May 1, 2003 Report 0304.R1 RGA Job #CLR8503

Mr. Joel Pitney California Linen Rental Company 989 41<sup>st</sup> Street Oakland, CA 94608

Oakland, CA





SUBJECT:

GROUNDWATER MONITORING AND SAMPLING REPORT

Fuel Leak Case RO0000337 California Linen Rental Company 989 41st Street

Dear Mr. Pitney:

RGA Environmental, Inc. (RGA) is pleased to present this report documenting the results of the most recent monitoring and sampling of the groundwater monitoring wells (designated as MW1 and MW2) at the subject site. This work was performed in accordance with a request from the Alameda County Department of Environmental Health (ACDEH) dated January 2, 2003. The wells were purged and sampled on April 2, 2003. A Site Location Map (Figure 1) and Site Plan Detail (Figure 2) are attached with this report.

### BACKGROUND

The site is currently used as a linen rental facility. Review of available documents for the site show that on February 6 through 8, 1989 three Underground Storage Tanks (USTs) were removed from the site by Miller Environmental Company (MEC). The tanks consisted of one 10,000 gallon tank containing gasoline, one 550 gallon tank containing gasoline, and one 2,500 gallon capacity tank containing #5 fuel oil. Each tank was in a separate pit. Petroleum hydrocarbons were detected in each of the pits at the time of tank removal. Figure 2 shows the tank locations at the site. An UST Unauthorized Release Site Report was completed by Mr. Gil Wistar of the ACDEH dated February 9, 1989. In a letter dated February 23, 1989 the ACDEH requested a preliminary assessment of the site. In a letter dated July 7, 1989 the ACDEH approved a revised work plan for subsurface investigation at the site that included installation of three groundwater monitoring wells.

Three monitoring wells, designated as MW1, MW2, and MW3 were installed at the site by MEC on September 25, 1989. One well was installed adjacent to each of the tank pits. Soil samples were collected for laboratory analysis from the boreholes for the monitoring wells at depths of 4 and 8 feet below the ground surface. The samples were analyzed for Total Petroleum Hydrocarbons as Gasoline (TPH-G), Total Petroleum Hydrocarbons as Diesel (TPH-D), Total Petroleum Hydrocarbons as Motor Oil (TPH-MO) and for benzene, toluene, ethylbenzene, and xylenes (BTEX). All target analytes were detected in the soil sample from the borehole for MW1 at a depth of 4 feet below the ground surface. None of the analytes were detected in the other

soil samples from the monitoring well boreholes, except for 190 ppm oil in the sample from MW2 collected at a depth of 4 feet.

On October 2, 1989, the three monitoring wells at the subject site were sampled by MEC personnel, and analyzed for the same compounds as the borehole soil samples. All analytes except oil were detected in the groundwater sample from MW1. None of the analytes were detected in the groundwater samples from the other two monitoring wells. Groundwater was encountered in the wells at depths ranging from 7.00 to 9.25 feet, and the groundwater flow direction at the site was calculated to be to the north-northwest. Documentation of the installation of the three monitoring wells, and soil and groundwater sample results from the well installation and subsequent well sampling is presented in MEC's Preliminary Subsurface Investigation Report dated November 3, 1989. Due to earthquake-related issues, the Regional Water Quality Control Board (RWQCB) was unavailable to comment on the report.

Following five quarterly monitoring and sampling events for the three wells, MEC recommended that well MW3 be destroyed. MEC concluded that petroleum hydrocarbons had not been detected in wells MW2 and MW3, and had only been detected in well MW1. MEC identified the petroleum hydrocarbons in well MW1 as gasoline, and stated that MW1 is downgradient of a former gasoline tank. MEC also stated that the groundwater flow direction was consistently to the north-northwest at the site, and that the three wells were located downgradient from each of the tank pits. MEC stated that well MW2 is downgradient of well MW1 and would effectively detect any migration of petroleum hydrocarbons from the vicinity of well MW1. Documentation of the quarterly monitoring and sampling results and associated recommendations is presented in a letter report from MEC dated March 7, 1991.

In a letter dated April 15, 1991 the ACDEH approved destruction of well MW3, and required continuation of the quarterly monitoring and sampling of wells MW1 and MW2. On July 19, 1991, well MW3 was destroyed by overdrilling. Quarterly reports documenting monitoring and sampling of the two wells were subsequently prepared by MEC.

In a November 6, 1992 letter report, MEC presented the results for quarterly monitoring and sampling through October 17, 1992. The results show that no petroleum hydrocarbons were detected in well MW2 with the exception of 0.05 mg/L TPH-D on August 15, 1991 and 1.1 ug/L toluene and 3.3 ug/L xylenes on March 18, 1992. In well MW1, TPH and BTEX concentrations appear relatively unchanged with the exception of the March 18 and October 17, 1992 sampling events, which showed increased in benzene and toluene concentrations.

Sample results for samples collected on June 10, 1993 by the Grow Group as part of a cooperative monitoring event for investigation of nearby sites showed no detectable concentrations of EPA Method 8240 compounds in well MW2, and BTEX concentrations in MW1 consistent with concentrations encountered in well MW1 prior to the March 18 and October 17, 1992 sampling events. Review of 1998 correspondence suggests that additional cooperative sampling of the wells was performed, however the sample results were not available for review.

### FIELD ACTIVITIES

On April 1, 2003, RGA personnel visited the site to obtain access to wells MW1 and MW2. On April 2, 2003 groundwater monitoring wells MW1 and MW2 were monitored, purged and sampled by RGA personnel. The groundwater monitoring wells were monitored for depth to water and the presence of free product or sheen. Depth to water was measured to the nearest 0.01 foot using an electric water level indicator. The presence of free product or sheen was evaluated using a transparent bailer and with gas-finding paste on a steel tape.

Free product was not observed in any of the wells. No sheen was observed on water from any of the wells. Depth to water level measurements and calculated groundwater surface elevations are presented in Table 1.

Prior to sampling wells MW1 and MW2, the wells were purged of a minimum of three casing volumes of water. During purging operations, the field parameters of electrical conductivity, temperature, and pH were monitored. Once a minimum of three casing volumes had been purged, or the wells had been pumped dry, water samples were collected using a clean Teflon bailer. The water samples were transferred to 40-milliliter glass Volatile Organic Analysis (VOA) vials containing hydrochloric acid preservative and to one-liter amber glass bottles which were sealed with Teflon-lined screw caps. The VOA vials were overturned and tapped to assure that no air bubbles were present.

The sample containers were then transferred to a cooler with ice, and later were transported to McCampbell Analytical, Inc. in Pacheco, California. McCampbell Analytical, Inc. is a State-Certified hazardous waste testing laboratory. Chain of custody documentation accompanied the samples to the laboratory. Records of the field parameters measured during well purging are attached with this report.

### **HYDROGEOLOGY**

The measured depth to water in the groundwater monitoring wells on April 2, 2003 was 7.00 feet in MW1 and 9.09 feet in MW2. The measured depth to water is consistent with water levels historically measured in these wells, as reported in the MEC November 6, 1992 letter report documenting historical monitoring and sampling results.

It is not possible to calculate groundwater flow direction with only two wells. The groundwater flow direction has been historically reported to be consistently to the north-northwest by MEC. MEC did not report the gradient. The groundwater flow direction identified by MEC is shown on Figure 2.

Groundwater monitoring data collected during the quarter are presented in Table 1.

### LABORATORY RESULTS

The groundwater samples collected from groundwater monitoring wells MW1 and MW2 were analyzed for Total Petroleum Hydrocarbons as Gasoline (TPH-G) using EPA Method 8015; and for benzene, toluene, ethylbenzene, total xylenes (BTEX), and MTBE, TAME, ETBE, DIPE, TBA, EDB and EDC (ether oxygenates and lead scavengers) using EPA Method 8260.

The laboratory analytical results for the groundwater samples show that in well MW2 none of the analytes were detected except for total xylenes, which was detected at 0.00074 ppm. In well MW1, fuel oxygenates and lead scavengers were not detected and TPH-G, benzene, toluene, ethylbenzene, total xylenes, and were detected at concentrations of 24, 4, 1.6, 2, and 1.4 ppm, respectively.

The sample results for wells MW1 and MW2 are consistent with historical results obtained during previous quarterly monitoring and sampling episodes. The laboratory analytical results are summarized in Table 2. Copies of the laboratory analytical reports and chain of custody documentation are attached with this report.

### DISCUSSION AND RECOMMENDATIONS

The two existing wells, designated as MW1 and MW2 were monitored and sampled on April 2, 2003. No sheen or free product was detected in either of the wells. Ether oxygenates and lead scavengers were not detected in either of the wells. TPH-G and BTEX were detected in well MW1, and no analytes were detected in well MW2 with the exception of 0.00074 ppm xylenes. The measured depths to water and the sample results are consistent with historical results obtained for the wells. The relative absence of petroleum hydrocarbons in well MW2 suggests that petroleum hydrocarbons have not migrated beyond well MW2.

A subsurface investigation work plan will be submitted under separate cover. RGA recommends that the need for additional monitoring and sampling be evaluated following receipt of the subsurface investigation results.

### DISTRIBUTION

Copies of this report should be sent to Mr. Barney Chan at the Alameda County Department of Environmental Health.

### LIMITATIONS

This report was prepared solely for the use of California Linen Rental Company. The content and conclusions provided by RGA in this assessment are based on information collected during our investigation, which may include, but not be limited to, visual site inspections; interviews with the site owner, regulatory agencies and other pertinent individuals; review of available public documents; subsurface exploration and our professional judgment based on said information at the

time of preparation of this document. Any subsurface sample results and observations presented herein are considered to be representative of the area of investigation; however, geological conditions may vary between borings and may not necessarily apply to the general site as a whole. If future subsurface or other conditions are revealed which vary from these findings, the newly-revealed conditions must be evaluated and may invalidate the findings of this report.

This report is issued with the understanding that it is the responsibility of the owner, or his representative, to ensure that the information contained herein is brought to the attention of the appropriate regulatory agencies, where required by law. Additionally, it is the sole responsibility of the owner to properly dispose of any hazardous materials or hazardous wastes left onsite, in accordance with existing laws and regulations.

This report has been prepared in accordance with generally accepted practices using standards of care and diligence normally practiced by recognized consulting firms performing services of a similar nature. RGA is not responsible for the accuracy or completeness of information provided by other individuals or entities which is used in this report. This report presents our professional judgment based upon data and findings identified in this report and interpretation of such data based upon our experience and background, and no warranty, either express or implied, is made. The conclusions presented are based upon the current regulatory climate and may require revision if future regulatory changes occur.

Should you have any questions or comments, please do not hesitate to contact us at (510) 547-7771.

Sincerely,

**RGA** Environmental

for for

Karin Schroeter

**Project Manager** 

Paul H. King

California Registered Geologist #5901

Expires: 12/31/03

Attachments: Tables 1 & 2

Site Location Map (Figure 1)
Site Plan Detail (Figure 2)
Field Parameter Forms

Laboratory Analytical Reports Chain of Custody Documentation

PHK/wrw 0304.R1

TABLE 1 WELL MONITORING DATA

| Well<br>No. | Date<br>Monitored | Top of Casing Elev. (ft.) | Depth to<br>Water (ft.) | Water Table<br>Elev. (ft.) |
|-------------|-------------------|---------------------------|-------------------------|----------------------------|
| MW1         | 04/02/03          | 53.89                     | 7.00                    | 46.89                      |
| MW2         | 04/02/03          | 54.06                     | 9.09                    | 44.97                      |

# TABLE 2 SUMMARY OF LABORATORY ANALYTICAL RESULTS GROUNDWATER MONITORING WELLS (Samples Collected April 2, 2003)

| Well<br>No. | трн-G   | Benzene   | Toluene   | Ethylbenzene | Xylenes | Fuel oxygenates,<br>MTBE,<br>and Lead Scavengers |
|-------------|---------|-----------|-----------|--------------|---------|--|
| MWI         | 24      | 4.0       | 1.6       | 2.0          | 1.4     | ND<0.05,<br>TBA = ND<0.5                         |
| MW2         | ND<0.05 | ND<0.0005 | ND<0.0005 | ND<0.0005    | 0.00074 | ND<0.0005,<br>TBA = ND<0.005                     |

Notes:

TPH-G = Total Petroleum Hydrocarbons as Gasoline.

MTBE = Methyl tert-Butyl Ether.

ND = Not Detected.

Results in parts per million (ppm), unless otherwise indicated.

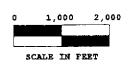


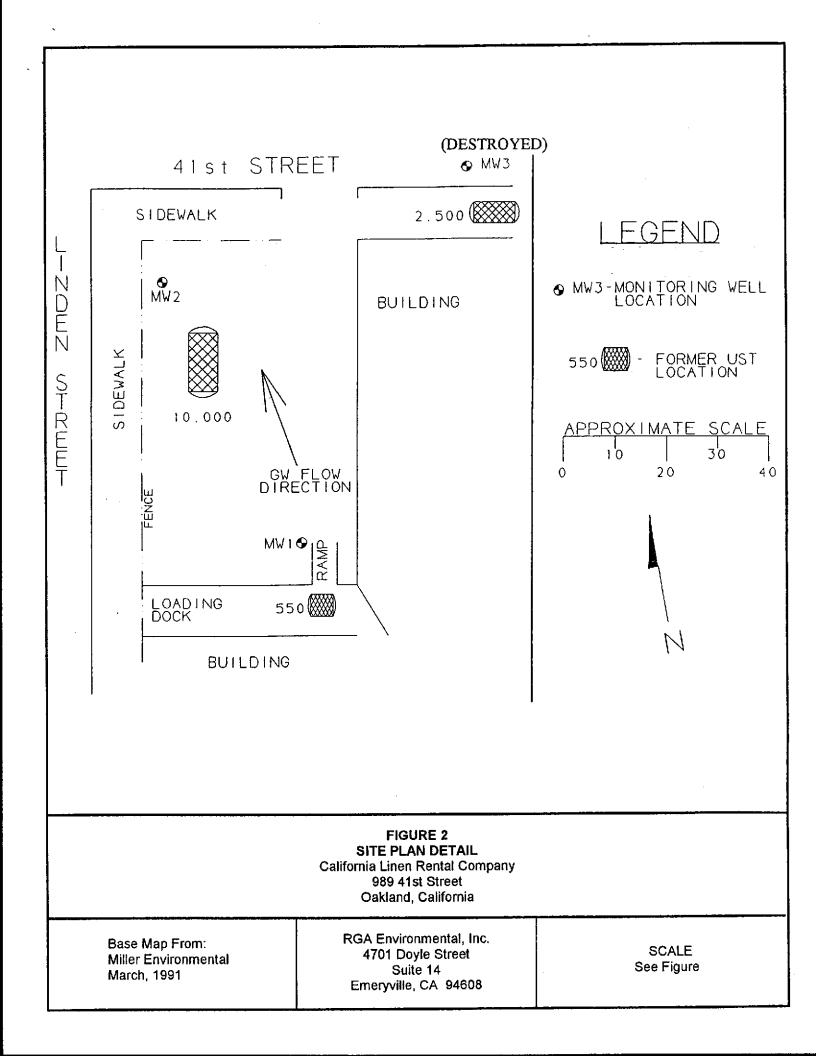
# FIGURE 1 SITE LOCATION MAP California Linen Rental Company 989 41st Street Oakland, California



Base Map From: U.S. Geological Survey Oakland - West, California 7.5 Minute Quadrangle Photorevised 1980

RGA Environmental, Inc. 4701 Doyle Street Suite 14 Emeryville, CA 94608





# RGA ENVIRONMENTAL GROUNDWATER MONITORING/WELL PURGING DATA SHEET

| •   | DAIA OIL          |                | Λa ( . ) \              |
|---|-------------------|----------------|-------------------------|
| Site Name (al. Linen                      |                   | Well No        | MW                      |
| Job No                                    |                   | Date           |                         |
| TOC to Water (ft.) 6.99 7.0               | Ø                 | Sheen          | NONE                    |
| Well Depth (ft.) 21.9                     |                   | Free Produc    | t Thickness             |
| Well Diameter \( \frac{\frac{1}{1}}{1} \) | -                 | Sample Coll    | ection Method           |
| Gal./Casing Vol. 9.0                      | _                 | <u>letton</u>  | bailer                  |
| E= 29.1                                   |                   | TEMPERATURE F) | ELECTRICAL (US/on)* 100 |
| TIME GAL. PURGED                          | <u>рн</u><br>О пО | TEMPERATURE '  | a.U.S                   |
| 12:02 pm 1                                | 8.98              | 120            | 725                     |
| 721,09 5                                  | 8,99              | <u> 675</u>    | <del>-7.6)</del>        |
| 12:07 10                                  | -8.98             | 12             | 122                     |
| 12:11 _ 15                                | 8,94              | <u> </u>       | 632                     |
| 12:15 20                                  | 8.96              | <u>-63.6</u>   | <u> </u>                |
| 12:19 25                                  | 8.96              | 64.3           | <del>-1.3/-</del>       |
| 12:22 - 50                                | 8.93              | 65.5           | 8,89                    |
| 12:24 _ 33_                               | <u>894</u>        | 67.0           | 9,96                    |
| 15:56                                     | 1 nm ped          | dry.           |                         |
| <u> </u>                                  |                   |                |                         |
|   |                   |                |                         |
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|   | -                 |                |                         |
|   |                   |                |                         |
| NOTES:                                    |                   |                | 1                       |
| Appears to have the                       | C. Sock           | - in well wa   | der                     |
| 1HC Sheen of 5th                          | ong odo           | on purge       | water.                  |
|   |                   |                |                         |

PURGE07.00

# RGA ENVIRONMENTAL GROUNDWATER MONITORING/WELL PURGING DATA SHEET

|                              | DATA SHEET    |              |                           |
|------------------------------|---------------|--------------|---------------------------|
| Site Name (a. Linen          |               | Well No      | W2                        |
| Job No                       |               | Date_ 4/7    | 1/03                      |
| TOC to Water (ft.) 4.78 9.00 | 1             | Sheen        | ONE                       |
| Well Depth (ft.) 22.9        |               | Free Product | Thickness Ø               |
| Well Diameter 4 h.           |               | Sample Colle | ction Method              |
| Gal./Casing Vol. 8.9         |               | Tefle        | a bailer                  |
| £ 2 <b>6.7</b>               |               |              | ELECTRICAL US (m) × 100 C |
| TIME GAL. PURGED             | 9.09 TE       | MPERATURE    | CONDUCTIVITY              |
| 11:15am 1                    | <u> </u>      | 64.6         | 0,89                      |
| 1 2 2                        | <u>4,00</u> _ | 04.4         | <u>0.98</u><br>A 95       |
| 11:22 10                     | 8.99          | 64.8         | 0.97                      |
| 10:27 15                     | <u>4,03</u> ( | <u> </u>     |                           |
| 11.78                        | 9.01 6        | 6.5          | 1.04                      |
| 11:30 200                    | pumped_       | <u>any</u>   |                           |
| <del>28</del>                | <u> </u>      |              |                           |
| ·                            |               |              |                           |
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|                              |               |              |                           |
| NOTES:                       |               |              |                           |
|                              |               |              |                           |

| 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

| RGA Environmental            | Client Project ID: #CLR 8503 California | Date Sampled: 04/02/03   |
|------------------------------|---|--------------------------|
| 4701 Doyle Street, Suite #14 | Linen                                   | Date Received: 04/03/03  |
| •                            | Client Contact: Paul King               | Date Extracted: 04/04/03 |
| Emeryville, CA 94608-2947    | Client P.O.:                            | Date Analyzed: 04/04/03  |

### Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline\*

| traction method: S | W5030B                                   | Analytic | cal methods: 8015Cm | Work Order: |          |  |
|--------------------|--|----------|---------------------|-------------|----------|--|
| Lab ID             | Client ID                                | Matrix   | TPH(g)              | DF          | % SS     |  |
| 001A               | MWI                                      | w        | 24,000,a            | 10          | 101      |  |
| 002A               | 002A MW2                                 | w        | ND                  | 1           | 102      |  |
|                    |  |          |                     |             |          |  |
|                    |  |          |                     |             |          |  |
|                    |  |          |                     |             |          |  |
|                    |  |          |                     |             |          |  |
|                    |  |          |                     |             | _        |  |
|                    |  |          |                     |             |          |  |
|                    |  |          |                     |             |          |  |
|                    |  |          |                     |             |          |  |
|                    |  |          |                     |             |          |  |
|                    |  |          |                     |             |          |  |
|                    |  |          |                     |             | <u> </u> |  |
| Reporting          | Limit for DF =1;<br>not detected at or   | W        | 50                  |             | g/L      |  |
| above th           | not detected at or<br>ne reporting limit | S        | NA                  | l           | ٧A       |  |

<sup>\*</sup>water and vapor samples are reported in μg/L, soil and sludge samples in mg/kg, wipe samples in μg/wipe, and TCLP extracts in μg/L.

<sup>#</sup> cluttered chromatogram; sample peak coelutes with surrogate peak.

<sup>+</sup>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 (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern.

# 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

| Client Project II | D: #CLR 8503 C  | alifornia                             | Date Sampled: 04/  | 02/03    |                         |
|-------------------|---|---------------------------------------|--|----------|-------------------------|
| Linen             |   |                                       | Date Received: 04/   | /03/03   |                         |
| Client Contact:   | noul Ving   |                                       | Date Extracted: 04/  | /05/03   |                         |
|                   | Paul King   |                                       |  |          |                         |
| <u>-</u>          |   |                                       | Date Analyzeu: 04/   |          |                         |
|                   |   | _                                     |  | Work Ord | er: 0304046             |
| 0304046-001B      | 0304046-002B  |                                       |  |          |                         |
| MWI               | MW2   | · · · · · · · · · · · · · · · · · · · |  |          |                         |
| W                 | W   |                                       | The second secon | Di       | -1                      |
| 100               | 1   |                                       |  | S        | w                       |
|                   | Сопсе   | ntration                              |  | ug/kg    | μg/L                    |
| ND<50             | ND  |                                       |  | NA       | 0.5                     |
| 4000              | ND  |                                       |  | NA       | 0.5                     |
| ND<500            | ND  |                                       |  | NA       | 5.0                     |
| ND<50             | ND  |                                       |  | NA       | 0.5                     |
| ND<50             | ND  |                                       |  | NA       | 0.5                     |
| ND<50             | ND  |                                       |  | NA       | 0.5                     |
| 2000              | ND  |                                       |  | NA       | 0.5                     |
| ND<50             | ND  |                                       |  | NA       | 0.5                     |
| ND<50             | ND  |                                       |  | NA       | 0.5                     |
| 1600              | ND  |                                       |  | NA       | 0.5                     |
| 1400              | 0.74  |                                       |  | NA       | 0.5                     |
| Surre             | ogate Recoveries  | (%)                                   |  |          |                         |
| 99.6              | 98.8  |                                       |  |          |                         |
| 92.8              | 92.5  |                                       |  |          |                         |
| 94.6              | 92.3  |                                       |  |          |                         |
|                   |   |                                       |  |          |                         |
|                   | Client Contact:   Client P.O.:   Oxygen:   An     0304046-001B     MW1     W     100     ND<50     4000     ND<50     ND<50 | Client Contact: Paul King             | Client Contact: Paul King  | Linen    | Date Received: 04/03/03 |

<sup>\*</sup> water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in µg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

## QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: W

WorkOrder: 0304046

| EPA Method: SW802 | 1B/8015Cm E | xtraction: | SW5030B |        | BatchID: | 6429   | Spiked Sample ID: 0304046-002 |          |            |              |
|-------------------|-------------|------------|---------|--------|----------|--------|-------------------------------|----------|------------|--------------|
|                   | Sample      | Spiked     | MS*     | MSD*   | MS-MSD*  | LCS    | LCSD                          | LCS-LCSD | Acceptance | Criteria (%) |
| Compound          | µg/L        | μg/L       | % Rec.  | % Rec. | % RPD    | % Rec. | % Rec.                        | % RPD    | Low        | High         |
| TPH(gas)          | ND          | 60         | 106     | 105    | 1.01     | 97.2   | 103                           | 5.38     | 80         | 120          |
| мтве              | ND          | 10         | 83.1    | 81.3   | 2.27     | 98.9   | 97.9                          | 0.992    | 80         | 120          |
| Benzene           | ND          | 10         | 100     | 101    | 0.989    | 104    | 104                           | 0.674    | 80         | 120          |
| Toluene           | ND          | 10         | 98.3    | 97.8   | 0.445    | 99.6   | 101                           | 1.32     | 80         | 120          |
| Ethylbenzene      | ND          | 10         | 98      | 97.2   | 0.825    | 97.6   | 99.2                          | 1.59     | 80         | 120          |
| Xylenes           | ND          | 30         | 89.3    | 89     | 0.374    | 92.3   | 92.3                          | 0        | 80         | 120          |
| %\$\$:            | 102         | 100        | 92.4    | 90.5   | 2.16     | 95.6   | 93.1                          | 2.71     | 80         | 120          |

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE :

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or langite content.

<sup>%</sup> Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / (MS + MSD) \* 2.

<sup>\*</sup> MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% If: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

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QC SUMMARY REPORT FOR SW8260B

Matrix: W

WorkOrder: 0304046

| EPA Method: SW8260B           | Extraction: SW5030 |        |        | BatchID: 6430 |         |        | Spiked Sample ID: N/A |          |            |              |
|-------------------------------|--------------------|--------|--------|---------------|---------|--------|-----------------------|----------|------------|--------------|
|                               | Sample             | Spiked | MS*    | MSD*          | MS-MSD* | LCS    | LCSD                  | LCS-LCSD | Acceptance | Criteria (%) |
| Compound                      | μg/L               | μg/L   | % Rec. | % Rec.        | % RPD   | % Rec. | % Rec.                | % RPD    | Low        | High         |
| Diisopropyl ether (DIPE)      | N/A                | 10     | N/A    | N/A           | N/A     | 115    | 117                   | 2.98     | 70         | 130          |
| Ethyl tert-butyl ether (ETBE) | N/A                | 10     | N/A    | N/A           | N/A     | 103    | 104                   | 0.332    | 70         | 130          |
| Methyl-t-butyl ether (MTBE)   | N/A                | 10     | N/A    | N/A           | N/A     | 106    | 107                   | 0.163    | 70         | 130          |
| tert-Amyl methyl ether (TAME) | N/A                | 10     | N/A    | N/A           | N/A     | 102    | 102                   | 0.659    | 70         | 130          |
| %\$\$:                        | N/A                | 100    | N/A    | N/A           | N/A     | 97.8   | 98.2                  | 60.5     | 70         | 130          |

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / (MS + MSD) \* 2.

\* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

### McCampbell Analytical Inc.

## **CHAIN-OF-CUSTODY RECORD**

Page 1 of 1

d

110 Second Avenue South, #D7 Pacheco, CA 94553-5560 (925) 798-1620

WorkOrder: 0304046

Client:

RGA Environmental 4701 Doyle Street, Suite #14 Emeryville, CA 94608-2947 TEL: FAX: (510) 547-7771

ProjectNo:

(510) 547-1983 #CLR 8503 California Linen

Date Received:

4/3/03

PO:

Date Printed:

4/3/03

|             |              | · · · · · · · · · · · · · · · · · · · |                 | -    |            |         |   |  |          |  |
|-------------|--------------|---------------------------------------|-----------------|------|------------|---------|---|--|----------|--|
| Sample ID   | ClientSamplD | Matrix                                | Collection Date | Hold | 8021B/8015 | SW8260B |   |  |          |  |
|             |              |                                       |                 |      |            |         | · |  |          |  |
| 0304046-001 | MW1          | Water                                 | 4/2/03          |      | Α          | В       |   |  |          |  |
| 0304046-002 | MW2          | Water                                 | 4/2/03          |      | Α          | B       |   |  | <u>_</u> |  |

Prepared by: Maria Venegas

#### Comments:

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.



ENVIRONMENTAL INC.

4701 DOYLE ST. #14

Tra.: (510) 547-7771

FAX: (510) 547-1983

EMERYVILLE, CA 94608

## CHAIN OF CUSTODY

by and lead scavengers 8260 Project Name: No. of Containers: Project Number: CIR 8503 Linen California Sampled By: (Printed and Signature): Wilhelm Welzenbach Remarks 🔍 Sample Location Sample Number Time Type Date (E) Derma Turn The 4/2/03 water + MWI MWZ ٤l GOOD CONDITIO **ÁPPEDPEIATE** HEAD SPACE ABSENT DECHI ORINATED IN LAB Received By: (Signature): Total No. of Samples Total No. of Relinquished By (Signature): Time Date, Laboratory: Containers 900 2 M (ample) Maly Laboratory Phone Number: Relinguished By; (Signature): Received By: (Signature): Laboratory Contact: Date Time 4/3/03 030 Angela Kydelius 925-798-1620 Received For Laboratory by: Relinquished By: (Signature): Date Time Sample Analysis Request Sheet (Signature) Attatched ( ) Yes (X) No

Comments:

VOAs preserved with HCl. \* a Extra Liters received per sample