RO2633

Pacific Gas and Electric Company

Environmental Support and Services

77 Beale Street
San Francisco, CA 94105

Mailing Address:
P.O. Box 7640
Mail Code B24A
San Francisco, CA 94120

(415) 973-7000

October 14, 2004

Alameda County Environmental Health Services
Environmental Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Attn: Mr. Barney Chan

Re: Proposed Supplemental Remedial Action for Lead in Shallow Soil
Former Pacific Gas and Electric Company Substation E
408 Linda Avenue, Piedmont, California

Dear Mr. Chan:

Thank you for meeting with us on September 16, 2004 at Pacific Gas and Electric Company's (PG&E) former Substation E in Piedmont, California. As agreed at that meeting, PG&E will conduct a supplemental remedial action for lead in shallow soil at the site. It is our understanding that this supplemental remedial action will provide the data necessary for Alameda County Environmental Health Services (ACEHS) to issue a no further action letter that would allow reuse of the property for residential use. A brief summary of the project background and description of the proposed remedial action is provided in the following sections.

Background

Former Piedmont Substation E is located at 408 Linda Avenue in Piedmont, California, in a primarily residential neighborhood. Electrical equipment that comprised the substation was housed in a two-story building that was constructed in 1926. PG&E de-energized the electrical equipment in 1991 and removed the equipment and cleaned the building in 2000/2001[1].

In 1999 and 2000, PG&E's Technical and Ecological Services (TES) tested soil outside Substation E[2]. This investigation identified lead in samples collected from shallow soils at elevated concentrations; the lead in the soils was most likely associated with the leaded paint on the exterior of the substation. In

[1] The documentation of the equipment removal and building cleaning is summarized in the report entitled Hazardous Materials Clearance Sampling, Building Interior, by KELLCO, dated February 19, 2004.

[2] The results of this sampling were presented in a report entitled Site Investigation at PG&E's Piedmont Substation E by TES, dated March 2000

June 2001, PG&E excavated shallow soil around the former substation down to 6 to 24 inches below ground surface. Soil samples were collected and chemically analyzed to confirm that residual lead concentrations average less than 147 mg/kg, the cleanup criterion for residual lead at the site approved by ACEHS[3].

Soils in two small areas, a triangular area at the western edge of the property and a narrow strip along the eastern margin, were not excavated during the 2001 soil removal because vegetation precluded access. In June 2004, SECOR International, Incorporated (SECOR) collected and chemically analyzed soil samples from these two areas (their report is attached). The concentrations of lead in samples collected from the triangular section at the western edge of the property were 15 mg/kg and 100 mg/kg (SB-1, 6 to 9 inches and 12 to 15 inches below ground surface, respectively), less than the 147 mg/kg clean up goal approved by ACEHS for the earlier remedial action. The concentrations of lead measured in samples collected from locations in a narrow strip along the eastern edge of the property exceeded the clean up goal in five of the six samples.

Proposed Supplemental Remedial Action

[redacted] to supplement our earlier remedial action by excavating [redacted] along the eastern edge of the property (Figure 1 of the attached report) down approximately 2 feet below ground surface. The soils will be excavated using appropriate equipment, such as a Bobcat or small excavator, and transported to a landfill acceptable to and approved by PG&E, such as Chemical Waste Management, Inc.'s landfill at Kettleman City, California. The excavations will be backfilled with clean soil imported from a local source, such as American Soil Products in Berkeley, California. Before the soil is imported to Substation E, PG&E will collect samples from the proposed backfill and chemically analyze them, if recent analytical results are not available to characterize the backfill adequately.

Confirmation soil samples (a minimum of three distributed throughout the length of the excavation) will be collected from the floor of the excavation, and the samples will be analyzed for lead using USEPA Method 6010 by a laboratory certified by the State of California to analyze for hazardous materials. The samples will be analyzed on an expedited turnaround so that ACEHS can have the opportunity to review the analytical results, compare the analytical results against the cleanup goal (no single concentrations greater than 200 mg/kg[4] and all concentrations averaging 147 mg/kg or less[5]), and approve that the excavation has met the cleanup criteria and can be backfilled.

Upon completion of the additional soil removal, PG&E will prepare a closure report that documents the remedial action and includes the analytical results of confirmation samples collected from the excavation. This report, together with the previous reports, is expected to provide the data necessary for ACEHS to conclude that no further investigation or remediation is required for the soils around the building that formerly housed Substation E.

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[3] The documentation of this soil removal and the results of the confirmation sampling are presented in a report entitled Soil Clearance Sampling for Lead, by KELLCO, dated February 19, 2004.

[4] The source for the 200 mg/kg cleanup criterion is the Risk Based Screening Level for lead in shallow soil in a residential area where groundwater may be used for drinking water, RWQCB, December 2001.

[5] The source for the cleanup criterion of an average lead concentration less than 147 mg/kg is the previously ACEHS approved cleanup criterion fro the site.

If you have any questions, please do not hesitate to call either myself at 510-301-2261 or Terry Winsor at (415) 973-1284. Thank you in advance for your assistance. PG&E looks forward to working cooperatively with ACEHS to return this property to productive use.

Sincerely,

Betsy Brunswick for
Sally Goodin, R.G

Terry R Winsor, R.G.

Attachment: Soil Sampling and Analysis Results, Former Substation E Site, SECOR International, Incorporated, October 2004

SECOR

SECOR
INTERNATIONAL
INCORPORATED

www.secor.com
57 Lafayette Circle, 2nd Floor
Lafayette, CA 94549
925-299-9300 TEL
925-299-9302 FAX

October 11, 2004

Ms. Sally Goodin
Pacific Gas and Electric Company
77 Beale Street
San Francisco, California 94105

Re: Soil Sampling and Analysis Results
Former Substation E Site
408 Linda Ave, Piedmont, California
SECOR PN: 05OT. 50173.00/0001

Dear Ms. Goodin:

SECOR International Incorporated (SECOR) has prepared this letter report to document the findings of soil sampling and analysis conducted at the Pacific Gas and Electric Company (PG&E) former Substation E Site located at 408 Linda Avenue in Piedmont California (the site). SECOR conducted this work in accordance with our proposal to PG&E dated June 8, 2004.

BACKGROUND

In June 2001, a soil removal action to remove near surface soils containing elevated lead concentrations was conducted at the former PG&E Substation E site. Soils were excavated to depths ranging from 6 to 24 inches below grade at the approximate locations shown on attached Figure 1. Following excavation, clearance soil samples were collected to document lead concentrations in soil remaining in place within the limits of the excavated areas. Lead concentrations in clearance soil samples ranged from 33 to 178 milligrams per kilogram (mg/kg); the average residual lead concentration of 98 mg/kg was below the Alameda County Environmental Health Services (ACEHS) cleanup criterion for the June 2001 remediation of 147 mg/kg. The June 2001 soil removal action was documented in a report entitled, "*Final Report, Soil Clearance Testing for Lead, PG&E Substation E, 408 Linda Avenue, Piedmont, California*," dated February 19, 2004, prepared by KELLCO Services, Inc. and submitted to the ACEHS on March 18, 2004.

In June 2004, PG&E requested SECOR to conduct supplemental soil sampling and lead analysis in areas of the site outside the June 2001 excavation limits. This report presents the findings of that supplemental soil sampling and analysis.

Ms. Sally Goodin
Pacific Gas and Electric Company
October 11, 2004

SOIL SAMPLING AND ANALYSIS

Prior to conducting field work, SECOR prepared a site-specific Health and Safety Plan (HASP) to address potential chemical and physical hazards associated with the sampling activities. On June 29, 2004, SECOR personnel collected soil samples from the four locations depicted on the attached figure 1. Sampling locations were selected at the direction of PG&E personnel and included one location within a small triangular area located in the southwest corner of the site and three locations along a 10-foot wide by 80-foot long strip of land along the eastern border of the site. At each location, two samples were collected, one from approximately 6 to 9 inches below grade and one from approximately 12 to 15 inches below grade.

Samples were collected by removing loose soil and organic material from the ground surface to approximately 6 inches below grade. Samples were collected using a clean stainless-steel trowel and placed directly into 4-ounce sample containers provided by the analytical laboratory. Samples were placed in a cooler and transported under chain-of-custody to Torrent Laboratory, Inc., Milpitas, California, a state-certified testing laboratory. Each sample was analyzed for total lead in accordance with U.S. Environmental Protection Agency (EPA) Method 6010B. Sample results are tabulated in the table below. The complete analytical laboratory report and chain-of-custody record is included as an attachment to this report.

Sample ID	Lead (mg/kg)	Depth (inches)
S-1A	15	6-9
S-1B	100	12-15
S-2A	250	6-9
S-2B	[redacted]	[redacted]
S-3A	330	6-9
S-3B	[redacted]	[redacted]
S-4A	300	6-9
S-4B	140	12-15

Ms. Sally Goodin
Pacific Gas and Electric Company
October 11, 2004

DISCUSSION OF RESULTS

The soil samples collected within the triangular area located in the southwest corner of the property contained lead concentrations (15 and 100 mg/kg) below the June 2001 ACEHS cleanup criterion of 147 mg/kg. Soil samples collected along the eastern border of the site (except the 12- to 15-inch depth sample at location S-4) contained lead at concentrations above both the June 2001 cleanup criterion and the San Francisco Regional Water Quality Control Board (RWQCB) Risk Based Screening Level (RBSL) of 200 mg/kg lead for surface soil in residential areas where groundwater could be a drinking water source (RWQCB, December 2001).

RECOMMENDATIONS

Based on the findings of the supplemental soil sampling, it is recommended that additional soil removal be conducted along the eastern border of the site as shown on Figure 1. No additional soil removal is recommended within the small triangular area in the southwest corner of the site.

If you have any questions regarding this report, please feel free to contact the undersigned at (925) 299-9300.

Sincerely,

SECOR International Incorporated

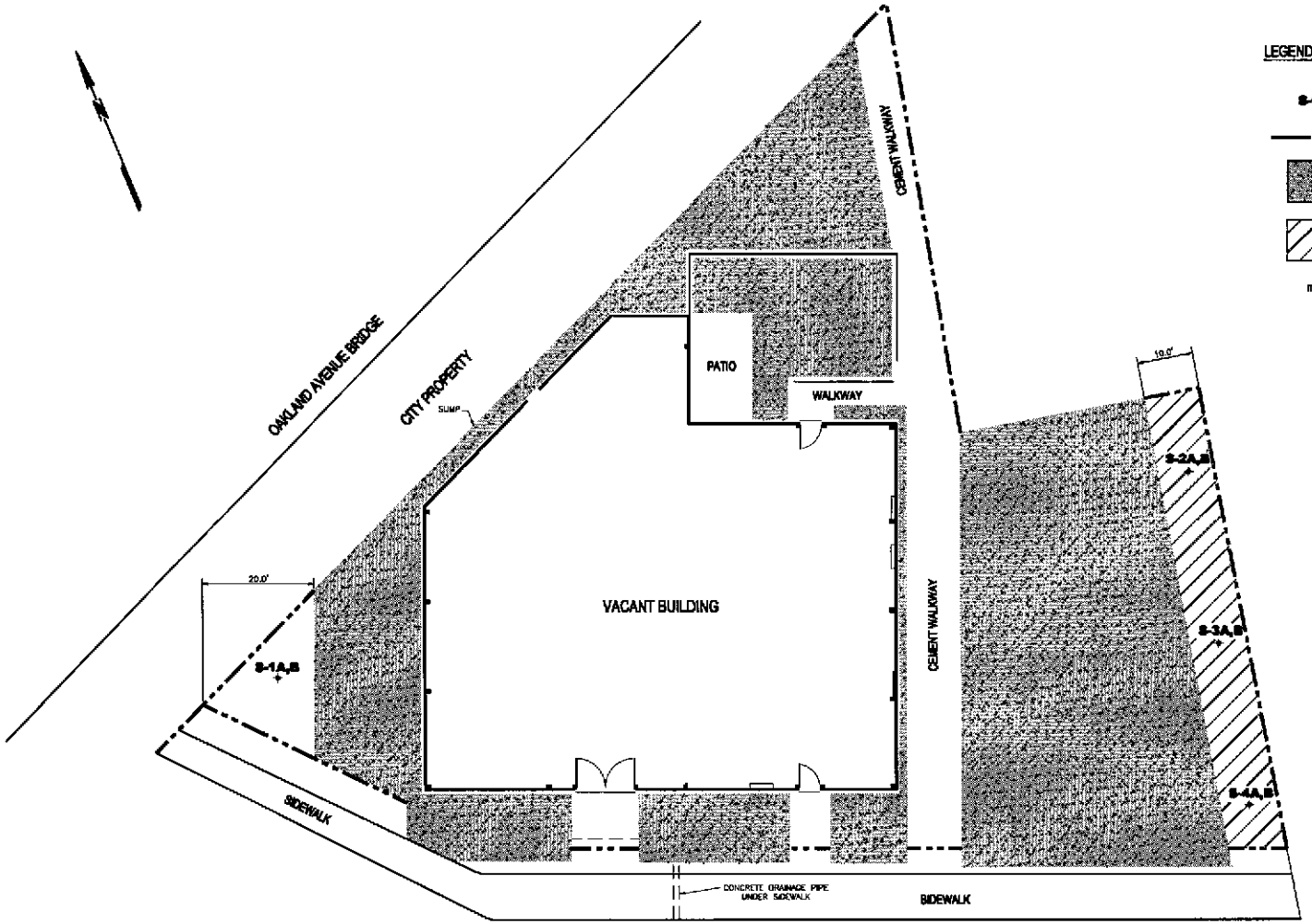
Mario Sternad, PE
Associate Engineer

Bruce E. Scarbrough, RG
Principal Geologist

REGISTERED GEOLOGIST
BRUCE SCARBROUGH
No. 4931
Exp. 10/05
STATE OF CALIFORNIA

Attachments

Figure 1 – Soil Sample Locations and Area of Proposed Excavation, June 28, 2004
Analytical Laboratory Report and Chain-of-Custody Record



LEGEND:

S-1A,B	SOIL SAMPLE LOCATION WITH SAMPLE ID COLLECTED ON JUNE 28, 2004
	APPROXIMATE PROPERTY BOUNDARY
	FORMER 2001 EXCAVATION AREAS
	AREA OF PROPOSED EXCAVATION
mg/kg	MILLIGRAMS PER KILOGRAM

TABLE 1

SAMPLE ID	LEAD mg/kg	DEPTH (INCHES)
S-1A	15	6-9
S-1B	100	12-15
S-2A	250	6-9
S-2B	230	12-15
S-3A	330	6-9
S-3B	270	12-15
S-4A	300	6-9
S-4B	140	12-15

0 20 40
APPROXIMATE SCALE FEET

SECOR

DRAWN	RRR
APPR	MAS
DATE	OCTOBER 10, 2004
JOB NO.	05OT.50173.00.0002

FIGURE 1
PG&E - PIEDMONT SUBSTATION "E"
PIEDMONT, CALIFORNIA
SOIL SAMPLE LOCATIONS AND AREA OF PROPOSED EXCAVATION
JUNE 28, 2004

20041011.1140727 K:\Pge\PG&E - Piedmont Substation E\PG&E - Piedmont Substation E - FIGURE 1.dwg

July 06, 2004

Mario Sternad
SECOR
57 Lafayette Circle 2nd Floor
Lafayette, CA 94549

TEL: 925-299-9300
FAX 925-299-9302

RE:

Order No.: 0406139

Dear Mario Sternad:

Torrent Laboratory, Inc. received 8 samples on 6/29/2004 for the analyses presented in the following report.

All data for associated QC met EPA or Laboratory specification except where noted in the case narative.

Torrent laboratory Inc. is certified by the State of California, ELAP #1991. If you have any question regarding these tests results, please feel free to contact Project Management Team at (408)263-5258;ext: 204.

Sincerely,

← no signature / date

Laboratory Director Date

Certified Analytical Report of
Total Metals

Report prepared for: Mario Sternad
SECOR

Date Received: 6/29/2004
Date Reported: 7/6/2004

Client Sample ID: S-1A
Sample Location: Piedmont Substation E-PG &E
Sample Matrix: SOIL
Date/Time Sampled 6/28/2004 11:15:00 AM

Lab Sample ID: 0406139-001A
Date Prepared: 6/30/2004

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
Lead	SW6010B	7/1/2004	0.369	1	0.35	15	mg/Kg

These analyses were performed according to State of California Environmental Laboratory Accreditation program, Certificate # 1991

Certified Analytical Report of
Total Metals

Report prepared for: Mario Sternad
SECOR

Date Received: 6/29/2004
Date Reported: 7/6/2004

Client Sample ID: S-1B
Sample Location: Piedmont Substation E-PG &E
Sample Matrix: SOIL
Date/Time Sampled 6/28/2004 11:20:00 AM

Lab Sample ID: 0406139-002A
Date Prepared: 6/30/2004

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
Lead	SW6010B	7/1/2004	0.369	1	0.36	100	mg/Kg

These analyses were performed according to State of California Environmental Laboratory Accreditation program, Certificate # 1991

Certified Analytical Report of
Total Metals

Report prepared for: Mario Sternad
SECOR

Date Received: 6/29/2004
Date Reported: 7/6/2004

Client Sample ID: S-2A
Sample Location: Piedmont Substation E-PG &E
Sample Matrix: SOIL
Date/Time Sampled 6/28/2004 11:30:00 AM

Lab Sample ID: 0406139-003A
Date Prepared: 6/30/2004

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
Lead	SW6010B	7/1/2004	0.369	1	0.37	250	mg/Kg

These analyses were performed according to State of California Environmental Laboratory Accreditation program, Certificate # 1991

Certified Analytical Report of
Total Metals

Report prepared for: Mario Sternad
SECOR

Date Received: 6/29/2004
Date Reported: 7/6/2004

Client Sample ID: S-2B
Sample Location: Piedmont Substation E-PG &E
Sample Matrix: SOIL
Date/Time Sampled 6/28/2004 11:35:00 AM

Lab Sample ID: 0406139-004A
Date Prepared: 6/30/2004

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
Lead	SW6010B	7/1/2004	0.369	1	0.35	230	mg/Kg

These analyses were performed according to State of California Environmental Laboratory Accreditation program, Certificate # 1991

Certified Analytical Report of
Total Metals

Report prepared for: Mario Sternad
SECOR

Date Received: 6/29/2004
Date Reported: 7/6/2004

Client Sample ID: S-3A
Sample Location: Piedmont Substation E-PG &E
Sample Matrix: SOIL
Date/Time Sampled 6/28/2004 11:38:00 AM

Lab Sample ID: 0406139-005A
Date Prepared: 6/30/2004

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
Lead	SW6010B	7/1/2004	0.369	1	0.37	330	mg/Kg

These analyses were performed according to State of California Environmental Laboratory Accreditation program, Certificate # 1991

Certified Analytical Report of
Total Metals

Report prepared for: Mario Sternad
SECOR

Date Received: 6/29/2004
Date Reported: 7/6/2004

Client Sample ID: S-3B
Sample Location: Piedmont Substation E-PG &E
Sample Matrix: SOIL
Date/Time Sampled 6/28/2004 11:42:00 AM

Lab Sample ID: 0406139-006A
Date Prepared: 6/30/2004

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
Lead	SW6010B	7/1/2004	0.369	1	0.36	270	mg/Kg

These analyses were performed according to State of California Environmental Laboratory Accreditation program, Certificate # 1991

Certified Analytical Report of
Total Metals

Report prepared for: Mario Sternad
SECOR

Date Received: 6/29/2004
Date Reported: 7/6/2004

Client Sample ID: S-4A
Sample Location: Piedmont Substation E-PG &E
Sample Matrix: SOIL
Date/Time Sampled 6/28/2004 11:45:00 AM

Lab Sample ID: 0406139-007A
Date Prepared: 6/30/2004

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
Lead	SW6010B	7/1/2004	0.369	1	0.35	300	mg/Kg

These analyses were performed according to State of California Environmental Laboratory Accreditation program, Certificate # 1991

Certified Analytical Report of
Total Metals

Report prepared for: Mario Sternad
SECOR

Date Received: 6/29/2004
Date Reported: 7/6/2004

Client Sample ID: S-4B
Sample Location: Piedmont Substation E-PG &E
Sample Matrix: SOIL
Date/Time Sampled 6/28/2004 12:00:00 PM

Lab Sample ID: 0406139-008A
Date Prepared: 6/30/2004

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
Lead	SW6010B	7/1/2004	0.369	1	0.37	140	mg/Kg

These analyses were performed according to State of California Environmental Laboratory Accreditation program, Certificate # 1991

Definitions, legends and Notes

Note	Description
ug/kg	Microgram per kilogram (ppb, part per billion).
ug/L	Microgram per liter (ppb, part per billion).
mg/kg	Milligram per kilogram (ppm, part per million).
mg/L	Milligram per liter (ppm, part per million).
LCS/LCSD	Laboratory control sample/laboratory control sample duplicate.
MDL	Method detection limit.
MRL	Modified reporting limit. When sample is subject to dilution, reporting limit times dilution factor yields MRL.
MS/MSD	Matrix spike/matrix spike duplicate.
N/A	Not applicable.
ND	Not detected at or above detection limit.
NR	Not reported.
QC	Quality Control.
RL	Reporting limit.
% RPD	Percent relative difference.
a	pH was measured immediately upon the receipt of the sample, but it was still done outside the holding time.
sub	Analyzed by subcontracting laboratory, Lab Certificate #

These analyses were performed according to State of California Environmental Laboratory Accreditation program, Certificate # 1991

Torrent Laboratory, Inc.

Date: *06-Jul-04*

CLIENT: SECOR
Work Order: 0406139
Project:

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010B_S

Sample ID	MB-836	SampType:	MBLK	TestCode:	6010B_S	Units:	mg/Kg	Prep Date:	6/30/2004	Run ID:	ICP_040701B
Client ID:	ZZZZZ	Batch ID:	836	TestNo:	SW6010B	(SW3050B)		Analysis Date:	7/1/2004	SeqNo:	54871

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.37									

Sample ID	LCS-836	SampType:	LCS	TestCode:	6010B_S	Units:	mg/Kg	Prep Date:	6/30/2004	Run ID:	ICP_040701B
Client ID:	ZZZZZ	Batch ID:	836	TestNo:	SW6010B	(SW3050B)		Analysis Date:	7/1/2004	SeqNo:	54869

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	106.8	0.37	100	0	107	80	120	0	0		

Sample ID	LCSD-836	SampType:	LCSD	TestCode:	6010B_S	Units:	mg/Kg	Prep Date:	6/30/2004	Run ID:	ICP_040701B
Client ID:	ZZZZZ	Batch ID:	836	TestNo:	SW6010B	(SW3050B)		Analysis Date:	7/1/2004	SeqNo:	54870

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	107	0.37	100	0	107	80	120	106.8	0.130	20	

Sample ID	0406134-001AMS	SampType:	MS	TestCode:	6010B_S	Units:	mg/Kg	Prep Date:	6/30/2004	Run ID:	ICP_040701B
Client ID:	ZZZZZ	Batch ID:	836	TestNo:	SW6010B	(SW3050B)		Analysis Date:	7/1/2004	SeqNo:	54847

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	98.42	0.36	98.04	3.898	96.4	65	135	0	0		

Sample ID	0406134-001AMSD	SampType:	MSD	TestCode:	6010B_S	Units:	mg/Kg	Prep Date:	6/30/2004	Run ID:	ICP_040701B
Client ID:	ZZZZZ	Batch ID:	836	TestNo:	SW6010B	(SW3050B)		Analysis Date:	7/1/2004	SeqNo:	54848

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	100.6	0.37	100	3.898	96.7	65	135	98.42	2.22	20	

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

0406139

TORRENT LABORATORY, INC.
CHAIN OF CUSTODY

483 Sinclair Frontage Rd. Milpitas, CA 95035
Phone: 408.263.5258 FAX: 408.263.8293
Visit us at www.torrentlab.com email: analysis@torrentlab.com

Company Name: SECOR INTL.	Location of Sampling: PIEDMONT SUB STATION E - PG&E
Address: 57 LAFAYETTE CIRCLE	Purpose: SOIL SAMPLING
City: LAFAYETTE State: CA Zip Code: 94549	Special Instructions / Comments:
Telephone: 925 299 9300 X222 FAX #:	
Report To: MARIO STERNAD Sampler: M. STERNAD	P.O. #:

Turnaround Time: ☐ 10 Working Days ☐ 3 Working Days ☐ 2-8 Hours ☐ 7 Working Days ☐ 2 Working Days NORMAL ☒ 5 Working Days ☐ 24 Hours

☐ Storm Water ☐ Waste Water ☒ Soil ☐ Other

Analyses Requested: TOTAL LEAD

	Torrent's Sample I.D.	Date/Time Sampled	Sample Type	#of Cont.	Cont. Type	Torrent's Comments
1.	S-1A	6-28-04 1115	SOIL	1	4oz JAR	0406139-001A
2.	S-1B	1120		1		" -002A
3.	S-2A	1130		1		" -003A
4.	S-2B	1135		1		" -004A
5.	S-3A	1138		1		" -005A
6.	S-3B	1142		1		" -006A
7.	S-4A	1145		1		" -007A
8.	S-4B	1200		1		" -008A
9.						
10.						

Relinquished By: [signature]	Date: 6-29-04	Time: 7AM	Received By: [signature] #250	Date: 6/29/04	Time: 13:16

Were Samples Received in Good Condition ? ☐ YES ☐ NO Samples on Ice? ☐ YES ☐ NO Method of Shipment World Courier Page 1 of 1

6/29/04 2:00 PM

14°C @ PM

#250 — 6/29/04 2:9 PM.