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W. A. CRAIG, INC.

Environmental Contracting and Consulting

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April 13, 2000

Project No. 3628

Mr. Reed Rinehart
Rinehart Distribution, Inc.
P.O. Box 725
Ukiah, California 94582

Groundwater Monitoring Report, March 2000
1107 Fifth Street
Oakland, California

Dear Mr. Rinehart:

W.A. Craig, Inc. (WAC) is pleased to submit this Groundwater Monitoring Report for sampling conducted on March 21, 2000 at the Rino Pacific service station, located at 1107 Fifth Street (site), Oakland, California (**Figure 1**). This work was performed in accordance with the scope of work presented in WAC's Work Plan dated September 16, 1996.

This report includes groundwater quality and elevation data for two of groundwater monitoring wells installed at the site. A description of the installation of the monitoring wells is presented in WAC's "Subsurface Investigation Report," dated January 17, 1997.

This is the first groundwater-monitoring event since December 30, 1998. ~~In March 1999,~~ Trinity Excavation & Engineering, at the direction of Rinehart Distribution (formerly Rino Pacific), excavated 2,625 cubic yards of contaminated soil, while ~~removing three 10,000-gallon and one 8,000-gallon underground storage tanks from the site.~~ These tanks were replaced with one 15,000 gallon diesel and one 15,000 gallon, partitioned (10,000 gallons unleaded gasoline and 5,000 gallons supreme gasoline) tanks. The contaminated soil was disposed of at Forward Landfill in Manteca, California. Additionally, 35,000 gallons of groundwater from the excavation pit was disposed of at the Seaport Environmental facility, in Redwood City, California. ~~During the excavation activities monitoring well MW-2 was destroyed.~~

Four sidewall samples and four boring samples were taken from the excavated pit. Soil sample analytical results from the four sidewall samples yielded MtBE at 26 mg/kg, 30 mg/kg, 39 mg/kg and 39 mg/kg. In the remaining four boring samples and four sidewall samples, only

minor concentrations of hydrocarbon constituents and lead were reported. The soil sample analytical results are summarized in **Table 3**.

SCOPE OF WORK

The scope of work conducted by WAC during this period included the following tasks:

- Measure dissolved oxygen concentration in two monitoring wells;
- Purge and sample groundwater from the two monitoring wells;
- Analyze groundwater samples for total petroleum hydrocarbons as gasoline (TPH-g), total petroleum hydrocarbons as diesel (TPH-d), benzene, toluene, ethylbenzene, xylenes (BTEX), and fuel oxygenates including methyl tert-butyl ether (MtBE),
- Prepare this summary report of the groundwater monitoring activities.

GROUNDWATER SAMPLING AND ANALYSIS

Groundwater Elevations

WAC technical staff measured water levels in the two monitoring wells on March 21, 2000 using an electronic water-level indicator. The wells were exposed to atmospheric conditions for approximately 30 minutes to allow stable water level measurements. The elevation of the top of each monitoring well casing was determined by a licensed surveyor following their installation. Groundwater elevations for this and previous monitoring events are summarized in **Table 1**.

Groundwater Sampling

At least three well casing volumes were purged from each monitoring well prior to collecting groundwater samples. Field parameters including temperature, pH, conductivity, dissolved oxygen concentration and turbidity were intermittently monitored during purging of the wells. Groundwater samples were collected using disposable polyethylene bailers. The field groundwater sampling logs are included in **Attachment A**.

The samples were submitted under chain-of-custody control to McCampbell Analytical, Inc. (MAI), of Pacheco, California. The purged groundwater is currently stored on-site in labeled, DOT approved, 55-gallon, steel drums.

Groundwater Sample Analytical Results

The groundwater samples were analyzed by MAI for TPH-g using EPA Method 8015 (modified), purgeable aromatic hydrocarbons (BTEX) using EPA Method 8020 and for fuel oxygenates using EPA Method 8260. MAI is certified by the State of California to perform the required

analyses. The results of the analyses are summarized in **Table 2**. A copy of the original laboratory analytical report and chain-of-custody document are in **Attachment B**.

Conclusions and Recommendations

This is the first monitoring event since December 1998. Samples collected from monitoring well MW-1 yielded TPH-g concentrations at 220 µg/l and benzene at 11µg/l. This is the first monitoring event that these constituents have been detected in samples from MW-1. The concentration of MtBE in monitoring well MW-1 increased by two orders of magnitude from ~~2.3 µg/l in December 1998 to 4,800 µg/l~~. TPH-d concentration also increased since December of 1998.

In monitoring well MW-3, TPH-d concentrations increased by two orders of magnitude from 64 µg/l to 2,800 µg/l. The concentration of MtBE has remained relatively unchanged. All other constituents analyzed in samples collected from MW-2 were below laboratory detection limits.

WAC recommends implementation of the scope of work outlined in WAC's WorkPlan Addendum "Soil and Groundwater Quality Investigation," dated August 27, 1998. This investigation includes the construction of six (6) groundwater monitoring wells and advancing four exploratory borings. WAC also recommends continued groundwater monitoring to further assess groundwater quality.

Professional Certification

This report has been prepared by the staff of W. A. Craig, Inc., under the professional supervision of the persons whose seals and signatures appear hereon. No warranty, either expressed or implied, is made as to the professional advice presented herein. The analysis, conclusions and recommendations contained in this report are based upon site conditions as they existed at the time of quarterly monitoring and sampling and they are subject to change.

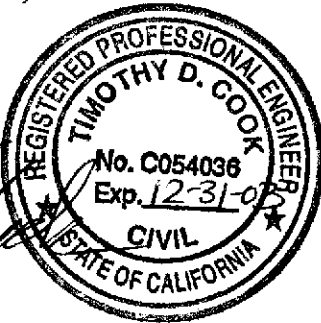

The conclusions presented in this report are professional opinions based solely upon visual observations of the site and vicinity, and interpretation of available information as described in this report. W.A. Craig, Inc. recognizes that the limited scope of services performed in execution of this scope of work may not be appropriate to satisfy the needs, or requirements of other state agencies, or of other users. Any use or reuse of this document or its findings, conclusions or recommendations presented herein the sole risk of the user. There is no other warranty, either expressed or implied.

Closing Statement

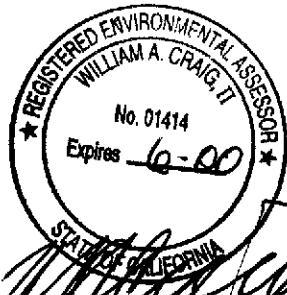
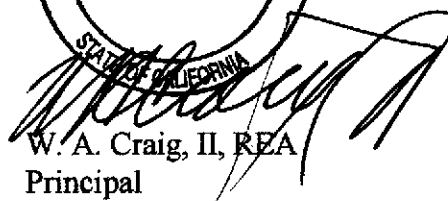
The next quarterly sampling event is tentatively scheduled for June 2000. We appreciate this opportunity to be of service to you on this groundwater monitoring project. Should you have any questions regarding this report please call Sean O'Grady at (707) 693-2929.

Sincerely,

W.A. Craig, Inc.,



Tim Cook, PE
Principal Engineer



W. A. Craig, II, REA
Principal

TC:sao

Attachments:

- Table 1 - Groundwater Elevation Data
- Table 2 - Groundwater Sample Analytical Results
- Table 3 - Soil Sample Analytical Results
- Figure 1 - Site Location Map
- Figure 2 - Site Plan
- A - Groundwater Sampling Logs and graphs
- B - Laboratory Analytical Reports

cc: Larry Seto, Alameda County Department of Environmental Health

Table 1
Groundwater Elevation
1107 5th Street Oakland, Ca.

| Well Number | Date | Top of Casing (ft) | Depth to Water | Static Water Elevation |
|-------------|----------|--------------------|----------------|------------------------|
| MW-1 | 10/21/96 | 3.84 | 5.08 | -1.24 |
| | 11/04/96 | | 3.02 | 0.82 |
| | 03/04/97 | | 2.28 | 1.56 |
| | 06/12/97 | | 4.80 | -0.96 |
| | 07/14/97 | | 2.66 | 1.18 |
| | 09/09/97 | | 2.45 | 1.39 |
| | 09/19/97 | | 2.60 | 1.24 |
| | 02/13/98 | | 2.76 | 1.08 |
| | 07/07/98 | | 2.15 | 1.69 |
| | 10/01/98 | | 3.63 | 0.21 |
| | 12/30/98 | | 4.40 | -0.56 |
| | 03/21/00 | | 2.62 | 1.22 |
| MW-2 | 10/21/96 | 4.48 | 4.66 | -0.18 |
| | 11/04/96 | | 4.60 | -0.12 |
| | 03/04/97 | | 3.68 | 0.80 |
| | 06/12/97 | | 3.70 | 0.78 |
| | 07/14/97 | | 4.16 | 0.32 |
| | 09/09/97 | | 3.88 | 0.60 |
| | 09/19/97 | | 4.50 | -0.02 |
| | 02/13/98 | | 3.08 | 1.40 |
| | 07/07/98 | | 3.74 | 0.74 |
| | 10/01/98 | | 4.63 | -0.15 |
| | 12/30/98 | | 3.90 | 0.58 |
| | 03/21/00 | | NA* | NA* |
| MW-3 | 10/21/96 | 4.81 | 7.66 | -2.85 |
| | 11/04/96 | | 5.70 | -0.89 |
| | 03/04/97 | | 11.38 | -6.57 |
| | 06/12/97 | | 5.18 | -0.37 |
| | 07/14/97 | | 7.96 | -3.15 |
| | 09/09/97 | | 10.16 | -5.35 |
| | 09/19/97 | | 12.80 | -7.99 |
| | 02/13/98 | | 11.42 | -6.61 |
| | 07/07/98 | | 11.76 | -6.95 |
| | 10/01/98 | | 11.34 | -6.53 |
| | 12/30/98 | | 4.56 | 0.25 |
| | 03/21/00 | | 10.92 | -6.11 |

Notes : Monitoring wells elevations are based upon the
 City of Oakland Datum # 16NW15
 * Monitoring Well MW-2 , was destroyed during excavation at the site. (03/04/99)

Table 2
Groundwater Sample Analytical Data
11075th Street, Oakland, Ca.

| ANALYTES (mg/kg) | | | | | | | | | |
|------------------|----------|--------|-------|---------|---------|---------|--------------|---------|-----------------|
| Well Number | Date | Diesel | TPH-g | MtBE | Benzene | Toluene | Ethylbenzene | Xylenes | MtBE EPA 8260 * |
| MW-1 | 11/04/96 | 220 | ND | ND | ND | ND | ND | ND | NA |
| | 03/05/97 | 230 | ND | ND | ND | ND | ND | ND | NA |
| | 06/12/97 | 290 | ND | ND | ND | ND | ND | ND | NA |
| | 09/09/97 | 180 | ND | ND | ND | ND | ND | ND | NA |
| | 02/13/98 | 590 | ND | 9.4 | ND | ND | ND | ND | NA |
| | 07/07/98 | 1,400 | ND | ND | ND | ND | ND | ND | 2.7 |
| | 10/01/98 | 1,100 | ND | ND | ND | ND | ND | ND | 1.8 |
| | 12/30/98 | 1,700 | ND | ND | ND | ND | ND | ND | 2.3 |
| 03/21/00 | 3,100 | 220 | 3,800 | 11 | ND | ND | ND | 4,800 | |
| MW-2 | 11/04/96 | 2,700 | 910 | 470,000 | 120 | 23 | 3.5 | 51 | NA |
| | 03/05/97 | 2,300 | 4,400 | 760,000 | 1,500 | 51 | 24 | 100 | NA |
| | 06/12/97 | 2,400 | 3,600 | 840,000 | 1,200 | 14 | 12 | 40 | NA |
| | 09/09/97 | 970 | 3,700 | 470,000 | 570 | 31 | 19 | 60 | NA |
| | 02/13/98 | 2,200 | 6,500 | 750,000 | 2,400 | 31 | ND | ND | NA |
| | 07/07/98 | 2,700 | 5,200 | 950,000 | 2,800 | ND | ND | ND | 1,000,000 |
| | 10/01/98 | 1,200 | 1,200 | 420,000 | 330 | 12 | 8.8 | 11 | 360,000 |
| | 12/30/98 | 1,900 | 1,000 | 370,000 | 96 | ND | ND | ND | 360,000 |
| 03/21/00 | NS | NS | NS | NS | NS | NS | NS | NS | |
| MW-3 | 11/04/96 | 310 | ND | 1,000 | ND | ND | ND | ND | NA |
| | 03/05/97 | 210 | ND | 13 | ND | ND | ND | ND | NA |
| | 06/12/97 | 94 | ND | 17 | ND | ND | ND | ND | NA |
| | 09/09/97 | 2,300 | ND | 12 | ND | ND | ND | ND | NA |
| | 02/13/98 | 570 | ND | 14 | ND | ND | ND | ND | NA |
| | 07/07/98 | 1,100 | ND | 7.8 | ND | ND | ND | ND | 6.6 |
| | 10/01/98 | 390 | ND | 9.2 | ND | ND | ND | ND | 4.8 |
| | 12/30/98 | 64 | ND | 6.9 | ND | ND | ND | ND | 4.5 |
| 03/21/00 | 2,800 | ND | 6.7 | ND | ND | ND | ND | 4.8 | |

Notes: NA = Not Analyzed
 ND = Not Detected at the laboratory reported limit of detection
 NS = Not sampled because MW-2 was destroyed during site excavation
 * Results of the 8260 found DIPE, ETBE, TAME, and tert-butanol as Non-detect

Table 3
Soil Sample Analytical Results
1107 5th Street, Oakland, Ca.

| ANALYTES (mg/kg) | | | | | | | | | |
|------------------|----------|-------|-------|------|---------|---------|--------------|---------|------|
| Sample Number | Date | TPH-g | TPH-d | MtBE | Benzene | Toluene | Ethylbenzene | Xylenes | Lead |
| B-1@14' | 03/03/99 | ND | ND | 1.3 | ND | ND | ND | ND | 4.6 |
| SW-1@8' | 03/03/99 | ND | ND | 26 | ND | ND | ND | ND | 4.7 |
| B-2@14' | 03/03/99 | ND | 4.3 | ND | ND | ND | ND | ND | 5.9 |
| SW-2@6' | 03/03/99 | ND | 4.2 | 30 | ND | 0.028 | ND | 0.047 | 3.8 |
| B-3@14' | 03/04/99 | ND | 2.2 | ND | ND | 0.017 | ND | 0.014 | ND |
| SW-3@8' | 03/04/99 | 14 | ND | 39 | 4.8 | 2.1 | 0.19 | 0.80 | 3.9 |
| B-4@14' | 03/04/99 | ND | 2.8 | 0.86 | 0.037 | 0.077 | 0.018 | 0.082 | ND |
| SW-4@8' | 03/04/99 | ND | 1.1 | 39 | 4.2 | ND | ND | 0.041 | 5.4 |

Notes: ND = Not Detected



Project No: 3628
 March 2000

Site Location Map
 Rinehart
 1107 Fith Street
 Oakland, California

Figure 1



Checked by:



W. A. Craig, Inc.

Environmental Contracting and Consulting

6940 Tremont Road
 Dixon, California 95620
 Cal License #455752

(707) 693-2929
 FAX (707) 693-2922



5th Street

Sidewalk

Scale

Scale house

MW-2
(Former location)

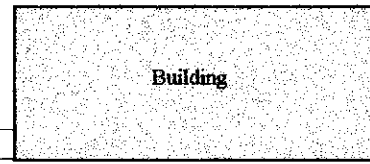
Diesel/Gas
Dispensers

Diesel Dispenser

Diesel Dispenser

Adeline Street

Landscaping





MW-1

Sump

MW-3

Landscaping

EXPLANATION

-  Former Location of UST's
-  Monitoring Wells

Olivers Hof Brau
360 Adeline

Parking lot



Approximate Scale: 1inch = 30 Feet

Checked by:



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Environmental Contracting and Consulting

6940 Tremont Road
Dixon, California 95620
Cal License #455752

(707) 693-2929
FAX (707) 693-2922

Project # 3628
March 2000

Site Plan
Rino Pacific
1107 5th Street
Oakland, CA

Figure 2

ATTACHMENT A
MONITORING WELL SAMPLING LOGS

(625 SW - 5000 - Jefferson 2 1/2 miles E. on
 Mazza Supply Air Handmade (512) 652 6532
 5424 Martin Luther
 512 - 653 - 4365

WELL DEVELOPMENT AND SAMPLING LOG

Well Name Sumner Job No. 3628 Date 3/21/00 Weather _____
 Well Number MD 1

Data
 Depth of Well 14' Casing Elevation _____ Depth to Water 2-6.2' Groundwater Elevation _____
 Method of Purging Well _____ Method of Sampling Well _____
 Volume 2.71 gallons Volume Factors: 2"=0.166g/ft; 4"=0.653g/ft; 6"=1.47g/ft; 8"=2.61g/ft; 12"=5.88g/ft
 to Water Prior to Sampling _____ D.O. 0.94 mg/l @ 17.0 C

Parameters

| Volume (gal) | Temperature | SP | pH | Turbidity | Comments (color/odor/sheen/product etc.) |
|--|-------------|------|------|-----------|--|
| Begin purging well | | | | | |
| 4.25 | 19.4 °C | 3999 | 6.76 | high | grey brown water color odor present |
| 6.50 | 18.9 | 3999 | 6.76 | high | " |
| 8.0 | 19.0 | 3999 | 6.76 | " | " |
| Range 8-15 sections Sampling for TPH & TPH in Benzene | | | | | |

Data
 Well Number MD 2
 Depth of Well _____ Casing Elevation _____ Depth to Water _____ Groundwater Elevation _____
 Method of Purging Well _____ Method of Sampling Well _____
 Volume _____ Volume Factors: 2"=0.166g/ft; 4"=0.653g/ft; 6"=1.47g/ft; 8"=2.61g/ft; 12"=5.88g/ft
 to Water Prior to Sampling _____

Parameters

| Volume (gal) | Temperature | SP | pH | Turbidity | Comments (color/odor/sheen/product etc.) |
|--------------------|-------------|----|----|-----------|--|
| Begin purging well | | | | | |
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WELL DEVELOPMENT AND SAMPLING LOG

Project Name RUINEHAKT Job No. 362E Date 3/21/00 Weather _____
Driller CRADY

Data Well Number NW 3
Depth of Well 14.7' Casing Elevation _____ Depth to Water 10.92' Groundwater Elevation _____
Volume of Purging Well _____ Method of Sampling Well _____
Purge Volume 1.88 gallons Volume Factors: 2"=0.166g/ft; 4"=0.653g/ft; 6"=1.47g/ft; 8"=2.61g/ft; 12"=5.88g/ft
Depth to Water Prior to Sampling D.O. 0.46 mg/l @ 19.2°C

| Time | Volume (gal) | Temperature | SP | pH | Turbidity | Comments (color/odor/sheen/product etc.) |
|------|--------------------|-------------|----|----|-----------|--|
| | Begin purging well | | | | | |
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Purge 1.88 gallons
Sampling for TPH-g, TPH-d, BTEX-d
-4-88

Data Well Number _____
Depth of Well _____ Casing Elevation _____ Depth to Water _____ Groundwater Elevation _____
Volume of Purging Well _____ Method of Sampling Well _____
Purge Volume _____ Volume Factors: 2"=0.166g/ft; 4"=0.653g/ft; 6"=1.47g/ft; 8"=2.61g/ft; 12"=5.88g/ft
Depth to Water Prior to Sampling _____

Parameters

| Time | Volume (gal) | Temperature | SP | pH | Turbidity | Comments (color/odor/sheen/product etc.) |
|------|--------------------|-------------|----|----|-----------|--|
| | Begin purging well | | | | | |
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Notes:

ATTACHMENT B
LABORATORY ANALYTICAL RESULTS



McCAMPBELL ANALYTICAL INC.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
 Telephone : 925-798-1620 Fax : 925-798-1622
<http://www.mccampbell.com> E-mail: main@mccampbell.com

| | | |
|--|-------------------------------------|--------------------------------|
| W. A. Craig, Inc. 6940 Tremont Road Dixon, CA 95620-9603 | Client Project ID: #3628; Rhinehart | Date Sampled: 03/21/00 |
| | | Date Received: 03/21/00 |
| | Client Contact: Sean O'Grady | Date Extracted: 03/22-03/24/00 |
| | Client P.O: | Date Analyzed: 03/22-03/24/00 |

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with Methyl tert-Butyl Ether* & BTEX*
 EPA methods 5030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030)

| Lab ID | Client ID | Matrix | TPH(g) ⁺ | MTBE | Benzene | Toluene | Ethylbenzene | Xylenes | % Recovery Surrogate |
|--|-----------|--------|---------------------|------|---------|---------|--------------|---------|----------------------|
| 33586 | MW 1 | W | 220,c | 3800 | 11 | ND | ND | ND | 102 |
| 33587 | MW 1D | W | 240,c | 4200 | 12 | 0.83 | ND | 0.97 | 104 |
| 33588 | MW 3 | W | ND | 6.7 | ND | ND | ND | ND | 98 |
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| Reporting Limit unless otherwise stated; ND means not detected above the reporting limit | W | | 50 ug/L | 5.0 | 0.5 | 0.5 | 0.5 | 0.5 | |
| | S | | 1.0 mg/kg | 0.05 | 0.005 | 0.005 | 0.005 | 0.005 | |

* water and vapor samples are reported in ug/L, wipe samples in ug/wipe, soil and sludge samples in mg/kg, and all TCLP and SPLP extracts in ug/L

* cluttered chromatogram; sample peak coelutes with surrogate peak

*The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment; j) no recognizable pattern.

 Edward Hamilton, Lab Director



McCAMPBELL ANALYTICAL INC.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
<http://www.mccampbell.com> E-mail: main@mccampbell.com

| | | |
|--|-------------------------------------|--------------------------|
| W. A. Craig, Inc. 6940 Tremont Road Dixon, CA 95620-9603 | Client Project ID: #3628; Rhinehart | Date Sampled: 03/21/00 |
| | | Date Received: 03/21/00 |
| | Client Contact: Sean O'Grady | Date Extracted: 03/21/00 |
| | Client P.O: | Date Analyzed: 03/22/00 |

Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel *

EPA methods modified 8015, and 3550 or 3510; California RWQCB (SF Bay Region) method GCFID(3550) or GCFID(3510)

| Lab ID | Client ID | Matrix | TPH(d)* | % Recovery Surrogate |
|--|-----------|-----------|----------|----------------------|
| 33586 | MW 1 | W | 3100,a/e | 104 |
| 33587 | MW 1D | W | 2900,a/e | 104 |
| 33588 | MW 3 | W | 2800,b,g | 104 |
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| Reporting Limit unless otherwise stated; ND means not detected above the reporting limit | W | 50 ug/L | | |
| | S | 1.0 mg/kg | | |

* water and vapor samples are reported in ug/L, wipe samples in ug/wipe, soil and sludge samples in mg/kg, and all TCLP / STLC / SPLP extracts in ug/L

* cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

*The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant; d) gasoline range compounds are significant; e) medium boiling point pattern that does not match diesel (fuel oil?); f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment.



McCAMPBELL ANALYTICAL INC.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
 Telephone : 925-798-1620 Fax : 925-798-1622
<http://www.mccampbell.com> E-mail: main@mccampbell.com

| | | |
|--|-------------------------------------|--------------------------------|
| W. A. Craig, Inc. 6940 Tremont Road Dixon, CA 95620-9603 | Client Project ID: #3628; Rhinehart | Date Sampled: 03/21/00 |
| | Client Contact: Sean O'Grady | Date Received: 03/21/00 |
| | Client P.O: | Date Extracted: 03/21-03/26/00 |
| | | Date Analyzed: 03/21-03/26/00 |

Oxygenated Volatile Organics By GC/MS

EPA method 8260 modified

| Lab ID | 33586 | 33587 | 33588 | 33589 | Reporting Limit | |
|--------------------------------|----------------|--------|-------|------------|-----------------|------|
| Client ID | MW 1 | MW 1D | MW 3 | Trip Blank | | |
| Matrix | W | W | W | W | S | W |
| Compound | Concentration* | | | | ug/kg | ug/L |
| Di-isopropyl Ether (DIPE) | ND<130 | ND<130 | ND | ND | 5.0 | 1.0 |
| Ethyl tert-Butyl Ether (ETBE) | ND<130 | ND<130 | ND | ND | 5.0 | 1.0 |
| Methyl-tert Butyl Ether (MTBE) | 4800 | 3500 | 4.8 | ND | 5.0 | 1.0 |
| tert-Amyl Methyl Ether (TAME) | ND<130 | ND<130 | ND | ND | 5.0 | 1.0 |
| tert-Butanol | 720 | 1100 | ND | ND | 25 | 5.0 |

Surrogate Recoveries (%)

| | | | | | |
|----------------------|-----|-----|-----|-----|--|
| Dibromofluoromethane | 104 | 101 | 103 | 100 | |
| Comments: | | | | | |

* water samples are reported in ug/L, soil and sludge samples in ug/kg, wipes in ug/wipe and all TCLP / STLC / SPLP extracts in ug/L
 ND means not detected above the reporting limit; N/A means surrogate not applicable to this analysis
 (h) lighter than water immiscible sheen is present; (i) liquid sample that contains greater than ~5 vol. % sediment; (j) sample diluted due to high organic content

DHS Certification No. 1644

 Edward Hamilton, Lab Director



McCAMPBELL ANALYTICAL INC.

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QC REPORT

Date: 03/22/00 Matrix: Water
Extraction: N/A

| Compound | Concentration: ug/L | | | %Recovery | | RPD |
|----------|---------------------|----|-----|---------------|----|-----|
| | Sample | MS | MSD | Amount Spiked | MS | |

SampleID: 32200

Instrument: GC-7

| | | | | | | | |
|---------------|-------|--------|--------|---------|-----|-----|-----|
| Surrogate1 | 0.000 | 97.0 | 96.0 | 100.00 | 97 | 96 | 1.0 |
| Xylenes | 0.000 | 299.0 | 304.0 | 300.00 | 100 | 101 | 1.7 |
| Ethyl Benzene | 0.000 | 95.0 | 97.0 | 100.00 | 95 | 97 | 2.1 |
| Toluene | 0.000 | 95.0 | 97.0 | 100.00 | 95 | 97 | 2.1 |
| Benzene | 0.000 | 95.0 | 96.0 | 100.00 | 95 | 96 | 1.0 |
| MTBE | 0.000 | 90.0 | 95.0 | 100.00 | 90 | 95 | 5.4 |
| GAS | 0.000 | 1080.5 | 1107.8 | 1000.00 | 108 | 111 | 2.5 |

SampleID: 32200

Instrument: GC-2 B

| | | | | | | | |
|--------------|-------|-------|-------|--------|-----|-----|-----|
| Surrogate1 | 0.000 | 112.0 | 112.0 | 100.00 | 112 | 112 | 0.0 |
| TPH (diesel) | 0.000 | 293.0 | 299.0 | 300.00 | 98 | 100 | 2.0 |

$$\% \text{ Recovery} = \frac{(MS - \text{Sample})}{\text{Amount Spiked}} \cdot 100$$

$$RPD = \frac{(MS - MSD)}{(MS + MSD)} \cdot 2 \cdot 100$$

RPD means Relative Percent Deviation



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QC REPORT

VOCs (EPA 8240/8260)

Date: 03/21/00-03/22/00 Matrix: Water

Extraction: N/A

| Compound | Concentration: ug/L | | | %Recovery | | RPD |
|----------|---------------------|----|-----|---------------|----|-----|
| | Sample | MS | MSD | Amount Spiked | MS | |

SampleID: 32400

Instrument: GC-4

| | | | | | | | |
|--------------------|-------|-------|-------|--------|-----|-----|------|
| Surrogate | 0.000 | 101.0 | 96.0 | 100.00 | 101 | 96 | 5.1 |
| Toluene | 0.000 | 110.0 | 104.0 | 100.00 | 110 | 104 | 5.6 |
| Benzene | 0.000 | 111.0 | 104.0 | 100.00 | 111 | 104 | 6.5 |
| Chlorobenzene | 0.000 | 109.0 | 103.0 | 100.00 | 109 | 103 | 5.7 |
| Trichloroethane | 0.000 | 109.0 | 102.0 | 100.00 | 109 | 102 | 6.6 |
| 1,1-Dichloroethene | 0.000 | 105.0 | 91.0 | 100.00 | 105 | 91 | 14.3 |

$$\% \text{ Recovery} = \frac{(MS - \text{Sample})}{\text{Amount Spiked}} \cdot 100$$

$$RPD = \frac{(MS - MSD)}{(MS + MSD)} \cdot 2 \cdot 100$$

RPD means Relative Percent Deviation

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CHAIN OF CUSTODY RECORD

TURN AROUND TIME

RUSH 24 HOUR 48 HOUR 5 DAY

Report To: SEAN O'GRADY

Bill To:

Company: W. A. Craig

6940 Tremont Road

Dixon, CA 95620-9603

Tele: (707) 693-2929

Fax: (707) 693-2922

Project #: "LAINEHAET" 3020

Project Name: " "

Project Location: ORELAND

Sampler Signature: Sean O'Grady

Analysis Request

Other

Comments

| SAMPLE ID | LOCATION | SAMPLING | | # Containers | Type Containers | MATRIX | | | | | METHOD PRESERVED | | | | BTEX & TPH as Gas (602/8020 + 8015) MTBE | TPH as Diesel (8015) | Total Petroleum Oil & Grease (5520 E&F/B&F) | Total Petroleum Hydrocarbons (#18.1) | EPA 601 / 8010 | BTEX ONLY (EPA 602 / 8020) | EPA 608 / 8080 | EPA 608 / 8080 PCB'S ONLY | EPA 624 / 8246 / 8260 <i>PHL only's only</i> | EPA 625 / 8270 | PAH's / PNA's by EPA 625 / 8270 / 8310 | CAM-17 Metals | LUFT 5 Metals | Lead (7240/7421/239.2/6010) | RCI | | | | | | | | | | | | | | |
|-----------------|----------|-------------|------|--------------|-----------------|--------|------|-----|--------|-------|------------------|-----|------------------|-------|--|----------------------|---|--------------------------------------|----------------|----------------------------|----------------|---------------------------|---|----------------|--|---------------|---------------|-----------------------------|-----|--|--|--|--|--|--|--|--|--|--|--|--|-------|-------|
| | | Date | Time | | | Water | Soil | Air | Sludge | Other | Ice | HCl | HNO ₃ | Other | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>MW 1</u> | | <u>3/21</u> | | | | X | | | | | X | X | X | X | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | |
| <u>MW 1D</u> | | <u> </u> | | | | X | | | | | X | X | X | X | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | 33586 |
| <u>MW 3</u> | | <u> </u> | | | | X | | | | | X | X | X | X | | | | | | | | X | | | | | | | | | | | | | | | | | | | | 33587 | |
| <u>TRIP BLK</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 33588 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 33589 |

Relinquished By: Sean O'Grady

Date: 3/21/00 Time: 3:20p

Received By: Juan Cal

Relinquished By: Juan Cal

Date: 3/21/00 Time: 5:20a

Received By: Lina A Butler

Relinquished By:

Date: Time:

Received By:

Remarks:

ICE /
GOOD CONDITION
HEAD SPACE ABSENT
PRESERVATION APPROPRIATE
CONTAINERS
VOAS / O&G / METALS / OTHER

68



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| | | |
|---|--|-------------------------------|
| Trinity Excavating & Engineering 1011 Second Street, Suite 205 Santa Rosa, CA 95404 | Client Project ID: 1107 5 th Street, Oakland | Date Sampled: 03/03/99 |
| | Client Contact: Brian Kesler | Date Received: 03/05/99 |
| | Client P.O.: | Date Extracted: 03/05/99 |
| | | Date Analyzed: 03/05-03/09/99 |

Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel *

EPA methods modified 8015, and 3550 or 3510; California RWQCB (SF Bay Region) method GCFID(3550) or GCFID(3510)

| Lab ID | Client ID | Matrix | TPH(d) ⁺ | % Recovery Surrogate |
|--|-----------|--------|---------------------|----------------------|
| 04548 | B-1-14 | S | ND | 102 |
| 04549 | SW-1-8 | S | ND | 101 |
| 04550 | B-2-14 | S | 4.3,g,b | 84 |
| 04551 | SW-2-6 | S | 4.2,b | 107 |
| 04552 | B-3-14 | S | 2.2,g,b | 103 |
| 04553 | SW-3-8 | S | ND | 107 |
| 04554 | B-4-14 | S | 2.8,g,b | 108 |
| 04555 | SW-4-8 | S | 1.1,b | 111 |
| | | | | |
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| | | | | |
| | | | | |
| | | | | |
| Reporting Limit unless otherwise stated: ND means not detected above the reporting limit | W | | 50 ug/L | |
| | S | | 1.0 mg/kg | |

* water and vapor samples are reported in ug/L, wipe samples in ug/wipe, soil and sludge samples in mg/kg, and all TCLP / STLC / SPLP extracts in ug/L

* clustered chromatogram resulting in occluded surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

*The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant, no recognizable pattern; c) aged diesel? is significant; d) gasoline range compounds are significant; e) medium boiling point pattern that does not match diesel (?); f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment.

DHS Certification No. 1644

EH Edward Hamilton, Lab Director



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| | | |
|---|--|--------------------------|
| Trinity Excavating & Engineering 1011 Second Street, Suite 205 Santa Rosa, CA 95404 | Client Project ID: 1107 5 th Street, Oakland | Date Sampled: 03/03/99 |
| | Client Contact: Brian Kesler | Date Received: 03/05/99 |
| | Client P.O.: | Date Extracted: 03/05/99 |
| | | Date Analyzed: 03/08/99 |

Lead*

EPA analytical methods 6010/200.7, 239.2*

| Lab ID | Client ID | Matrix | Extraction * | Lead* | % Recovery Surrogate |
|--|-----------|-----------|--------------|------------|----------------------|
| 04548 | B-1-14 | S | TTLIC | 4.6 | 99 |
| 04549 | SW-1-8 | S | TTLIC | 4.7 | 100 |
| 04550 | B-2-14 | S | TTLIC | 5.9 | 96 |
| 04551 | SW-2-6 | S | TTLIC | 3.8 | 100 |
| 04552 | B-3-14 | S | TTLIC | ND | 98 |
| 04553 | SW-3-8 | S | TTLIC | 3.9 | 102 |
| 04554 | B-4-14 | S | TTLIC | ND | 100 |
| 04555 | SW-4-8 | S | TTLIC | 5.4 | 101 |
| | | | | | |
| | | | | | |
| | | | | | |
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| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| Reporting Limit unless otherwise stated; ND means not detected above the reporting limit | S | TTLIC | | 3.0 mg/kg | |
| | W | TTLIC | | 0.005 mg/L | |
| | --- | STLC,TCLP | | 0.2 mg/L | |

* soil and sludge samples are reported in mg/kg, wipe samples in ug/wipe, and water samples and all STLC / SPLP / TCLP extracts in mg/L
 * Lead is analysed using EPA method 6010 (ICP) for soils, sludges, STLC & TCLP extracts and method 239.2 (AA Furnace) for water samples
 * EPA extraction methods 1311(TCLP), 3010/3020(water,TTLIC), 3040(organic matrices,TTLIC), 3050(solids,TTLIC); STLC - CA Title 22
 * surrogate diluted out of range; N/A means surrogate not applicable to this analysis
 * reporting limit raised due matrix interference
 i) liquid sample that contains greater than ~2 vol. % sediment; this sediment is extracted with the liquid, in accordance with EPA methodologies and can significantly effect reported metal concentrations.

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QC REPORT FOR HYDROCARBON ANALYSES

Date: 03/05/99-03/06/99

Matrix: SOIL

| Analyte | Concentration (mg/kg) | | | Amount Spiked | % Recovery | | RPD |
|-----------------------|-----------------------|-------|-------|---------------|------------|-----|-----|
| | Sample (#00686) | MS | MSD | | MS | MSD | |
| TPH (gas) | 0.000 | 2.188 | 2.032 | 2.03 | 108 | 100 | 7.4 |
| Benzene | 0.000 | 0.208 | 0.196 | 0.2 | 104 | 98 | 5.9 |
| Toluene | 0.000 | 0.210 | 0.198 | 0.2 | 105 | 99 | 5.9 |
| Ethylbenzene | 0.000 | 0.206 | 0.194 | 0.2 | 103 | 97 | 6.0 |
| Xylenes | 0.000 | 0.598 | 0.564 | 0.6 | 100 | 94 | 5.9 |
| TPH(diesel) | 0 | 304 | 288 | 300 | 101 | 96 | 5.2 |
| TRPH (oil and grease) | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

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QC REPORT FOR ICP and/or AA METALS

Date: 03/08/99-03/09/99

Matrix: SOIL

Extraction: TLIC

| Analyte | Concentration (mg/kg, mg/L) | | | Amount Spiked | † Recovery | | RPD |
|----------------|--------------------------------|------|------|------------------|------------|-----|-----|
| | Sample | MS | MSD | | MS | MSD | |
| Total Lead | 0.0 | 4.67 | 4.93 | 5.0 | 97 | 99 | 5.5 |
| Total Cadmium | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total Chromium | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total Nickel | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total Zinc | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total Copper | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| TCLP Lead | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

† Rec. = (MS - Sample) / amount spiked x 100

RPD = (MS - MSD) / (MS + MSD) x 2 x 100

