85 | 30 | | | | | | | | | | |
| FIELD INTRINSICS: DO (mg/L) | 5.74 | 6.01 | | | | | | | | | | |
| FIELD INTRINSICS: OTHER (units) | — | | | | | | | | | | | |
| PURGE: TIME | 12:05 | 12:13 | | | | | | | | | | |
| PURGE: METHOD (DHP/CB/B) | DHP | | | | | | | | | | | |
| PURGE: RATE (Lpm) | 0.25 | | | | | | | | | | | |
| PURGE: VOLUME (L) | 2.0 | | | | | | | | | | | |
| PURGE: COLOR | CLEAR | CLEAR | | | | | | | | | | |
| PURGE: ODOR | NONE | | | | | | | | | | | |
| PURGE: INTAKE DEPTH (FEET) | 13.0 | | | | | | | | | | | |
| SAMPLE: TIME | 12:15 | | | | | | | | | | | |
| SAMPLE: METHOD (DHP/CB/B) | DHP | | | | | | | | | | | |
| SAMPLE: ANALYTES | 8260 List 1; TPHd/mo w/SGC | | | | | | | | | | | |
| SAMPLE: TOTAL DRAWDOWN (FEET) | 1.01 | | | | | | | | | | | |
| SAMPLE: REMARKS | 18' DHT/1-BF | | | | | | | | | | | |
| WELL CONDITION | GOOD | | | | | | | | | | | |
| WASTE DRUMS | 4 DOT DRUMS ONSITE 3 SOIL 1 TRASH & SOIL 0 - PURE WATER | | | | | | | | | | | |

DEPTH MEASUREMENTS ARE REFERENCED TO TOP OF CASING

DHP=DOWN HOLE PUMP CB=CHECK BALL B=BAILER FD=FIELD DUPLICATE MB=METHOD BLANK FF=FIELD FILTERED

LACO ASSOCIATES
CONSULTING ENGINEERS

21 West Fourth Street, Eureka, CA 95501
TEL 707.443.5054
FAX 707.443.0553

Project Name: DIBBLES

Project No.: 4870.00

Tech: RLD

Date: 1-26-05

| WELL ID: | METER ACCURACY RANGE | | | | |
|---|---|---|---|---|---|
| MW 1 | +/- 0.2 pH | +/- 0.5 °C | +/- 20 µmohs | +/- 2 mv | +/- 0.3 mg/L |
| TIME | pH | TEMP (°C) | Ecw (µmohs) | ORP (mV) | DO (mg/L) |
| 12:07 | 6.5 | 12.6 | 160 | -30 | 6.38 |
| 12:09 | 6.2 | 12.7 | 160 | 16 | 6.33 |
| 12:11 | 6.0 | 13.2 | 160 | 28 | 6.25 |
| 12:13 | 6.0 | 13.4 | 160 | 30 | 6.01 |

| WELL ID: | | | | | |
|---|---|---|---|---|---|
| TIME | pH | TEMP (°C) | Ecw (µmohs) | ORP (mV) | DO (mg/L) |

| WELL ID: | | | | | |
|---|---|---|---|---|---|
| TIME | pH | TEMP (°C) | Ecw (µmohs) | ORP (mV) | DO (mg/L) |

| WELL ID: | | | | | |
|---|---|---|---|---|---|
| TIME | pH | TEMP (°C) | Ecw (µmohs) | ORP (mV) | DO (mg/L) |

| WELL ID: | | | | | |
|---|---|---|---|---|---|
| TIME | pH | TEMP (°C) | Ecw (µmohs) | ORP (mV) | DO (mg/L) |

| WELL ID: | | | | | |
|---|---|---|---|---|---|
| TIME | pH | TEMP (°C) | Ecw (µmohs) | ORP (mV) | DO (mg/L) |

| WELL ID: | | | | | |
|---|---|---|---|---|---|
| TIME | pH | TEMP (°C) | Ecw (µmohs) | ORP (mV) | DO (mg/L) |

LACO ASSOCIATES
CONSULTING ENGINEERS

21 West Fourth Street, Eureka, CA 95501
TEL 707.443.5054
FAX 707.443.0553

Project Name: DIBBLES

Project No.: 4870.00

Tech: RLD

Date: 1-26-06

| WELL ID: MW1 | | WELL ID: | | WELL ID: | | WELL ID: | | WELL ID: | | WELL ID: | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TIME | DTW (ft) | TIME | DTW (ft) | TIME | DTW (ft) | TIME | DTW (ft) | TIME | DTW (ft) | TIME | DTW (ft) |
| 11:45 | 10.72 | | | | | | | | | | |
| 12:00 | 10.72 | | | | | | | | | | |

| WELL ID: | | WELL ID: | | WELL ID: | | WELL ID: | | WELL ID: | | WELL ID: | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TIME | DTW (ft) | TIME | DTW (ft) | TIME | DTW (ft) | TIME | DTW (ft) | TIME | DTW (ft) | TIME | DTW (ft) |

| WELL ID: | | WELL ID: | | WELL ID: | | WELL ID: | | WELL ID: | | WELL ID: | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TIME | DTW (ft) | TIME | DTW (ft) | TIME | DTW (ft) | TIME | DTW (ft) | TIME | DTW (ft) | TIME | DTW (ft) |

NORTH COAST LABORATORIES LTD.
5680 West End Road • Arcata • CA 95521-9202
707-822-4649 Fax 707-822-6831

# Chain of Custody

LABORATORY NUMBER:

Attention:
Results & Invoice to: Ron Kendall
Address: PO BOX 838, Fortuna, CA 95540

Phone: (707) 725-5626
Copies of Report to: LACO; Gary Manhart

Sampler (Sign & Print): RLD

TAT: ☐ 24 Hr ☐ 48 Hr ☐ 5 Day ☐ 5–7 Day
☑ STD (2–3 Wk) ☐ Other:
PRIOR AUTHORIZATION IS REQUIRED FOR RUSHES

REPORTING REQUIREMENTS: State Forms ☐
Preliminary: FAX ☑ Verbal ☐ By:
Final Report: FAX ☐ Verbal ☐ By:

**PROJECT INFORMATION**
Project Number: 4870.00
Project Name: Dibbles
Purchase Order Number: Task 3035

| LAB ID | SAMPLE ID | DATE | TIME | MATRIX* | CONTAINER | PRESERVATIVE | ANALYSIS: 8260 List 1 | ANALYSIS: TPHd/mo w/SGC |
|---|---|---|---|---|---|---|---|---|
| | | | | | 9 | B | | 7 |
| | 4870-MW1-W | 1-26-06 | PM | GW | 3 | | 1 | 1 |
| | 4870-QCTB-W | ↓ | ↓ | ↓ | 1 | | | |

**CONTAINER CODES:** 1—½ gal. pl; 2—250 ml pl; 3—500 ml pl; 4—1 L Nalgene; 5—250 ml BG; 6—500 ml BG; 7—1 L BG; 8—1 L cg; 9—40 ml VOA; 10—125 ml VOA; 11—4 oz glass jar; 12—8 oz glass jar; 13—brass tube; 14—other

**PRESERVATIVE CODES:** a—$HNO_3$; b—HCl; c—$H_2SO_4$; d—$Na_2S_2O_3$; e—NaOH; f—$C_2H_3O_2Cl$; g—other

**SAMPLE CONDITION/SPECIAL INSTRUCTIONS**
GEOTRACKER

| RELINQUISHED BY (Sign & Print) | DATE/TIME | RECEIVED BY (Sign) | DATE/TIME |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

**SAMPLE DISPOSAL**
☑ NCL Disposal of Non-Contaminated
☐ Return ☐ Pickup

**CHAIN OF CUSTODY SEALS Y/N/NA**
**SHIPPED VIA:** UPS Air-Ex Fed-Ex Bus Hand

***MATRIX:** DW=Drinking Water; Eff=Effluent; Inf=Influent; SW=Surface Water; GW=Ground Water; S=Soil; O=Other.

**ALL CONTAMINATED NON-AQUEOUS SAMPLES WILL BE RETURNED TO CLIENT**

**LACO ASSOCIATES**
CONSULTING ENGINEERS

21 West Fourth Street, Eureka, CA 95501
TEL 707.443.5054
FAX 707.443.0553



Project Name: Dibbles
Project No.: 4870.00
Date: 2-23-06
Golbal ID No.: T0602300517
PM: MRK

Tech: ~~SJD~~ RLD
Mob/Demob time: .50/.50
Travel time: 1.0
Time on site: 12:20
Time off site: 1:20
Mileage: 36

| WELL No | MW1 | MW2 | MW3 | | |
|---|---|---|---|---|---|
| DIAMETER (in) | 2.00 | 2.00 | 2.00 | | |
| SCREENED INTERVAL (ft) | 5-15 | 5-15 | 5-15 | | |
| DEPTH TO WATER (ft) | 13.92 | 12.92 | 13.62 | | |

| | | MW1 INITIAL | MW1 FINAL | MW2 INITIAL | MW2 FINAL | MW3 INITIAL | MW3 FINAL | INITIAL | FINAL | INITIAL | FINAL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DEPTH MEASUREMENTS ARE REFERENCED TO TOP OF CASING | FIELD INTRINSICS: pH | | | | | | | | | | |
| | TEMP (°C) | | | | | | | | | | |
| | Ecw (µmohs) | | | | | | | | | | |
| | ORP (mV) | | | | | | | | | | |
| | DO (mg/L) | | | | | | | | | | |
| | OTHER (units) | | | | | | | | | | |
| | PURGE: TIME | 1:05 | 1:15 | | | | | | | | |
| | METHOD (DHP/CB/B) | 3/4" B | | | | | | | | | |
| | RATE (Lpm) | — | | | | | | | | | |
| | VOLUME (L) | 0.50 | | | | | | | | | |
| | COLOR | CLOUDY CLEAR | TAN | | | | | | | | |
| | ODOR | NONE | | | | | | | | | |
| | INTAKE DEPTH (FEET) | 14.5 | | | | | | | | | |
| | SAMPLE: TIME | 1:17 | | | | | | | | | |
| | METHOD (DHP/CB/B) | 3/4" B | | | | | | | | | |
| | ANALYTES | 8260 List 1; TPHd/mo w/SGC | | MEASURE ONLY | | MEASURE ONLY | | | | | |
| | TOTAL DRAWDOWN (FEET) | — | | | | | | | | | |
| | REMARKS | BARELY ENOUGH TO GET SAMPLES | | | | | | | | | |
| WELL CONDITION | | GOOD | | GOOD | | GOOD | | | | | |

WASTE DRUMS: 4 DOT DRUMS ONSITE 3 - SOIL 1 - TRASH & SOIL 0 - PURGE H2O

DHP=DOWN HOLE PUMP CB=CHECK BALL B=BAILER FD=FIELD DUPLICATE MB=METHOD BLANK FF=FIELD FILTERED

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Project Name: DIBBLES
Project No.: 4870.00

Tech: RLD
Date: 2-23-06

| WELL ID: MW1 | | WELL ID: MW2 | | WELL ID: MW3 | | WELL ID: | | WELL ID: | | WELL ID: | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TIME | DTW (ft) | TIME | DTW (ft) | TIME | DTW (ft) | TIME | DTW (ft) | TIME | DTW (ft) | TIME | DTW (ft) |
| 12:25 | 13.92 | 12:30 | 12.92 | 12:35 | 13.62 | | | | | | |
| 12:40 | 13.92 | 12:45 | 12.92 | 12:50 | 13.62 | | | | | | |

| WELL ID: | | WELL ID: | | WELL ID: | | WELL ID: | | WELL ID: | | WELL ID: | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TIME | DTW (ft) | TIME | DTW (ft) | TIME | DTW (ft) | TIME | DTW (ft) | TIME | DTW (ft) | TIME | DTW (ft) |

| WELL ID: | | WELL ID: | | WELL ID: | | WELL ID: | | WELL ID: | | WELL ID: | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TIME | DTW (ft) | TIME | DTW (ft) | TIME | DTW (ft) | TIME | DTW (ft) | TIME | DTW (ft) | TIME | DTW (ft) |

NORTH COAST LABORATORIES LTD.
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707-822-4649 Fax 707-822-6831

# Chain of Custody

LABORATORY NUMBER:

Attention:
Results & Invoice to: Ron Kendall
Address: PO BOX 838, Fortuna, CA 95540

Phone: (707) 725-5626
Copies of Report to: LACO; Mike Kitahara

Sampler (Sign & Print): ~~SID~~ RLD

TAT: 24 Hr 48 Hr 5 Day 5–7 Day
✔ STD (2–3 Wk) Other:
PRIOR AUTHORIZATION IS REQUIRED FOR RUSHES

REPORTING REQUIREMENTS: State Forms
Preliminary: FAX ✔ Verbal By:
Final Report: FAX Verbal By:

**PROJECT INFORMATION**
Project Number: 4870.00
Project Name: Dibbles
Purchase Order Number: Task 3035

| LAB ID | SAMPLE ID | DATE | TIME | MATRIX* | ANALYSIS: 8260 List 1 (CONTAINER 9, PRESERVATIVE B) | ANALYSIS: TPHd/mo w/SGC (CONTAINER 7, PRESERVATIVE ----) |
|---|---|---|---|---|---|---|
| | 4870-MW1-W | 2-23-06 | PM | GW | 3 | 1 |
| | 4870-QCTB-W | ↓ | ↓ | ↓ | 1 | |

**CONTAINER CODES:** 1—½ gal. pl; 2—250 ml pl; 3—500 ml pl; 4—1 L Nalgene; 5—250 ml BG; 6—500 ml BG; 7—1 L BG; 8—1 L cg; 9—40 ml VOA; 10—125 ml VOA; 11—4 oz glass jar; 12—8 oz glass jar; 13—brass tube; 14—other

**PRESERVATIVE CODES:** a—$HNO_3$; b—HCl; c—$H_2SO_4$; d—$Na_2S_2O_3$; e—NaOH; f—$C_2H_3O_2Cl$; g—other

**SAMPLE CONDITION/SPECIAL INSTRUCTIONS**
GEOTRACKER

LIMITED AMOUNT – 1 L BG

| RELINQUISHED BY (Sign & Print) | DATE/TIME | RECEIVED BY (Sign) | DATE/TIME |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

**SAMPLE DISPOSAL**
✔ NCL Disposal of Non-Contaminated
Return Pickup

CHAIN OF CUSTODY SEALS Y/N/NA
SHIPPED VIA: UPS Air-Ex Fed-Ex Bus Hand

***MATRIX:** DW=Drinking Water; Eff=Effluent; Inf=Influent; SW=Surface Water; GW=Ground Water; S=Soil; O=Other.

**ALL CONTAMINATED NON-AQUEOUS SAMPLES WILL BE RETURNED TO CLIENT**

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21 West Fourth Street, Eureka, CA 95501
TEL 707.443.5054
FAX 707.443.0553



Project Name: Dibbles
Project No.: 4870.00
Date: 3/7/06
Golbal ID No.: T0602300517
PM: MRK

Tech: ~~SJD~~ RLD
Mob/Demob time: 150/150
Travel time: 1.0
Time on site: 12:45
Time off site: 2:30
Mileage: 36

| WELL No. | MW1 | | MW2 | | MW3 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| DIAMETER (in) | 2.00 | | 2.00 | | 2.00 | | | | | |
| SCREENED INTERVAL (ft) | 5-15 | | 5-15 | | 5-15 | | | | | |
| DEPTH TO WATER (ft) | 10.25 | | 9.61 | | 9.50 | | | | | |
| | INITIAL | FINAL | INITIAL | FINAL | INITIAL | FINAL | INITIAL | FINAL | INITIAL | FINAL |
| FIELD INTRINSICS: pH | — | — | — | — | — | — | | | | |
| TEMP (°C) | 13.7 | 12.6 | 13.6 | 13.7 | 12.3 | 12.8 | | | | |
| Ecw (µmohs) | 140 | 140 | 80 | 80 | 120 | 120 | | | | |
| ORP (mV) | 134 | 196 | 200 | 225 | 200 | 202 | | | | |
| DO (mg/L) | 5.14 | 6.15 | 8.03 | 8.16 | 8.36 | 9.37 | | | | |
| OTHER (units) | — | | — | | — | | | | | |
| PURGE: TIME | 1:41 | 1:49 | 2:23 | 2:29 | 2:05 | 2:11 | | | | |
| METHOD (DHP/CB/B) | DHP | | DHP | | DHP | | | | | |
| RATE (Lpm) | 0.25 | | 0.25 | | 0.25 | | | | | |
| VOLUME (L) | 2.0 | | 1.5 | | 1.5 | | | | | |
| COLOR | CLEAR | CLEAR | CLEAR | TAN TINT | CLEAR | CLEAR | | | | |
| ODOR | NONE | | NONE | | NONE | | | | | |
| INTAKE DEPTH (FEET) | 13.0 | | 13.0 | | 13.0 | | | | | |
| SAMPLE: TIME | 1:51 | | 2:31 | | 2:13 | | | | | |
| METHOD (DHP/CB/B) | DHP | | DHP | | DHP | | | | | |
| ANALYTES | 8260 List 1; TPHd/mo w/SGC | | 8260 List 1; TPHd/mo w/SGC | | 8260 List 1; TPHd/mo w/SGC | | | | | |
| TOTAL DRAWDOWN (FEET) | 0.55 | | 0.41 | | 1.03 | | | | | |
| REMARKS | pH METER NOT WORKING | | pH METER NOT WORKING | | pH METER NOT WORKING | | | | | |
| WELL CONDITION | GOOD | | GOOD | | GOOD | | | | | |
| WASTE DRUMS | | | | | | | | | | |

DEPTH MEASUREMENTS ARE REFERENCED TO TOP OF CASING

DHP=DOWN HOLE PUMP CB=CHECK BALL B=BAILER FD=FIELD DUPLICATE MB=METHOD BLANK FF=FIELD FILTERED

REVIEWER

REVISED:3/6/2006

LACO ASSOCIATES
CONSULTING ENGINEERS
21 West Fourth Street, Eureka, CA 95501
TEL 707.443.5054
FAX 707.443.0553

Project Name: DIBBLE'S
Project No.: 4870.00
Tech: RLD
Date: 3-7-06

## METER ACCURACY RANGE

| +/- 0.2 pH | +/- 0.5 °C | +/- 20 µmohs | +/- 2 mv | +/- 0.3 mg/L |
|---|---|---|---|---|

WELL ID: MW1

| TIME | pH | TEMP (°C) | Ecw (µmohs) | ORP (mV) | DO (mg/L) |
|---|---|---|---|---|---|
| 1:43 | — | 12.9 | 140 | 190 | 5.61 |
| 1:45 | — | 12.8 | 140 | 193 | 5.77 |
| 1:47 | — | 12.7 | 140 | 195 | 5.99 |
| 1:49 | — | 12.6 | 140 | 196 | 6.15 |

WELL ID: MW2

| TIME | pH | TEMP (°C) | Ecw (µmohs) | ORP (mV) | DO (mg/L) |
|---|---|---|---|---|---|
| 2:25 | — | 13.6 | 80 | 222 | 8.18 |
| 2:27 | — | 13.7 | 80 | 224 | 8.20 |
| 2:29 | — | 13.7 | 80 | 225 | 8.16 |

WELL ID: MW3

| TIME | pH | TEMP (°C) | Ecw (µmohs) | ORP (mV) | DO (mg/L) |
|---|---|---|---|---|---|
| 2:07 | — | 12.7 | 120 | 206 | 9.35 |
| 2:09 | — | 12.7 | 120 | 204 | 9.38 |
| 2:11 | — | 12.8 | 120 | 202 | 9.37 |

WELL ID: —

| TIME | pH | TEMP (°C) | Ecw (µmohs) | ORP (mV) | DO (mg/L) |
|---|---|---|---|---|---|

WELL ID: —

| TIME | pH | TEMP (°C) | Ecw (µmohs) | ORP (mV) | DO (mg/L) |
|---|---|---|---|---|---|

WELL ID: —

| TIME | pH | TEMP (°C) | Ecw (µmohs) | ORP (mV) | DO (mg/L) |
|---|---|---|---|---|---|

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CONSULTING ENGINEERS

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TEL 707.443.5054
FAX 707.443.0553

Project Name: DIBBLES

Project No.: 4870.00

Tech: RLP

Date: 3-7-06

| WELL ID: MW1 | | WELL ID: MW2 | | WELL ID: MW3 | | WELL ID: | | WELL ID: | | WELL ID: | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TIME | DTW (ft) | TIME | DTW (ft) | TIME | DTW (ft) | TIME | DTW (ft) | TIME | DTW (ft) | TIME | DTW (ft) |
| 12:50 | 10.25 | 12:55 | 9.47 | 1:00 | 9.50 | | | | | | |
| 1:05 | 10.25 | 1:10 | 9.61 | 1:15 | 9.50 | | | | | | |
| | | 1:20 | 9.61 | | | | | | | | |

| WELL ID: | | WELL ID: | | WELL ID: | | WELL ID: | | WELL ID: | | WELL ID: | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TIME | DTW (ft) | TIME | DTW (ft) | TIME | DTW (ft) | TIME | DTW (ft) | TIME | DTW (ft) | TIME | DTW (ft) |

| WELL ID: | | WELL ID: | | WELL ID: | | WELL ID: | | WELL ID: | | WELL ID: | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TIME | DTW (ft) | TIME | DTW (ft) | TIME | DTW (ft) | TIME | DTW (ft) | TIME | DTW (ft) | TIME | DTW (ft) |

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# Chain of Custody

LABORATORY NUMBER:

Attention:
Results & Invoice to: Ron Kendall
Address: PO BOX 838, Fortuna, CA 95540

Phone: (707) 725-5626
Copies of Report to: LACO; Mike Kitahara

Sampler (Sign & Print): ~~STD~~ RLD

TAT: ☐ 24 Hr ☐ 48 Hr ☐ 5 Day ☐ 5–7 Day
☑ STD (2–3 Wk) ☐ Other:
PRIOR AUTHORIZATION IS REQUIRED FOR RUSHES

REPORTING REQUIREMENTS: State Forms ☐
Preliminary: FAX ☑ Verbal ☐ By:
Final Report: FAX ☐ Verbal ☐ By:

**CONTAINER CODES:** 1—½ gal. pl; 2—250 ml pl; 3—500 ml pl; 4—1 L Nalgene; 5—250 ml BG; 6—500 ml BG; 7—1 L BG; 8—1 L cg; 9—40 ml VOA; 10—125 ml VOA; 11—4 oz glass jar; 12—8 oz glass jar; 13—brass tube; 14—other

**PRESERVATIVE CODES:** a—$HNO_3$; b—HCl; c—$H_2SO_4$; d—$Na_2S_2O_3$; e—NaOH; f—$C_2H_3O_2Cl$; g—other

## PROJECT INFORMATION

Project Number: 4870.00
Project Name: Dibbles
Purchase Order Number: Task 3035

| LAB ID | SAMPLE ID | DATE | TIME | MATRIX* | ANALYSIS | CONTAINER | PRESERVATIVE |
|---|---|---|---|---|---|---|---|
| | 4870-MW1-W | 3-7-06 | PM | GW | 8260 List 1 | 9 | B |
| | 4870-MW2-W | ↓ | ↓ | ↓ | TPHd/mo w/SGC | 7 | ---- |
| | 4870-MW3-W | | | | | | |
| | 4870-QCTB-W | | | | | | |
| | | | | | 3 | 1 | |
| | | | | | 3 | 1 | |
| | | | | | 3 | 1 | |
| | | | | | 1 | | |

## SAMPLE CONDITION/SPECIAL INSTRUCTIONS

GEOTRACKER

| RELINQUISHED BY (Sign & Print) | DATE/TIME | RECEIVED BY (Sign) | DATE/TIME |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

**SAMPLE DISPOSAL**
☑ NCL Disposal of Non-Contaminated
☐ Return ☐ Pickup

**CHAIN OF CUSTODY SEALS Y/N/NA**
**SHIPPED VIA:** UPS Air-Ex Fed-Ex Bus Hand

***MATRIX:** DW=Drinking Water; Eff=Effluent; Inf=Influent; SW=Surface Water; GW=Ground Water; S=Soil; O=Other.

**ALL CONTAMINATED NON-AQUEOUS SAMPLES WILL BE RETURNED TO CLIENT**

# Attachment 3

NORTH COAST LABORATORIES LTD.

February 09, 2006

Pvt. cust. paying on pickup

,

Attn: Ron Kendall

RE: 4870.00, Dibbles

Order No.: 0602056
Invoice No.: 56176
PO No.: TASK 3035
ELAP No. 1247-Expires July 2006

**SAMPLE IDENTIFICATION**

| Fraction | Client Sample Description |
|---|---|
| 01A | 4870-MW1-W |
| 01D | 4870-MW1-W |
| 02A | 4870-QCTB-W |

ND = Not Detected at the Reporting Limit

Limit = Reporting Limit

All solid results are expressed on a wet-weight basis unless otherwise noted.

**REPORT CERTIFIED BY**

Colleen Blackstone

Laboratory Supervisor(s) QA Unit

Jesse G. Chaney, Jr.
Laboratory Director

5680 West End Road • Arcata California 95521-9202 • 707-822-4649 • FAX 707-822-6831

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**North Coast Laboratories, Ltd.** **Date:** *09-Feb-06*

**CLIENT:** Pvt. cust. paying on pickup
**Project:** 4870.00, Dibbles
**Lab Order:** 0602056

# CASE NARRATIVE

The sample submitted for a silica gel cleanup was initially analyzed for diesel/motor oil. The sample showed no detectable levels of the analytes and was not subjected to the cleanup procedure.

TPH as Diesel/Motor Oil:
The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) recoveries were above the upper acceptance limit for diesel. These recoveries indicate that the sample results may be erroneously high. There were no detectable levels of the analyte in the sample; therefore, the data were accepted.

Gasoline Components/Additives:
The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) recoveries were above the upper acceptance limit for benzene. These recoveries indicate that the sample results may be erroneously high. There were no detectable levels of the analyte in the samples; therefore, the data were accepted.

Date: 09-Feb-06
WorkOrder: 0602056

# ANALYTICAL REPORT

**Client Sample ID:** 4870-MW1-W **Received:** 2/1/06 **Collected:** 1/26/06 0:00
**Lab ID:** 0602056-01A

**Test Name:** Gasoline Components/Additives **Reference:** LUFT/EPA 8260B Modified

| Parameter | Result | Limit | Units | DF | Extracted | Analyzed |
|---|---|---|---|---|---|---|
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | µg/L | 1.0 | | 2/7/06 |
| Tert-butyl alcohol (TBA) | ND | 10 | µg/L | 1.0 | | 2/7/06 |
| Di-Isopropyl ether (DIPE) | ND | 1.0 | µg/L | 1.0 | | 2/7/06 |
| Ethyl tert-butyl ether (ETBE) | ND | 1.0 | µg/L | 1.0 | | 2/7/06 |
| Benzene | ND | 0.50 | µg/L | 1.0 | | 2/7/06 |
| Tert-amyl methyl ether (TAME) | ND | 1.0 | µg/L | 1.0 | | 2/7/06 |
| Toluene | ND | 0.50 | µg/L | 1.0 | | 2/7/06 |
| Ethylbenzene | ND | 0.50 | µg/L | 1.0 | | 2/7/06 |
| m,p-Xylene | ND | 0.50 | µg/L | 1.0 | | 2/7/06 |
| o-Xylene | ND | 0.50 | µg/L | 1.0 | | 2/7/06 |
| Surrogate: 1,4-Dichlorobenzene-d4 | 111 | 80.8-139 | % Rec | 1.0 | | 2/7/06 |

**Test Name:** TPH as Gasoline **Reference:** LUFT/EPA 8260B Modified

| Parameter | Result | Limit | Units | DF | Extracted | Analyzed |
|---|---|---|---|---|---|---|
| TPHC Gasoline | ND | 50 | µg/L | 1.0 | | 2/7/06 |

**Client Sample ID:** 4870-MW1-W **Received:** 2/1/06 **Collected:** 1/26/06 0:00
**Lab ID:** 0602056-01D

**Test Name:** TPH as Diesel/Motor Oil **Reference:** EPA 3510/GCFID(LUFT)/EPA 8015B

| Parameter | Result | Limit | Units | DF | Extracted | Analyzed |
|---|---|---|---|---|---|---|
| TPHC Diesel (C12-C22) | ND | 50 | µg/L | 1.0 | 2/6/06 | 2/7/06 |
| TPHC Motor Oil | ND | 170 | µg/L | 1.0 | 2/6/06 | 2/7/06 |



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Date: 09-Feb-06
WorkOrder: 0602056

# ANALYTICAL REPORT

**Client Sample ID:** 4870-QCTB-W **Received:** 2/1/06 **Collected:** 1/26/06 0:00
**Lab ID:** 0602056-02A

**Test Name:** Gasoline Components/Additives **Reference:** LUFT/EPA 8260B Modified

| Parameter | Result | Limit | Units | DF | Extracted | Analyzed |
|---|---|---|---|---|---|---|
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | µg/L | 1.0 | | 2/6/06 |
| Tert-butyl alcohol (TBA) | ND | 10 | µg/L | 1.0 | | 2/6/06 |
| Di-isopropyl ether (DIPE) | ND | 1.0 | µg/L | 1.0 | | 2/6/06 |
| Ethyl tert-butyl ether (ETBE) | ND | 1.0 | µg/L | 1.0 | | 2/6/06 |
| Benzene | ND | 0.50 | µg/L | 1.0 | | 2/6/06 |
| Tert-amyl methyl ether (TAME) | ND | 1.0 | µg/L | 1.0 | | 2/6/06 |
| Toluene | ND | 0.50 | µg/L | 1.0 | | 2/6/06 |
| Ethylbenzene | ND | 0.50 | µg/L | 1.0 | | 2/6/06 |
| m,p-Xylene | ND | 0.50 | µg/L | 1.0 | | 2/6/06 |
| o-Xylene | ND | 0.50 | µg/L | 1.0 | | 2/6/06 |
| Surrogate: 1,4-Dichlorobenzene-d4 | 109 | 80.8-139 | % Rec | 1.0 | | 2/6/06 |

**Test Name:** TPH as Gasoline **Reference:** LUFT/EPA 8260B Modified

| Parameter | Result | Limit | Units | DF | Extracted | Analyzed |
|---|---|---|---|---|---|---|
| TPHC Gasoline | ND | 50 | µg/L | 1.0 | | 2/6/06 |



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North Coast Laboratories, Ltd.

**Date:** 09-Feb-06

**CLIENT:** Pvt. cust. paying on pickup
**Work Order:** 0602056
**Project:** 4870.00, Dibbles

# QC SUMMARY REPORT

## Method Blank

Sample ID: **MB-2/6/06** Batch ID: **R39631** Test Code: **8260OXYW** Units: **µg/L** Analysis Date: **2/6/06 11:19:00 AM** Prep Date:
Client ID: Run ID: **ORGCMS3_060206B** SeqNo: **569357**

| Analyte | Result | Limit | SPK value | SPK Ref Val | % Rec | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | | |
| Tert-butyl alcohol (TBA) | ND | 10 | | | | | | | | | |
| Di-isopropyl ether (DIPE) | ND | 1.0 | | | | | | | | | |
| Ethyl tert-butyl ether (ETBE) | ND | 1.0 | | | | | | | | | |
| Benzene | ND | 0.50 | | | | | | | | | |
| Tert-amyl methyl ether (TAME) | ND | 1.0 | | | | | | | | | |
| Toluene | ND | 0.50 | | | | | | | | | |
| Ethylbenzene | ND | 0.50 | | | | | | | | | |
| m,p-Xylene | 0.1475 | 0.50 | | | | | | | | | J |
| o-Xylene | ND | 0.50 | | | | | | | | | |
| 1,4-Dichlorobenzene-d4 | 1.10 | 0.10 | 1.00 | 0 | 110% | 81 | 139 | 0 | | | |

Sample ID: **MB-2/6/06** Batch ID: **R39627** Test Code: **GASW-MS** Units: **µg/L** Analysis Date: **2/6/06 11:19:00 AM** Prep Date:
Client ID: Run ID: **ORGCMS3_060206A** SeqNo: **569289**

| Analyte | Result | Limit | SPK value | SPK Ref Val | % Rec | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TPHC Gasoline | 26.29 | 50 | | | | | | | | | J |

Sample ID: **MB-15118** Batch ID: **15118** Test Code: **TPHDMW** Units: **µg/L** Analysis Date: **2/7/06 7:59:47 PM** Prep Date: **2/6/06**
Client ID: Run ID: **ORGC7_060208B** SeqNo: **569658**

| Analyte | Result | Limit | SPK value | SPK Ref Val | % Rec | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TPHC Diesel (C12-C22) | ND | 50 | | | | | | | | | |
| TPHC Motor Oil | ND | 170 | | | | | | | | | |

**Qualifiers:** ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

North Coast Laboratories, Ltd.

**Date:** 09-Feb-06

**CLIENT:** Pvt. cust. paying on pickup
**Work Order:** 0602056
**Project:** 4870.00, Dibbles

# QC SUMMARY REPORT

Laboratory Control Spike

Sample ID: **LCS-06079** Batch ID: **R39631** Test Code: **8260OXYW** Units: **µg/L** Analysis Date: **2/6/06 7:55:00 AM** Prep Date:

Client ID: Run ID: **ORGCMS3_060206B** SeqNo: **569354**

| Analyte | Result | Limit | SPK value | SPK Ref Val | % Rec | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether (MTBE) | 21.43 | 1.0 | 20.0 | 0 | 107% | 80 | 120 | 0 | | | |
| Tert-butyl alcohol (TBA) | 477.3 | 10 | 400 | 0 | 119% | 25 | 162 | 0 | | | |
| Di-isopropyl ether (DIPE) | 21.22 | 1.0 | 20.0 | 0 | 106% | 80 | 120 | 0 | | | |
| Ethyl tert-butyl ether (ETBE) | 20.22 | 1.0 | 20.0 | 0 | 101% | 77 | 120 | 0 | | | |
| Benzene | 23.41 | 0.50 | 20.0 | 0 | 117% | 78 | 117 | 0 | | | S |
| Tert-amyl methyl ether (TAME) | 19.62 | 1.0 | 20.0 | 0 | 98.1% | 64 | 136 | 0 | | | |
| Toluene | 22.05 | 0.50 | 20.0 | 0 | 110% | 80 | 120 | 0 | | | |
| Ethylbenzene | 20.60 | 0.50 | 20.0 | 0 | 103% | 80 | 120 | 0 | | | |
| m,p-Xylene | 42.94 | 0.50 | 40.0 | 0 | 107% | 80 | 120 | 0 | | | |
| o-Xylene | 18.04 | 0.50 | 20.0 | 0 | 90.2% | 80 | 120 | 0 | | | |
| 1,4-Dichlorobenzene-d4 | 1.16 | 0.10 | 1.00 | 0 | 116% | 81 | 139 | 0 | | | |

Sample ID: **LCSD-06079** Batch ID: **R39631** Test Code: **8260OXYW** Units: **µg/L** Analysis Date: **2/6/06 8:20:00 AM** Prep Date:

Client ID: Run ID: **ORGCMS3_060206B** SeqNo: **569355**

| Analyte | Result | Limit | SPK value | SPK Ref Val | % Rec | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether (MTBE) | 21.78 | 1.0 | 20.0 | 0 | 109% | 80 | 120 | 21.4 | 1.63% | 20 | |
| Tert-butyl alcohol (TBA) | 457.1 | 10 | 400 | 0 | 114% | 25 | 162 | 477 | 4.34% | 20 | |
| Di-isopropyl ether (DIPE) | 21.90 | 1.0 | 20.0 | 0 | 109% | 80 | 120 | 21.2 | 3.13% | 20 | |
| Ethyl tert-butyl ether (ETBE) | 20.84 | 1.0 | 20.0 | 0 | 104% | 77 | 120 | 20.2 | 2.98% | 20 | |
| Benzene | 24.13 | 0.50 | 20.0 | 0 | 121% | 78 | 117 | 23.4 | 3.03% | 20 | S |
| Tert-amyl methyl ether (TAME) | 19.99 | 1.0 | 20.0 | 0 | 99.9% | 64 | 136 | 19.6 | 1.86% | 20 | |
| Toluene | 22.61 | 0.50 | 20.0 | 0 | 113% | 80 | 120 | 22.0 | 2.47% | 20 | |
| Ethylbenzene | 21.11 | 0.50 | 20.0 | 0 | 106% | 80 | 120 | 20.6 | 2.41% | 20 | |
| m,p-Xylene | 44.08 | 0.50 | 40.0 | 0 | 110% | 80 | 120 | 42.9 | 2.62% | 20 | |
| o-Xylene | 18.65 | 0.50 | 20.0 | 0 | 93.2% | 80 | 120 | 18.0 | 3.28% | 20 | |
| 1,4-Dichlorobenzene-d4 | 1.16 | 0.10 | 1.00 | 0 | 115% | 81 | 139 | 1.16 | 0.851% | 20 | |

**Qualifiers:** ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

**CLIENT:** Pvt. cust. paying on pickup
**Work Order:** 0602056
**Project:** 4870.00, Dibbles

# QC SUMMARY REPORT

## Laboratory Control Spike

Sample ID: **LCS-06080** Batch ID: **R39627** Test Code: **GASW-MS** Units: **µg/L** Analysis Date: **2/6/06 9:37:00 AM** Prep Date:
Client ID: Run ID: **ORGCMS3_060206A** SeqNo: **569286**

| Analyte | Result | Limit | SPK value | SPK Ref Val | % Rec | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TPHC Gasoline | 920.9 | 50 | 1,000 | 0 | 92.1% | 80 | 120 | 0 | | | |

Sample ID: **LCSD-06080** Batch ID: **R39627** Test Code: **GASW-MS** Units: **µg/L** Analysis Date: **2/6/06 10:03:00 AM** Prep Date:
Client ID: Run ID: **ORGCMS3_060206A** SeqNo: **569287**

| Analyte | Result | Limit | SPK value | SPK Ref Val | % Rec | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TPHC Gasoline | 922.8 | 50 | 1,000 | 0 | 92.3% | 80 | 120 | 921 | 0.211% | 20 | |

Sample ID: **LCS-15118** Batch ID: **15118** Test Code: **TPHDMW** Units: **µg/L** Analysis Date: **2/8/06 6:29:47 PM** Prep Date: **2/6/06**
Client ID: Run ID: **ORGC7_060208B** SeqNo: **569662**

| Analyte | Result | Limit | SPK value | SPK Ref Val | % Rec | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TPHC Diesel (C12-C22) | 682.2 | 50 | 500 | 0 | 136% | 72 | 124 | 0 | | | S |
| TPHC Motor Oil | 1,184 | 170 | 1,000 | 0 | 118% | 71 | 139 | 0 | | | |

Sample ID: **LCSD-15118** Batch ID: **15118** Test Code: **TPHDMW** Units: **µg/L** Analysis Date: **2/8/06 6:49:50 PM** Prep Date: **2/6/06**
Client ID: Run ID: **ORGC7_060208B** SeqNo: **569663**

| Analyte | Result | Limit | SPK value | SPK Ref Val | % Rec | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TPHC Diesel (C12-C22) | 707.8 | 50 | 500 | 0 | 142% | 72 | 124 | 682 | 3.69% | 15 | S |
| TPHC Motor Oil | 1,185 | 170 | 1,000 | 0 | 119% | 71 | 139 | 1,180 | 0.0811% | 15 | |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

#0602056

P. 1 of 1

NORTH COAST LABORATORIES LTD.
5680 West End Road • Arcata • CA 95521-9202
707-822-4649 Fax 707-822-6831

# Chain of Custody

LABORATORY NUMBER:

Attention:
Results & Invoice to: Ron Kendall
Address: PO BOX 838, Fortuna, CA 95540

Phone: (707) 725-5626
Copies of Report to: LACO; Gary Manhart

Sampler (Sign & Print): RLD

TAT: ☐ 24 Hr ☐ 48 Hr ☐ 5 Day ☐ 5–7 Day
☑ STD (2–3 Wk) ☐ Other:
PRIOR AUTHORIZATION IS REQUIRED FOR RUSHES

REPORTING REQUIREMENTS: State Forms ☐
Preliminary: FAX ☑ Verbal ☐ By:
Final Report: FAX ☐ Verbal ☐ By:

**CONTAINER CODES:** 1—½ gal. pl; 2—250 ml pl; 3—500 ml pl; 4—1 L Nalgene; 5—250 ml BG; 6—500 ml BG; 7—1 L BG; 8—1 L cg; 9—40 ml VOA; 10—125 ml VOA; 11—4 oz glass jar; 12—8 oz glass jar; 13—brass tube; 14—other

**PRESERVATIVE CODES:** a—$HNO_3$; b—HCl; c—$H_2SO_4$; d—$Na_2S_2O_3$; e—NaOH; f—$C_2H_3O_2Cl$; g—other

## PROJECT INFORMATION

Project Number: 4870.00
Project Name: Dibbles
Purchase Order Number: Task 3035

| LAB ID | SAMPLE ID | DATE | TIME | MATRIX* | ANALYSIS: 8260 List 1 (CONTAINER 9, PRESERVATIVE B) | ANALYSIS: TPHd/mo w/SGC (CONTAINER 7, PRESERVATIVE ----) |
|---|---|---|---|---|---|---|
| | 4870-MW1-W | 1-26-06 | PM | GW | 3 | 1 |
| | 4870-QCTB-W | ↓ | ↓ | ↓ | 1 | |

SAMPLE CONDITION/SPECIAL INSTRUCTIONS
GEOTRACKER

| RELINQUISHED BY (Sign & Print) | DATE/TIME | RECEIVED BY (Sign) | DATE/TIME |
|---|---|---|---|
| STEVE DAVIS | 2-1-06 4:30pm | 2/1/06 | 1630 |

SAMPLE DISPOSAL
☑ NCL Disposal of Non-Contaminated
☐ Return ☐ Pickup

CHAIN OF CUSTODY SEALS Y/N/NA
SHIPPED VIA: UPS Air-Ex Fed-Ex Bus Hand

***MATRIX:** DW=Drinking Water; Eff=Effluent; Inf=Influent; SW=Surface Water; GW=Ground Water; S=Soil; O=Other.

**ALL CONTAMINATED NON-AQUEOUS SAMPLES WILL BE RETURNED TO CLIENT**

NORTH COAST LABORATORIES LTD.

March 09, 2006

Pvt. cust. paying on pickup

,

Attn: Ron Kendall

RE: 4870.00, Dibbles

Order No.: 0603085
Invoice No.: 56731
PO No.: TASK 3035
ELAP No. 1247-Expires July 2006

**SAMPLE IDENTIFICATION**

| Fraction | Client Sample Description |
|---|---|
| 01A | 4870-MW1-W |
| 01D | 4870-MW1-W |
| 02A | 4870-QCTB-W |

ND = Not Detected at the Reporting Limit

Limit = Reporting Limit

All solid results are expressed on a wet-weight basis unless otherwise noted.

**REPORT CERTIFIED BY**

Collen Blackstone — Laboratory Supervisor(s)

QA Unit

Jesse G. Chaney, Jr.
Laboratory Director

5680 West End Road • Arcata California 95521-9202 • 707-822-4649 • FAX 707-822-6831

Printed on Recycled Paper

**CLIENT:** Pvt. cust. paying on pickup
**Project:** 4870.00, Dibbles
**Lab Order:** 0603085

# CASE NARRATIVE

Gasoline Components/Additives:
The surrogate recovery for the method blank was below the lower acceptance limit. The response of the reporting limit standard was such that the analytes would have been detected even with the low recovery; therefore, the data were accepted.

The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) recoveries were below the lower acceptance limits for benzene and toluene. The response of the reporting limit standard was such that the analyte would have been detected even with the low recovery; therefore, the data were accepted.

TPH as Diesel and Motor Oil:
All samples submitted for a silica gel cleanup were initially analyzed for diesel/motor oil. The samples showing no detectable levels of the analytes were not subjected to the cleanup procedure.

Due to a laboratory error, the laboratory control sample duplicate (LCSD) was fortified with twice the standard concentration of motor oil. This error has caused the relative percent difference (RPD) for the laboratory control samples to be above the acceptance limit for motor oil.



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**Date:** 09-Mar-06
**WorkOrder:** 0603085

# ANALYTICAL REPORT

**Client Sample ID:** 4870-MW1-W **Received:** 3/2/06 **Collected:** 2/23/06 0:00
**Lab ID:** 0603085-01A

**Test Name:** Gasoline Components/Additives **Reference:** LUFT/EPA 8260B Modified

| Parameter | Result | Limit | Units | DF | Extracted | Analyzed |
|---|---|---|---|---|---|---|
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | µg/L | 1.0 | | 3/6/06 |
| Tert-butyl alcohol (TBA) | ND | 10 | µg/L | 1.0 | | 3/6/06 |
| Di-isopropyl ether (DIPE) | ND | 1.0 | µg/L | 1.0 | | 3/6/06 |
| Ethyl tert-butyl ether (ETBE) | ND | 1.0 | µg/L | 1.0 | | 3/6/06 |
| Benzene | ND | 0.50 | µg/L | 1.0 | | 3/6/06 |
| Tert-amyl methyl ether (TAME) | ND | 1.0 | µg/L | 1.0 | | 3/6/06 |
| Toluene | ND | 0.50 | µg/L | 1.0 | | 3/6/06 |
| Ethylbenzene | ND | 0.50 | µg/L | 1.0 | | 3/6/06 |
| m,p-Xylene | ND | 0.50 | µg/L | 1.0 | | 3/6/06 |
| o-Xylene | ND | 0.50 | µg/L | 1.0 | | 3/6/06 |
| Surrogate: 1,4-Dichlorobenzene-d4 | 83.0 | 80.8-139 | % Rec | 1.0 | | 3/6/06 |

**Test Name:** TPH as Gasoline **Reference:** LUFT/EPA 8260B Modified

| Parameter | Result | Limit | Units | DF | Extracted | Analyzed |
|---|---|---|---|---|---|---|
| TPHC Gasoline | ND | 50 | µg/L | 1.0 | | 3/6/06 |

**Client Sample ID:** 4870-MW1-W **Received:** 3/2/06 **Collected:** 2/23/06 0:00
**Lab ID:** 0603085-01D

**Test Name:** TPH as Diesel/Motor Oil **Reference:** EPA 3510/GCFID(LUFT)/EPA 8015B

| Parameter | Result | Limit | Units | DF | Extracted | Analyzed |
|---|---|---|---|---|---|---|
| TPHC Diesel (C12-C22) | ND | 50 | µg/L | 1.0 | 3/3/06 | 3/6/06 |
| TPHC Motor Oil | ND | 170 | µg/L | 1.0 | 3/3/06 | 3/6/06 |



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**Date:** 09-Mar-06
**WorkOrder:** 0603085

# ANALYTICAL REPORT

**Client Sample ID:** 4870-QCTB-W **Received:** 3/2/06 **Collected:** 2/23/06 0:00
**Lab ID:** 0603085-02A

**Test Name:** Gasoline Components/Additives **Reference:** LUFT/EPA 8260B Modified

| Parameter | Result | Limit | Units | DF | Extracted | Analyzed |
|---|---|---|---|---|---|---|
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | µg/L | 1.0 | | 3/6/06 |
| Tert-butyl alcohol (TBA) | ND | 10 | µg/L | 1.0 | | 3/6/06 |
| Di-isopropyl ether (DIPE) | ND | 1.0 | µg/L | 1.0 | | 3/6/06 |
| Ethyl tert-butyl ether (ETBE) | ND | 1.0 | µg/L | 1.0 | | 3/6/06 |
| Benzene | ND | 0.50 | µg/L | 1.0 | | 3/6/06 |
| Tert-amyl methyl ether (TAME) | ND | 1.0 | µg/L | 1.0 | | 3/6/06 |
| Toluene | ND | 0.50 | µg/L | 1.0 | | 3/6/06 |
| Ethylbenzene | ND | 0.50 | µg/L | 1.0 | | 3/6/06 |
| m,p-Xylene | ND | 0.50 | µg/L | 1.0 | | 3/6/06 |
| o-Xylene | ND | 0.50 | µg/L | 1.0 | | 3/6/06 |
| Surrogate: 1,4-Dichlorobenzene-d4 | 83.0 | 80.8-139 | % Rec | 1.0 | | 3/6/06 |

**Test Name:** TPH as Gasoline **Reference:** LUFT/EPA 8260B Modified

| Parameter | Result | Limit | Units | DF | Extracted | Analyzed |
|---|---|---|---|---|---|---|
| TPHC Gasoline | ND | 50 | µg/L | 1.0 | | 3/6/06 |



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North Coast Laboratories, Ltd.

**Date:** 09-Mar-06

**CLIENT:** Pvt. cust. paying on pickup
**Work Order:** 0603085
**Project:** 4870.00, Dibbles

# QC SUMMARY REPORT

Method Blank

Sample ID **MB 030606** Batch ID: **R40118** Test Code: **8260OXYW** Units: **µg/L** Analysis Date **3/6/06 7:49:00 AM** Prep Date
Client ID: Run ID: **ORGCMS2_060306A** SeqNo: **576425**

| Analyte | Result | Limit | SPK value | SPK Ref Val | % Rec | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | | |
| Tert-butyl alcohol (TBA) | ND | 10 | | | | | | | | | |
| Di-isopropyl ether (DIPE) | ND | 1.0 | | | | | | | | | |
| Ethyl tert-butyl ether (ETBE) | ND | 1.0 | | | | | | | | | |
| Benzene | 0.1084 | 0.50 | | | | | | | | | J |
| Tert-amyl methyl ether (TAME) | ND | 1.0 | | | | | | | | | |
| Toluene | 0.3258 | 0.50 | | | | | | | | | J |
| Ethylbenzene | 0.2233 | 0.50 | | | | | | | | | J |
| m,p-Xylene | 0.2866 | 0.50 | | | | | | | | | J |
| o-Xylene | 0.2160 | 0.50 | | | | | | | | | J |
| 1,4-Dichlorobenzene-d4 | 0.805 | 0.10 | 1.00 | 0 | 80.5% | 81 | 139 | 0 | | | S |

Sample ID **MB 030606** Batch ID: **R40120** Test Code: **GASW-MS** Units: **µg/L** Analysis Date **3/6/06 7:49:00 AM** Prep Date
Client ID: Run ID: **ORGCMS2_060306B** SeqNo: **576461**

| Analyte | Result | Limit | SPK value | SPK Ref Val | % Rec | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TPHC Gasoline | ND | 50 | | | | | | | | | |

Sample ID **MB-15293** Batch ID: **15293** Test Code: **TPHDMW** Units: **µg/L** Analysis Date **3/6/06 2:32:33 PM** Prep Date **3/3/06**
Client ID: Run ID: **ORGC7_060306A** SeqNo: **577065**

| Analyte | Result | Limit | SPK value | SPK Ref Val | % Rec | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TPHC Diesel (C12-C22) | ND | 50 | | | | | | | | | |
| TPHC Motor Oil | 66.08 | 170 | | | | | | | | | J |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

North Coast Laboratories, Ltd.

**Date:** 09-Mar-06

**CLIENT:** Pvt. cust. paying on pickup
**Work Order:** 0603085
**Project:** 4870.00, Dibbles

# QC SUMMARY REPORT

Laboratory Control Spike

Sample ID **LCS-06137** Batch ID: **R40118** Test Code: **8260OXYW** Units: **µg/L** Analysis Date **3/6/06 3:47:00 AM** Prep Date

Client ID: Run ID: **ORGCMS2_060306A** SeqNo: **576422**

| Analyte | Result | Limit | SPK value | SPK Ref Val | % Rec | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether (MTBE) | 17.36 | 1.0 | 20.0 | 0 | 86.8% | 80 | 120 | 0 | | | |
| Tert-butyl alcohol (TBA) | 511.1 | 10 | 400 | 0 | 128% | 25 | 162 | 0 | | | |
| Di-isopropyl ether (DIPE) | 18.28 | 1.0 | 20.0 | 0 | 91.4% | 80 | 120 | 0 | | | |
| Ethyl tert-butyl ether (ETBE) | 18.01 | 1.0 | 20.0 | 0 | 90.0% | 77 | 120 | 0 | | | |
| Benzene | 15.43 | 0.50 | 20.0 | 0 | 77.1% | 78 | 117 | 0 | | | S |
| Tert-amyl methyl ether (TAME) | 19.81 | 1.0 | 20.0 | 0 | 99.0% | 64 | 136 | 0 | | | |
| Toluene | 15.05 | 0.50 | 20.0 | 0 | 75.3% | 80 | 120 | 0 | | | S |
| Ethylbenzene | 16.74 | 0.50 | 20.0 | 0 | 83.7% | 80 | 120 | 0 | | | |
| m,p-Xylene | 33.84 | 0.50 | 40.0 | 0 | 84.6% | 80 | 120 | 0 | | | |
| o-Xylene | 18.49 | 0.50 | 20.0 | 0 | 92.4% | 80 | 120 | 0 | | | |
| 1,4-Dichlorobenzene-d4 | 1.01 | 0.10 | 1.00 | 0 | 101% | 81 | 139 | 0 | | | |

Sample ID **LCSD-06137** Batch ID: **R40118** Test Code: **8260OXYW** Units: **µg/L** Analysis Date **3/6/06 4:18:00 AM** Prep Date

Client ID: Run ID: **ORGCMS2_060306A** SeqNo: **576423**

| Analyte | Result | Limit | SPK value | SPK Ref Val | % Rec | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether (MTBE) | 16.57 | 1.0 | 20.0 | 0 | 82.8% | 80 | 120 | 17.4 | 4.69% | 20 | |
| Tert-butyl alcohol (TBA) | 462.4 | 10 | 400 | 0 | 116% | 25 | 162 | 511 | 10.0% | 20 | |
| Di-isopropyl ether (DIPE) | 18.07 | 1.0 | 20.0 | 0 | 90.4% | 80 | 120 | 18.3 | 1.15% | 20 | |
| Ethyl tert-butyl ether (ETBE) | 17.27 | 1.0 | 20.0 | 0 | 86.4% | 77 | 120 | 18.0 | 4.15% | 20 | |
| Benzene | 15.28 | 0.50 | 20.0 | 0 | 76.4% | 78 | 117 | 15.4 | 0.944% | 20 | S |
| Tert-amyl methyl ether (TAME) | 19.21 | 1.0 | 20.0 | 0 | 96.1% | 64 | 136 | 19.8 | 3.05% | 20 | |
| Toluene | 15.20 | 0.50 | 20.0 | 0 | 76.0% | 80 | 120 | 15.0 | 1.02% | 20 | S |
| Ethylbenzene | 16.74 | 0.50 | 20.0 | 0 | 83.7% | 80 | 120 | 16.7 | 0.0253% | 20 | |
| m,p-Xylene | 33.92 | 0.50 | 40.0 | 0 | 84.8% | 80 | 120 | 33.8 | 0.242% | 20 | |
| o-Xylene | 18.17 | 0.50 | 20.0 | 0 | 90.8% | 80 | 120 | 18.5 | 1.75% | 20 | |
| 1,4-Dichlorobenzene-d4 | 1.04 | 0.10 | 1.00 | 0 | 104% | 81 | 139 | 1.01 | 2.87% | 20 | |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

**CLIENT:** Pvt. cust. paying on pickup
**Work Order:** 0603085
**Project:** 4870.00, Dibbles

# QC SUMMARY REPORT

## Laboratory Control Spike

Sample ID **LCS-06138** Batch ID: **R40120** Test Code: **GASW-MS** Units: **µg/L** Analysis Date **3/6/06 5:49:00 AM** Prep Date
Client ID: Run ID: **ORGCMS2_060306B** SeqNo: **576458**

| Analyte | Result | Limit | SPK value | SPK Ref Val | % Rec | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TPHC Gasoline | 1,129 | 50 | 1,000 | 0 | 113% | 80 | 120 | 0 | | | |

Sample ID **LCSD-06138** Batch ID: **R40120** Test Code: **GASW-MS** Units: **µg/L** Analysis Date **3/6/06 6:19:00 AM** Prep Date
Client ID: Run ID: **ORGCMS2_060306B** SeqNo: **576459**

| Analyte | Result | Limit | SPK value | SPK Ref Val | % Rec | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TPHC Gasoline | 1,087 | 50 | 1,000 | 0 | 109% | 80 | 120 | 1,130 | 3.85% | 20 | |

Sample ID **LCS-15293** Batch ID: **15293** Test Code: **TPHDMW** Units: **µg/L** Analysis Date **3/6/06 12:30:58 PM** Prep Date **3/3/06**
Client ID: Run ID: **ORGC7_060306A** SeqNo: **577062**

| Analyte | Result | Limit | SPK value | SPK Ref Val | % Rec | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TPHC Diesel (C12-C22) | 405.5 | 50 | 500 | 0 | 81.1% | 72 | 124 | 0 | | | |
| TPHC Motor Oil | 1,093 | 170 | 1,000 | 0 | 109% | 71 | 139 | 0 | | | |

Sample ID **LCSD-15293** Batch ID: **15293** Test Code: **TPHDMW** Units: **µg/L** Analysis Date **3/6/06 12:51:16 PM** Prep Date **3/3/06**
Client ID: Run ID: **ORGC7_060306A** SeqNo: **577063**

| Analyte | Result | Limit | SPK value | SPK Ref Val | % Rec | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TPHC Diesel (C12-C22) | 459.1 | 50 | 500 | 0 | 91.8% | 72 | 124 | 406 | 12.4% | 15 | |
| TPHC Motor Oil | 1,825 | 170 | 2,000 | 0 | 91.2% | 71 | 139 | 1,090 | 50.1% | 15 | R |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

NORTH COAST LABORATORIES LTD.
5680 West End Road · Arcata · CA 95521-9202
707-822-4649 Fax 707-822-6831

# Chain of Custody

0603085

LABORATORY NUMBER:

Attention:
Results & Invoice to: Ron Kendall
Address: PO BOX 838, Fortuna, CA 95540

Phone: (707) 725-5626
Copies of Report to: LACO; Mike Kitahara

Sampler (Sign & Print): ~~SID~~ RLD [signature]

TAT: ☐ 24 Hr ☐ 48 Hr ☐ 5 Day ☐ 5–7 Day
☑ STD (2–3 Wk) ☐ Other:
PRIOR AUTHORIZATION IS REQUIRED FOR RUSHES

REPORTING REQUIREMENTS: State Forms ☐
Preliminary: FAX ☑ Verbal ☐ By: ___, ___, ___
Final Report: FAX ☐ Verbal ☐ By: ___, ___, ___

CONTAINER CODES: 1—½ gal. pl; 2—250 ml pl; 3—500 ml pl; 4—1 L Nalgene; 5—250 ml BG; 6—500 ml BG; 7—1 L BG; 8—1 L cg; 9—40 ml VOA; 10—125 ml VOA; 11—4 oz glass jar; 12—8 oz glass jar; 13—brass tube; 14—other

PRESERVATIVE CODES: a—$HNO_3$; b—HCl; c—$H_2SO_4$; d—$Na_2S_2O_3$; e—NaOH; f—$C_2H_3O_2Cl$; g—other

## PROJECT INFORMATION

Project Number: 4870.00
Project Name: Dibbles
Purchase Order Number: Task 3035

| LAB ID | SAMPLE ID | DATE | TIME | MATRIX* | ANALYSIS: 8260 List 1 | TPHd/mo w/SGC | CONTAINER: 9 | PRESERVATIVE: B |
|---|---|---|---|---|---|---|---|---|
| | 4870-MW1-W | 2-23-06 | PM | GW | 3 | 1 | 7 | ---- |
| | 4870-QCTB-W | ↓ | ↓ | ↓ | 1 | | | |

SAMPLE CONDITION/SPECIAL INSTRUCTIONS
GEOTRACKER

LIMITED AMOUNT - 1 L BG

cold intact

| RELINQUISHED BY (Sign & Print) | DATE/TIME | RECEIVED BY (Sign) | DATE/TIME |
|---|---|---|---|
| | | [signature] 3/2/06 | 1300 |

SAMPLE DISPOSAL
☑ NCL Disposal of Non-Contaminated
☐ Return ☐ Pickup

CHAIN OF CUSTODY SEALS Y/N/NA
SHIPPED VIA: UPS Air-Ex Fed-Ex Bus Hand

*MATRIX: DW=Drinking Water; Eff=Effluent; Inf=Influent; SW=Surface Water; GW=Ground Water; S=Soil; O=Other.

P/U

ALL CONTAMINATED NON-AQUEOUS SAMPLES WILL BE RETURNED TO CLIENT

NORTH COAST
LABORATORIES LTD.

January 16, 2006

Pvt. cust. paying on pickup

,

Attn: Ron Kendall

RE: 4870.00, Dibbles

Order No.: 0512660
Invoice No.: 55659
PO No.: TASK 3030
ELAP No. 1247-Expires July 2006

**SAMPLE IDENTIFICATION**

| Fraction | Client Sample Description |
|---|---|
| 01A | 4870-MW1-W |
| 01D | 4870-MW1-W |
| 02A | 4870-MW2-W |
| 02D | 4870-MW2-W |
| 03A | 4870-MW3-W |
| 03D | 4870-MW3-W |
| 04A | 4870-QCTB-W |

ND = Not Detected at the Reporting Limit

Limit = Reporting Limit

All solid results are expressed on a wet-weight basis unless otherwise noted.

**REPORT CERTIFIED BY**

Laboratory Supervisor(s) | QA Unit | Jesse G. Chaney, Jr. Laboratory Director

5680 West End Road • Arcata California 95521-9202 • 707-822-4649 • FAX 707-822-6831

Printed on Recycled Paper

**North Coast Laboratories, Ltd.** Date: *16-Jan-06*

**CLIENT:** Pvt. cust. paying on pickup
**Project:** 4870.00, Dibbles
**Lab Order:** 0512660

## CASE NARRATIVE

All samples submitted for a silica gel cleanup were initially analyzed for diesel/motor oil. The samples showing no detectable levels of the analytes were not subjected to the cleanup procedure.

Gasoline Components/Additives:
The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) recoveries were below the lower acceptance limit for o-xylene. The response of the reporting limit standard was such that the analyte would have been detected even with the low recoveries; therefore, the data were accepted.



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Date: 16-Jan-06
WorkOrder: 0512660

# ANALYTICAL REPORT

**Client Sample ID:** 4870-MW1-W **Received:** 12/29/05 **Collected:** 12/23/05 0:00
**Lab ID:** 0512660-01A

**Test Name:** Gasoline Components/Additives **Reference:** LUFT/EPA 8260B Modified

| Parameter | Result | Limit | Units | DF | Extracted | Analyzed |
|---|---|---|---|---|---|---|
| Methyl tert-butyl ether (MTBE) | 4.5 | 1.0 | µg/L | 1.0 | | 1/6/06 |
| Tert-butyl alcohol (TBA) | ND | 10 | µg/L | 1.0 | | 1/6/06 |
| Di-isopropyl ether (DIPE) | ND | 1.0 | µg/L | 1.0 | | 1/6/06 |
| Ethyl tert-butyl ether (ETBE) | ND | 1.0 | µg/L | 1.0 | | 1/6/06 |
| Benzene | ND | 0.50 | µg/L | 1.0 | | 1/6/06 |
| Tert-amyl methyl ether (TAME) | 1.5 | 1.0 | µg/L | 1.0 | | 1/6/06 |
| Toluene | ND | 0.50 | µg/L | 1.0 | | 1/6/06 |
| Ethylbenzene | ND | 0.50 | µg/L | 1.0 | | 1/6/06 |
| m,p-Xylene | ND | 0.50 | µg/L | 1.0 | | 1/6/06 |
| o-Xylene | ND | 0.50 | µg/L | 1.0 | | 1/6/06 |
| Surrogate: 1,4-Dichlorobenzene-d4 | 109 | 80.8-139 | % Rec | 1.0 | | 1/6/06 |

**Test Name:** TPH as Gasoline **Reference:** LUFT/EPA 8260B Modified

| Parameter | Result | Limit | Units | DF | Extracted | Analyzed |
|---|---|---|---|---|---|---|
| TPHC Gasoline | ND | 50 | µg/L | 1.0 | | 1/6/06 |

**Client Sample ID:** 4870-MW1-W **Received:** 12/29/05 **Collected:** 12/23/05 0:00
**Lab ID:** 0512660-01D

**Test Name:** TPH as Diesel/Motor Oil **Reference:** EPA 3510/GCFID(LUFT)/EPA 8015B

| Parameter | Result | Limit | Units | DF | Extracted | Analyzed |
|---|---|---|---|---|---|---|
| TPHC Diesel (C12-C22) | ND | 50 | µg/L | 1.0 | 12/30/05 | 1/13/06 |
| TPHC Motor Oil | ND | 170 | µg/L | 1.0 | 12/30/05 | 1/13/06 |



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Date: 16-Jan-06

WorkOrder: 0512660

# ANALYTICAL REPORT

**Client Sample ID:** 4870-MW2-W **Received:** 12/29/05 **Collected:** 12/23/05 0:00

**Lab ID:** 0512660-02A

**Test Name:** Gasoline Components/Additives **Reference:** LUFT/EPA 8260B Modified

| Parameter | Result | Limit | Units | DF | Extracted | Analyzed |
|---|---|---|---|---|---|---|
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | µg/L | 1.0 | | 1/6/06 |
| Tert-butyl alcohol (TBA) | ND | 10 | µg/L | 1.0 | | 1/6/06 |
| Di-isopropyl ether (DIPE) | ND | 1.0 | µg/L | 1.0 | | 1/6/06 |
| Ethyl tert-butyl ether (ETBE) | ND | 1.0 | µg/L | 1.0 | | 1/6/06 |
| Benzene | ND | 0.50 | µg/L | 1.0 | | 1/6/06 |
| Tert-amyl methyl ether (TAME) | ND | 1.0 | µg/L | 1.0 | | 1/6/06 |
| Toluene | ND | 0.50 | µg/L | 1.0 | | 1/6/06 |
| Ethylbenzene | ND | 0.50 | µg/L | 1.0 | | 1/6/06 |
| m,p-Xylene | ND | 0.50 | µg/L | 1.0 | | 1/6/06 |
| o-Xylene | ND | 0.50 | µg/L | 1.0 | | 1/6/06 |
| Surrogate: 1,4-Dichlorobenzene-d4 | 110 | 80.8-139 | % Rec | 1.0 | | 1/6/06 |

**Test Name:** TPH as Gasoline **Reference:** LUFT/EPA 8260B Modified

| Parameter | Result | Limit | Units | DF | Extracted | Analyzed |
|---|---|---|---|---|---|---|
| TPHC Gasoline | ND | 50 | µg/L | 1.0 | | 1/6/06 |

**Client Sample ID:** 4870-MW2-W **Received:** 12/29/05 **Collected:** 12/23/05 0:00

**Lab ID:** 0512660-02D

**Test Name:** TPH as Diesel/Motor Oil **Reference:** EPA 3510/GCFID(LUFT)/EPA 8015B

| Parameter | Result | Limit | Units | DF | Extracted | Analyzed |
|---|---|---|---|---|---|---|
| TPHC Diesel (C12-C22) | ND | 50 | µg/L | 1.0 | 12/30/05 | 1/13/06 |
| TPHC Motor Oil | ND | 170 | µg/L | 1.0 | 12/30/05 | 1/13/06 |



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**Date:** 16-Jan-06
**WorkOrder:** 0512660

# ANALYTICAL REPORT

**Client Sample ID:** 4870-MW3-W **Received:** 12/29/05 **Collected:** 12/23/05 0:00
**Lab ID:** 0512660-03A

**Test Name:** Gasoline Components/Additives **Reference:** LUFT/EPA 8260B Modified

| Parameter | Result | Limit | Units | DF | Extracted | Analyzed |
|---|---|---|---|---|---|---|
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | µg/L | 1.0 | | 1/6/06 |
| Tert-butyl alcohol (TBA) | ND | 10 | µg/L | 1.0 | | 1/6/06 |
| Di-isopropyl ether (DIPE) | ND | 1.0 | µg/L | 1.0 | | 1/6/06 |
| Ethyl tert-butyl ether (ETBE) | ND | 1.0 | µg/L | 1.0 | | 1/6/06 |
| Benzene | ND | 0.50 | µg/L | 1.0 | | 1/6/06 |
| Tert-amyl methyl ether (TAME) | ND | 1.0 | µg/L | 1.0 | | 1/6/06 |
| Toluene | ND | 0.50 | µg/L | 1.0 | | 1/6/06 |
| Ethylbenzene | ND | 0.50 | µg/L | 1.0 | | 1/6/06 |
| m,p-Xylene | ND | 0.50 | µg/L | 1.0 | | 1/6/06 |
| o-Xylene | ND | 0.50 | µg/L | 1.0 | | 1/6/06 |
| Surrogate: 1,4-Dichlorobenzene-d4 | 109 | 80.8-139 | % Rec | 1.0 | | 1/6/06 |

**Test Name:** TPH as Gasoline **Reference:** LUFT/EPA 8260B Modified

| Parameter | Result | Limit | Units | DF | Extracted | Analyzed |
|---|---|---|---|---|---|---|
| TPHC Gasoline | ND | 50 | µg/L | 1.0 | | 1/6/06 |

**Client Sample ID:** 4870-MW3-W **Received:** 12/29/05 **Collected:** 12/23/05 0:00
**Lab ID:** 0512660-03D

**Test Name:** TPH as Diesel/Motor Oil **Reference:** EPA 3510/GCFID(LUFT)/EPA 8015B

| Parameter | Result | Limit | Units | DF | Extracted | Analyzed |
|---|---|---|---|---|---|---|
| TPHC Diesel (C12-C22) | ND | 50 | µg/L | 1.0 | 12/30/05 | 1/13/06 |
| TPHC Motor Oil | ND | 170 | µg/L | 1.0 | 12/30/05 | 1/13/06 |



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Date: 16-Jan-06
WorkOrder: 0512660

# ANALYTICAL REPORT

**Client Sample ID:** 4870-QCTB-W **Received:** 12/29/05 **Collected:** 12/23/05 0:00
**Lab ID:** 0512660-04A

**Test Name:** Gasoline Components/Additives **Reference:** LUFT/EPA 8260B Modified

| Parameter | Result | Limit | Units | DF | Extracted | Analyzed |
|---|---|---|---|---|---|---|
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | µg/L | 1.0 | | 1/6/06 |
| Tert-butyl alcohol (TBA) | ND | 10 | µg/L | 1.0 | | 1/6/06 |
| Di-isopropyl ether (DIPE) | ND | 1.0 | µg/L | 1.0 | | 1/6/06 |
| Ethyl tert-butyl ether (ETBE) | ND | 1.0 | µg/L | 1.0 | | 1/6/06 |
| Benzene | ND | 0.50 | µg/L | 1.0 | | 1/6/06 |
| Tert-amyl methyl ether (TAME) | ND | 1.0 | µg/L | 1.0 | | 1/6/06 |
| Toluene | ND | 0.50 | µg/L | 1.0 | | 1/6/06 |
| Ethylbenzene | ND | 0.50 | µg/L | 1.0 | | 1/6/06 |
| m,p-Xylene | ND | 0.50 | µg/L | 1.0 | | 1/6/06 |
| o-Xylene | ND | 0.50 | µg/L | 1.0 | | 1/6/06 |
| Surrogate: 1,4-Dichlorobenzene-d4 | 106 | 80.8-139 | % Rec | 1.0 | | 1/6/06 |

**Test Name:** TPH as Gasoline **Reference:** LUFT/EPA 8260B Modified

| Parameter | Result | Limit | Units | DF | Extracted | Analyzed |
|---|---|---|---|---|---|---|
| TPHC Gasoline | ND | 50 | µg/L | 1.0 | | 1/6/06 |



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North Coast Laboratories, Ltd.

Date: 16-Jan-06

**CLIENT:** Pvt. cust. paying on pickup
**Work Order:** 0512660
**Project:** 4870.00, Dibbles

# QC SUMMARY REPORT

Method Blank

Sample ID: **MB 010606** Batch ID: **R39048** Test Code: **8260OXYW** Units: **µg/L** Analysis Date: **1/6/06 5:04:00 AM** Prep Date:
Client ID: Run ID: **ORGCMS3_060106B** SeqNo: **561341**

| Analyte | Result | Limit | SPK value | SPK Ref Val | % Rec | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | | |
| Tert-butyl alcohol (TBA) | ND | 10 | | | | | | | | | |
| Di-isopropyl ether (DIPE) | ND | 1.0 | | | | | | | | | |
| Ethyl tert-butyl ether (ETBE) | ND | 1.0 | | | | | | | | | |
| Benzene | ND | 0.50 | | | | | | | | | |
| Tert-amyl methyl ether (TAME) | ND | 1.0 | | | | | | | | | |
| Toluene | ND | 0.50 | | | | | | | | | |
| Ethylbenzene | 0.08264 | 0.50 | | | | | | | | | J |
| m,p-Xylene | 0.1510 | 0.50 | | | | | | | | | J |
| o-Xylene | ND | 0.50 | | | | | | | | | |
| 1,4-Dichlorobenzene-d4 | 1.07 | 0.10 | 1.00 | 0 | 107% | 81 | 139 | 0 | | | |

Sample ID: **MB 010606** Batch ID: **R39047** Test Code: **GASW-MS** Units: **µg/L** Analysis Date: **1/6/06 5:04:00 AM** Prep Date:
Client ID: Run ID: **ORGCMS3_060106A** SeqNo: **561292**

| Analyte | Result | Limit | SPK value | SPK Ref Val | % Rec | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TPHC Gasoline | 27.82 | 50 | | | | | | | | | J |

Sample ID: **MB-14929** Batch ID: **14929** Test Code: **TPHDMW** Units: **µg/L** Analysis Date: **1/13/06 2:43:03 PM** Prep Date: **12/30/05**
Client ID: Run ID: **ORGC7_060113A** SeqNo: **563059**

| Analyte | Result | Limit | SPK value | SPK Ref Val | % Rec | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TPHC Diesel (C12-C22) | ND | 50 | | | | | | | | | |
| TPHC Motor Oil | ND | 170 | | | | | | | | | |

**Qualifiers:** ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

North Coast Laboratories, Ltd.

**Date:** 16-Jan-06

**CLIENT:** Pvt. cust. paying on pickup
**Work Order:** 0512660
**Project:** 4870.00, Dibbles

# QC SUMMARY REPORT

Laboratory Control Spike

Sample ID: **LCS-06008** Batch ID: **R39048** Test Code: **8260OXYW** Units: **µg/L** Analysis Date: **1/6/06 9:44:00 AM** Prep Date:

Client ID: Run ID: **ORGCMS3_060106B** SeqNo: **561351**

| Analyte | Result | Limit | SPK value | SPK Ref Val | % Rec | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether (MTBE) | 17.63 | 1.0 | 20.0 | 0 | 88.1% | 80 | 120 | 0 | | | |
| Tert-butyl alcohol (TBA) | 383.8 | 10 | 400 | 0 | 95.9% | 25 | 162 | 0 | | | |
| Di-isopropyl ether (DIPE) | 17.97 | 1.0 | 20.0 | 0 | 89.9% | 80 | 120 | 0 | | | |
| Ethyl tert-butyl ether (ETBE) | 16.65 | 1.0 | 20.0 | 0 | 83.2% | 77 | 120 | 0 | | | |
| Benzene | 20.78 | 0.50 | 20.0 | 0 | 104% | 78 | 117 | 0 | | | |
| Tert-amyl methyl ether (TAME) | 16.15 | 1.0 | 20.0 | 0 | 80.7% | 64 | 136 | 0 | | | |
| Toluene | 19.42 | 0.50 | 20.0 | 0 | 97.1% | 80 | 120 | 0 | | | |
| Ethylbenzene | 17.94 | 0.50 | 20.0 | 0 | 89.7% | 80 | 120 | 0 | | | |
| m,p-Xylene | 37.40 | 0.50 | 40.0 | 0 | 93.5% | 80 | 120 | 0 | | | |
| o-Xylene | 15.41 | 0.50 | 20.0 | 0 | 77.0% | 80 | 120 | 0 | | | S |
| 1,4-Dichlorobenzene-d4 | 1.18 | 0.10 | 1.00 | 0 | 118% | 81 | 139 | 0 | | | |

Sample ID: **LCSD-06008** Batch ID: **R39048** Test Code: **8260OXYW** Units: **µg/L** Analysis Date: **1/6/06 10:09:00 AM** Prep Date:

Client ID: Run ID: **ORGCMS3_060106B** SeqNo: **561352**

| Analyte | Result | Limit | SPK value | SPK Ref Val | % Rec | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether (MTBE) | 18.15 | 1.0 | 20.0 | 0 | 90.7% | 80 | 120 | 17.6 | 2.92% | 20 | |
| Tert-butyl alcohol (TBA) | 404.0 | 10 | 400 | 0 | 101% | 25 | 162 | 384 | 5.14% | 20 | |
| Di-isopropyl ether (DIPE) | 18.59 | 1.0 | 20.0 | 0 | 93.0% | 80 | 120 | 18.0 | 3.39% | 20 | |
| Ethyl tert-butyl ether (ETBE) | 17.26 | 1.0 | 20.0 | 0 | 86.3% | 77 | 120 | 16.6 | 3.61% | 20 | |
| Benzene | 20.90 | 0.50 | 20.0 | 0 | 104% | 78 | 117 | 20.8 | 0.562% | 20 | |
| Tert-amyl methyl ether (TAME) | 16.76 | 1.0 | 20.0 | 0 | 83.8% | 64 | 136 | 16.2 | 3.74% | 20 | |
| Toluene | 19.40 | 0.50 | 20.0 | 0 | 97.0% | 80 | 120 | 19.4 | 0.0828% | 20 | |
| Ethylbenzene | 18.11 | 0.50 | 20.0 | 0 | 90.5% | 80 | 120 | 17.9 | 0.914% | 20 | |
| m,p-Xylene | 37.70 | 0.50 | 40.0 | 0 | 94.2% | 80 | 120 | 37.4 | 0.805% | 20 | |
| o-Xylene | 15.23 | 0.50 | 20.0 | 0 | 76.2% | 80 | 120 | 15.4 | 1.14% | 20 | S |
| 1,4-Dichlorobenzene-d4 | 1.15 | 0.10 | 1.00 | 0 | 115% | 81 | 139 | 1.18 | 2.63% | 20 | |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

**CLIENT:** Pvt. cust. paying on pickup
**Work Order:** 0512660
**Project:** 4870.00, Dibbles

# QC SUMMARY REPORT
## Laboratory Control Spike

Sample ID: **LCS-06009** Batch ID: **R39047** Test Code: **GASW-MS** Units: **µg/L** Analysis Date: **1/6/06 11:00:00 AM** Prep Date:
Client ID: Run ID: **ORGCMS3_060106A** SeqNo: **561302**

| Analyte | Result | Limit | SPK value | SPK Ref Val | % Rec | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TPHC Gasoline | 854.4 | 50 | 1,000 | 0 | 85.4% | 80 | 120 | 0 | | | |

Sample ID: **LCSD-06009** Batch ID: **R39047** Test Code: **GASW-MS** Units: **µg/L** Analysis Date: **1/6/06 11:26:00 AM** Prep Date:
Client ID: Run ID: **ORGCMS3_060106A** SeqNo: **561303**

| Analyte | Result | Limit | SPK value | SPK Ref Val | % Rec | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TPHC Gasoline | 859.7 | 50 | 1,000 | 0 | 86.0% | 80 | 120 | 854 | 0.616% | 20 | |

Sample ID: **LCS-14929** Batch ID: **14929** Test Code: **TPHDMW** Units: **µg/L** Analysis Date: **1/13/06 12:42:54 PM** Prep Date: **12/30/05**
Client ID: Run ID: **ORGC7_060113A** SeqNo: **563056**

| Analyte | Result | Limit | SPK value | SPK Ref Val | % Rec | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TPHC Diesel (C12-C22) | 527.2 | 50 | 500 | 0 | 105% | 72 | 124 | 0 | | | |
| TPHC Motor Oil | 1,059 | 170 | 1,000 | 0 | 106% | 71 | 139 | 0 | | | |

Sample ID: **LCSD-14929** Batch ID: **14929** Test Code: **TPHDMW** Units: **µg/L** Analysis Date: **1/13/06 1:02:53 PM** Prep Date: **12/30/05**
Client ID: Run ID: **ORGC7_060113A** SeqNo: **563057**

| Analyte | Result | Limit | SPK value | SPK Ref Val | % Rec | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TPHC Diesel (C12-C22) | 573.5 | 50 | 500 | 0 | 115% | 72 | 124 | 527 | 8.41% | 15 | |
| TPHC Motor Oil | 1,037 | 170 | 1,000 | 0 | 104% | 71 | 139 | 1,060 | 2.06% | 15 | |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

NORTH COAST LABORATORIES LTD.
5680 West End Road · Arcata · CA 95521-9202
707-822-4649 Fax 707-822-6831

# Chain of Custody

LABORATORY NUMBER: 0512660

Attention:
Results & Invoice to: Ron Kendall
Address: PO BOX 838, Fortuna, CA 95540

Phone: (707) 725-5626
Copies of Report to: LACO; Gary Manhart

Sampler (Sign & Print): SJD-RLD [signature]

TAT: ☐ 24 Hr ☐ 48 Hr ☐ 5 Day ☐ 5–7 Day
☑ STD (2–3 Wk) ☐ Other:
PRIOR AUTHORIZATION IS REQUIRED FOR RUSHES

REPORTING REQUIREMENTS: State Forms ☐
Preliminary: FAX ☑ Verbal ☐ By:
Final Report: FAX ☐ Verbal ☐ By:

**CONTAINER CODES:** 1—½ gal. pl; 2—250 ml pl; 3—500 ml pl; 4—1 L Nalgene; 5—250 ml BG; 6—500 ml BG; 7—1 L BG; 8—1 L cg; 9—40 ml VOA; 10—125 ml VOA; 11—4 oz glass jar; 12—8 oz glass jar; 13—brass tube; 14—other

**PRESERVATIVE CODES:** a—$HNO_3$; b—HCl; c—$H_2SO_4$; d—$Na_2S_2O_3$; e—NaOH; f—$C_2H_3O_2Cl$; g—other

## PROJECT INFORMATION

Project Number: 4870.00
Project Name: Dibbles
Purchase Order Number: Task 3030

| LAB ID | SAMPLE ID | DATE | TIME | MATRIX* | ANALYSIS: 8260 List 1 | CONTAINER: 9 | PRESERVATIVE: B | ANALYSIS: TPHd/mo w/SGC | CONTAINER: 7 | PRESERVATIVE: ----- |
|---|---|---|---|---|---|---|---|---|---|---|
| | 4870-MW1-W | 12-23-05 | AM | GW | | 3 | | 1 | | |
| | 4870-MW2-W | ↓ | ↑ | ↓ | | 3 | | 1 | | |
| | 4870-MW3-W | ↓ | ↓ | ↓ | | 3 | | 1 | | |
| | 4870-QCTB-W | ↓ | PM | ↓ | | 1 | | | | |

## SAMPLE CONDITION/SPECIAL INSTRUCTIONS

GEOTRACKER

Cooler temp = 5.3 C

| RELINQUISHED BY (Sign & Print) | DATE/TIME | RECEIVED BY (Sign) | DATE/TIME |
|---|---|---|---|
| [signature] JASON BUCK | 12/29/05 11:48 | [signature] 122905 | 1145 |
| | | | |
| | | | |

**SAMPLE DISPOSAL**
☑ NCL Disposal of Non-Contaminated
☐ Return ☐ Pickup

CHAIN OF CUSTODY SEALS Y/N/NA
SHIPPED VIA: UPS Air-Ex Fed-Ex Bus Hand

*MATRIX: DW=Drinking Water; Eff=Effluent; Inf=Influent; SW=Surface Water; GW=Ground Water; S=Soil; O=Other.

P/N

**ALL CONTAMINATED NON-AQUEOUS SAMPLES WILL BE RETURNED TO CLIENT**

NORTH COAST LABORATORIES LTD.

RECEIVED
LACO ASSOCIATES
MAR 16 2006
BY: JG

March 15, 2006

Pvt. cust. paying on pickup

,

Attn: Ron Kendall

RE: 4870.00, Dibbles

CJW
HRK

Order No.: 0603190
Invoice No.: 56850
PO No.: TASK 3035
ELAP No. 1247-Expires July 2006

**SAMPLE IDENTIFICATION**

| Fraction | Client Sample Description |
|---|---|
| 01A | 4870-MW1-W |
| 01D | 4870-MW1-W |
| 02A | 4870-MW2-W |
| 02D | 4870-MW2-W |
| 03A | 4870-MW3-W |
| 03D | 4870-MW3-W |
| 04A | 4870-QCTB-W |

ND = Not Detected at the Reporting Limit

Limit = Reporting Limit

All solid results are expressed on a wet-weight basis unless otherwise noted.

**REPORT CERTIFIED BY**

Laboratory Supervisor(s) | QA Unit | Jesse G. Chaney, Jr. Laboratory Director

5680 West End Road • Arcata California 95521-9202 • 707-822-4649 • FAX 707-822-6831

Printed on Recycled Paper

**CLIENT:** Pvt. cust. paying on pickup
**Project:** 4870.00, Dibbles
**Lab Order:** 0603190

# CASE NARRATIVE

TPH as Diesel/Motor Oil:
The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) recoveries were below the lower acceptance limit for diesel. The response of the reporting limit standard was such that the analyte would have been detected even with the low recoveries; therefore, the data were accepted.



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Date: 15-Mar-06
WorkOrder: 0603190

# ANALYTICAL REPORT

**Client Sample ID:** 4870-MW1-W **Received:** 3/7/06 **Collected:** 3/7/06 0:00
**Lab ID:** 0603190-01A

**Test Name:** Gasoline Components/Additives **Reference:** LUFT/EPA 8260B Modified

| Parameter | Result | Limit | Units | DF | Extracted | Analyzed |
|---|---|---|---|---|---|---|
| Methyl tert-butyl ether (MTBE) | 1.5 | 1.0 | µg/L | 1.0 | | 3/13/06 |
| Tert-butyl alcohol (TBA) | ND | 10 | µg/L | 1.0 | | 3/13/06 |
| Di-isopropyl ether (DIPE) | ND | 1.0 | µg/L | 1.0 | | 3/13/06 |
| Ethyl tert-butyl ether (ETBE) | ND | 1.0 | µg/L | 1.0 | | 3/13/06 |
| Benzene | ND | 0.50 | µg/L | 1.0 | | 3/13/06 |
| Tert-amyl methyl ether (TAME) | ND | 1.0 | µg/L | 1.0 | | 3/13/06 |
| Toluene | ND | 0.50 | µg/L | 1.0 | | 3/13/06 |
| Ethylbenzene | ND | 0.50 | µg/L | 1.0 | | 3/13/06 |
| m,p-Xylene | ND | 0.50 | µg/L | 1.0 | | 3/13/06 |
| o-Xylene | ND | 0.50 | µg/L | 1.0 | | 3/13/06 |
| Surrogate: 1,4-Dichlorobenzene-d4 | 94.8 | 80.8-139 | % Rec | 1.0 | | 3/13/06 |

**Test Name:** TPH as Gasoline **Reference:** LUFT/EPA 8260B Modified

| Parameter | Result | Limit | Units | DF | Extracted | Analyzed |
|---|---|---|---|---|---|---|
| TPHC Gasoline | ND | 50 | µg/L | 1.0 | | 3/13/06 |

**Client Sample ID:** 4870-MW1-W **Received:** 3/7/06 **Collected:** 3/7/06 0:00
**Lab ID:** 0603190-01D

**Test Name:** TPH as Diesel/Motor Oil **Reference:** EPA 3510/GCFID(LUFT)/EPA 8015B

| Parameter | Result | Limit | Units | DF | Extracted | Analyzed |
|---|---|---|---|---|---|---|
| TPHC Diesel (C12-C22) | ND | 50 | µg/L | 1.0 | 3/8/06 | 3/9/06 |
| TPHC Motor Oil | ND | 170 | µg/L | 1.0 | 3/8/06 | 3/9/06 |



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**Date:** 15-Mar-06
**WorkOrder:** 0603190

# ANALYTICAL REPORT

**Client Sample ID:** 4870-MW2-W **Received:** 3/7/06 **Collected:** 3/7/06 0:00
**Lab ID:** 0603190-02A

**Test Name:** Gasoline Components/Additives **Reference:** LUFT/EPA 8260B Modified

| Parameter | Result | Limit | Units | DF | Extracted | Analyzed |
|---|---|---|---|---|---|---|
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | µg/L | 1.0 | | 3/13/06 |
| Tert-butyl alcohol (TBA) | ND | 10 | µg/L | 1.0 | | 3/13/06 |
| Di-isopropyl ether (DIPE) | ND | 1.0 | µg/L | 1.0 | | 3/13/06 |
| Ethyl tert-butyl ether (ETBE) | ND | 1.0 | µg/L | 1.0 | | 3/13/06 |
| Benzene | ND | 0.50 | µg/L | 1.0 | | 3/13/06 |
| Tert-amyl methyl ether (TAME) | ND | 1.0 | µg/L | 1.0 | | 3/13/06 |
| Toluene | ND | 0.50 | µg/L | 1.0 | | 3/13/06 |
| Ethylbenzene | ND | 0.50 | µg/L | 1.0 | | 3/13/06 |
| m,p-Xylene | ND | 0.50 | µg/L | 1.0 | | 3/13/06 |
| o-Xylene | ND | 0.50 | µg/L | 1.0 | | 3/13/06 |
| Surrogate: 1,4-Dichlorobenzene-d4 | 93.9 | 80.8-139 | % Rec | 1.0 | | 3/13/06 |

**Test Name:** TPH as Gasoline **Reference:** LUFT/EPA 8260B Modified

| Parameter | Result | Limit | Units | DF | Extracted | Analyzed |
|---|---|---|---|---|---|---|
| TPHC Gasoline | ND | 50 | µg/L | 1.0 | | 3/13/06 |

**Client Sample ID:** 4870-MW2-W **Received:** 3/7/06 **Collected:** 3/7/06 0:00
**Lab ID:** 0603190-02D

**Test Name:** TPH as Diesel/Motor Oil **Reference:** EPA 3510/GCFID(LUFT)/EPA 8015B

| Parameter | Result | Limit | Units | DF | Extracted | Analyzed |
|---|---|---|---|---|---|---|
| TPHC Diesel (C12-C22) | ND | 50 | µg/L | 1.0 | 3/8/06 | 3/9/06 |
| TPHC Motor Oil | ND | 170 | µg/L | 1.0 | 3/8/06 | 3/9/06 |



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Date: 15-Mar-06
WorkOrder: 0603190

# ANALYTICAL REPORT

**Client Sample ID:** 4870-MW3-W **Received:** 3/7/06 **Collected:** 3/7/06 0:00
**Lab ID:** 0603190-03A

**Test Name:** Gasoline Components/Additives **Reference:** LUFT/EPA 8260B Modified

| Parameter | Result | Limit | Units | DF | Extracted | Analyzed |
|---|---|---|---|---|---|---|
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | µg/L | 1.0 | | 3/13/06 |
| Tert-butyl alcohol (TBA) | ND | 10 | µg/L | 1.0 | | 3/13/06 |
| Di-isopropyl ether (DIPE) | ND | 1.0 | µg/L | 1.0 | | 3/13/06 |
| Ethyl tert-butyl ether (ETBE) | ND | 1.0 | µg/L | 1.0 | | 3/13/06 |
| Benzene | ND | 0.50 | µg/L | 1.0 | | 3/13/06 |
| Tert-amyl methyl ether (TAME) | ND | 1.0 | µg/L | 1.0 | | 3/13/06 |
| Toluene | ND | 0.50 | µg/L | 1.0 | | 3/13/06 |
| Ethylbenzene | ND | 0.50 | µg/L | 1.0 | | 3/13/06 |
| m,p-Xylene | ND | 0.50 | µg/L | 1.0 | | 3/13/06 |
| o-Xylene | ND | 0.50 | µg/L | 1.0 | | 3/13/06 |
| Surrogate: 1,4-Dichlorobenzene-d4 | 94.0 | 80.8-139 | % Rec | 1.0 | | 3/13/06 |

**Test Name:** TPH as Gasoline **Reference:** LUFT/EPA 8260B Modified

| Parameter | Result | Limit | Units | DF | Extracted | Analyzed |
|---|---|---|---|---|---|---|
| TPHC Gasoline | ND | 50 | µg/L | 1.0 | | 3/13/06 |

**Client Sample ID:** 4870-MW3-W **Received:** 3/7/06 **Collected:** 3/7/06 0:00
**Lab ID:** 0603190-03D

**Test Name:** TPH as Diesel/Motor Oil **Reference:** EPA 3510/GCFID(LUFT)/EPA 8015B

| Parameter | Result | Limit | Units | DF | Extracted | Analyzed |
|---|---|---|---|---|---|---|
| TPHC Diesel (C12-C22) | ND | 50 | µg/L | 1.0 | 3/8/06 | 3/9/06 |
| TPHC Motor Oil | ND | 170 | µg/L | 1.0 | 3/8/06 | 3/9/06 |



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Date: 15-Mar-06
WorkOrder: 0603190

# ANALYTICAL REPORT

**Client Sample ID:** 4870-QCTB-W **Received:** 3/7/06 **Collected:** 3/7/06 0:00
**Lab ID:** 0603190-04A

**Test Name:** Gasoline Components/Additives **Reference:** LUFT/EPA 8260B Modified

| Parameter | Result | Limit | Units | DF | Extracted | Analyzed |
|---|---|---|---|---|---|---|
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | µg/L | 1.0 | | 3/13/06 |
| Tert-butyl alcohol (TBA) | ND | 10 | µg/L | 1.0 | | 3/13/06 |
| Di-isopropyl ether (DIPE) | ND | 1.0 | µg/L | 1.0 | | 3/13/06 |
| Ethyl tert-butyl ether (ETBE) | ND | 1.0 | µg/L | 1.0 | | 3/13/06 |
| Benzene | ND | 0.50 | µg/L | 1.0 | | 3/13/06 |
| Tert-amyl methyl ether (TAME) | ND | 1.0 | µg/L | 1.0 | | 3/13/06 |
| Toluene | ND | 0.50 | µg/L | 1.0 | | 3/13/06 |
| Ethylbenzene | ND | 0.50 | µg/L | 1.0 | | 3/13/06 |
| m,p-Xylene | ND | 0.50 | µg/L | 1.0 | | 3/13/06 |
| o-Xylene | ND | 0.50 | µg/L | 1.0 | | 3/13/06 |
| Surrogate: 1,4-Dichlorobenzene-d4 | 92.1 | 80.8-139 | % Rec | 1.0 | | 3/13/06 |

**Test Name:** TPH as Gasoline **Reference:** LUFT/EPA 8260B Modified

| Parameter | Result | Limit | Units | DF | Extracted | Analyzed |
|---|---|---|---|---|---|---|
| TPHC Gasoline | ND | 50 | µg/L | 1.0 | | 3/13/06 |



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North Coast Laboratories, Ltd.

Date: 15-Mar-06

**CLIENT:** Pvt. cust. paying on pickup
**Work Order:** 0603190
**Project:** 4870.00, Dibbles

# QC SUMMARY REPORT

Method Blank

Sample ID **MB-3/13/06** Batch ID: **R40271** Test Code: **8260OXYW** Units: **µg/L** Analysis Date **3/13/06 4:12:00 AM** Prep Date
Client ID: Run ID: **ORGCMS3_060313B** SeqNo: **578512**

| Analyte | Result | Limit | SPK value | SPK Ref Val | % Rec | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | | |
| Tert-butyl alcohol (TBA) | ND | 10 | | | | | | | | | |
| Di-isopropyl ether (DIPE) | ND | 1.0 | | | | | | | | | |
| Ethyl tert-butyl ether (ETBE) | ND | 1.0 | | | | | | | | | |
| Benzene | ND | 0.50 | | | | | | | | | |
| Tert-amyl methyl ether (TAME) | ND | 1.0 | | | | | | | | | |
| Toluene | 0.1067 | 0.50 | | | | | | | | | J |
| Ethylbenzene | 0.2191 | 0.50 | | | | | | | | | J |
| m,p-Xylene | 0.3563 | 0.50 | | | | | | | | | J |
| o-Xylene | ND | 0.50 | | | | | | | | | |
| 1,4-Dichlorobenzene-d4 | 0.928 | 0.10 | 1.00 | 0 | 92.8% | 81 | 139 | 0 | | | |

Sample ID **MB-3/13/06** Batch ID: **R40269** Test Code: **GASW-MS** Units: **µg/L** Analysis Date **3/13/06 4:12:00 AM** Prep Date
Client ID: Run ID: **ORGCMS3_060313A** SeqNo: **578459**

| Analyte | Result | Limit | SPK value | SPK Ref Val | % Rec | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TPHC Gasoline | 27.87 | 50 | | | | | | | | | J |

Sample ID **MB-15317** Batch ID: **15317** Test Code: **TPHDMW** Units: **µg/L** Analysis Date **3/9/06 5:18:41 AM** Prep Date **3/8/06**
Client ID: Run ID: **ORGC7_060309A** SeqNo: **578625**

| Analyte | Result | Limit | SPK value | SPK Ref Val | % Rec | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TPHC Diesel (C12-C22) | ND | 50 | | | | | | | | | |
| TPHC Motor Oil | 58.22 | 170 | | | | | | | | | J |

**Qualifiers:** ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

North Coast Laboratories, Ltd.

**Date:** 15-Mar-06

**CLIENT:** Pvt. cust. paying on pickup
**Work Order:** 0603190
**Project:** 4870.00, Dibbles

# QC SUMMARY REPORT

Laboratory Control Spike

Sample ID **LCS-06157** Batch ID: **R40271** Test Code: **8260OXYW** Units: **µg/L** Analysis Date **3/13/06 1:39:00 AM** Prep Date

Client ID: Run ID: **ORGCMS3_060313B** SeqNo: **578510**

| Analyte | Result | Limit | SPK value | SPK Ref Val | % Rec | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether (MTBE) | 19.35 | 1.0 | 20.0 | 0 | 96.8% | 80 | 120 | 0 | | | |
| Tert-butyl alcohol (TBA) | 402.8 | 10 | 400 | 0 | 101% | 25 | 162 | 0 | | | |
| Di-isopropyl ether (DIPE) | 19.47 | 1.0 | 20.0 | 0 | 97.4% | 80 | 120 | 0 | | | |
| Ethyl tert-butyl ether (ETBE) | 19.22 | 1.0 | 20.0 | 0 | 96.1% | 77 | 120 | 0 | | | |
| Benzene | 18.89 | 0.50 | 20.0 | 0 | 94.4% | 78 | 117 | 0 | | | |
| Tert-amyl methyl ether (TAME) | 21.05 | 1.0 | 20.0 | 0 | 105% | 64 | 136 | 0 | | | |
| Toluene | 19.56 | 0.50 | 20.0 | 0 | 97.8% | 80 | 120 | 0 | | | |
| Ethylbenzene | 18.90 | 0.50 | 20.0 | 0 | 94.5% | 80 | 120 | 0 | | | |
| m,p-Xylene | 38.88 | 0.50 | 40.0 | 0 | 97.2% | 80 | 120 | 0 | | | |
| o-Xylene | 22.17 | 0.50 | 20.0 | 0 | 111% | 80 | 120 | 0 | | | |
| 1,4-Dichlorobenzene-d4 | 0.946 | 0.10 | 1.00 | 0 | 94.6% | 81 | 139 | 0 | | | |

Sample ID **LCSD-06157** Batch ID: **R40271** Test Code: **8260OXYW** Units: **µg/L** Analysis Date **3/13/06 11:25:00 AM** Prep Date

Client ID: Run ID: **ORGCMS3_060313B** SeqNo: **578529**

| Analyte | Result | Limit | SPK value | SPK Ref Val | % Rec | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether (MTBE) | 19.50 | 1.0 | 20.0 | 0 | 97.5% | 80 | 120 | 19.4 | 0.748% | 20 | |
| Tert-butyl alcohol (TBA) | 425.1 | 10 | 400 | 0 | 106% | 25 | 162 | 403 | 5.38% | 20 | |
| Di-isopropyl ether (DIPE) | 19.53 | 1.0 | 20.0 | 0 | 97.7% | 80 | 120 | 19.5 | 0.297% | 20 | |
| Ethyl tert-butyl ether (ETBE) | 18.96 | 1.0 | 20.0 | 0 | 94.8% | 77 | 120 | 19.2 | 1.31% | 20 | |
| Benzene | 19.46 | 0.50 | 20.0 | 0 | 97.3% | 78 | 117 | 18.9 | 2.99% | 20 | |
| Tert-amyl methyl ether (TAME) | 20.96 | 1.0 | 20.0 | 0 | 105% | 64 | 136 | 21.0 | 0.413% | 20 | |
| Toluene | 20.27 | 0.50 | 20.0 | 0 | 101% | 80 | 120 | 19.6 | 3.58% | 20 | |
| Ethylbenzene | 19.68 | 0.50 | 20.0 | 0 | 98.4% | 80 | 120 | 18.9 | 4.08% | 20 | |
| m,p-Xylene | 39.61 | 0.50 | 40.0 | 0 | 99.0% | 80 | 120 | 38.9 | 1.86% | 20 | |
| o-Xylene | 22.01 | 0.50 | 20.0 | 0 | 110% | 80 | 120 | 22.2 | 0.703% | 20 | |
| 1,4-Dichlorobenzene-d4 | 0.972 | 0.10 | 1.00 | 0 | 97.2% | 81 | 139 | 0.946 | 2.74% | 20 | |

**Qualifiers:** ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

**CLIENT:** Pvt. cust. paying on pickup
**Work Order:** 0603190
**Project:** 4870.00, Dibbles

# QC SUMMARY REPORT

## Laboratory Control Spike

Sample ID **LCS-06158** Batch ID: **R40269** Test Code: **GASW-MS** Units: **µg/L** Analysis Date **3/13/06 2:55:00 AM** Prep Date
Client ID: Run ID: **ORGCMS3_060313A** SeqNo: **578457**

| Analyte | Result | Limit | SPK value | SPK Ref Val | % Rec | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TPHC Gasoline | 976.0 | 50 | 1,000 | 0 | 97.6% | 80 | 120 | 0 | | | |

Sample ID **LCSD-06158** Batch ID: **R40269** Test Code: **GASW-MS** Units: **µg/L** Analysis Date **3/13/06 11:50:00 AM** Prep Date
Client ID: Run ID: **ORGCMS3_060313A** SeqNo: **578484**

| Analyte | Result | Limit | SPK value | SPK Ref Val | % Rec | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TPHC Gasoline | 944.6 | 50 | 1,000 | 0 | 94.5% | 80 | 120 | 976 | 3.27% | 20 | |

Sample ID **LCS-15317** Batch ID: **15317** Test Code: **TPHDMW** Units: **µg/L** Analysis Date **3/9/06 3:18:30 AM** Prep Date **3/8/06**
Client ID: Run ID: **ORGC7_060309A** SeqNo: **578614**

| Analyte | Result | Limit | SPK value | SPK Ref Val | % Rec | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TPHC Diesel (C12-C22) | 339.4 | 50 | 500 | 0 | 67.9% | 72 | 124 | 0 | | | S |
| TPHC Motor Oil | 947.4 | 170 | 1,000 | 0 | 94.7% | 71 | 139 | 0 | | | |

Sample ID **LCSD-15317** Batch ID: **15317** Test Code: **TPHDMW** Units: **µg/L** Analysis Date **3/9/06 3:38:32 AM** Prep Date **3/8/06**
Client ID: Run ID: **ORGC7_060309A** SeqNo: **578615**

| Analyte | Result | Limit | SPK value | SPK Ref Val | % Rec | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TPHC Diesel (C12-C22) | 346.4 | 50 | 500 | 0 | 69.3% | 72 | 124 | 339 | 2.04% | 15 | S |
| TPHC Motor Oil | 961.4 | 170 | 1,000 | 0 | 96.1% | 71 | 139 | 947 | 1.47% | 15 | |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

NORTH COAST LABORATORIES LTD.
5680 West End Road • Arcata • CA 95521-9202
707-822-4649 Fax 707-822-6831

# Chain of Custody

0603190

LABORATORY NUMBER:

Attention:
Results & Invoice to: Ron Kendall
Address: PO BOX 838, Fortuna, CA 95540
Phone: (707) 725-5626
Copies of Report to: LACO; Mike Kitahara
Sampler (Sign & Print): STD RKD

TAT: ☐ 24 Hr ☐ 48 Hr ☐ 5 Day ☐ 5–7 Day
☑ STD (2–3 Wk) ☐ Other:
PRIOR AUTHORIZATION IS REQUIRED FOR RUSHES

REPORTING REQUIREMENTS: State Forms ☐
Preliminary: FAX ☑ Verbal ☐ By:
Final Report: FAX ☐ Verbal ☐ By:

**CONTAINER CODES:** 1—½ gal. pl; 2—250 ml pl; 3—500 ml pl; 4—1 L Nalgene; 5—250 ml BG; 6—500 ml BG; 7—1 L BG; 8—1 L cg; 9—40 ml VOA; 10—125 ml VOA; 11—4 oz glass jar; 12—8 oz glass jar; 13—brass tube; 14—other

**PRESERVATIVE CODES:** a—$HNO_3$; b—HCl; c—$H_2SO_4$; d—$Na_2S_2O_3$; e—NaOH; f—$C_2H_3O_2Cl$; g—other

## PROJECT INFORMATION

Project Number: 4870.00
Project Name: Dibbles
Purchase Order Number: Task 3035

| LAB ID | SAMPLE ID | DATE | TIME | MATRIX* | CONTAINER | PRESERVATIVE | ANALYSIS: 8260 List 1 | ANALYSIS: TPHd/mo w/SGC |
|---|---|---|---|---|---|---|---|---|
| | 4870-MW1-W | 3-7-06 | PM | GW | 9 | B | 3 | 1 |
| | 4870-MW2-W | ↓ | ↓ | ↓ | 7 | ---- | 3 | 1 |
| | 4870-MW3-W | | | | | | 3 | 1 |
| | 4870-QCTB-W | | | | | | 1 | |

## SAMPLE CONDITION/SPECIAL INSTRUCTIONS

GEOTRACKER

Cold intact

| RELINQUISHED BY (Sign & Print) | DATE/TIME | RECEIVED BY (Sign) | DATE/TIME |
|---|---|---|---|
| STEVE DAVIS | 3-7-06 1642 | Kelley Thompson | 3/7/06 1642 |

**SAMPLE DISPOSAL**
☑ NCL Disposal of Non-Contaminated
☐ Return ☐ Pickup

CHAIN OF CUSTODY SEALS Y/N/NA
SHIPPED VIA: UPS Air-Ex Fed-Ex Bus Hand

*MATRIX: DW=Drinking Water; Eff=Effluent; Inf=Influent; SW=Surface Water; GW=Ground Water; S=Soil; O=Other.

**ALL CONTAMINATED NON-AQUEOUS SAMPLES WILL BE RETURNED TO CLIENT**