

Ro-2511

May 16, 2003
Report 0278.R2
RGA Job # PRD8729

Alameda County
MAY 21 2003
Environmental Health



Mr. Jerry Johnson
Pacific Rolling Door Company
15900 Worthley Drive
San Lorenzo, CA 94580

SUBJECT: SUBSURFACE INVESTIGATION REPORT
Pacific Rolling Door Company
15900 Worthley Drive
San Lorenzo, CA

Dear Mr. Johnson:

RGA Environmental, Inc. (RGA) is pleased to present this report documenting the hand augering of 25 soil borings, designated as B15 through B39, and the collection of shallow soil samples from each soil boring at the subject site. Nine of the boreholes were drilled in beneath a 1984 building addition to investigate soil conditions in the vicinity of a former paint rack. The remaining samples were collected to further investigate concentrations of lead detected in soil samples during previous investigations.

This work was performed in accordance with our Subsurface Investigation Work Plan dated March 18, 2003, and our Work Plan Addendum dated March 31, 2003 for investigation beneath the building at the site (boreholes B15 through B23). Written approval of the work plan and work plan addendum was provided by the Alameda County Department of Environmental Health (ACDEH) in a letter dated April 3, 2003. In the approval letter, it was suggested that additional soil samples be collected outside the building to further define the extent of lead in soil. In response to this suggestion, a map showing boring locations B24 through B39 outside the building was provided to Ms. Chu for review. On April 4, 2003 Ms. Chu approved the outside proposed borehole locations contingent upon moving borehole B31 closure to the building. All work was performed under the direct supervision of an appropriately registered professional. Field activities were performed on April 8, 2003.

A Site Location Map is attached as Figure 1, a Site Plan Detail showing the indoor soil boring locations and Total Threshold Limit Concentration (TTLC) lead results is attached as Figure 2, a Site Plan Detail showing the outdoor soil boring locations and TTLC lead results is attached as Figure 3, and a Site Plan Detail showing the outdoor soil boring locations and Soluble Threshold Limit Concentrations (STLC) lead results is attached as Figure 4.

BACKGROUND

The site consists of a large spray painting facility and warehouse in an industrial area of San Lorenzo, California. The site is bordered to the northeast by railroad tracks, to the southeast and northwest by industrial facilities, and to the southwest by Worthley Drive. Based on

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conversations with Mr. Jerry Duncan of Pacific Rolling Door (PRD), the subject site was farmland until approximately 1961. PRD occupied the site in approximately 1961 and constructed a warehouse for metal rolling door manufacturing. Spray-painting operations have been performed for a number of years on an outdoor paint rack and in an open shed located in the storage yard between the back of the building and the railroad tracks (see Figure 2, Site Plan). The spray painting operations have included lead-based paint.

In the 1980's, the back of the existing building was extended 100 feet towards the railroad tracks. It is our understanding that at that time, the paint racks and open shed were relocated from the back of the original building footprint approximately 100 feet towards the railroad tracks to their present location. The ground surface cover at the site consists of concrete on the southeast side of the building from the front to the back of the building. From the back of the building to the railroad tracks, the ground surface is covered with a gray clayey gravel cover measuring approximately 11 to 18 inches in thickness. Mr. Duncan stated that the area behind the building was initially bare earth, and that the gravel was periodically added over time to increase the gravel layer thickness. A chain link fence is present on the sides and the back of the property at the property line.

In 1995, a total of five soil samples designated as TB1 through TB5 were collected by RGA at a depth of 0.5 to 1.0 feet below the ground surface. The samples were analyzed for Volatile Organic Compounds (VOCs) using EPA Method 8010 and for CAM 17 metals. The sample results showed that VOCs were not detected and that lead was detected in all of the boreholes and zinc was detected in one of the boreholes at concentrations exceeding ten times their respective STLC values. No Waste Extraction Tests (WETs) were performed. Based on the sample results, RGA recommended additional analysis for lead, mercury and zinc. The sample collection locations are shown on Figure 2. Documentation of the investigation and sample results is presented in RGA's Preliminary Subsurface Investigation report dated May 1, 1995.

In 2002, PRD requested that RGA return to the site to further investigate the extent of metals in soil at the site. On July 18, 2002 a total of nine soil borings, designated as borings B6 through B14, were hand augered to further investigate concentrations of lead, zinc, and mercury at the site. The July 18, 2002 investigation of these metals in the vicinity of the paint rack identified only lead at concentrations of concern. The elevated concentrations of lead appear to be limited to the clayey gravel layer which covers the ground surface behind the facility building, and which measures between 11 and 18 inches in thickness. Analysis of soil samples collected beneath the clayey gravel at a depth of 2.0 feet showed that the elevated lead concentrations appear to be limited to the clayey gravel. WET analysis on samples collected in the clayey gravel where the TTLC value exceeded ten times the lead STLC value showed that 3 of the 6 samples had concentrations which would cause the clayey gravel to be considered hazardous waste if removed from the site for disposal. The sample collection locations are shown on Figure 2.

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Documentation of the investigation and sample results is presented in RGA's Subsurface Investigation Report 0278.R1 dated August 19, 2002.

Based on discussions with Ms. Eva Chu at the Alameda County Department of Environmental Health, it was determined that an investigation for the presence of lead, zinc, and VOCs needed to be performed in the vicinity of the former paint racks, now located beneath the 1984 building addition.

FIELD ACTIVITIES

No permits were obtained for the shallow soil borings because the total depth of exploration did not exceed 2.5 feet below the ground surface. Prior to the beginning of field activities, a health and safety plan was prepared, Underground Service Alert was notified for underground utility location, and notification of the field date was provided to the ACDEH. In addition, a private utility locator cleared the boring locations inside the building.

Soil Boring Oversight and Groundwater Grab Sample Collection

On April 8, 2003 a total of 25 soil borings, designated as borings B15 through B39, were hand augered to further investigate concentrations of lead, zinc, and VOCs at the site. The soil from all of the borings was logged in the field in accordance with standard geologic field techniques and the Unified Soil Classification System. All of the soil samples from the nine indoor soil borings, designated as boreholes B15 through B23, were evaluated with a 10.3 eV Photoionization Detector (PID) calibrated using a 100 ppm isobutylene standard.

Relatively undisturbed soil samples were collected from all of the borings for laboratory analysis using a slide hammer and a stainless steel sampler lined with a 2-inch diameter, 6-inch long stainless steel tube. Two soil samples were collected from each of boreholes B15 through B23 (the indoor boreholes) between the depths of 6 and 12 inches and 24 and 30 inches below the bottom of the 6-inch thick concrete slab. A 3-inch thick layer of loose brown sand was encountered beneath the concrete at all of the boring locations. A moist, medium stiff brown sandy clay or silty clay was encountered beneath the sand layer to the total depth explored of 30 inches in all of the boreholes inside the building.

One soil sample was collected from each of boreholes B24 through B39 (the outdoor boreholes) between the depths of 6 and 12 inches below the ground surface using methods described above. The materials encountered in the boreholes consisted of clayey gravel to the total depth explored of 6 inches below the ground surface. After sample collection, the stainless steel tube was removed from the sampler, and the ends of the tube were sequentially covered with aluminum foil and plastic endcaps. The tubes were then labeled and placed in a cooler pending delivery to a

State-accredited hazardous waste laboratory. Chain of custody documentation procedures were observed for all sample handling.

All hand augering and sampling equipment was cleaned with an Alconox solution followed by a clean water rinse prior to use in each borehole. Following completion of sample collection activities, boreholes B15 through B23 were filled with neat cement grout, and boreholes B24 through B39 were filled with soil generated during drilling.

No staining or discoloration, no petroleum hydrocarbon or solvent odors, and no detectable PID readings were observed in any of the boreholes or soil samples, except for borehole B23. PID values were recorded as 159 ppm at a depth of 6 inches, and 80 ppm at a depth of 24 inches. The odor was qualitatively described as a sweet solvent odor, not resembling gasoline or other petroleum hydrocarbons.

A total of 34 soil samples were retained for laboratory analysis from both the indoor and the outdoor boring locations. The locations of the indoor soil borings are shown on the attached Site Plan Detail, Figures 2 and the outdoor borehole locations are shown on the attached Site Plan Detail, Figure 3.

GEOLOGY AND HYDROGEOLOGY

Based on review of regional geologic maps from U. S. Geological Survey Professional Paper 943, "Flatland Deposits - Their Geology and Engineering Properties and Their Importance to Comprehensive Planning," by E. J. Helley and K. R. Lajoie, 1979, the subject site is underlain by Holocene fine-grained alluvium (Qhaf) and bay mud (Qhbm). The fine-grained alluvium is described as being unconsolidated, plastic, moderately- to poorly-sorted silt and clay rich in organic material, which is seasonally saturated and irregularly bedded. The bay mud is described as unconsolidated, water-saturated, dark, plastic clay and silty clay rich in organic material, locally containing lenses and stringers of well-sorted silt and sand as well as beds of peat.

The subsurface materials encountered in the indoor boreholes B15 through B23 consisted of a three-inch thick layer of sand, underlain by clayey or silty sand to the total depth explored of approximately 30 inches below the bottom of the concrete slab. The subsurface materials encountered in outdoor boreholes B26 through B39 consisted of clayey gravel to the total depth explored of approximately 12 inches below the ground surface.

The sandy gravel encountered in outdoor boreholes, as well as the sand layer beneath the indoor concrete slab is interpreted to be fill material. The depth to groundwater at the site is unknown, but based on the proximity of San Francisco Bay, is assumed to be less than 10 feet. The

groundwater flow direction at the site is unknown, but based on local topography the groundwater flow direction is assumed to be toward San Francisco Bay to the southwest (see Figure 1).

LABORATORY ANALYSIS

All of the soil samples were analyzed at McCampbell Analytical, Inc. in Pacheco, California. The soil samples collected at the 0.5-foot depth below the ground surface from all of the boreholes were analyzed for total lead (TTLIC values). The soil samples collected at a depth of 0.5 feet from indoor boreholes B15 through B23 were also analyzed for total zinc (TTLIC values). A WET was performed for lead for the indoor sample at the 0.5-foot depth from borehole B23. Total lead analysis was performed for the indoor sample collected from borehole B23 at a depth of 2-feet below the ground surface, however a WET analysis was not performed for this sample.

A WET analysis was performed for all of the outdoor samples with the exception of boreholes B29, B37 and B39. A WET was not performed for the outdoor sample from borehole B29 because the total lead value did not exceed ten times the STLC value for lead. A WET was not performed for the outdoor sample from borehole B39 because the total lead value exceeded 1,000 ppm. Although the laboratory was requested to similarly not perform a WET for the outdoor sample from borehole B31 because the total lead value exceeded 1,000 ppm, a WET was not performed for the sample from borehole B37 and a WET was performed for the sample from borehole B31.

Review of the laboratory analytical results for the indoor soil samples collected at the 0.5-foot depth shows that zinc was not detected at concentrations exceeding 2,500 ppm (ten times the STLC value for zinc) in any of the samples. Similarly, lead was not detected at concentrations exceeding 50 ppm, (ten times the STLC value for lead), in any of the indoor samples with the exception of borehole B23 at a concentration of 520 ppm. The total lead value for the sample at the 2-foot depth from borehole B23 was 490 ppm. None of the other indoor samples from the 2-foot depth were analyzed.

Lead was detected at concentrations greater than 50 ppm in all of the outdoor samples collected at the 0.5-foot depth (boreholes B24 through B39) with the exception of B29. The total lead values for those samples ranged from 53 to 720 ppm, with the exception of B1 and B39 where total lead was detected at concentrations of 1,700 and 3,800.

The lead WET results for the 0.5-foot depth indoor sample B23 was below the STLC value for lead of 5.0 mg/L. Similarly, the outdoor samples from boreholes B33 and B34 were below the STLC value for lead of 5.0 mg/L. All of the remaining outdoor samples for which a WET was

performed (samples from boreholes B24 through B28, B30, B31, B32, B35, and B38) exceeded the STLC value of 5.0 mg/L for lead.

VOCs were only detected in the two samples from borehole B23. At the 0.5-foot depth, four compounds (toluene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene and ethylbenzene) commonly associated with solvents or petroleum hydrocarbons were detected at concentrations ranging from 2.2 to 22 ppm. At the 2.0-foot depth, three compounds (1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene and xylenes) were detected at concentrations ranging from 6.3 to 14 ppm.

The total lead (TTLC), total zinc (TTLC), soluble lead (STLC), and VOC laboratory analytical results for the indoor samples collected at the 0.5-foot depth are summarized in Table 1 and shown on Figure 2. The laboratory analytical results for the indoor samples collected at the 24-inch depth are summarized in Table 2. The total lead (TTLC) laboratory analytical results for the outdoor samples are summarized in Table 3 and shown on Figure 3. The soluble lead (STLC) laboratory analytical results for the outdoor samples are summarized in Table 3 and shown on Figure 4. Copies of the laboratory analytical reports and chain of custody documentation are attached with this report.

DISCUSSION AND RECOMMENDATIONS

Previous investigation in 1995 and 2002 of gravel fill in the vicinity of the existing paint rack at the site identified the metals lead and zinc at concentrations that resulted in a request from the ACDEH for additional investigation of the site prior to obtaining agency case closure. The current investigation of lead, zinc, and VOCs underneath the 1984 building addition (indoor samples), identified only lead and VOCs at concentrations of concern in one borehole (B23). Lead was also identified at concentrations of concern in the vicinity of the existing outdoor paint rack presently located behind the existing building.

The results of the WET analysis of the indoor sample collected at a depth of 0.5-foot in borehole B23 did not exceed the STLC value of 5.0 mg/L. Total lead (TTLC) was detected at a concentration of 490 ppm in borehole B23 at a depth of 24 inches below the ground surface. A WET analysis was not performed on the sample at the 24-inch depth in borehole B23 based on the higher TTLC value encountered in the sample collected at the 0.5-foot depth and the STLC value obtained for that sample. During hand augering in borehole B23, PID values were recorded as 159 ppm at a depth of 6 inches, and 80 ppm at a depth of 24 inches. The odor was qualitatively described as a sweet solvent odor, not resembling gasoline or other petroleum hydrocarbons. No staining or discoloration, no petroleum hydrocarbon or solvent odors, and no detectable PID readings were observed in any of the boreholes or soil samples, except for borehole B23, as described above.

The total lead results for the outdoor samples show that lead concentrations exceeded 50 ppm for all but one of the samples. WET analysis was performed for lead for 13 of the 16 outdoor samples. A total of 11 of the 13 WET analysis results exceeded the STLC value for lead of 5.0 ppm.

Based on discussions with Mr. Gerry Duncan of Pacific Rolling Door, it is our understanding that solvents associated with paint stripping may have been dumped immediately outside the back door located closest to borehole B23. It is also our understanding that fueling of vehicles with gasoline historically occurred in this area.

Based on discussions with Ms. Eva Chu of the ACDEH, a work plan will need to be submitted to further investigate the extent of VOCs in groundwater the vicinity of borehole B23 (see Figure 2) and in soil in the vicinity of the roll-up door at the back of the building near borehole B23. RGA recommends that groundwater also be evaluated for VOCs at the location immediately outside the backdoor near borehole B23. The horizontal extent of lead and VOCs in soil beneath the building has been defined to be limited to the vicinity of borehole B23 by the boreholes surrounding borehole B23. The work plan will also need to address collection and analysis of an unpreserved water sample collected from the location of the highest lead concentration encountered in the outdoor soil samples (B39).

The outdoor extent of lead below a concentration of 750 ppm (the commercial cleanup concentration) has not been defined to the south of borehole B39, and the extent of outdoor lead below a concentration of 255 ppm (the residential cleanup concentration) has not been defined to the south of borehole B38 or borehole B39 (see Figure 3). Isoconcentration contours showing the approximate known extent of total lead (TTLC) concentrations exceeding 750 and 255 ppm are shown on Figure 3.

Similarly, the extent of soluble lead exceeding 5.0 ppm for the WET analyses has not been defined in the vicinity of borehole B7 or to the south of boreholes B10, B38, or B39. Based on the total lead concentration of 3,800 ppm at borehole B39, it is assumed that soluble lead concentrations will exceed 5.0 ppm at this location. Isoconcentration contours showing the approximate known extent of soluble lead (STLC) concentrations exceeding 5.0 ppm are shown on Figure 4.

The presence of outdoor lead concentrations exceeding the commercial cleanup concentration of 750 will require some form of abatement to satisfy human health risk concerns. The presence of outdoor soluble lead concentrations exceeding 5.0 ppm will also require some form of abatement to satisfy water quality degradation concerns. The most cost-effective abatement methods available consist of removal and disposal of the impacted material or capping of the affected area with an asphaltic or concrete cap. In the event that removal is performed, the excavated material

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will be disposed of as hazardous waste based on the soluble lead concentration exceeding 5.0 ppm, in addition to the total lead concentration exceeding 1,000 ppm at two locations (B31 and B39).

In the event that capping is performed, the entire area from the building to the back fence line and from the south fence line to the north fence line will require capping unless additional delineation of the extent of lead is performed. In the event that additional delineation of the extent of lead is to be performed, procedures and proposed sample collection locations should be included in the work plan. The thickness of the outdoor area affected by lead is known to be approximately 11 to 18 inches thick, and to consist of clayey gravel fill overlying native clayey material. In the event that additional delineation of the extent of lead is performed, RGA recommends that the thickness of the clayey gravel layer be verified in several locations. Capping will also result in a deed restriction for the property and the requirement for a cap maintenance plan and program.

LIMITATIONS

This report was prepared solely for the use of Pacific Rolling Door 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 site owner, regulatory agencies and other pertinent individuals; review of available public documents; subsurface exploration and our professional judgement 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.

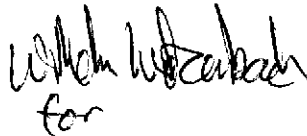
This report is issued with the understanding that it is the responsibility of the owner, or his representative, to ensure that the information contained herein is brought to the attention of the appropriate regulatory agencies, where required by law. Additionally, it is the sole responsibility of the 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 judgement 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.

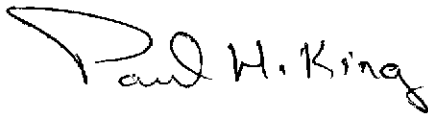
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Should you have any questions, please do not hesitate to contact us at (510) 547-7771.

Sincerely,



Karin Schroeter
Project Manager



Paul H. King
California Registered Geologist #5901
Expires: 12/31/03

Attachments: Table 1: Analytical Results, 0.5-Foot Depth Indoor Soil Samples
Table 2: Analytical Results, 2.0- Foot Depth Indoor Soil Samples
Table 3: Analytical Results, 0.5- Foot Depth Outdoor Soil Samples
Site Location Map - Figure 1
Site Plan Detail, Indoor Boring Locations, TTLC Results - Figure 2
Site Plan Detail, Outdoor Boring Locations, TTLC Results - Figure 3
Site Plan Detail, Outdoor Boring Locations, STLC Results - Figure 4
Laboratory Reports
Chain of Custody Documentation

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TABLE 1
 SUMMARY OF LABORATORY ANALYTICAL RESULTS
 0.5-FOOT DEPTH INDOOR SOIL SAMPLES
 (Samples Collected on April 8, 2003)

Sample No.	Lead (TTLC)	Lead (STLC)	Zinc (TTLC)	VOCs
B15-0.5	10	--	110	--
B16-0.5	ND	--	20	--
B17-0.5	19	--	55	--
B18-0.5	6.8	--	44	--
B19-0.5	6.5	--	41	ND
B20-0.5	9.6	--	57	--
B21-0.5	5.7	--	42	--
B22-0.5	8.3	--	63	--
B23-0.5	520	4.4	940	ND, except Toluene = 2.6, 1,2,4- Trimethylbenzene = 22, 1,3,5- Trimethylbenzene = 8.7, Xylenes = 19, Ethylbenzene = 2.2

Notes:

TTLC = Total Threshold Limit Concentration

STLC = Soluble Threshold Limit Concentration

VOCs = Volatile Organic Compounds

ND = Not Detected

-- = Not Analyzed

TTLC results are in ppm (mg/kg), unless otherwise indicated.

STLC results are in ppm (mg/L), unless otherwise indicated.

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TABLE 2
SUMMARY OF LABORATORY ANALYTICAL RESULTS
2.0-FOOT DEPTH INDOOR SOIL SAMPLES
(Samples Collected on April 8, 2003)

Sample No.	Lead (TTLC)	VOCs
B23-2.0	490	ND, except 1,2,4- Trimethylbenzene = 14 1,3,5- Trimethylbenzene = 6.3 Xylenes = 7.0

Notes:

TTLC = Total Threshold Limit Concentration

VOCs = Volatile Organic Compounds

ND = Not Detected

Results are in ppm (mg/kg), unless otherwise indicated.

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TABLE 3
SUMMARY OF LABORATORY ANALYTICAL RESULTS
0.5-FOOT DEPTH OUTDOOR SOIL SAMPLES
(Samples Collected on April 8, 2003)

Sample No.	Lead (TTLC)	Lead (STLC)
B24	720	46
B25	300	15
B26	160	15
B27	330	33
B28	170	9.3
B29	22	--
B30	630	34
B31	1700	71
B32	230	6.6
B33	100	4.9
B34	53	3.2
B35	130	7.7
B36	110	6.3
B37	300	--
B38	410	22
B39	3800	--

Notes:

TTLC = Total Threshold Limit Concentration

STLC = Soluble Threshold Limit Concentration

ND = Not Detected

-- = Not Analyzed

TTLC results are in ppm (mg/kg), unless otherwise indicated.

STLC results are in ppm (mg/L), unless otherwise indicated.

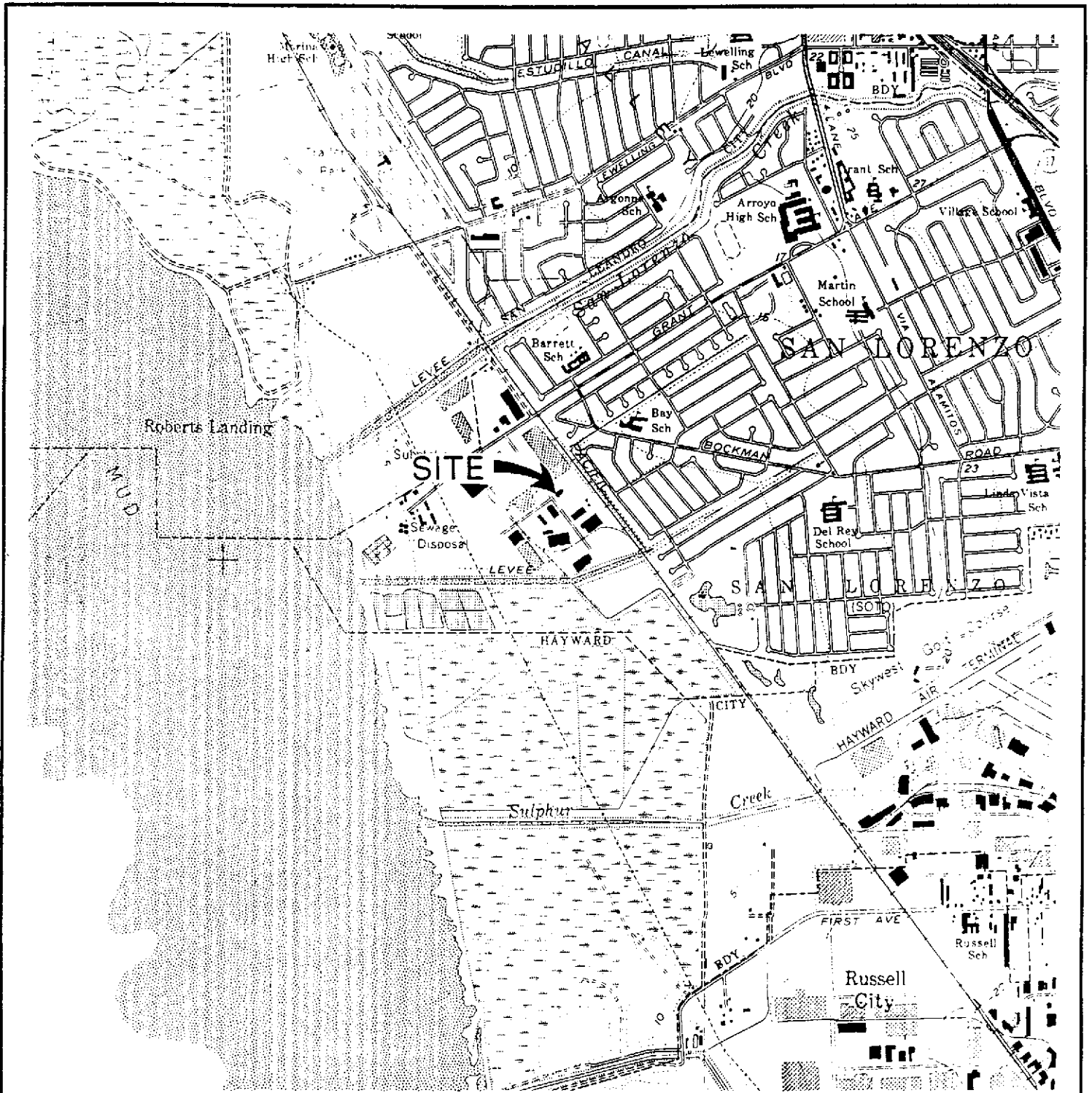
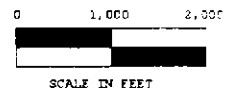


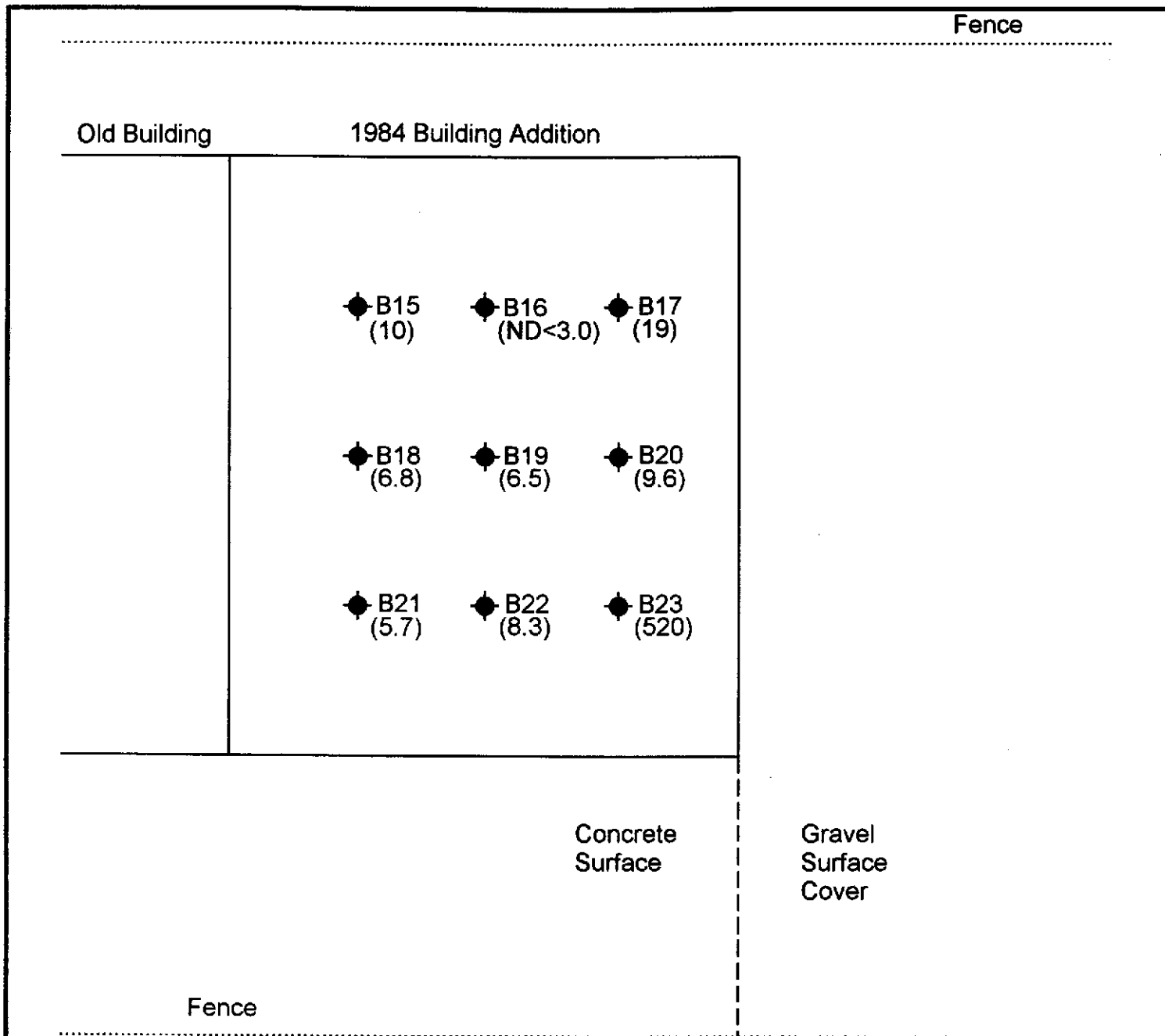
FIGURE 1
SITE LOCATION MAP
 Pacific Rolling Door
 15900 Worthley Drive
 San Lorenzo, California



Base Map From:
 U.S. Geological Survey
 San Leandro, California
 7.5 Minute Quadrangle
 Photorevised 1980

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





LEGEND

- ◆ Soil Boring Location — 2003 Investigation
- (999) TLC Lead Concentration, ppm

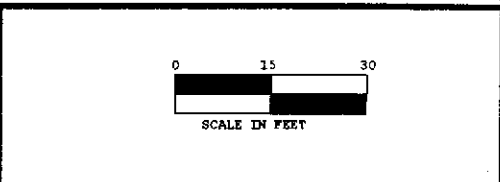
FIGURE 2
SITE PLAN DETAIL - INDOOR BORING LOCATIONS, TLC Lead

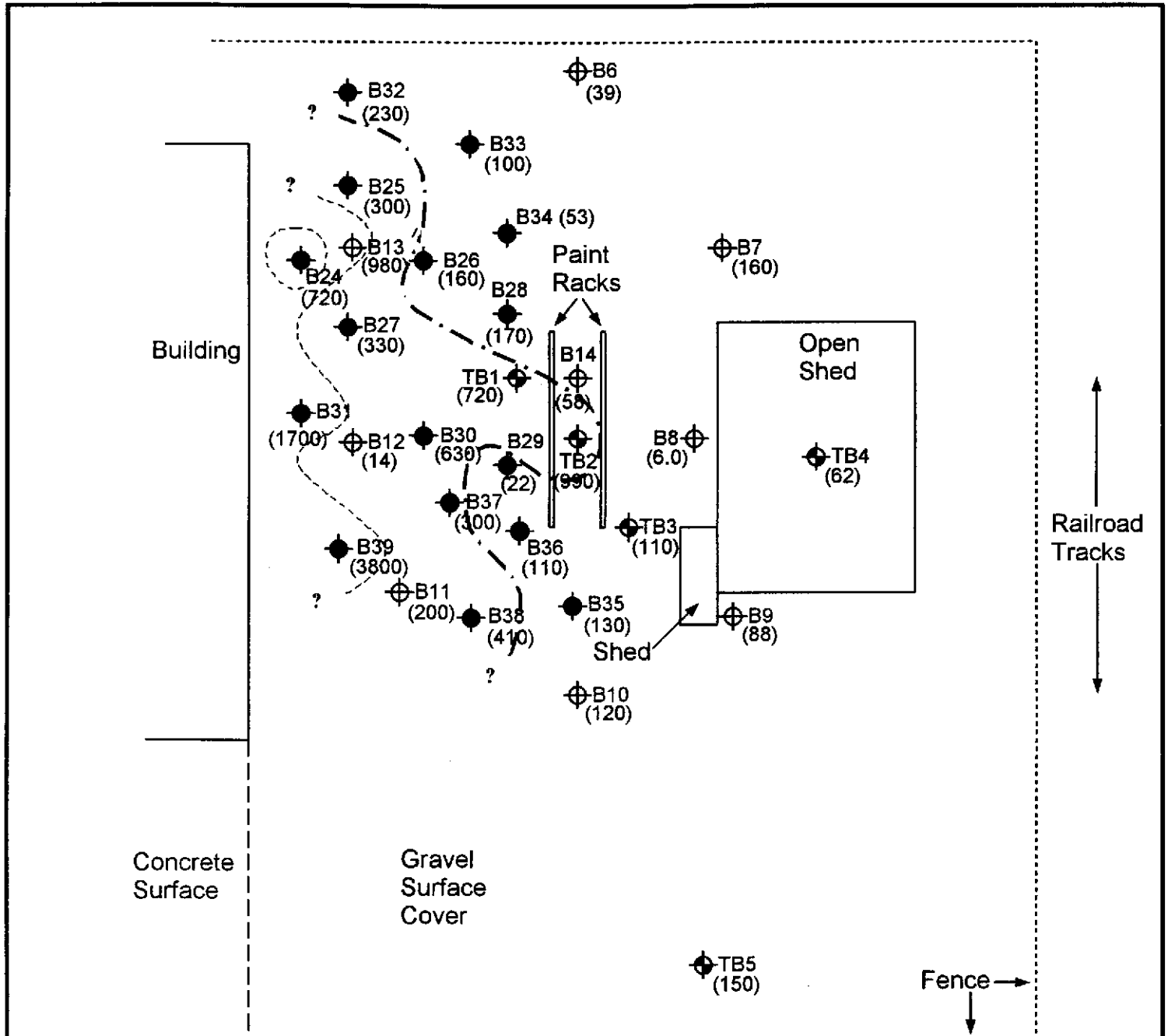
Pacific Rolling Door
 15900 Worthley Drive
 San Lorenzo, California



Base Map From:
 RGA Environmental
 July, 2002

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





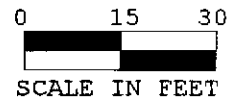
LEGEND	
⊕	Soil Boring Location (2002 Investigation)
●	Soil Boring Location (1995 Investigation)
---	255 mg/Kg Total Lead Isoconcentration Contour
- · -	750 mg/Kg Total Lead Isoconcentration Contour
●	Soil Boring Location (2003 Investigation)
(999)	TTLC Lead Concentration, ppm

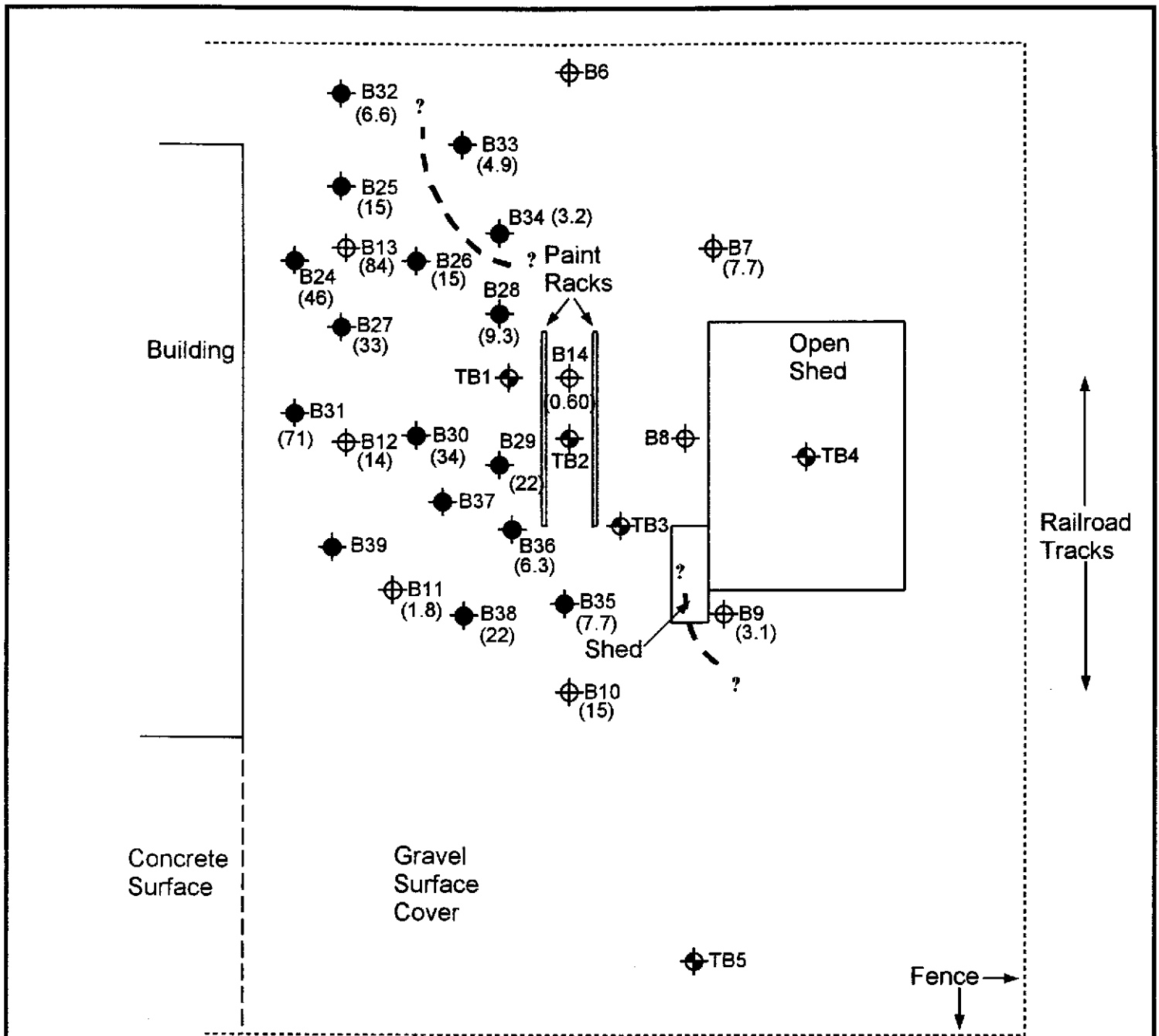
FIGURE 3
SITE PLAN DETAIL - OUTDOOR BORING LOCATIONS, TTLC LEAD
 Pacific Rolling Door
 15900 Worthley Drive
 San Lorenzo, California



Base Map From:
 RGA Environmental
 July, 2002

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





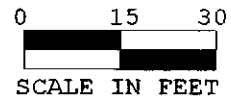
LEGEND	
⊕ Soil Boring Location (2002 Investigation)	--- 5.0 mg/L Soluble Lead Isoconcentration Contour
● Soil Boring Location (1995 Investigation)	● Soil Boring Location (2003 Investigation)
	(99) STLC Soluble Lead Concentration, ppm

FIGURE 4
SITE PLAN DETAIL - OUTDOOR BORING LOCATIONS, STLC Lead
 Pacific Rolling Door
 15900 Worthley Drive
 San Lorenzo, California



Base Map From:
 RGA Environmental
 July, 2002

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





McC Campbell Analytical Inc.

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

RGA Environmental 4701 Doyle Street, Suite #14 Emeryville, CA 94608-2947	Client Project ID: #PRD 7785	Date Sampled: 04/08/03
		Date Received: 04/09/03
	Client Contact: Paul King	Date Extracted: 04/09/03
	Client P.O.:	Date Analyzed: 04/09/03

Metals*

Extraction method: SW3050B

Analytical methods: 6010C

Work Order: 0304144

Lab ID	Client ID	Matrix	Extraction	Lead	Zinc	DF	% SS
001A	B15-0.5	S	TTLIC	10	110	1	103
003A	B16-0.5	S	TTLIC	ND	20	1	106
005A	B17-0.5	S	TTLIC	19	55	1	104
007A	B18-0.5	S	TTLIC	6.8	44	1	106
009A	B19-0.5	S	TTLIC	6.5	41	1	102
011A	B20-0.5	S	TTLIC	9.6	57	1	101
013A	B21-0.5	S	TTLIC	5.7	42	1	101
015A	B22-0.5	S	TTLIC	8.3	63	1	101
017A	B23-0.5	S	TTLIC	520	940	1	98.7


Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	TTLIC	NA	NA	NA
	S	TTLIC	3.0	1.0	mg/Kg

* water/liquid/oil samples are reported in mg/L, soil/sludge/solid/product samples in mg/kg, wipes in µg/wipe and all TCLP / STLC / DISTLC / SPLP extracts in mg/L.

means surrogate recovery outside of acceptance range due to matrix interference; ND means not detected above the reporting limit; N/A means not applicable to this sample or instrument.

Analytical Methods: EPA 6010C/200.7 for all elements except: 200.9 (water/liquid- Sb, As, Pb, Se, Tl); 245.1 (Hg); 7010 (sludge/soil/solid/oil/product/wipes - As, Se, Tl); 7471B (Hg).

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; j) reporting limit raised due to insufficient sample amount; y) estimated values due to low surrogate recovery; z) reporting limit raised due to matrix interference.

 Angela Rydelius, Lab Manager



RGA Environmental 4701 Doyle Street, Suite #14 Emeryville, CA 94608-2947	Client Project ID: #PRD 7785	Date Sampled: 04/08/03
		Date Received: 04/09/03
	Client Contact: Paul King	Date Extracted: 04/09/03
	Client P.O.:	Date Analyzed: 04/11/03-04/15/03

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0304144

Lab ID	0304144-009A
Client ID	B19-0.5
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	50	Benzene	ND	1.0	5.0
Bromobenzene	ND	1.0	5.0	Bromochloromethane	ND	1.0	5.0
Bromodichloromethane	ND	1.0	5.0	Bromoform	ND	1.0	5.0
Bromomethane	ND	1.0	5.0	2-Butanone (MEK)	ND	1.0	10
n-Butyl benzene	ND	1.0	5.0	sec-Butyl benzene	ND	1.0	5.0
tert-Butyl benzene	ND	1.0	5.0	Carbon Disulfide	ND	1.0	5.0
Carbon Tetrachloride	ND	1.0	5.0	Chlorobenzene	ND	1.0	5.0
Chloroethane	ND	1.0	5.0	2-Chloroethyl Vinyl Ether	ND	1.0	5.0
Chloroform	ND	1.0	5.0	Chloromethane	ND	1.0	5.0
2-Chlorotoluene	ND	1.0	5.0	4-Chlorotoluene	ND	1.0	5.0
Dibromochloromethane	ND	1.0	5.0	1,2-Dibromo-3-chloropropane	ND	1.0	5.0
1,2-Dibromoethane (EDB)	ND	1.0	5.0	Dibromomethane	ND	1.0	5.0
1,2-Dichlorobenzene	ND	1.0	5.0	1,3-Dichlorobenzene	ND	1.0	5.0
1,4-Dichlorobenzene	ND	1.0	5.0	Dichlorodifluoromethane	ND	1.0	5.0
1,1-Dichloroethane	ND	1.0	5.0	1,2-Dichloroethane (1,2-DCA)	ND	1.0	5.0
1,1-Dichloroethene	ND	1.0	5.0	cis-1,2-Dichloroethene	ND	1.0	5.0
trans-1,2-Dichloroethene	ND	1.0	5.0	1,2-Dichloropropane	ND	1.0	5.0
1,3-Dichloropropane	ND	1.0	5.0	2,2-Dichloropropane	ND	1.0	5.0
1,1-Dichloropropene	ND	1.0	5.0	cis-1,3-Dichloropropene	ND	1.0	5.0
trans-1,3-Dichloropropene	ND	1.0	5.0	Ethylbenzene	ND	1.0	5.0
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	5.0
Iodomethane (Methyl iodide)	ND	1.0	10	4-Isopropyl toluene	ND	1.0	5.0
Isopropylbenzene	ND	1.0	5.0	4-Methyl-2-pentanone (MIBK)	ND	1.0	5.0
Methylene chloride	ND	1.0	5.0	Methyl-t-butyl ether (MTBE)	ND	1.0	5.0
Naphthalene	ND	1.0	5.0	n-Propyl benzene	ND	1.0	5.0
Styrene	ND	1.0	5.0	1,1,1,2-Tetrachloroethane	ND	1.0	5.0
1,1,2,2-Tetrachloroethane	ND	1.0	5.0	Tetrachloroethene	ND	1.0	5.0
Toluene	ND	1.0	5.0	1,2,3-Trichlorobenzene	ND	1.0	5.0
1,2,4-Trichlorobenzene	ND	1.0	5.0	1,1,1-Trichloroethane	ND	1.0	5.0
1,1,2-Trichloroethane	ND	1.0	5.0	Trichloroethene	ND	1.0	5.0
Trichlorofluoromethane	ND	1.0	5.0	1,2,3-Trichloropropane	ND	1.0	5.0
1,2,4-Trimethylbenzene	ND	1.0	5.0	1,3,5-Trimethylbenzene	ND	1.0	5.0
Vinyl Acetate	ND	1.0	50	Vinyl Chloride	ND	1.0	5.0
Xylenes	ND	1.0	5.0				

Surrogate Recoveries (%)

%SS1:	91.6	%SS2:	101
%SS3:	101		

Comments:
 * 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.



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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
 4701 Doyle Street, Suite #14
 Emeryville, CA 94608-2947

Client Project ID: #PRD 7785

Date Sampled: 04/08/03

Date Received: 04/09/03

Client Contact: Paul King

Date Extracted: 04/09/03

Client P.O.:

Date Analyzed: 04/11/03-04/15/03

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0304144

Lab ID 0304144-017A

Client ID B23-0.5

Matrix Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<10,000	200	50	Benzene	ND<1000	200	5.0
Bromobenzene	ND<1000	200	5.0	Bromochloromethane	ND<1000	200	5.0
Bromodichloromethane	ND<1000	200	5.0	Bromoform	ND<1000	200	5.0
Bromomethane	ND<1000	200	5.0	2-Butanone (MEK)	ND<2000	200	10
n-Butyl benzene	ND<1000	200	5.0	sec-Butyl benzene	ND<1000	200	5.0
tert-Butyl benzene	ND<1000	200	5.0	Carbon Disulfide	ND<1000	200	5.0
Carbon Tetrachloride	ND<1000	200	5.0	Chlorobenzene	ND<1000	200	5.0
Chloroethane	ND<1000	200	5.0	2-Chloroethyl Vinyl Ether	ND<1000	200	5.0
Chloroform	ND<1000	200	5.0	Chloromethane	ND<1000	200	5.0
2-Chlorotoluene	ND<1000	200	5.0	4-Chlorotoluene	ND<1000	200	5.0
Dibromochloromethane	ND<1000	200	5.0	1,2-Dibromo-3-chloropropane	ND<1000	200	5.0
1,2-Dibromoethane (EDB)	ND<1000	200	5.0	Dibromomethane	ND<1000	200	5.0
1,2-Dichlorobenzene	ND<1000	200	5.0	1,3-Dichlorobenzene	ND<1000	200	5.0
1,4-Dichlorobenzene	ND<1000	200	5.0	Dichlorodifluoromethane	ND<1000	200	5.0
1,1-Dichloroethane	ND<1000	200	5.0	1,2-Dichloroethane (1,2-DCA)	ND<1000	200	5.0
1,1-Dichloroethene	ND<1000	200	5.0	cis-1,2-Dichloroethene	ND<1000	200	5.0
trans-1,2-Dichloroethene	ND<1000	200	5.0	1,2-Dichloropropane	ND<1000	200	5.0
1,3-Dichloropropane	ND<1000	200	5.0	2,2-Dichloropropane	ND<1000	200	5.0
1,1-Dichloropropene	ND<1000	200	5.0	cis-1,3-Dichloropropene	ND<1000	200	5.0
trans-1,3-Dichloropropene	ND<1000	200	5.0	Ethylbenzene	2200	200	5.0
Hexachlorobutadiene	ND<1000	200	5.0	2-Hexanone	ND<1000	200	5.0
Iodomethane (Methyl iodide)	ND<2000	200	10	4-Isopropyl toluene	ND<1000	200	5.0
Isopropylbenzene	ND<1000	200	5.0	4-Methyl-2-pentanone (MIBK)	ND<1000	200	5.0
Methylene chloride	ND<1000	200	5.0	Methyl-t-butyl ether (MTBE)	ND<1000	200	5.0
Naphthalene	ND<1000	200	5.0	n-Propyl benzene	ND<1000	200	5.0
Styrene	ND<1000	200	5.0	1,1,1,2-Tetrachloroethane	ND<1000	200	5.0
1,1,2,2-Tetrachloroethane	ND<1000	200	5.0	Tetrachloroethene	ND<1000	200	5.0
Toluene	2600	200	5.0	1,2,3-Trichlorobenzene	ND<1000	200	5.0
1,2,4-Trichlorobenzene	ND<1000	200	5.0	1,1,1-Trichloroethane	ND<1000	200	5.0
1,1,2-Trichloroethane	ND<1000	200	5.0	Trichloroethene	ND<1000	200	5.0
Trichlorofluoromethane	ND<1000	200	5.0	1,2,3-Trichloropropane	ND<1000	200	5.0
1,2,4-Trimethylbenzene	22,000	200	5.0	1,3,5-Trimethylbenzene	8700	200	5.0
Vinyl Acetate	ND<10,000	200	50	Vinyl Chloride	ND<1000	200	5.0
Xylenes	19,000	200	5.0				

Surrogate Recoveries (%)

%SS1:	98.4	%SS2:	92.5
%SS3:	91.7		

Comments:

* 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.



McC Campbell Analytical Inc.

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

RGA Environmental 4701 Doyle Street, Suite #14 Emeryville, CA 94608-2947	Client Project ID: #PRD 7785	Date Sampled: 04/08/03
		Date Received: 04/09/03
	Client Contact: Paul King	Date Extracted: 04/09/03
	Client P.O.:	Date Analyzed: 04/11/03-04/15/03

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0304144

Lab ID	0304144-018A
Client ID	B23-2.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<10,000	200	50	Benzene	ND<1000	200	5.0
Bromobenzene	ND<1000	200	5.0	Bromochloromethane	ND<1000	200	5.0
Bromodichloromethane	ND<1000	200	5.0	Bromoform	ND<1000	200	5.0
Bromomethane	ND<1000	200	5.0	2-Butanone (MEK)	ND<2000	200	10
n-Butyl benzene	ND<1000	200	5.0	sec-Butyl benzene	ND<1000	200	5.0
tert-Butyl benzene	ND<1000	200	5.0	Carbon Disulfide	ND<1000	200	5.0
Carbon Tetrachloride	ND<1000	200	5.0	Chlorobenzene	ND<1000	200	5.0
Chloroethane	ND<1000	200	5.0	2-Chloroethyl Vinyl Ether	ND<1000	200	5.0
Chloroform	ND<1000	200	5.0	Chloromethane	ND<1000	200	5.0
2-Chlorotoluene	ND<1000	200	5.0	4-Chlorotoluene	ND<1000	200	5.0
Dibromochloromethane	ND<1000	200	5.0	1,2-Dibromo-3-chloropropane	ND<1000	200	5.0
1,2-Dibromoethane (EDB)	ND<1000	200	5.0	Dibromomethane	ND<1000	200	5.0
1,2-Dichlorobenzene	ND<1000	200	5.0	1,3-Dichlorobenzene	ND<1000	200	5.0
1,4-Dichlorobenzene	ND<1000	200	5.0	Dichlorodifluoromethane	ND<1000	200	5.0
1,1-Dichloroethane	ND<1000	200	5.0	1,2-Dichloroethane (1,2-DCA)	ND<1000	200	5.0
1,1-Dichloroethene	ND<1000	200	5.0	cis-1,2-Dichloroethene	ND<1000	200	5.0
trans-1,2-Dichloroethene	ND<1000	200	5.0	1,2-Dichloropropane	ND<1000	200	5.0
1,3-Dichloropropane	ND<1000	200	5.0	2,2-Dichloropropane	ND<1000	200	5.0
1,1-Dichloropropene	ND<1000	200	5.0	cis-1,3-Dichloropropene	ND<1000	200	5.0
trans-1,3-Dichloropropene	ND<1000	200	5.0	Ethylbenzene	ND<1000	200	5.0
Hexachlorobutadiene	ND<1000	200	5.0	2-Hexanone	ND<1000	200	5.0
Iodomethane (Methyl iodide)	ND<2000	200	10	4-Isopropyl toluene	ND<1000	200	5.0
Isopropylbenzene	ND<1000	200	5.0	4-Methyl-2-pentanone (MIBK)	ND<1000	200	5.0
Methylene chloride	ND<1000	200	5.0	Methyl-t-butyl ether (MTBE)	ND<1000	200	5.0
Naphthalene	ND<1000	200	5.0	n-Propyl benzene	ND<1000	200	5.0
Styrene	ND<1000	200	5.0	1,1,1,2-Tetrachloroethane	ND<1000	200	5.0
1,1,2,2-Tetrachloroethane	ND<1000	200	5.0	Tetrachloroethene	ND<1000	200	5.0
Toluene	ND<1000	200	5.0	1,2,3-Trichlorobenzene	ND<1000	200	5.0
1,2,4-Trichlorobenzene	ND<1000	200	5.0	1,1,1-Trichloroethane	ND<1000	200	5.0
1,1,2-Trichloroethane	ND<1000	200	5.0	Trichloroethene	ND<1000	200	5.0
Trichlorofluoromethane	ND<1000	200	5.0	1,2,3-Trichloropropane	ND<1000	200	5.0
1,2,4-Trimethylbenzene	14,000	200	5.0	1,3,5-Trimethylbenzene	6300	200	5.0
Vinyl Acetate	ND<10,000	200	50	Vinyl Chloride	ND<1000	200	5.0
Xylenes	7000	200	5.0				

Surrogate Recoveries (%)

%SS1:	96.0	%SS2:	93.1
%SS3:	95.5		

Comments:

* 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.



McC Campbell 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

QC SUMMARY REPORT FOR 6010C

Matrix: S

WorkOrder: 0304144

EPA Method: 6010C		Extraction: SW3050B			BatchID: 6489		Spiked Sample ID: 0304124-001A			
Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
Lead	8.07	500	103	83.7	20.8	96	98.6	2.63	70	130
Zinc	44.58	500	92.1	81.9	10.7	92.2	94.3	2.26	70	130
%SS:	99.6	100	96.6	96.6	200	101	103	1.77	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.



McC Campbell 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

QC SUMMARY REPORT FOR 6010C

Matrix: S

WorkOrder: 0304144

EPA Method: 6010C		Extraction: SW3050B			BatchID: 6498		Spiked Sample ID: 0304146-001A			
Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
Lead	ND	500	91	98	7.42	106	106	0.0496	70	130
Zinc	36.17	500	88.4	94.1	5.78	99.3	101	1.24	70	130
%SS:	102	100	103	99.7	2.98	103	106	2.70	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.



QC SUMMARY REPORT FOR 6010C

Matrix: S

WorkOrder: 0304144

EPA Method: 6010C		Extraction: SW3050B		BatchID: 6523		Spiked Sample ID: 0304184-001A				
Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
Lead	5.466	500	93	91.3	1.81	102	98.6	3.10	70	130
%SS:	103	100	99.9	98.7	1.25	103	101	2.57	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.



McC Campbell 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

QC SUMMARY REPORT FOR SW6010C

Matrix: S

WorkOrder: 0304144

EPA Method: SW6010C	Extraction: CA Title 22		BatchID: 6433			Spiked Sample ID: N/A				
Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/L	mg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
Lead	N/A	10	N/A	N/A	N/A	101	99.3	1.86	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.



McC Campbell 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

QC SUMMARY REPORT FOR SW8260B

Matrix: S

WorkOrder: 0304144

EPA Method: SW8260B		Extraction: SW5030B			BatchID: 6466		Spiked Sample ID: 0304100-003A			
Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/Kg	µg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
Benzene	ND	50	121	127	4.95	121	121	0.0621	70	130
Chlorobenzene	ND	50	105	107	1.18	109	108	1.10	70	130
1,1-Dichloroethene	ND	50	121	129	6.26	123	126	2.15	70	130
Methyl-t-butyl ether (MTBE)	ND	50	104	109	4.44	96.4	95.2	1.27	70	130
Toluene	ND	50	111	113	2.37	112	112	0.349	70	130
Trichloroethene	ND	50	88.4	90.8	2.67	86.9	86.9	0.0481	70	130
%SS1:	98.7	100	112	109	2.86	108	107	1.04	70	130
%SS2:	95.3	100	95.9	95.4	0.547	95.6	94.8	0.814	70	130
%SS3:	88.3	100	93.7	92.6	1.15	91.8	91.6	0.262	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

MMS = 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.

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0304144

Client:

RGA Environmental
 4701 Doyle Street, Suite #14
 Emeryville, CA 94608-2947

TEL: (510) 547-7771
 FAX: (510) 547-1983
 ProjectNo: #PRD 7785
 PO:

Date Received: 4/9/03

Date Printed: 4/9/03

Sample ID	ClientSamplD	Matrix	Collection Date	Hold	Requested Tests	
					6010C	SW8260B
0304144-001	B15-0.5	Soil	4/8/03		A	
0304144-002	B15-2.0	Soil	4/8/03	✓	A	
0304144-003	B16-0.5	Soil	4/8/03		A	
0304144-004	B16-2.0	Soil	4/8/03	✓	A	
0304144-005	B17-0.5	Soil	4/8/03		A	
0304144-006	B17-2.0	Soil	4/8/03	✓	A	
0304144-007	B18-0.5	Soil	4/8/03		A	
0304144-008	B18-2.0	Soil	4/8/03	✓	A	
0304144-009	B19-0.5	Soil	4/8/03		A	A
0304144-010	B19-2.0	Soil	4/8/03	✓	A	
0304144-011	B20-0.5	Soil	4/8/03		A	
0304144-012	B20-2.0	Soil	4/8/03	✓	A	
0304144-013	B21-0.5	Soil	4/8/03		A	
0304144-014	B21-2.0	Soil	4/8/03	✓	A	
0304144-015	B22-0.5	Soil	4/8/03		A	
0304144-016	B22-2.0	Soil	4/8/03	✓	A	

Prepared by: **Melissa Valles**

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.

McC Campbell Analytical Inc.



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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0304144

Client:

RGA Environmental
4701 Doyle Street, Suite #14
Emeryville, CA 94608-2947

TEL: (510) 547-7771
FAX: (510) 547-1983
ProjectNo: #PRD 7785
PO:

Date Received: 4/9/03

Date Printed: 4/9/03

Sample ID	ClientSamplID	Matrix	Collection Date	Hold	Requested Tests	
					6010C	SW8260B
0304144-017	B23-0.5	Soil	4/8/03		A	A
0304144-018	B23-2.0	Soil	4/8/03			A

Prepared by: Melissa Valles

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

TEL: (510) 547-1983

FAX: (510) 547-1983

EMERYVILLE, CA 94608

0304144

Page 1 of 2

CHAIN OF CUSTODY

Project Number: PRD 7285 Project Name: Pacific Rolling Door

Sampled By: (Printed and Signature): Wilhelm Weizenbach Wilhelm Weizenbach

No. of Containers: 1

Analysis(es):
Total Lead
Total Zinc
VOCs by 8260

Preservatives: RE

Sample Number	Date	Time	Type	Sample Location	No. of Containers	Total Lead	Total Zinc	VOCs by 8260	Preservatives	Remarks
B15-0.5	4/8/03		Soil		1	X	X		RE	Normal Turnaround Time
B15-2.0										
B16-0.5						X	X			
B16-2.0										
B17-0.5						X	X			
B17-2.0										
B18-0.5						X	X			
B18-2.0										
B19-0.5						X	X	X		
B19-2.0										
B20-0.5						X	X			
B20-2.0										

ICEM: PRESERVATION:

GOOD CONDITION: APPROPRIATE CONTAINERS:

LEAK SPACE INSERT: PRESERVED IN LAB:

TECH ASSOCIATED IN LAB:

VEAS: OGG: METALS: OTHER:

Relinquished By: (Signature): Wilhelm Weizenbach Date: 4/9/03 Time: 9:35am Received By: (Signature): [Signature] Total No. of Samples: 18 Total No. of Containers: 18 Laboratory: McC Campbell Analytical

Relinquished By: (Signature): [Signature] Date: 4/9 Time: 11:23 Received By: (Signature): Mel Valh Laboratory Contact: Angela Rydelius Laboratory Phone Number: 925-798-1620

Relinquished By: (Signature): _____ Date: _____ Time: _____ Received For Laboratory By: (Signature): _____ Sample Analysis Request Sheet Attached () Yes (X) No

Comments: HOLD 2.0 samples (Except B23-2.0 for 8260)

pg 002



ENVIRONMENTAL INC.

4701 DOYLE ST. #14

FAX: (510) 547-1983

TEL: (510) 547-7771

EMERYVILLE, CA 94608

0304144

Page 2 of 2

CHAIN OF CUSTODY

Project Number: PRD 7785 Project Name: Pacific Rolling Door
 Sampled By: (Printed and Signature): Wilhelm Welzenbach Wilhelm Welzenbach

No. of Containers:	Analysis(es):					Preservatives
	Total Lead	Total Zinc	VOCs by 8260	STIC Pb	Oil/14 per Fax	

Sample Number	Date	Time	Type	Sample Location
B 21-0.5	4/8/03		Soil	
B 21-2.0	↓			
B 22-0.5	↓			
B 22-2.0	↓			
B 23-0.5	↓			
B 23-2.0	↓			

Remarks: Normal Turnaround Time

Relinquished By: (Signature): <u>Wilhelm Welzenbach</u>	Date: <u>4/9/03</u>	Time: <u>9:35am</u>	Received By: (Signature): <u>[Signature]</u>	Total No. of Sampler: <u>18</u>	Total No. of Containers: <u>18</u>	Laboratory: <u>McCampbell Analytical</u>
Relinquished By: (Signature): <u>[Signature]</u>	Date: <u>4/9</u>	Time: <u>14:20</u>	Received By: (Signature): <u>Mike Valler</u>	Laboratory Contact: <u>Angela Kydelius</u>	Laboratory Phone Number: <u>925-798-1620</u>	
Relinquished By: (Signature):	Date:	Time:	Received For Laboratory By: (Signature):	Sample Analysis Request Sheet Attached () Yes (X) No		

Comments: HOLD 2.0 samples (Except B23-2.0) for 8260



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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 4701 Doyle Street, Suite #14 Emeryville, CA 94608-2947	Client Project ID: #PRD 7785; Pacific Rolling Door	Date Sampled: 04/08/03
	Client Contact: Paul King	Date Received: 04/09/03
	Client P.O.:	Date Extracted: 04/09/03-04/18/03
		Date Analyzed: 04/09/03-04/21/03

Lead by ICP*

Extraction method: SW3050B

Analytical methods: 6010C

Work Order: 0304143

Lab ID	Client ID	Matrix	Extraction	Lead	DF	% SS
0304143-001A	B24	S	TTLC	720	1	104
0304143-002A	B25	S	TTLC	300	1	102
0304143-003A	B26	S	TTLC	160	1	102
0304143-004A	B27	S	TTLC	330	1	106
0304143-005A	B28	S	TTLC	170	1	107
0304143-006A	B29	S	TTLC	22	1	106
0304143-007A	B30	S	TTLC	630	1	101
0304143-008A	B31	S	TTLC	1700	1	108
0304143-009A	B32	S	TTLC	230	1	104
0304143-010A	B33	S	TTLC	100	1	109
0304143-011A	B34	S	TTLC	53	1	106
0304143-012A	B35	S	TTLC	130	1	101
0304143-013A	B36	S	TTLC	110	1	105
0304143-014A	B37	S	TTLC	300	1	103
0304143-015A	B38	S	TTLC	410	1	107
0304143-016A	B39	S	TTLC	3800	1	102

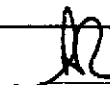
Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	TTLC	NA	mg/L
	S	TTLC	3.0	mg/Kg

* water/liquid/oil samples are reported in mg/L, soil/sludge/solid/product samples in mg/kg, wipes in µg/wipe and all TCLP / STLC / DISTLC / SPLP extracts in mg/L.

means surrogate recovery outside of acceptance range due to matrix interference; ND means not detected above the reporting limit; N/A means not applicable to this sample or instrument.

Analytical Methods: EPA 6010C/200.7 for all elements except: 200.9 (water/liquid- Sb, As, Pb, Se, Tl); 245.1 (Hg); 7010 (sludge/soil/solid/oil/product/wipes - As, Se, Tl); 7471B (Hg).

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; j) reporting limit raised due to insufficient sample amount; y) estimated values due to low surrogate recovery; z) reporting limit raised due to matrix interference.

 Angela Rydelius, Lab Manager



McC Campbell 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

QC SUMMARY REPORT FOR 6010C

Matrix: S

WorkOrder: 0304143

EPA Method: 6010C		Extraction: SW3050B		BatchID: 6489			Spiked Sample ID: 0304124-001A			
Compound	Sample	Spiked	MS*	MSD*	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
Lead	8.07	500	103	83.7	20.8	96	98.6	2.63	70	130
%SS:	99.6	100	96.6	96.6	0	101	103	1.77	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.

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

* 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.

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.



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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

QC SUMMARY REPORT FOR 6010C

Matrix: S

WorkOrder: 0304143

EPA Method: 6010C		Extraction: SW3050B		BatchID: 6590			Spiked Sample ID: 0304254-001A			
Compound	Sample	Spiked	MS*	MSD*	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
Lead	5.369	500	86.9	89.6	3.03	105	102	3.32	70	130
%SS:	101	100	100	101	0.556	104	104	0	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.

% 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.

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.



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110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
 Telephone : 925-798-1620 Fax : 925-798-1622
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QC SUMMARY REPORT FOR 6010C

Matrix: S

WorkOrder: 0304143

EPA Method: 6010C		Extraction: SW3050B			BatchID: 6621			Spiked Sample ID: 0304294-015A		
Compound	Sample	Spiked	MS*	MSD*	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
Lead	ND	500	99.9	99.4	0.474	95.2	98.2	3.12	70	130
%SS:	106	100	107	103	3.70	104	103	0.885	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.

% 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.

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.



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

QC SUMMARY REPORT FOR SW6010C

Matrix: S

WorkOrder: 0304143

EPA Method: SW6010C		Extraction: CA Title 22			BatchID: 6547			Spiked Sample ID: N/A		
Compound	Sample	Spiked	MS*	MSD*	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/L	mg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
Lead	N/A	10	N/A	N/A	N/A	101	90.4	11.2	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.

% 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.

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.



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 Telephone : 925-798-1620 Fax : 925-798-1622
<http://www.mccampbell.com> E-mail: main@mccampbell.com

QC SUMMARY REPORT FOR SW6010C

Matrix: S

WorkOrder: 0304143

EPA Method: SW6010C		Extraction: CA Title 22			BatchID: 6672		Spiked Sample ID: N/A			
Compound	Sample	Spiked	MS*	MSD*	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/L	mg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
Lead	N/A	10	N/A	N/A	N/A	103	96.3	6.65	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.

% 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.

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.

McC Campbell Analytical Inc.



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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0304143

Client:

RGA Environmental
 4701 Doyle Street, Suite #14
 Emeryville, CA 94608-2947

TEL: (510) 547-7771
 FAX: (510) 547-1983
 ProjectNo: #PRD 7785; Pacific Rolling Door
 PO:

Date Received: 4/9/03

Date Printed: 4/18/03

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests	
					6010C	SW6010C
0304143-001	B24	Soil	4/8/03		A	A
0304143-002	B25	Soil	4/8/03		A	A
0304143-003	B26	Soil	4/8/03		A	A
0304143-004	B27	Soil	4/8/03		A	A
0304143-005	B28	Soil	4/8/03		A	A
0304143-006	B29	Soil	4/8/03		A	
0304143-007	B30	Soil	4/8/03		A	A
0304143-008	B31	Soil	4/8/03		A	
0304143-009	B32	Soil	4/8/03		A	
0304143-010	B33	Soil	4/8/03		A	
0304143-011	B34	Soil	4/8/03		A	
0304143-012	B35	Soil	4/8/03		A	
0304143-013	B36	Soil	4/8/03		A	
0304143-014	B37	Soil	4/8/03		A	
0304143-015	B38	Soil	4/8/03		A	
0304143-016	B39	Soil	4/8/03		A	

Prepared by: Melissa Valles

Comments: Samples 008 009 010 013 and 014 off hold 04-16 per fax; stlc's added 04/18 total pb also added 04/18

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

FAX: (510) 547-1983

TEL: (510) 547-7771

EMERYVILLE, CA 94608

0304143

Page 2 of 2

CHAIN OF CUSTODY

Project Number: PRD 7785 Project Name: Pacific Rolling Door

Sampled By: (Printed and Signature): Wilhelm Wetzendorf *Wilhelm Wetzendorf*

Sample Number	Date	Time	Type	Sample Location	No. of Containers:	Analysis(es):				Preservatives	Remarks
						Top/Lead	STC Plate		ICE		
B 36	4/8/03		Soil		1	X	X		X	Normal Turnaround	
B 37	↓		↓		↓	↓	X		X	Time	
B 38	↓		↓		↓	↓	X		X	Off Road	
B 39	↓		↓		↓	↓	X		X	418	

Relinquished By: (Signature): <i>Wilhelm Wetzendorf</i>	Date: <u>4/9/03</u>	Time: <u>9:35am</u>	Received By: (Signature): <i>[Signature]</i>	Total No. of Samples: <u>16</u>	Total No. of Containers: <u>16</u>	Laboratory: <u>McCampbell Analytical</u>
Relinquished By: (Signature): <i>[Signature]</i>	Date: <u>4/9</u>	Time: <u>14:00</u>	Received By: (Signature): <i>[Signature]</i>	Laboratory Contact: <u>Angela Rydellius</u>	Laboratory Phone Number: <u>925-798-1620</u>	
Relinquished By: (Signature):	Date:	Time:	Received For Laboratory By: (Signature):	Sample Analysis Request Sheet Attached () Yes (X) No		

Comments:

* O1A and O1B cancelled (the STC)