

FINAL REPORT

Alameda County
MAR 22 2004
Environmental Health

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HAZARDOUS MATERIALS CLEARANCE SAMPLING

BUILDING INTERIOR

**PG&E SUBSTATION E
408 LINDA AVENUE
PIEDMONT, CA**

2/19/04

FINAL REPORT
HAZARDOUS MATERIALS CLEARANCE SAMPLING
BUILDING INTERIOR

DATE: February 19, 2004

KELLCO JOB # 0008-14

CLIENT: PG&E
PO Box 770000, Mail Code B24
San Francisco, CA 94177

LOCATION: INTERIOR ONLY
Substation E
408 Linda Avenue
Piedmont, CA

Executive Summary

This report describes the equipment removal and cleanup of the building at Pacific Gas & Electric's (PG&E's) property formerly know as Piedmont Substation E. The property is located on Linda Avenue in Piedmont, California. The equipment removal and building cleanup activities were completed in anticipation of the future sale and reuse of the property. KELLCO Services Inc. (KELLCO) of Hayward California provided air testing during asbestos removal and lead paint chip cleanup. In addition, KELLCO performed post cleanup sampling. KELLCO has prepared this report to provide a summary of the cleanup.

During late 2000 and early 2001, the electrical and mechanical equipment that remained in the building were removed and the interior of the building was cleaned. Some of the mechanical and electrical equipment contained dielectric and lubricating oil. This equipment was drained of the fluids

and the fluids were disposed off site according to applicable regulations. The equipment was cleaned and disposed or recycled as appropriate. The building surfaces were cleaned to remove oil stains and peeling lead paint. Some areas of interior lead-based paint, where necessary, were encapsulated with coatings. Visible and accessible asbestos-containing materials were also removed. All activities were completed in accordance with a Workplan prepared by KELLCO and approved by Alameda County Department of Environmental Health Agency (ACDEH). During and following these cleanup activities, KELLCO took soil, water and wipe samples of building and mechanical components. Following completion of cleanup activities, the sample results were all below regulatory criteria.

1.0 Site Description and Project Background

Piedmont Substation E is located at 408 Linda Avenue in Piedmont, California. The substation is a two-story building that housed electrical and mechanical equipment used to provide power. The property is located in a residential neighborhood and is partially surrounded by fencing. Substation E was originally built in 1926 to supply direct current power to the trolley line in the city of Piedmont. The substation was also used to convert 12kV to 4kV electric power that served residents and businesses in Piedmont and Oakland between 1926 and 1991. Some of the substation equipment was removed during the 1990s for use at other PG&E facilities; however, other equipment remained onsite, de-energized.

1.1 Purpose

The purpose of the equipment removal and building cleaning at Substation E was to prepare the property for future sale and reuse. The scope of work and the methods were identified in the *WORKPLAN for Equipment Removal and Cleanup of Pacific Gas and Electric Company Substation "E"*, prepared by KELLCO and dated September 17, 2000 (KELLCO Workplan). The KELLCO Workplan was submitted to Alameda County Department of Environmental Health Care (ACDEH) and verbally approved by ACDEH in a meeting in September 2000. The Workplan is included in Appendix A.

1.2 Environmental Testing Prior to Equipment Removal and Building Cleanup

Between October 1999 and March 2000, PG&E's Technical and Ecological Services (TES) performed testing at Piedmont Substation E. The purpose of the TES investigation was to determine whether hazardous materials associated with the past utility operations at the property remained in the building and surrounding soil. Results of the 10/99-3/00 sampling were presented in a report entitled *Site Investigation at PG&E's Piedmont Substation E*, and dated March 2000, which will be referred to in this document as "TES 2000." TES 2000 was submitted to the ACDEH and formed the basis for the KELLCO Workplan for removing the equipment and cleaning the Substation. Inside the substation, the TES 2000 report identified the presence of:

- oil residues on some walls, floors, sumps, and equipment surfaces. A few of these residues contained polychlorinated biphenyls (PCBs) at trace levels. Out of 112 samples tested, only 16 samples had PCBs and only one sample slightly exceeded the federal cleanup criterion for PCBs of 10 micrograms per 100 square centimeters ($10 \mu\text{g}/100\text{cm}^2$; 40 CFR 761.125)
- equipment containing oil. Samples of the oil remaining in some of the equipment was collected and analyzed for PCBs. These oil samples did not contain detectable levels of PCBs; however, not all of the oil remaining in equipment was tested during the TES 2000 investigation.
- local corrosion staining in the battery room.
- lead-based paint on the interior walls, locally peeling.
- elevated lead and PCBs in soil collected in a floor air duct in the motor room.

The TES 2000 investigation did not find asbestos in samples taken from the floor tiles, mortar, wall debris or conduit wrap. However, likely non-friable and friable asbestos containing materials, including transite door and equipment panels, lead/asbestos cables, and thermal system insulation were identified during the planning for the substation cleanup. In addition, the elevated lead and PCBs in soil collected from the floor air duct in the motor room (TES 2000) was originally thought to represent a potential breach in the concrete floor of the building. Prior to building cleanup, KELLCO inspected this area and drilled a soil boring. The results are included in Appendix B (which was submitted to ACDEH)

and indicate that the floor is not breached in this area. PCBs were not reported in soil samples from beneath the floor slab and lead is present at background levels.

In addition, prior to and during cleanup activities, KELLCO performed the following testing (the results and sample locations are included as Appendix C):

- On 10/31/00, KELLCO sampled water in the Control Room Sump for PCBs and lead; both PCB and lead were reported to be "Non Detect" in the water sample. Sludge in the Exciter Room sump was sampled. The analytical results on the sludge indicated elevated lead and PCBs; the lead concentration exceeded the total threshold limit concentration (TTLC; California Code of Regulations [CCR], Title 22, Chapter 11, Article 3) used to define a hazardous waste; this material was disposed as a hazardous waste at Chemical Waste Management's Kettleman Hills facility.
- On 1/19/01 KELLCO collected two bulk samples of metal flaking from filters; these samples were analyzed for metals. In addition, wipe samples from three air ducts were collected; these samples were analyzed for metals and PCBs. The results were "Non Detect" for PCBs. However, metals were elevated in the bulk samples and the wipe samples. Based on these data, the bulk material was disposed as waste; metal ducts and filters were wet-wiped and sent to a metal recycler.
- On 1/23/01 additional wipe samples were taken on the 3rd floor fan duct, 3rd floor fan blade and large transformer room air duct. These were analyzed for PCBs; PCBs were not reported in the samples.

- On 2/1/01, KELLCO performed random sampling on a fan and three ducts that had been removed, cleaned and were ready for disposal. The samples were sent for PCB analysis, and were found to be "Non Detect" for PCBs.

Based on the results of the TES 2000 investigation results and the KELLCO sampling, equipment cleaning and removal and building cleaning were conducted by Decon Environmental Services (Decon) of Hayward, California, in accordance with the ACDEH approved Workplan from January to March 2001. These activities are described in the following sections and summarized on Table 1.

2.0 Equipment Cleaning and Removal

Decon sampled all oils that remained in onsite equipment ; oils that contained PCBs were removed and disposed in accordance with applicable regulations. Oils that did not contain detectable PCBs were sent to Evergreen Oil for recycling. Mechanical equipment, fans and removable air ducts were wet-wipe cleaned and then shipped offsite for metal recycling

3.0 Asbestos Removal

Prior to removal of any asbestos containing material, PG&E provided the asbestos notification to the local air district; the notification is included in Appendix D.

Asbestos-containing materials including thermal and electrical system insulations and transite panels were removed and packaged for shipment by Decon. The transite asbestos panels were non-friable, but were removed. Intact thermal system insulation was found on pipes. Decon removed and packaged the intact asbestos using OSHA and EPA approved methods and procedures . PG&E arranged manifesting and transportation of these materials for disposal at Chemical Waste Management, Kettleman City, and Forward, Stockton.

4.0 Lead-based Paint Removal and Encapsulation

Decon removed flaking paint from surfaces within the building. Decon gathered the flaking paint using HEPA filtered vacuum cleaners. The flaking paint was packaged and handled as a hazardous waste. PG&E was responsible for the manifesting, transportation and disposal at Chemical Waste Management, Kettleman City in accordance with applicable regulations. Decon encapsulated the areas surrounding the peeling paint with architectural coating to reduce the potential for additional paint flaking. No loose, chipping or peeling paint was found at the time of the visual inspection performed by KELLCO (Bonnie Kellogg, DHS IMSD 762) on February 14, 2000.

5.0 BUILDING CLEANING

Although the TES 2000 report and KELLCO's additional testing did not indicate the presence of PCBs above regulatory criteria on the interior walls or floors, Decon washed the interior walls up to 40 feet from the floor (the highest level practical) as well as floor areas in locations where equipment had contained PCBs. The walls and floors were washed with a product called Zep. Zep is designed to deactivate and remove PCBs; information about Zep is included as Appendix E. Zep effectively removed the oil stains from the surfaces.

After the washing with Zep was complete, KELLCO performed the final wipe sampling for PCBs on 3/9/01. Wipe sample locations on the cleaned walls and floors were chosen based on the potential for PCBs based on the locations of equipment that had contained PCBs. All samples indicated "Non Detect" for PCBs. The locations and results for the final clearance sampling for PCBs are included in Appendix C.

Decon also cleaned the battery room area (battery racks and floor under racks) with alkaline solution "Spilfyter Kolorsafe Liquid Neutralizer for Acid" to remove trace amounts of sulfuric acid. Decon

reported that a post-washing litmus test showed the area had a neutral pH. In addition, Decon applied the Zep cleaning solution to the floor area of the battery racks, and pressure washed the area.

6.0 AIR MONITORING

The equipment removal and cleanup inside Substation E was performed concurrent with the soil removal outside the building (documented in the Final Report, Soil Remediation and Testing, KELLCO, February 2004). Air monitoring was performed both inside and outside of the building. The air monitoring consisted of both area and personal air monitoring devices. The results for both the interior and exterior air monitoring are included in Appendix F; the results for the interior sampling are discussed below (the outdoor results are discussed in the Soil Remediation and Testing Report, KELLCO, February, 2004).

6.1 Interior Air Monitoring

The interior air monitoring included monitoring for lead and asbestos. Monitoring for air borne lead was performed by KELLCO personnel using personal monitors and area monitors that were located within the building, outside the visqueen enclosures around the removal of the leaded paint chips. The air monitoring results¹ (Appendix F) show that the results for air borne lead were below OSHA limits.

Air monitoring for asbestos was performed by KELLCO personnel during the loading of transite panels and other asbestos materials into the disposal dumpsters. Air monitoring sampling results (Appendix F) indicate that the asbestos fibers in air were below applicable limits. Following asbestos removal, a Bonnie Kellogg of KELLCO (Certified Asbestos Consultant 92-0182) performed a visual inspection of the interior of the facility. No additional accessible asbestos-containing material was observed and therefore no further removal was performed.

¹ The results for personal air monitor (ID 010131T-4) exceeded the 8 hour TWA; however a determination was made that this personal monitor had been removed and corrupted by placing the device on the floor in the enclosure resulting in direct contact with contaminants.

7.0 ANALYTICAL LABORATORIES

Water, solid and wipe sample analyses were performed by Curtis & Tompkins, Ltd (Curtis & Tomkins) of Berkeley, California. Curtis & Tomkins is a state-certified analytical laboratory. Samples were analyzed using the following EPA analytical methods:

Type of Analysis	EPA Method for Analysis
Total Extractable Hydrocarbons	8015M
Polychlorinated Biphenyls (PCBs)	8082
CAM 17 - California Title 22 Metals (including lead)	6010B & 7471 (mercury)

Curtis & Tomkins analytical reports are include in Appendices B and C.

KELCO's analytical laboratory, a state certified laboratory, performed the lead and asbestos analyses on the air monitoring samples. KELCO analyzed for asbestos fibers in air using NIOSH Method 7400 and air borne lead using NIOSH Method 7082. KELCO's analytical results are included in Appendix F.

8.0 CONCLUSIONS

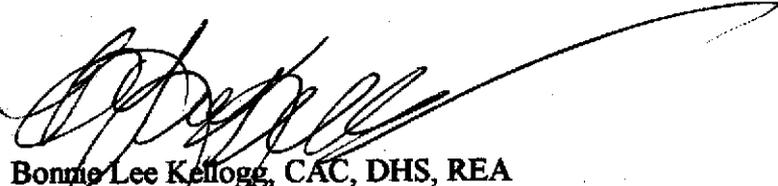
All equipment has been removed from the substation and disposed in accordance with applicable regulations. The walls and floors have been cleaned. Confirmation samples were collected in areas where equipment had contained PCBs; PCBs were not reported in any confirmation samples. Areas of lead paint chips were removed and an architectural coating was applied as necessary to limit

additional flaking. Accessible asbestos containing material has been removed from the building. All cleanup activities were conducted in accordance with the approved Workplan.

Please feel free to contact me if you have any questions about this report.

Sincerely,

KELLCO Services, Inc.



Bonnie Lee Kellogg, CAC, DHS, REA
Senior Consultant

APPENDICES:

- A - KELLCO Workplan for Equipment Removal and Cleanup
- B. PCB and Lead Testing Below Air Duct in Motor Room with analytical Report
- C - KELLCO Sampling Locations, Results, and Laboratory Reports
- D - Asbestos notification
- E - Zep Cleaning Solution Information
- F - Air Monitoring Results

Room	Contaminant	Resolution	Notes
Exciter Room	Asbestos	Equipment, panels and cables with asbestos were removed and either recycled or disposed appropriately	Note 1
Exciter Room (continued)	PCBs	Equipment containing oils with PCBs were removed and disposed appropriately; walls and sumps were washed down with Zep to ensure decontamination. Confirmation samples taken	Note 2 Note 3 Confirmation samples: Floor near electric equipment: sample W8- ND for PCB; W7- ND for PCB, Sump confirmation sample: 010309-P1- ND for PCB
	Paint containing lead	Equipment with lead paint was removed. Steps were taken to ensure paint would not be released during transport. Chipping and peeling paint was removed and disposed appropriately. Any remaining paint was encapsulated. The sump under the room was cleaned and confirmation sample taken.	Note 4 Confirmation sample ER 1.,2.,3.,4,5 3.1 mg/kg for Pb.

Room	Contaminant	Resolution	Notes
Motor Room (continued)	PCBs	Walls up to 40 feet and floor were washed with Zep. Surface samples were taken to ensure decontamination including ventilation sump	Confirmation Samples Motor Room: Air duct: 010309 -P5- ND for PCB; 010309 P6- ND for PCB; Floor in front of panel: 010309 P7- ND for PCB; Floor behind panel: 010309 P8- ND for PCB; Fan level, wall: 010309 P10- ND for PCB; 010309 P11- ND for PCB

Air Filtration Room	Asbestos	No asbestos was observed and none removed	
	Paint containing lead	Old metal filters were removed and tested for lead and metal contamination. They were sent for metal reclamation. No paint flakes encountered.	
	PCBs	Area washed down with Zep confirmation samples taken.	Note 3 Confirmation samples on floor: near entrance: 010309 P4- ND for PCB; Back: 010309 P3- ND for PCB
	Asbestos	No asbestos was observed and none removed	

Room	Contaminant	Resolution	Notes
Air Filtration Room (continued)	Paint containing lead	Equipment with lead paint was removed with steps taken to ensure paint no was released during transport. Existing (flaking) Chipping and peeling paint was removed and disposed appropriately. Any remaining paint was encapsulated in place.	Note 4
	PCBs	Walls washed with Zep up to 40 feet and along floor. Confirmation samples taken.	Note 2 Confirmation samples on floor near sink: 010309- P9 - ND for PCB; inside duct work : W7 - ND for PCB W8 - ND for PCB

Lower Balcony Room	Asbestos	Transite panels were removed and disposed appropriately	Note 1
	Paint containing lead	Chipping and peeling paint was removed and disposed appropriately. Any remaining paint was encapsulated in place.	Note 4
	Battery area (acid)	Area neutralized; area was checked for neutralization with PH paper	Note 6
	PCBs	None observed and none removed	

Room	Contaminant	Resolution	Notes
Upper Balcony Room (continued)	Asbestos	Transite panels were removed and disposed appropriately	Note 4
	Paint containing lead	Chipping and peeling paint was removed and disposed appropriately, with remaining paint encapsulated in place. Equipment with lead containing paint was removed with steps were taken to ensure paint was not released during transport.	
	PCBs	Equipment containing PCBs was removed and disposed appropriately	

Notes:

1. Care was taken to ensure asbestos remained intact (non friable)
2. Care was taken to ensure no oils were released
3. Wash down solution collected and disposed appropriately
4. Any paint chips and peeling paint is collected and disposed appropriately
5. Drilling debris was managed and disposed appropriately
6. Neutralized solution managed appropriately

APPENDIX A

Workplan for Equipment Removal and Cleanup

K E L L C O

**WORKPLAN
for
Equipment Removal and Cleanup
of
Pacific Gas and Electric Company Substation "E"
Piedmont, CA**

Prepared by:

KELLCO Services, Inc.

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1.0 INTRODUCTION

This workplan was prepared for Pacific Gas and Electric Company to support the planned equipment removal from the inactive Piedmont Substation "E," located at 408 Linda Avenue in Piedmont, California. Distribution substation equipment is being removed to prepare it for sale, and it is anticipated that a new owner will eventually redevelop the property.

This plan presents the overall approach to environmental closure of the facility in accordance with applicable regulations. Included is the approach and procedures for cleaning up hazardous materials in the building and soil that were identified during previous testing at the property, as described in a report by Pacific Gas and Electric Company Technical and Engineering Services Department (TES 2000). The hazardous materials identified previously at the property are listed below.

- Oil residues on surfaces and equipment inside the building. Some of these areas contain polychlorinated biphenyls (PCBs) at trace levels, most below the federal cleanup criterion.
- Battery corrosion stains in a small area inside the building.
- Lead paint in surface soil outside the substation.
- Non-friable asbestos-containing materials will be encountered during the equipment removal.

It is anticipated that a variety of waste materials will require management during the planned equipment removal of the Piedmont Substation "E." This workplan presents guidelines for the cleaning and removal of electrical equipment, cleaning of residual PCBs, removal of asbestos containing materials, removal of chipping and peeling lead based paints and removal of lead contaminated soil.

1.1 Site Description And Background

Piedmont Substation "E" is located at 408 Linda Avenue in Piedmont, California. The substation contains a two-story building that formerly housed the electrical

equipment. Some of the former substation equipment has been removed, and the remaining de-energized equipment is inside the building. The property is located in a residential neighborhood and is partially surrounded by fencing.

The Piedmont Substation "E" was originally built in 1926 to supply direct current power to the trolley line in the city of Piedmont. The substation was also used to convert 12kV to 4kV electric power which served residents and businesses in Piedmont and Oakland between 1926 and 1991. It is not uncommon for substation facilities of this vintage to have some used equipment containing PCB insulating oil, lead-based paint or asbestos.

1.2 Previous Work

Between October 1999 and March 2000, Pacific Gas and Electric Company's Technical and Ecological Services (TES) performed testing at Piedmont Substation "E." The purpose of the investigation was to determine whether hazardous materials associate with the past utility operations at the property are present in the building and surrounding soil. Results of the 10/99-3/00 sampling were presented in a report entitled Site Investigation at PG&E's Piedmont Substation "E." which will be referred to in this document as "TES 2000." The TES 2000 report confirmed the presence of asbestos, lead based paint and PCBs above levels that Pacific Gas and Electric Company would allow to remain when closing the facility.

2.0 PROJECT SUMMARY

Pacific Gas and Electric Company contractors will remove the equipment and cleanup Piedmont Substation "E." The objective of the cleanup is to leave a vacant property that is ready to be redeveloped by a new owner. Materials integral to the building that may contain asbestos and lead will not be removed. These may include flooring, paint and other construction materials.

The work presented in this document will be conducted in two stages as outlined below:

2.1 Equipment Removal and Cleanup of Building Interior

This stage of the project involves cleanup and removal of equipment and residual materials from the building. This stage also includes testing and cleaning the motor room sump area.

2.2 *Soil Cleanup*

Soil surrounding the building that contains lead concentrations above the residential soil cleanup criteria of 255 milligrams per kilogram (mg/kg) will be removed. Confirmation testing will be conducted for seventeen metals, including lead, designated by the State of California in Title 22 as hazardous. The purpose of testing for other metals is profiling the soil for off-site disposal.¹

3.0 CLEANUP AND SAMPLING PLAN

3.1 *Equipment Removal and Cleanup of Building Interior*

3.1.1 **Cleanup Objectives**

- The goal is to clean the building to below regulatory threshold levels for known chemicals.

3.1.2 **Pre-Removal Cleanup and Sampling**

- PCB wipe sampling will be conducted inside the building to confirm the TES 2000 report. Cleaning of machinery will be based on the sample results as follows:
- The machinery and surfaces that test for PCBs at greater than $10\mu\text{g}/100\text{cm}^2$ will be cleaned by the double wash/rinse method described in 40 CFR 761.360. Once the machinery has been cleaned according to the prescribed method, it will be managed in accordance with the regulations.
- PCB cleanup levels for high contact solid surfaces and low contact indoor surfaces will be $10\mu\text{g}/\text{cm}^2$ as indicated in 40 CFR 761.125.
- Sampling in the motor room sump will be conducted by drilling a soil boring at the proposed location shown in Figure 2. Drilling will continue to ten feet or refusal, whichever occurs first. Two samples will be taken, one at 5 feet and one at 10 feet or refusal. The samples will be analyzed for PCBs (EPA Method 6080/608), "CAM 17 Metals" (EPA Method 6010), and Total Extractable Petroleum Hydrocarbons

¹ These metals are usually referred to as "CAM 17," after the California Assessment Manual that preceded Title 22.

(TEPH, EPA Method 8015 modified for kerosene, diesel and motor oil).

- Drilling, collection of samples and sealing of the borehole will be supervised by a California registered geologist, who will log the boring using the Unified Soil Classification System. Immediately following sampling, the borehole will be sealed to the ground surface using slurry of cement and bentonite. Further action will depend on sample results.

3.1.3 Hazardous Materials Management during Equipment Removal

Asbestos and lead paint cleanup will be accomplished by a contractor and workers trained and licensed to perform the work. Air monitoring will be performed to establish that airborne levels of asbestos and lead during cleanup are below the OSHA action levels. Additional monitoring will be performed as needed. Depending on air monitoring results, cleanup of asbestos and lead cleanup may be conducted within containment with negative pressure.

- Chipping and peeling paint will be removed from equipment, collected with HEPA filtered vacuum cleaners and managed as hazardous waste.
- Asbestos materials that are part of the equipment being removed will be managed in accordance with applicable requirements. Materials used in the cleanup process will be collected and managed in accordance with applicable requirements.
- The battery room floor will be washed with an alkali solution.

3.1.4 Post Removal Cleanup and Sampling

- Confirmatory lead wipe samples on the floor in the battery acid area will be taken after the area is clean.
- Asbestos air samples will be taken after the machinery has been removed. The clearance criteria is .01 fibers/cc (10 times below the OSHA action level) with analysis by Phase Contrast Microscopy (PCM,

EPA Method 7400).

- The number and locations of confirmation samples will be taken in accordance with EPA guidelines.

3.2 *Soil Remediation*

3.2.1 **Cleanup Objectives**

The soil cleanup level is 255 ppm lead. This cleanup goal is recommended by Department of Toxic Substances Control (DTSC), for lead in residential soil.

3.2.2 **Pre-Cleanup Sampling**

Soil sampling was conducted by Pacific Gas and Electric Company in an extensive study (TES 2000). The lead results for soil are shown in Figure 1. Five (5) additional Title 22 ("CAM 17") metals samples will be taken for soil profiling prior to excavation and disposal.

3.2.3 **Cleanup Activities**

The Contractor will remove six inches of topsoil from the grounds around the building exterior, as indicated in Figure 2. Additional soil samples may be taken as necessary to verify excavation limits, and analyzed for lead using EPA method 6010. The excavation activities will be monitored visually for dust, and water will be applied to the soil for dust control as needed. Excavation will not extend past the PG&E property.

3.2.4 **Verification Sampling and Excavation Closure**

Following removal the soil will be tested using five composite samples of 10 sub-samples each. Each sample will represent a subarea of the property surrounding the building, so that all excavated areas are sampled. If a subarea sample exceeds the cleanup goal of 255 mg/kg, then six more inches of soil will be excavated from that subarea and it will be resampled using the method described above. Once the entire property is confirmed to meet the cleanup goal, the excavations will be backfilled to grade with clean imported fill.

3.3 *Notifications*

WHO	WHAT	WHEN
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Department Toxic Substances Control (DTSC)	Hazardous waste generator number for the site	Prior to removal of any hazardous materials from the site
Bay Area Air Quality Management District (BAAQMD)	NESHAP notification for asbestos related work	Ten (10) days prior to the start of work
Cal-OSHA	Notification of intention for asbestos related work	24 hours prior to the start of abatement
Underground Services Alert (USA)	Notification prior to boring Notification prior to excavation	2-3 days prior to boring 2-3 days prior to excavation

- As the project develops, other agencies may be notified as appropriate.

4.0 HEALTH AND SAFETY

4.1 Contractor Personnel

- All site personnel training will be consistent with applicable Federal, State and local regulations as a minimum. All personnel involved in site activities shall have certificates or written assurances of competency, qualifications or training as required by law. All training records must be available for inspection.
- All contractors performing abatement for this project will submit to Pacific Gas and Electric Company a Health and Safety Plan.

4.2 Public Health and Safety

Equipment removal and cleanup of the materials at the Piedmont

Substation "E" will proceed in a manner to prevent any health threat or nuisance to the public beyond that of a normal construction project. Additional precautions that Pacific Gas and Electric Company are taking for this project include:

- Pacific Gas and Electric Company has retained KELLCO Services, Inc., a third party environmental consultant, to provide independent environmental and health and safety oversight during the project.
- A temporary fence will be installed around the site perimeter to discourage trespassers. This fence will temporarily close the pathway that crosses the property between Linda Avenue and Oakland Avenue.
- A traffic plan will be prepared with a transport plan for the large equipment required for this project. The traffic plan may have some of the following elements: temporary closure of Linda Avenue while removing heavy equipment from the building, sidewalk closure directly in front of Piedmont Substation "E". A safety/traffic monitor (flagman) will be available as needed to facilitate vehicle and pedestrian traffic.
- Work hours will comply with City of Piedmont requirements that are intended to minimize disturbance of adjacent residence.
- Water will be used during soil excavation to ensure that soil excavation does not create dust.
- During soil excavation, KELLCO will provide perimeter air monitoring to verify that airborne levels of lead are well below regulatory limits. Dust control measures are expected to suppress airborne lead. However, if the perimeter monitoring shows the airborne lead above $15\mu\text{g}/\text{m}^3$, which is half the OSHA action level, work will be suspended until more aggressive dust control measures can be employed.

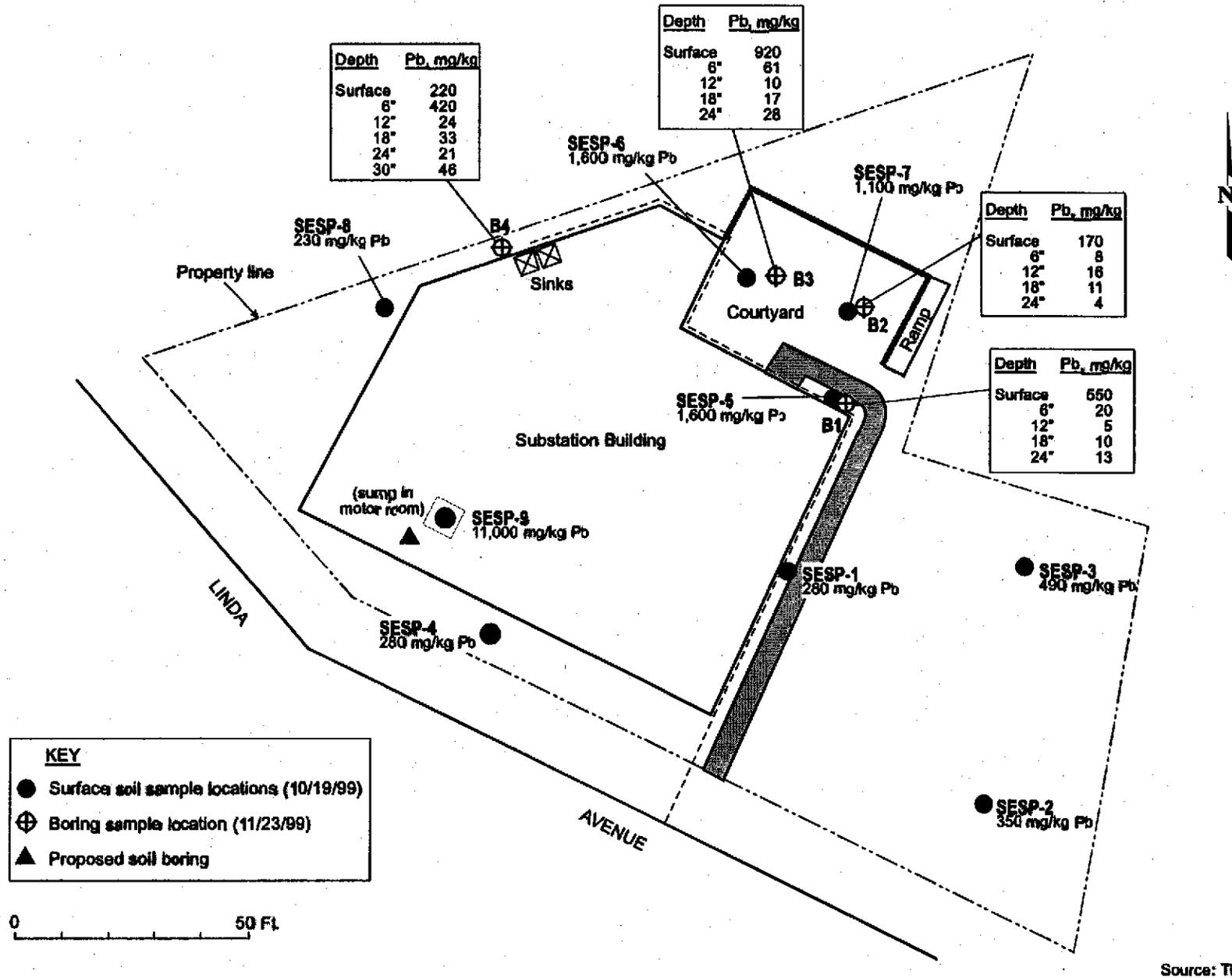


Figure 1: Lead test results in soil, Piedmont Substation "E"

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Between October 1999 and March 2000, Pacific Gas and Electric Company's Technical and Ecological Services (TES) performed testing at Piedmont Substation "E." The purpose of the investigation was to determine whether hazardous materials associate with the past utility operations at the property are present in the building and surrounding soil. Results of the 10/99-3/00 sampling were presented in a report entitled Site Investigation at PG&E's Piedmont Substation "E." which will be referred to in this document as "TES 2000." The TES 2000 report confirmed the presence of asbestos, lead based paint and PCBs above levels that Pacific Gas and Electric Company would allow to remain when closing the facility.

2.0 PROJECT SUMMARY

Pacific Gas and Electric Company contractors will remove the equipment and cleanup Piedmont Substation "E." The objective of the cleanup is to leave a vacant property that is ready to be redeveloped by a new owner. Materials integral to the building that may contain asbestos and lead will not be removed. These may include flooring, paint and other construction materials.

The work presented in this document will be conducted in two stages as outlined below:

2.1 *Equipment Removal and Cleanup of Building Interior*

This stage of the project involves cleanup and removal of equipment and residual materials from the building. This stage also includes testing and cleaning the motor room sump area.

2.2 *Soil Cleanup*

Soil surrounding the building that contains lead concentrations above the residential soil cleanup criteria of 255 milligrams per kilogram (mg/kg) will be removed. Confirmation testing will be conducted for seventeen metals, including lead, designated by the State of California in Title 22 as hazardous. The purpose of testing for other metals is profiling the soil for off-site disposal.¹

3.0 CLEANUP AND SAMPLING PLAN

3.1 *Equipment Removal and Cleanup of Building Interior*

3.1.1 **Cleanup Objectives**

- The goal is to clean the building to below regulatory threshold levels for known chemicals.

3.1.2 **Pre-Removal Cleanup and Sampling**

- PCB wipe sampling will be conducted inside the building to confirm the TES 2000 report. Cleaning of machinery will be based on the sample results as follows:
- The machinery and surfaces that test for PCBs at greater than $10\mu\text{g}/100\text{cm}^2$ will be cleaned by the double wash/rinse method described in 40 CFR 761.360. Once the machinery has been cleaned according to the prescribed method, it will be managed in accordance with the regulations.
- PCB cleanup levels for high contact solid surfaces and low contact indoor surfaces will be $10\mu\text{g}/\text{cm}^2$ as indicated in 40 CFR 761.125.

¹ These metals are usually referred to as "CAM 17," after the California Assessment Manual that preceded Title 22.

- Sampling in the motor room sump will be conducted by drilling a soil boring at the proposed location shown in Figure 2. Drilling will continue to ten feet or refusal, whichever occurs first. Two samples will be taken, one at 5 feet and one at 10 feet or refusal. The samples will be analyzed for PCBs (EPA Method 6080/608), "CAM 17 Metals" (EPA Method 6010), and Total Extractable Petroleum Hydrocarbons (TEPH, EPA Method 8015 modified for kerosene, diesel and motor oil).
- Drilling, collection of samples and sealing of the borehole will be supervised by a California registered geologist, who will log the boring using the Unified Soil Classification System. Immediately following sampling, the borehole will be sealed to the ground surface using slurry of cement and bentonite. Further action will depend on sample results.

3.1.3 Hazardous Materials Management during Equipment Removal

Asbestos and lead paint cleanup will be accomplished by a contractor and workers trained and licensed to perform the work. Air monitoring will be performed to establish that airborne levels of asbestos and lead during cleanup are below the OSHA action levels. Additional monitoring will be performed as needed. Depending on air monitoring results, cleanup of asbestos and lead cleanup may be conducted within containment with negative pressure.

- Chipping and peeling paint will be removed from equipment, collected with HEPA filtered vacuum cleaners and managed as hazardous waste.
- Asbestos materials that are part of the equipment being removed will be managed in accordance with applicable requirements. Materials used in the cleanup process will be collected and managed in accordance with applicable requirements.
- The battery room floor will be washed with an alkali solution.

3.1.4 Post Removal Cleanup and Sampling

- Confirmatory lead wipe samples on the floor in the battery acid area will be taken after the area is clean.
- Asbestos air samples will be taken after the machinery has been removed. The clearance criteria is .01 fibers/cc (10 times below the OSHA action level) with analysis by Phase Contrast Microscopy (PCM, EPA Method 7400).
- The number and locations of confirmation samples will be taken in accordance with EPA guidelines.

3.2 Soil Remediation

3.2.1 Cleanup Objectives

The soil cleanup level is 255 ppm lead. This cleanup goal is recommended by Department of Toxic Substances Control (DTSC), for lead in residential soil.

3.2.2 Pre-Cleanup Sampling

Soil sampling was conducted by Pacific Gas and Electric Company in an extensive study (TES 2000). The lead results for soil are shown in Figure 1. Five (5) additional Title 22 ("CAM 17") metals samples will be taken for soil profiling prior to excavation and disposal

3.2.3 Cleanup Activities

The Contractor will remove six inches of topsoil from the grounds around the building exterior, as indicated in Figure 2. Additional soil samples may be taken as necessary to verify excavation limits, and analyzed for lead using EPA method 6010. The excavation activities will be monitored visually for dust, and water will be applied to the soil for dust control as needed. Excavation will not extend past the PG&E property.

3.2.4 Verification Sampling and Excavation Closure

Following removal the soil will be tested using five composite samples of 10 sub-samples each. Each sample will represent a subarea of the property surrounding the building, so that all excavated areas are

sampled. If a subarea sample exceeds the cleanup goal of 255 mg/kg, then six more inches of soil will be excavated from that subarea and it will be resampled using the method described above. Once the entire property is confirmed to meet the cleanup goal, the excavations will be backfilled to grade with clean imported fill.

3.3 Notifications

WHO	WHAT	WHEN
Department Toxic Substances Control (DTSC)	Hazardous waste generator number for the site	Prior to removal of any hazardous materials from the site
Bay Area Air Quality Management District (BAAQMD)	NESHAP notification for asbestos related work	Ten (10) days prior to the start of work
Cal-OSHA	Notification of intention for asbestos related work	24 hours prior to the start of abatement
Underground Services Alert (USA)	Notification prior to boring Notification prior to excavation	2-3 days prior to boring 2-3 days prior to excavation

- As the project develops, other agencies may be notified as appropriate.

4.0 HEALTH AND SAFETY

4.1 Contractor Personnel

- All site personnel training will be consistent with applicable Federal, State and local regulations as a minimum. All personnel involved in

site activities shall have certificates or written assurances of competency, qualifications or training as required by law. All training records must be available for inspection.

- All contractors performing abatement for this project will submit to Pacific Gas and Electric Company a Health and Safety Plan.

4.2 *Public Health and Safety*

Equipment removal and cleanup of the materials at the Piedmont Substation "E" will proceed in a manner to prevent any health threat or nuisance to the public beyond that of a normal construction project. Additional precautions that Pacific Gas and Electric Company are taking for this project include:

- Pacific Gas and Electric Company has retained KELLCO Services, Inc., a third party environmental consultant, to provide independent environmental and health and safety oversight during the project.
- A temporary fence will be installed around the site perimeter to discourage trespassers. This fence will temporarily close the pathway that crosses the property between Linda Avenue and Oakland Avenue.
- A traffic plan will be prepared with a transport plan for the large equipment required for this project. The traffic plan may have some of the following elements: temporary closure of Linda Avenue while removing heavy equipment from the building, sidewalk closure directly in front of Piedmont Substation "E". A safety/traffic monitor (flagman) will be available as needed to facilitate vehicle and pedestrian traffic.
- Work hours will comply with City of Piedmont requirements that are intended to minimize disturbance of adjacent residence.
- Water will be used during soil excavation to ensure that soil excavation does not create dust.

- During soil excavation, KELLCO will provide perimeter air monitoring to verify that airborne levels of lead are well below regulatory limits. Dust control measures are expected to suppress airborne lead. However, if the perimeter monitoring shows the airborne lead above $15\mu\text{g}/\text{m}^3$, which is half the OSHA action level, work will be suspended until more aggressive dust control measures can be employed.

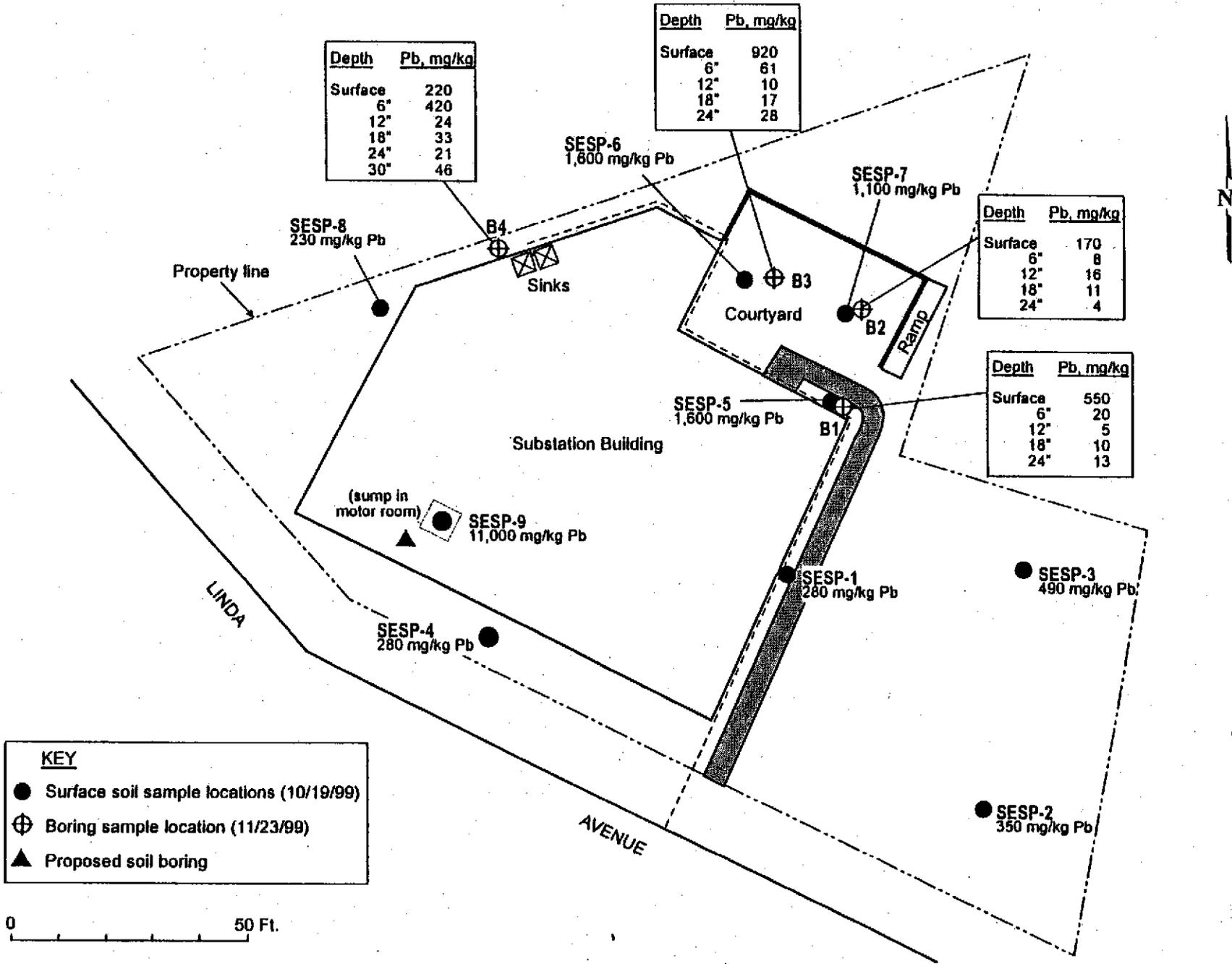


Figure 1: Lead test results in soil, Piedmont Substation "E"

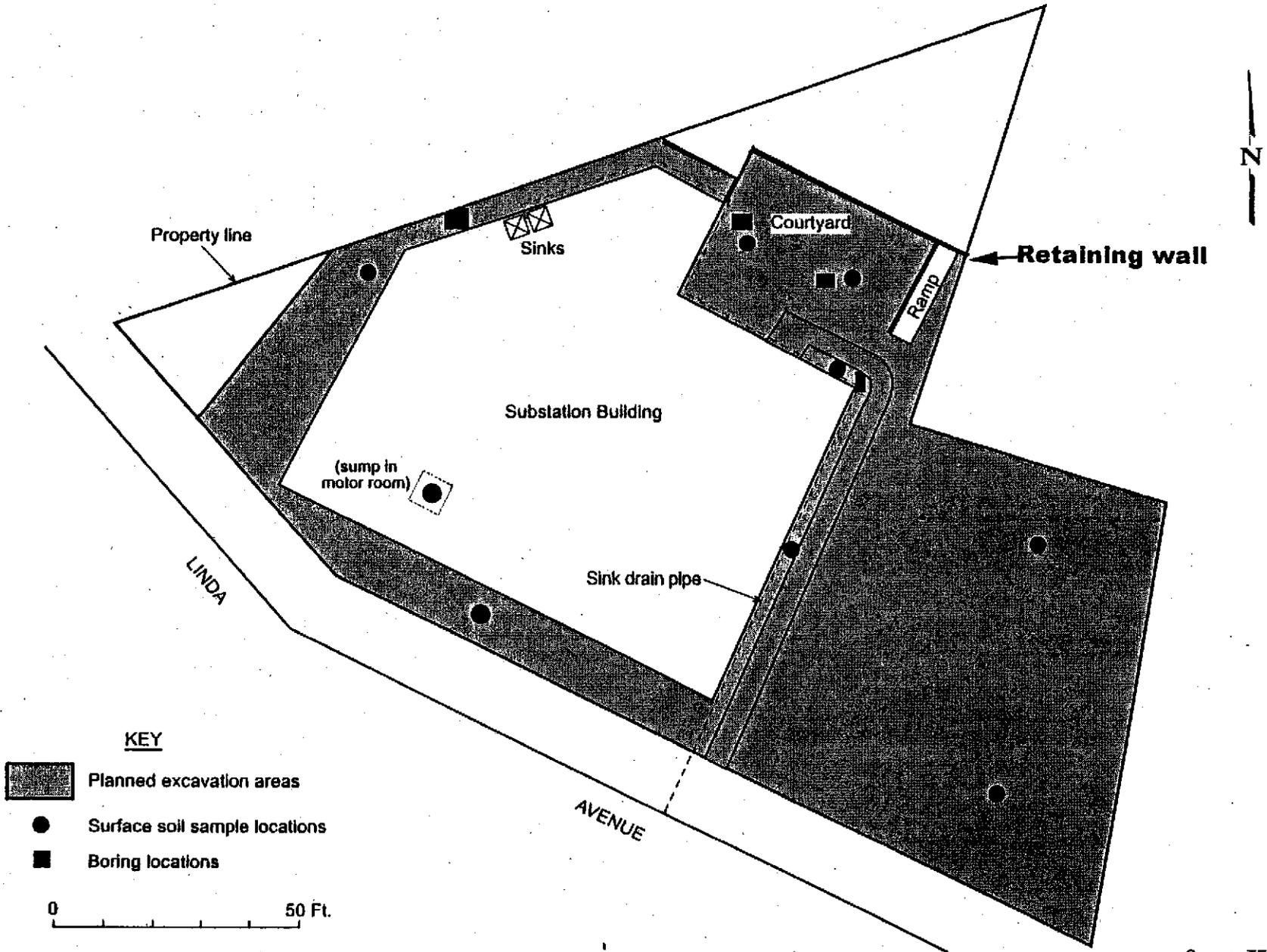


Figure 2: Planned excavation, Piedmont Substation "E"

Source: TES, 2000

APPENDIX B

**PCB and Lead Testing
Below Air Duct in Motor Room**

December 20, 2000

Ms. Susan Hugo
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502

RE: PCB and Lead testing below air duct Motor Room
PG&E Substation E
408 Linda Avenue
Piedmont, CA

Dear Ms. Hugo,

Executive Summary

Initial PCB testing (10/19/99) below floor air ducting of the motor room at Substation E showed detectable PCBs and lead. In order to determine the extent of PCB and lead contamination, drilling and additional testing was performed. This further testing showed that the floor to the air duct was fully intact and no PCB, lead or other contaminations were found below the concrete.

Background

On October 19, 1999, PG&E had a sample taken in the air duct below the floor in the motor room. This sample (SESP-9) indicated the presence of PCB's and lead. As there was no documentation regarding the depth of the sample, it was assumed that the floor of the air duct had been breached. In order to plan remediation of the contamination, further testing was performed.

Preparation for Core Sampling

When Gregg Drilling arrived and the air duct was inspected, the concrete floor was found to be perfectly intact. There was no indication of breach, or of an area where a previous below surface sample may have been taken. In order to perform the required sampling to determine potential PCB and lead contamination, the concrete had to be broken with a jackhammer.

Corporate: 3137 Diablo Avenue • Hayward, CA 94545-2701 • (510) 786-9751 • fax (510) 786-9625

SoCal: 18649 Sunburst Street • Northridge, CA 91324 • (818) 349-9663 • fax (818) 349-7988

Nevada: 1000 Bible Way # 54 • Reno, NV 89502 • (775) 323-5288 • fax (775) 323-3385

<http://www.kellco.com> email: kellco@kellco.com

Core Sampling

Gregg Drilling used a hollow core auger to acquire the samples. KELLCO's geologist Gavan Heinrich logged the sample. A copy of the sample log is attached. Samples were taken and logged as:

PGEPSE-1A - 1-1.5'

PGEPSE-1B - 4-4.5'

PGEPSE-1C - 7-7.5'

Following sampling the core access hole was filled with a cement mixture, thus again sealing the soil below from potential contamination from above.

Analysis and Results

Curtis and Tompkins laboratory analyzed samples. A copy of the laboratory report is attached. There were no PCB's in any of the samples. Lead and other contaminate levels were well below any regulatory limits. A table is attached to this document showing the complete sample results for all contaminants tested with the Preliminary EPA Goals and the Background Concentrations of Trace and Major Elements in California Soils to show that the amounts of contaminants found were background levels.

Conclusion

Based on observations and samplings, we find no concern for PCB or lead contamination in the soil beneath the motor room air duct at Substation E.

Please let me know if I can be of further assistance with this matter.

Sincerely,

KELLCO Services, Inc.

Bonnie Lee Kellogg, REA, CAC, DHS
Senior Project Manager

Enclosures

CC: Sara Everitt, PG&E



Total Extractable Hydrocarbons

Lab #:	148037	Location:	Piedmont Substation E
Client:	Pacific Gas & Electric	Prep:	SHAKER TABLE
Project#:	STANDARD	Analysis:	EPA 8015M
Matrix:	Soil	Sampled:	10/13/00
Units:	mg/Kg	Received:	10/13/00
Basis:	wet	Prepared:	10/13/00
Diln Fac:	1.000	Analyzed:	10/14/00
Batch#:	58890		

Field ID: PGEPSE-1A Lab ID: 148037-001
 Type: SAMPLE

Analyte	Result	RL
Kerosene C10-C16	ND	0.99
Diesel C10-C24	3.5 Y Z	0.99
Motor Oil C24-C36	12 Y	5.0
Surrogate	SPC	Limits
Hexacosane	99	60-136

Field ID: PGEPSE-1B Lab ID: 148037-002
 Type: SAMPLE

Analyte	Result	RL
Kerosene C10-C16	ND	0.99
Diesel C10-C24	3.0 Y Z	0.99
Motor Oil C24-C36	ND	5.0
Surrogate	SPC	Limits
Hexacosane	90	60-136

Field ID: PGEPSE-1C Lab ID: 148037-003
 Type: SAMPLE

Analyte	Result	RL
Kerosene C10-C16	ND	0.99
Diesel C10-C24	1.5 Y Z	0.99
Motor Oil C24-C36	ND	5.0
Surrogate	SPC	Limits
Hexacosane	111	60-136

Type: BLANK Lab ID: QC127466

Analyte	Result	RL
Kerosene C10-C16	ND	1.0
Diesel C10-C24	ND	1.0
Motor Oil C24-C36	ND	5.0
Surrogate	SPC	Limits
Hexacosane	96	60-136

Y = Sample exhibits fuel pattern which does not resemble standard
 Z = Sample exhibits unknown single peak or peaks
 ND = Not Detected
 RL = Reporting Limit
 Page 1 of 1

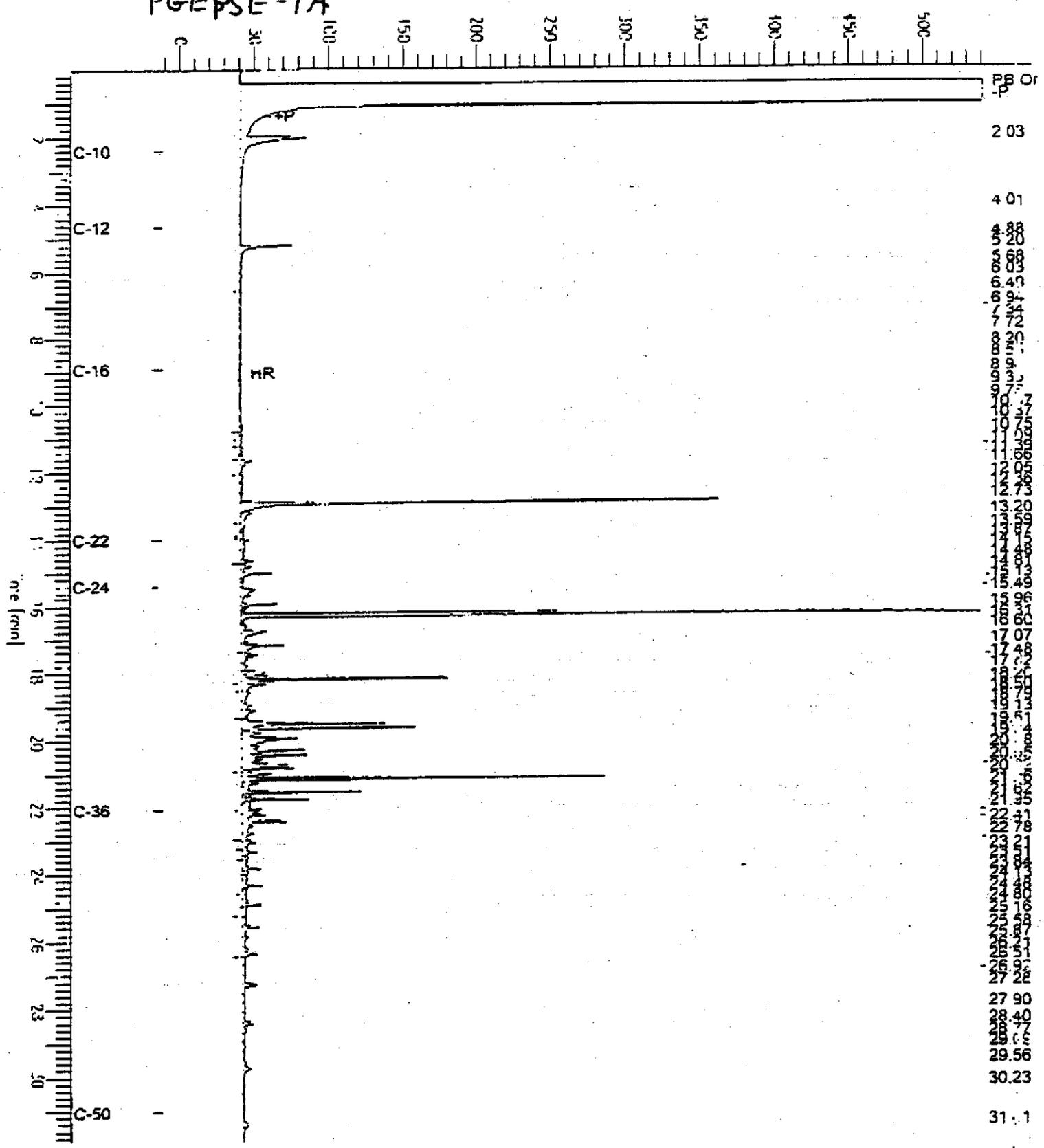
Sample Name : 148037-001.58890
FileName : G:\GCL1\CHA\287A038.RAW
Mode : ATEH205.MTH
Start Time : 0.01 min
Scale Factor : 0.0

End Time : 31.91 min
Plot Offset : -11 mV

Sample #: 58890
Date : 10/15/00 01:19 PM
Time of Injection: 10/14/00 11:01 AM
Low Point : -11.40 mV
Plot Scale: 552.1 mV
High Point : 540.75 mV

PGEPSE-1A

Response [mv]



Sample Name : 10039-002.58890
 FileName : G:\GC11\ChA\287A039.RAW
 Method : ATEN265.MTH
 Start Time : 0.01 min
 Scale Factor : 0.0

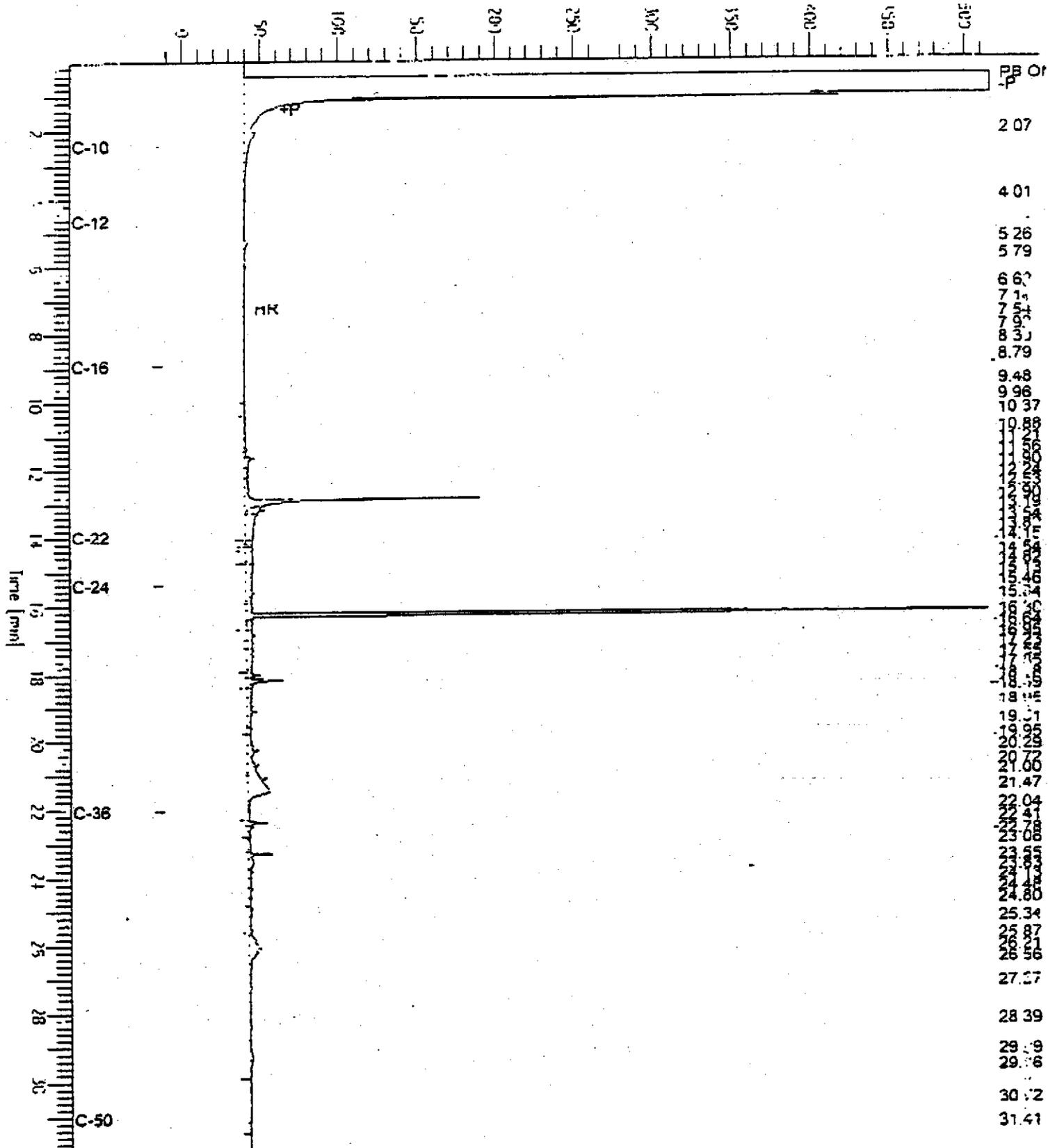
DV. 1/15/00

End Time : 31.91 min
 Plot Offset : -12 mV

Sample #: 58890
 Date : 10/15/00 01:20 PM
 Time of Injection: 10/14/00 11:41 AM
 Low Point : -11.92 mV
 High Point : 515.92 mV
 Plot Scale : 527.8 mV

PGEPSE-1B

Response [nV]



Chromatogram

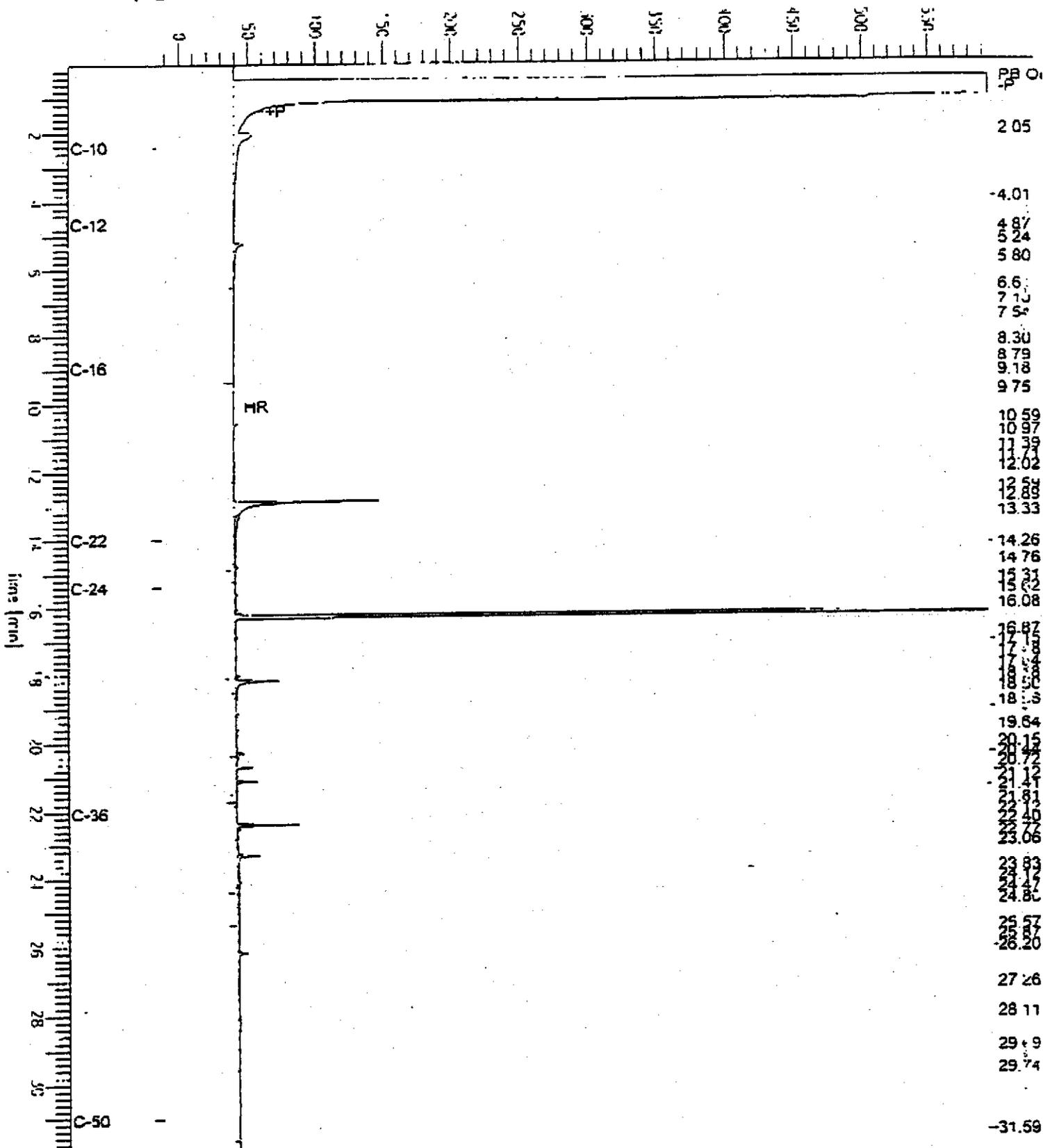
Sample Name : 148037-003.58890
FileName : G:\CC11\CHA\287A040.RAW
Method : ATEN265.MTH
Start Time : 0.01 min
Scale Factor : 0.0

End Time : 31.91 min
Plot Offset : -12 mv

Sample #: 58890
Date : 10/15/00 01:21 PM
Time of Injection: 10/14/00 12:21 PM
Low Point : -12.33 mv
High Point : 594.64 mv
Plot Scale: 607.0 mv

PGEPSE-1C

Response [mv]



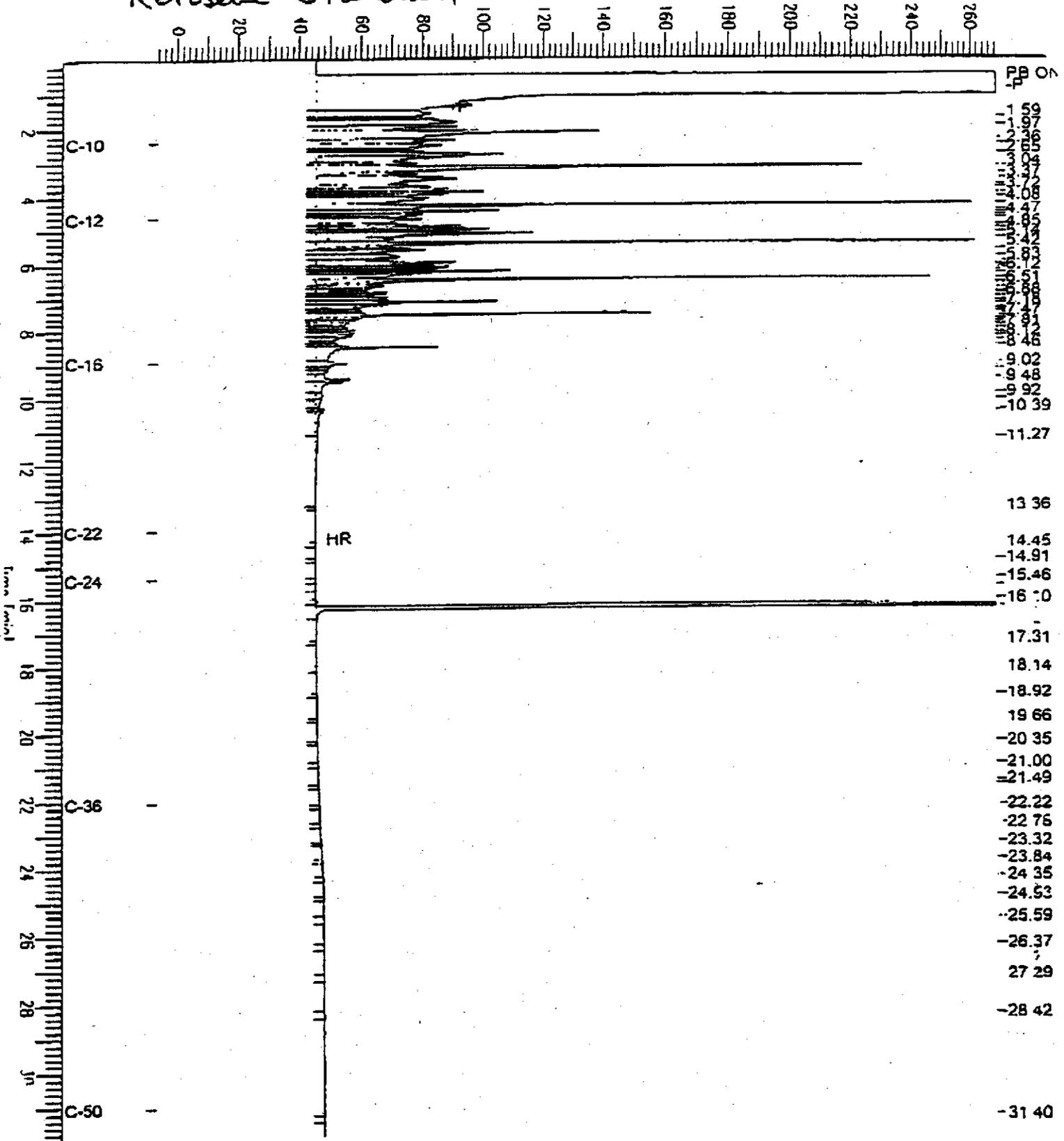
Sample name : ccv_00-s9509_ker
Filename : G:\GC11\CHNA\287A032.RAW
Method : ATEH265.NTH
Start Time : 0.01 min
Gain Factor : 0.0

End Time : 31.91 min
Plot Offset: -6 mV

Sample 1: 250mg/l
Date : 10/14/00 12:02 PM
Time of Injection: 10/14/00 07:01 AM
Low Point : -8.37 mV
High Point : 268.41 mV
Plot Scale: 274.8 mV

Kerosene Standard

Response [mV]



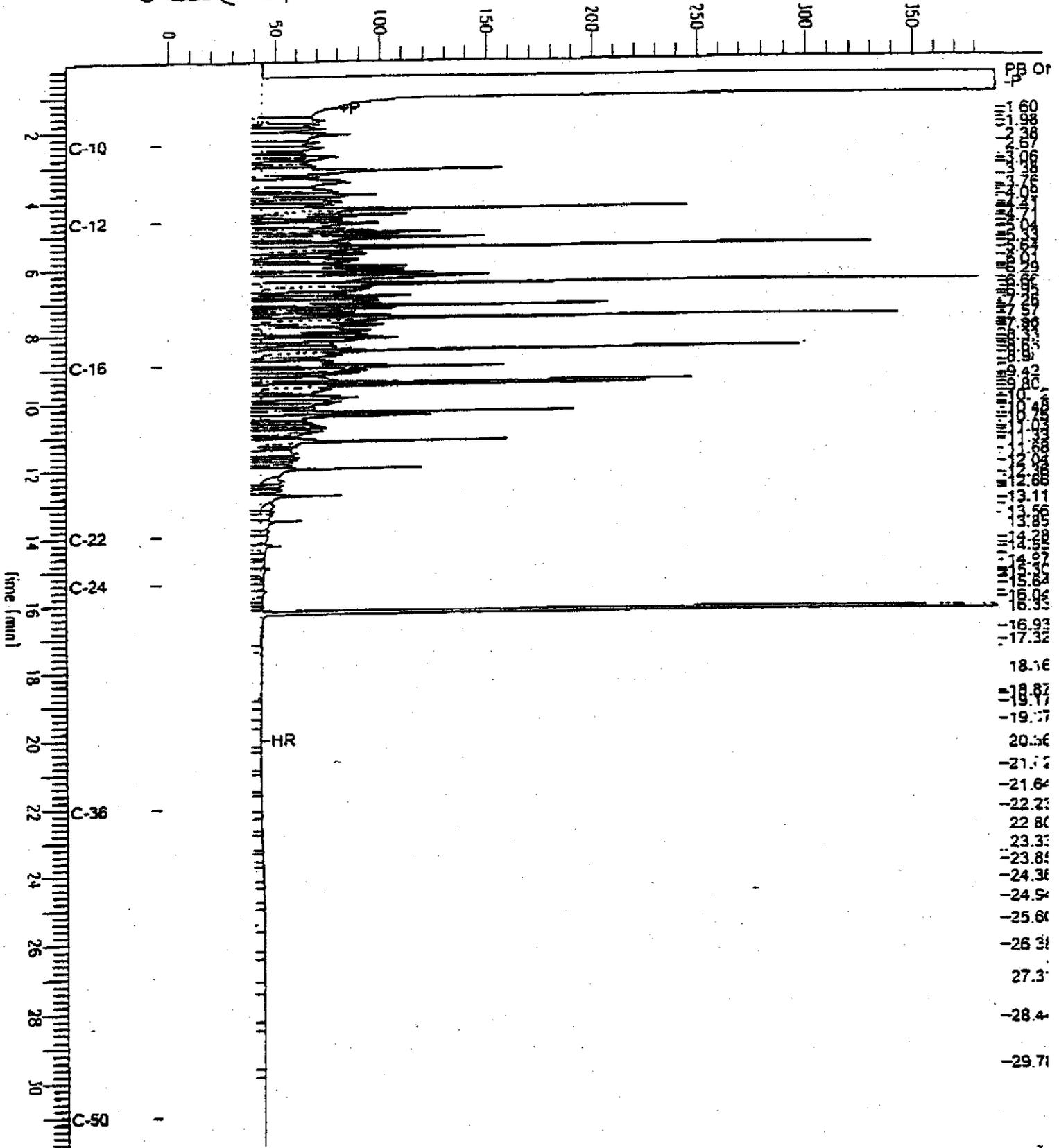
Sample Name : ccv_00wx9775.dsl
FileName : G:\GC11\CHA\287A001.RAW
AcqMod : ATEH265.MTH
Ret Time : 0.01 min
Factor : 0.0

End Time : 31.91 min
Plot Offset: -3 mV

Sample #: 500mg/l
Date : 10/13/00 10:43 AM
Time of Injection: 10/13/00 10:09 AM
Low Point : -3.39 mV
Plot Scale: 393.3 mV
High Point : 389.90 mV

Diesel Standard

Response [mV]



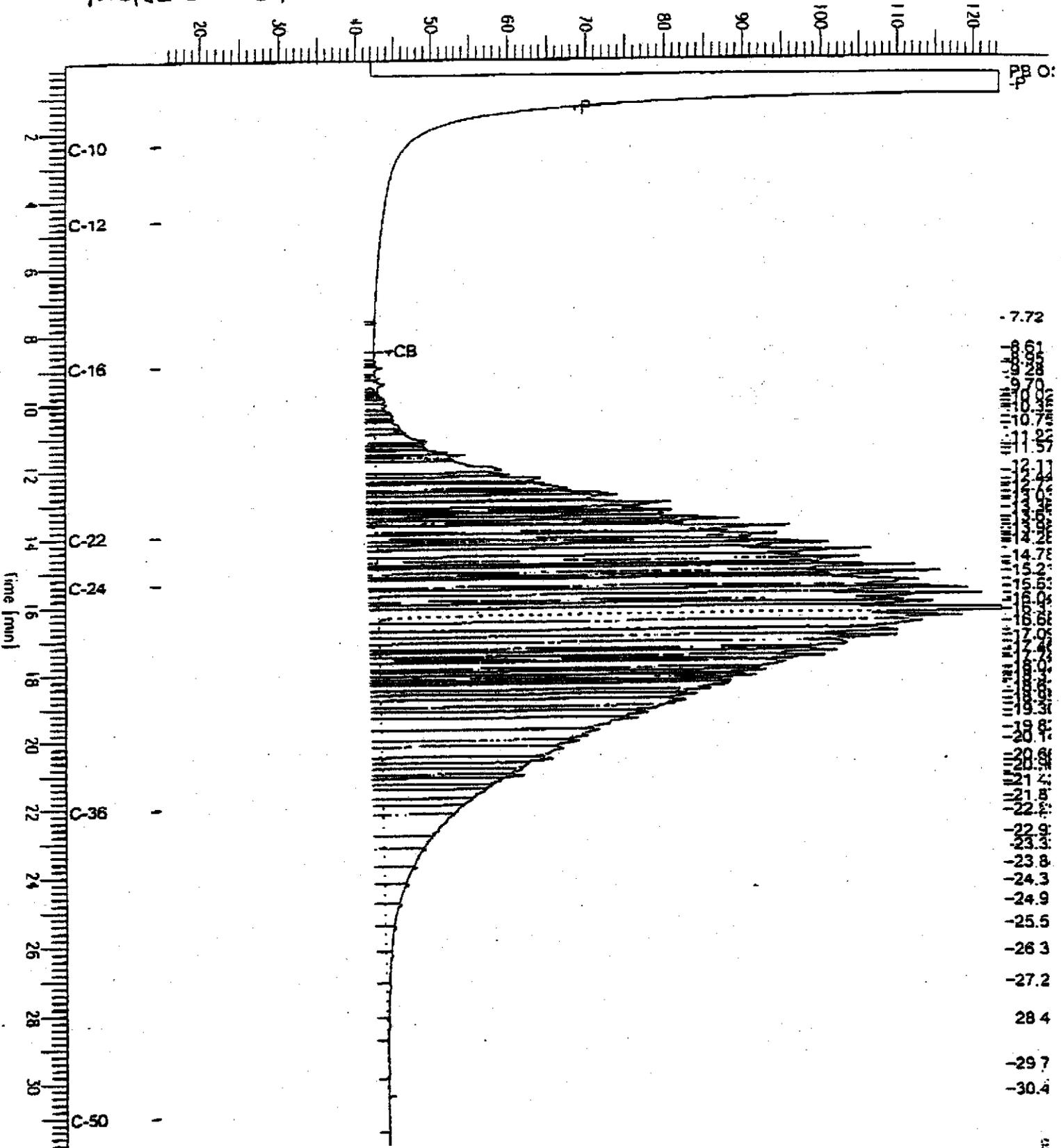
Sample Name : ccv_00w9673.mo
FileName : G:\GC11\CHA\287A002.RAW
Method : ATEH265.MTH
Inject Time : 0.01 min
Gain Factor : 0.0

End Time : 31.91 min
Plot Offset: 15 mV

Sample #: 500mg/l
Date : 10/13/00 11:34 AM
Time of Injection: 10/13/00 10:49 AM
Low Point : 15.04 mV
High Point : 123.28 mV
Plot Scale: 108.2 mV

Motor Oil Standard

Response [mV]





Polychlorinated Biphenyls (PCBs)

Lab #:	148037	Prep:	EPA 3550
Client:	Pacific Gas & Electric	Cleanup Method:	EPA 3665A
Project#:	STANDARD	Analysis:	EPA 8082
Location:	Piedmont Substation E		
Matrix:	Soil	Sampled:	10/13/00
Units:	ug/Kg	Received:	10/13/00
Basis:	wet	Prepared:	10/13/00
Diln Fac:	1.000	Analyzed:	10/16/00
Batch#:	58899		

Field ID: PGEPSE-1A Lab ID: 148037-001
 Type: SAMPLE

Analyte	Result	RL
Aroclor-1016	ND	12
Aroclor-1221	ND	12
Aroclor-1232	ND	12
Aroclor-1242	ND	12
Aroclor-1248	ND	12
Aroclor-1254	ND	12
Aroclor-1260	ND	12

Surrogate	APCC	Limits
TCMX	85	39-150
Decachlorobiphenyl	123	33-144

Field ID: PGEPSE-1B Lab ID: 148037-002
 Type: SAMPLE

Analyte	Result	RL
Aroclor-1016	ND	12
Aroclor-1221	ND	12
Aroclor-1232	ND	12
Aroclor-1242	ND	12
Aroclor-1248	ND	12
Aroclor-1254	ND	12
Aroclor-1260	ND	12

Surrogate	APCC	Limits
TCMX	77	39-150
Decachlorobiphenyl	116	33-144

ND = Not Detected
 RL = Reporting Limit
 NA = Not Analyzed
 Page 1 of 2



Curtis & Tompkins, Ltd.

Polychlorinated Biphenyls (PCBs)

Lab #:	148037	Prep:	EPA 3550
Client:	Pacific Gas & Electric	Cleanup Method:	EPA 3665A
Project#:	STANDARD	Analysis:	EPA 8082
Location:	Piedmont Substation E		
Matrix:	Soil	Sampled:	10/13/00
Units:	ug/Kg	Received:	10/13/00
Basis:	wet	Prepared:	10/13/00
Diln Fac:	1.000	Analyzed:	10/16/00
Batch#:	58899		

Field ID: PGPSE-1C
Type: SAMPLE

Lab ID: 148037-003

Analyte	Result	RL
Aroclor-1016	ND	12
Aroclor-1221	ND	12
Aroclor-1232	ND	12
Aroclor-1242	ND	12
Aroclor-1248	ND	12
Aroclor-1254	ND	12
Aroclor-1260	ND	12

Surrogate	SEC	Limit
TCMX	85	39-150
Decachlorobiphenyl	108	33-144

Type: BLANK

Lab ID: QC127511

Analyte	Result
Aroclor-1016	NA
Aroclor-1221	NA
Aroclor-1232	NA
Aroclor-1242	NA
Aroclor-1248	NA
Aroclor-1254	NA
Aroclor-1260	NA

Surrogate	Result
TCMX	NA
Decachlorobiphenyl	NA

ND = Not Detected
RL = Reporting Limit
NA = Not Analyzed
Page 2 of 2



Curtis & Tompkins, Ltd.

California Title 26 Metals

Lab #:	148037	Project#:	STANDARD
Client:	Pacific Gas & Electric	Location:	Piedmont Substation E
Field ID:	PGEPSE-1A	Basis:	wet
Lab ID:	148037-001	Diln Fac:	1.000
Matrix:	Soil	Sampled:	10/13/00
UNITS:	mg/Kg	Received:	10/13/00

Analyte	Result	RL	Batch	Prepared	Analyzed	Prep	Analysis
Antimony	ND	2.9	58897	10/13/00	10/18/00	EPA 3050	EPA 6010B
Arsenic	1.7	0.24	58897	10/13/00	10/16/00	EPA 3050	EPA 6010B
Barium	150	0.49	58897	10/13/00	10/16/00	EPA 3050	EPA 6010B
Beryllium	0.58	0.098	58897	10/13/00	10/16/00	EPA 3050	EPA 6010B
Cadmium	0.74	0.24	58897	10/13/00	10/16/00	EPA 3050	EPA 6010B
Chromium	30	0.49	58897	10/13/00	10/16/00	EPA 3050	EPA 6010B
Cobalt	7.2	0.98	58897	10/13/00	10/16/00	EPA 3050	EPA 6010B
Copper	11	0.49	58897	10/13/00	10/16/00	EPA 3050	EPA 6010B
Lead	4.1	0.15	58897	10/13/00	10/16/00	EPA 3050	EPA 6010B
Mercury	ND	0.020	58936	10/17/00	10/17/00	METHOD	EPA 7471
Molybdenum	ND	0.98	58897	10/13/00	10/16/00	EPA 3050	EPA 6010B
Nickel	36	0.98	58897	10/13/00	10/16/00	EPA 3050	EPA 6010B
Selenium	ND	0.24	58897	10/13/00	10/16/00	EPA 3050	EPA 6010B
Silver	ND	0.24	58897	10/13/00	10/16/00	EPA 3050	EPA 6010B
Thallium	0.79	0.24	58897	10/13/00	10/18/00	EPA 3050	EPA 6010B
Vanadium	29	0.49	58897	10/13/00	10/16/00	EPA 3050	EPA 6010B
Zinc	20	0.98	58897	10/13/00	10/16/00	EPA 3050	EPA 6010B

ND = Not Detected
 RL = Reporting Limit
 Page 1 of 1



California Title 26 Metals

Lab #:	148037	Project#:	STANDARD
Client:	Pacific Gas & Electric	Location:	Piedmont Substation E
Field ID:	PGEPS-1B	Basis:	wet
Lab ID:	148037-002	Diln Fac:	1.000
Matrix:	Soil	Sampled:	10/13/00
Units:	mg/Kg	Received:	10/13/00

Analyte	Result	RL	Batch	Prepared	Analyzed	Prep	Analysis
Antimony	ND	2.9	58897	10/13/00	10/18/00	EPA 3050	EPA 6010B
Arsenic	3.4	0.24	58897	10/13/00	10/16/00	EPA 3050	EPA 6010B
Barium	150	0.48	58897	10/13/00	10/16/00	EPA 3050	EPA 6010B
Beryllium	0.59	0.097	58897	10/13/00	10/16/00	EPA 3050	EPA 6010B
Cadmium	1.1	0.24	58897	10/13/00	10/16/00	EPA 3050	EPA 6010B
Chromium	38	0.48	58897	10/13/00	10/16/00	EPA 3050	EPA 6010B
Cobalt	22	0.97	58897	10/13/00	10/16/00	EPA 3050	EPA 6010B
Copper	11	0.48	58897	10/13/00	10/16/00	EPA 3050	EPA 6010B
Lead	29	0.14	58897	10/13/00	10/16/00	EPA 3050	EPA 6010B
Mercury	0.040	0.020	58936	10/17/00	10/17/00	METHOD	EPA 7471
Molybdenum	1.5	0.97	58897	10/13/00	10/16/00	EPA 3050	EPA 6010B
Nickel	53	0.97	58897	10/13/00	10/16/00	EPA 3050	EPA 6010B
Selenium	0.78	0.24	58897	10/13/00	10/16/00	EPA 3050	EPA 6010B
Silver	ND	0.24	58897	10/13/00	10/16/00	EPA 3050	EPA 6010B
Thallium	3.2	0.24	58897	10/13/00	10/16/00	EPA 3050	EPA 6010B
Vanadium	40	0.48	58897	10/13/00	10/16/00	EPA 3050	EPA 6010B
Zinc	72	0.97	58897	10/13/00	10/16/00	EPA 3050	EPA 6010B

ND = Not Detected
 RL = Reporting Limit
 Page 1 of 1



Curtis & Tompkins, Ltd.

California Title 26 Metals

Lab #:	148037	Project#:	STANDARD
Client:	Pacific Gas & Electric	Location:	Piedmont Substation E
Field ID:	PGEPS-1C	Basis:	wet
Lab ID:	148037-003	Diln Fac:	1.000
Matrix:	Soil	Sampled:	10/13/00
Units:	mg/Kg	Received:	10/13/00

Analyte	Result	RL	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	ND	3.0	58897	10/13/00	10/18/00	EPA 3050	EPA 6010B
Arsenic	0.49	0.25	58897	10/13/00	10/18/00	EPA 3050	EPA 6010B
Barium	110	0.50	58897	10/13/00	10/16/00	EPA 3050	EPA 6010B
Beryllium	0.36	0.10	58897	10/13/00	10/16/00	EPA 3050	EPA 6010B
Cadmium	0.72	0.25	58897	10/13/00	10/16/00	EPA 3050	EPA 6010B
Chromium	28	0.50	58897	10/13/00	10/16/00	EPA 3050	EPA 6010B
Cobalt	3.3	1.0	58897	10/13/00	10/16/00	EPA 2050	EPA 6010B
Copper	10	0.50	58897	10/13/00	10/16/00	EPA 3050	EPA 6010B
Lead	1.6	0.15	58897	10/13/00	10/16/00	EPA 3050	EPA 6010B
Mercury	0.033	0.020	58936	10/17/00	10/17/00	METHOD	EPA 7471
Molybdenum	ND	1.0	58897	10/13/00	10/16/00	EPA 3050	EPA 6010B
Nickel	46	1.0	58897	10/13/00	10/16/00	EPA 3050	EPA 6010B
Selenium	ND	0.25	58897	10/13/00	10/16/00	EPA 3050	EPA 6010B
Silver	ND	0.25	58897	10/13/00	10/16/00	EPA 3050	EPA 6010B
Thallium	ND	0.25	58897	10/13/00	10/16/00	EPA 3050	EPA 6010B
Vanadium	16	0.50	58897	10/13/00	10/16/00	EPA 3050	EPA 6010B
Zinc	20	1.0	58897	10/13/00	10/16/00	EPA 3050	EPA 6010B

ND = Not Detected
 RL = Reporting Limit
 Page 1 of 1

APPENDIX C

KELCO Sampling
Locations, Results and Laboratory Reports

SUMMARY OF INTERIOR SAMPLES TAKEN ON EQUIPMENT AND BUILDING COMPONENTS DURING CLEANUP OF PG&E SUBSTATION "E"

Sample Date	Sample #	CT ID#	Description / Location	Type	PCB's	Lead	Other	Comments
10/13/00	PGEPSE-1A	148037-001	Air shaft - 1-1.5' deep	soil	ND			Samples under concrete floor of air shaft all within regulatory limits for heavy metals and PCB's.
	PGEPSE-2A	148037-002	Air shaft - 4-4.5' deep	soil	ND			
	PGEPSE-3A	148037-003	Air shaft - 7-7.5' deep	soil	ND			

Sample Date	Sample #	CT ID#	Description / Location	Type	PCB's	Lead	Other	Comments
10/31/00	001031-1	148414-001	Control Room Sump	water	ND	9.6 µg/L		Water not a problem. Waste in sump to be cleaned by Decon.
	001031-2	148414-002	Exciter Room Sump	waste	1,600 µg/Kg	2400 mg/Kg		

Sample Date	Sample #	CT ID#	Description / Location	Type	PCB's	Lead	Other	Comments
1/19/00	W1	149852-001	Filter Room; metal deteriorated from filter	bulk		810 mg/Kg	Zinc 5,700 mg/KG	Lead results consistent with chipping and peeling paint on walls and some equipment. Zinc consistent with galvanized metal. Decon implemented wet wipe cleaning.
	W2	14985-0022	Filter Room; metal deteriorated from filter	bulk		1300 mg/Kg	Zinc 19,000 mg/Kg	
	W3/ W6	149852-003/ 149851-001	On wall in air duct below fan housing motor generator	wipe	ND	3100 µg/s	Zinc 14,000 µg/s	
	W4/ W7	149852-005/ 149851-002	Inside air duct to small transformer room	wipe	ND	420 µg/s	Zinc 20,000 µg/s	
	W5/ W8	149852-006/ 149851-003	On side of duct in floor of small transformer	wipe	ND	3,800 µg/s	Zinc 170,000 µg/s	
	S12	149852-004	Soil inside air duct under fan housing for motor generator	soil		7,000 mg/Kg	23,000 mg/Kg	

Sample Date	Sample #	CT ID#	Description / Location	Type	PCB's	Lead	Other	Comments
1/23/01	2	149904-001	3rd Floor Fan Duct	wipe	ND			No PCB remediation required.
	3	149904-002	3rd Floor Fan Blade	wipe	ND			
	5	149904-003	Large Transformer Room Air Duct	wipe	ND			

Sample Date	Sample #	CT ID#	Description / Location	Type	PCB's	Lead	Other	Comments
2/1/01	Fan	150056-001	Fan after cleaning	wipe	ND			No PCB remediation required.
	Duct1	150056-002	Duct after cleaning	wipe	ND			
	Duct2	150056-003	Duct after cleaning	wipe	ND			
	Duct3	150056-004	Duct after cleaning	wipe	ND			

Sample Date	Sample #	CT ID#	Description / Location	Type	PCB's	Lead	Other	Comments
3/9/01	010309-P1	150789-001	Exciter Room Sump Floor	wipe	ND			
	010309-P2	150789-002	Exciter Room Sump Wall	wipe	ND			
	010309-P3	150789-003	Filter Room west floor	wipe	ND			
	010309-P4	150789-004	Filter Room Air shaft near door	wipe	ND			
	010309-P5	150789-005	Motor room north pit	wipe	ND			
	010309-P6	150789-006	Motor room south pit	wipe	ND			No PCB remediation required.
	010309-P7	150789-007	Motor room 9' from east wall	wipe	ND			
	010309-P8	150789-008	Motor room 2' from east wall	wipe	ND			
	010309-P9	150789-009	Transformer Room under sink	wipe	ND			
	010309-P10	150789-010	Fan Mezzanine North Wall	wipe	ND			
	010309-P11	150789-011	Fan Mezzanine East Wall	wipe	ND			



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

ANALYTICAL REPORT

Prepared for:

Pacific Gas & Electric
245 Market Street
San Francisco, CA 94105

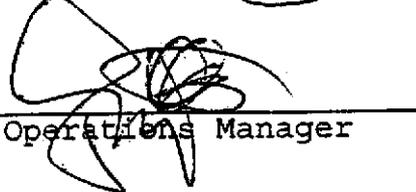
Date: 07-NOV-00
Lab Job Number: 148414
Project ID: N/A
Location: 408 Linda Ave

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis.

Reviewed by:


Project Manager

Reviewed by:


Operations Manager

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Curtis & Tompkins, Ltd.

Laboratory Numbers: **148414**
Client: **Pacific Gas & Electric**
Project #: **Standard**
Location: **408 Linda Avenue**

Sampled Date: **10/31/00**
Received Date: **10/31/00**

CASE NARRATIVE

This hardcopy data package contains sample and QC results for two water samples and three soil samples, which were received from the site referenced above on October 31, 2000. The samples were received cold and intact.

Pesticides/PCB's (EPA 8081A):

The decachlorobiphenyl surrogate in the method blank (QC129118) is over the acceptable limits. However, the TCMX surrogates passed in all samples and according to the EPA method once one surrogate passes then the overall quality of the data is acceptable. No other analytical problems were encountered.

Metals (EPA 6010B):

No analytical problems were encountered.

CHAIN OF CUSTODY FORM

Page ____ of ____

Curtis & Tompkins, Ltd.

Analytical Laboratory Since 1878
2323 Fifth Street
Berkeley, CA 94710
(510)486-0900 Phone
(510)486-0532 Fax

C&T LOGIN # 148414

Analyses

Sampler: Bonnie Kellogg

Report To: Sara Everett

Company: PGE

Telephone: 415-973-0707

Fax: 415-973-7668

Project No:

Project Name: 408 Linda Ave

Project P.O.:

Turnaround Time: 1 wk

Laboratory Number	Sample ID.	Sampling Date Time	Matrix			# of Containers	Preservative				Field Notes	Analysis				
			Soil	Water	Waste		HCL	H2SO	HNO3	ICE		PCB'S	LEAD	Received	On Ice	Intact
Laboratory For Use	001031-1	10/31/14 19		X		2					Control Room Sump	X	X	<input checked="" type="checkbox"/> Received	<input type="checkbox"/> On Ice	<input checked="" type="checkbox"/> Intact
	001031-2	10/31/14 18			X	1					Exter Rm Sump	X	X	<input checked="" type="checkbox"/> Cold	<input type="checkbox"/> Ambient	<input checked="" type="checkbox"/> Intact
	001031-3	10/31/14 28		X							Side yard	X	X			
	001031-4	10/31/14 34		X							Back yard	X	X			
	001031-5	10/31/14 20		X							Front yard	X	X			

Received On Ice
 Cold Ambient Intact

Preservation Correct?
 Yes No N/A

Notes:
Please fax copy results to
Bonnie Kellogg
510 786-9625

RELINQUISHED BY:	RECEIVED BY:
<u>[Signature]</u> DATE/TIME: 10/31/00 5:21	<u>[Signature]</u> DATE/TIME: 10/31/00 15:24
DATE/TIME	DATE/TIME
DATE/TIME	DATE/TIME

Signature

Polychlorinated Biphenyls (PCBs)

Lab #:	148414	Location:	408 Linda Ave
Client:	Pacific Gas & Electric	Prep:	EPA 3520
Project#:	STANDARD	Analysis:	EPA 8082
Field ID:	001031	Sampled:	10/31/00
Matrix:	Water	Received:	10/31/00
Units:	ug/L	Prepared:	11/01/00
Diln Fac:	1.000	Analyzed:	11/03/00
Batch#:	59308		

Type: SAMPLE Lab ID: 148414-001

Analyte	Result	RL
Aroclor-1016	ND	0.50
Aroclor-1221	ND	0.50
Aroclor-1232	ND	0.50
Aroclor-1242	ND	0.50
Aroclor-1248	ND	0.50
Aroclor-1254	ND	0.50
Aroclor-1260	ND	0.50

Surrogate	%REC	Limits
TCMX	97	27-116
Decachlorobiphenyl	100	15-110

Type: BLANK Lab ID: QC129118

Analyte	Result	RL
Aroclor-1016	ND	0.50
Aroclor-1221	ND	0.50
Aroclor-1232	ND	0.50
Aroclor-1242	ND	0.50
Aroclor-1248	ND	0.50
Aroclor-1254	ND	0.50
Aroclor-1260	ND	0.50

Surrogate	%REC	Limits
TCMX	81	27-116
Decachlorobiphenyl	115 *	15-110

* = Value outside of QC limits; see narrative

ND = Not Detected

RL = Reporting Limit

Polychlorinated Biphenyls (PCBs)

Lab #:	148414	Prep:	EPA 3550
Client:	Pacific Gas & Electric	Cleanup Method:	EPA 3665C
Project#:	STANDARD	Analysis:	EPA 8082
Location:	408 Linda Ave		
Field ID:	001031-2	Batch#:	59339
Matrix:	Soil	Sampled:	10/31/00
Units:	ug/Kg	Received:	10/31/00
Basis:	wet	Prepared:	11/02/00

Type:	SAMPLE	Diln Fac:	5.000
Lab ID:	148414-002	Analyzed:	11/06/00

Analyte	Result	RL
Aroclor-1016	ND	60
Aroclor-1221	ND	60
Aroclor-1232	ND	60
Aroclor-1242	ND	60
Aroclor-1248	ND	60
Aroclor-1254	1,600	60
Aroclor-1260	ND	60

Surrogate	%REC	Limits
TCMX	123	39-150
Decachlorobiphenyl	52	33-144

Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC129247	Analyzed:	11/04/00

Analyte	Result	RL
Aroclor-1016	ND	12
Aroclor-1221	ND	12
Aroclor-1232	ND	12
Aroclor-1242	ND	12
Aroclor-1248	ND	12
Aroclor-1254	ND	12
Aroclor-1260	ND	12

Surrogate	%REC	Limits
TCMX	97	39-150
Decachlorobiphenyl	111	33-144

Polychlorinated Biphenyls (PCBs)

Lab #:	148414	Location:	408 Linda Ave
Client:	Pacific Gas & Electric	Prep:	EPA 3520
Project#:	STANDARD	Analysis:	EPA 8082
Matrix:	Water	Batch#:	59308
Units:	ug/L	Prepared:	11/01/00
Diln Fac:	1.000		

Type: BS Analyzed: 11/03/00
 Lab ID: QC129119

Analyte	Spiked	Result	%REC	Limits
Aroclor-1260	5.000	5.301	106	46-111

Surrogate	%REC	Limits
TCMX	86	27-116
Decachlorobiphenyl	98	15-110

Type: BSD Analyzed: 11/04/00
 ID: QC129120

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Aroclor-1260	5.000	5.208	104	46-111	2	26

Surrogate	%REC	Limits
TCMX	86	27-116
Decachlorobiphenyl	101	15-110

Lead

Lab #:	148414	Location:	408 Linda Ave
Client:	Pacific Gas & Electric	Prep:	EPA 3010
Project#:	STANDARD	Analysis:	EPA 6010B
Analyte:	Lead	Batch#:	59316
Field ID:	001031-1	Sampled:	10/31/00
Matrix:	Water	Received:	10/31/00
Units:	ug/L	Prepared:	11/01/00
Diln Fac:	1.000	Analyzed:	11/02/00

Type	Lab ID	Result	RL
SAMPLE	148414-001	9.6	3.0
BLANK	QC129150	ND	3.0

Lead

Lab #:	148414	Location:	408 Linda Ave
Client:	Pacific Gas & Electric	Prep:	EPA 3010
Project#:	STANDARD	Analysis:	EPA 6010B
Analyte:	Lead	Batch#:	59316
Field ID:	ZZZZZZZZZZ	Sampled:	10/30/00
MSS Lab ID:	148402-001	Received:	10/31/00
Matrix:	Water	Prepared:	11/01/00
Units:	ug/L	Analyzed:	11/02/00
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	RL	%REC	Limits	RPD	Lim
BS	QC129151		100.0	95.40		95	78-120		
BSD	QC129152		100.0	98.50		99	78-120	3	20
SDUP	QC129153	<3.000		ND	3.0				NC 29
SSPIKE	QC129154	1.190	100.0	89.20		88	66-128		

NC = Not Calculated
 ND = Not Detected
 RL = Reporting Limit
 RPD = Relative Percent Difference
 Page 1 of 1

Lead

Lab #:	148414	Location:	408 Linda Ave
Client:	Pacific Gas & Electric	Prep:	EPA 3010
Project#:	STANDARD	Analysis:	EPA 6010B
Analyte:	Lead	Batch#:	59317
Matrix:	Soil	Sampled:	10/31/00
Units:	mg/Kg	Received:	10/31/00
Basis:	wet	Prepared:	11/01/00
Diln Fac:	1.000	Analyzed:	11/03/00

Field ID	Type	Lab ID	Result	RL
001031-2	SAMPLE	148414-002	2,400	0.14
001031-3	SAMPLE	148414-003	14	0.015
001031-4	SAMPLE	148414-004	200	0.15
001031-5	SAMPLE	148414-005	53	0.15
	BLANK	QC129155	ND	0.15

Lead

Lab #: 148414 Client: Pacific Gas & Electric Project#: STANDARD Analyte: Lead Field ID: 001031-5 MSS Lab ID: 148414-005 Matrix: Soil Units: mg/Kg Basis: wet	Location: 408 Linda Ave Prep: EPA 3010 Analysis: EPA 6010B Diln Fac: 1.000 Batch#: 59317 Sampled: 10/31/00 Received: 10/31/00 Prepared: 11/01/00 Analyzed: 11/03/00
---	--

Type	Lab ID	MSS Result	Spiked	Result	RL	%REC	Limits	RPD	Lim
BS	QC129156		100.0	84.00		84	70-110		
BSD	QC129157		100.0	84.00		84	70-110	0	20
SDUP	QC129158	52.68		54.90	0.15			4	40
SSPIKE	QC129159	52.68	99.50	136.8		85	31-133		

RL = Reporting Limit
 RPD= Relative Percent Difference
 Page 1 of 1



Curtis & Tompkins, Ltd.



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

ANALYTICAL REPORT

Prepared for:

Pacific Gas & Electric
245 Market Street
San Francisco, CA 94105

Date: 01-FEB-01
Lab Job Number: 149852
Project ID: 0008-14
Location: N/A

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis.

Reviewed by: Paul Rordergast
Project Manager

Reviewed by: [Signature]
Operations Manager

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49852

REQUEST FOR ANALYSIS		
HEAVY METALS CAM 17 (no Mercury)		
PROJECT/PO #: 0008-14	Lab Log #:	
CLIENT: PG&E	JOB SITE: Substation E	
ADDRESS: MAIL CODE N13J PO BOX 77000	ADDRESS: 408 Linda Avenue	
CITY: SAN FRANCISCO, CA 94177	CITY: Piedmont, CA	
CONTACT: SARA EVERITT	Date sample(s) collected: 1/19/00	
Phone#: 415-973-0707	Turnaround Time: RUSH (2 DAYS IF POSSIBLE)	
# of Samples Received	# of Samples Analyzed	Comments:

LAB LOG #	SAMPLE #	CLIENT SAMPLE	SAMPLE LOCATION	DESCRIPTION	NOTES
		W1	Filter Room	Metal deteriorated from filter. Took 1' x 12' filter section	HEAVY METALS
		W2	Filter Room	Metal deteriorated from filter. Scraped 3' by 8' from back of filter	HEAVY METALS
		W3	On wall in air duct below fan housing motor generator	12'x12' area	HEAVY METALS
		S12	Soil inside air duct under fan housing for motor generator		HEAVY METALS

Released By: <i>[Signature]</i>	Date: 01-22-01	Time: 1:16
Received By: <i>[Signature]</i> CNT	Date: 1-22-01	Time: 1:18
Released By:	Date:	Time:
Received By:	Date:	Time:

REQUEST FOR ANALYSIS — continuation

LAB LOG #	SAMPLE #	CLIENT SAMPLE	SAMPLE LOCATION	DESCRIPTION	NOTES
		W4	Inside air duct to small transformer room	12'x12' area	HEAVY METALS
		W5	Wipe on side of duct in floor of small transformer	12'x12' area	HEAVY METALS
		W9	Blank for heavy metal samples		Heavy Metals

Preservation Correct?
 Yes No N/A

Received On Ice
 Cold Ambient Intact

Released By: <i>[Signature]</i>	Date: 01-22-01	Time: 1:16
Received By: <i>[Signature]</i>	Date: 1-22-01	Time: 1:14
Released By:	Date:	Time:
Received By:	Date:	Time:

California Title 26 Metals

Lab #:	149852	Prep:	EPA 3050
Client:	Pacific Gas & Electric	Analysis:	EPA 6010B
Project#:	0008-14		
Field ID:	W1	Batch#:	61013
Lab ID:	149852-001	Sampled:	01/19/01
Matrix:	Miscell.	Received:	01/22/01
Units:	mg/Kg	Prepared:	01/23/01
Basis:	wet		

Analyte	Result	RL	Diln Fac	Analyzed
Antimony	ND	300	100.0	01/24/01
Arsenic	54	0.25	1.000	01/24/01
Barium	10	0.50	1.000	01/24/01
Beryllium	ND	10	100.0	01/24/01
Cadmium	90	0.25	1.000	01/24/01
Chromium	60	0.50	1.000	01/24/01
Cobalt	29	1.0	1.000	01/24/01
Copper	810	0.50	1.000	01/24/01
Lead	470	15	100.0	01/24/01
Mercury	NA			
lybdenum	26	1.0	1.000	01/24/01
Nickel	600	100	100.0	01/24/01
Selenium	48	25	100.0	01/25/01
Silver	0.50	0.25	1.000	01/24/01
Thallium	ND	25	100.0	01/24/01
Vanadium	ND	50	100.0	01/24/01
Zinc	5,700	100	100.0	01/24/01

California Title 26 Metals

Lab #:	149852	Prep:	EPA 3050
Client:	Pacific Gas & Electric	Analysis:	EPA 6010B
Project#:	0008-14		
Field ID:	W2	Batch#:	61013
Lab ID:	149852-002	Sampled:	01/19/01
Matrix:	Miscell.	Received:	01/22/01
Units:	mg/Kg	Prepared:	01/23/01
Basis:	wet		

Analyte	Result	RL	Diln Fac	Analyzed
Antimony	ND	300	100.0	01/24/01
Arsenic	60	0.25	1.000	01/24/01
Barium	11	0.49	1.000	01/24/01
Beryllium	ND	9.9	100.0	01/24/01
Cadmium	69	0.25	1.000	01/24/01
Chromium	140	0.49	1.000	01/24/01
Cobalt	40	0.99	1.000	01/24/01
Copper	2,300	49	100.0	01/24/01
	1,300	15	100.0	01/24/01
Mercury	NA			
Molybdenum	63	0.99	1.000	01/24/01
Nickel	800	99	100.0	01/24/01
Selenium	39	25	100.0	01/25/01
Silver	1.1	0.25	1.000	01/24/01
Thallium	ND	25	100.0	01/24/01
Vanadium	ND	49	100.0	01/24/01
Zinc	19,000	200	200.0	01/25/01

California Title 26 Metals

Lab #:	149852	Prep:	METHOD
Client:	Pacific Gas & Electric	Analysis:	EPA 6010B
Project#:	0008-14		
Field ID:	W3	Sampled:	01/19/01
Lab ID:	149852-003	Received:	01/22/01
Matrix:	Wipe	Prepared:	01/23/01
Units:	ug/s	Analyzed:	01/24/01
Batch#:	61004		

Analyte	Result	RL	Diln. Fac
Antimony	ND	150	50.00
Arsenic	51	0.25	1.000
Barium	930	25	50.00
Beryllium	ND	5.0	50.00
Cadmium	80	0.25	1.000
Chromium	82	0.50	1.000
Cobalt	30	1.0	1.000
Copper	740	0.50	1.000
Lead	3,100	7.5	50.00
Mercury	NA		
Molybdenum	2.8	1.0	1.000
Nickel	550	50	50.00
Selenium	ND	5.0	20.00
Silver	1.1	0.25	1.000
Thallium	ND	13	50.00
Vanadium	ND	25	50.00
Zinc	14,000	100	100.0

California Title 26 Metals

Lab #:	149852	Prep:	METHOD
Client:	Pacific Gas & Electric	Analysis:	EPA 6010B
Project#:	0008-14		
Field ID:	W4	Sampled:	01/19/01
Lab ID:	149852-005	Received:	01/22/01
Matrix:	Wipe	Prepared:	01/23/01
Units:	ug/s	Analyzed:	01/24/01
Batch#:	61004		

Analyte	Result	RL	Diln Fac
Antimony	9.8	3.0	1.000
Arsenic	3.6	0.25	1.000
Barium	340	25	50.00
Beryllium	ND	0.10	1.000
Cadmium	18	0.25	1.000
Chromium	9.3	0.50	1.000
Cobalt	3.7	1.0	1.000
Copper	72	0.50	1.000
Lead	420	0.15	1.000
Mercury	NA		
Molybdenum	ND	1.0	1.000
Nickel	10	1.0	1.000
Selenium	0.61	0.25	1.000
Silver	ND	0.25	1.000
Thallium	ND	0.25	1.000
Vanadium	6.5	0.50	1.000
Zinc	20,000	200	200.0

California Title 26 Metals

Lab #:	149852	Prep:	METHOD
Client:	Pacific Gas & Electric	Analysis:	EPA 6010B
Project#:	0008-14		
Field ID:	W5	Sampled:	01/19/01
Lab ID:	149852-006	Received:	01/22/01
Matrix:	Wipe	Prepared:	01/23/01
Units:	ug/s	Analyzed:	01/24/01
Batch#:	61004		

Analyte	Result	RL	DI in Fac
Antimony	52	3.0	1.000
Arsenic	14	0.25	1.000
Barium	360	25	50.00
Beryllium	ND	0.10	1.000
Cadmium	68	0.25	1.000
Chromium	19	0.50	1.000
Cobalt	5.7	1.0	1.000
Copper	350	0.50	1.000
Lead	3,800	7.5	50.00
Mercury	NA		
Molybdenum	2.5	1.0	1.000
nickel	36	1.0	1.000
Selenium	2.9	0.25	1.000
Silver	0.86	0.25	1.000
Thallium	ND	0.25	1.000
Vanadium	26	0.50	1.000
Zinc	170,000	5,000	5,000

. Not Analyzed

ND= Not Detected

RL= Reporting Limit

Page 1 of 1

California Title 26 Metals

Lab #:	149852	Prep:	METHOD
Client:	Pacific Gas & Electric	Analysis:	EPA 6010B
Project#:	0008-14		
Field ID:	W9	Batch#:	61004
Lab ID:	149852-007	Sampled:	01/19/01
Matrix:	Wipe	Received:	01/22/01
Units:	ug/s	Prepared:	01/23/01
Diln Fac:	1.000	Analyzed:	01/24/01

Analyte	Result	RL
Antimony	5.8	3.0
Arsenic	0.52	0.25
Barium	8.2	0.50
Beryllium	ND	0.10
Cadmium	ND	0.25
Chromium	ND	0.50
Cobalt	2.2	1.0
Copper	2.7	0.50
Lead	9.7	0.15
Mercury	NA	
Molybdenum	ND	1.0
Nickel	ND	1.0
Selenium	0.32	0.25
Silver	ND	0.25
Thallium	ND	0.25
Vanadium	ND	0.50
Zinc	72	1.0

- Not Analyzed

ND= Not Detected

RL= Reporting Limit

California Title 26 Metals

Lab #:	149852	Prep:	EPA 3050
Client:	Pacific Gas & Electric	Analysis:	EPA 6010B
Project#:	0008-14		
Field ID:	S12	Batch#:	61013
Lab ID:	149852-004	Sampled:	01/19/01
Matrix:	Soil	Received:	01/22/01
Units:	mg/Kg	Prepared:	01/23/01
Basis:	wet		

Analyte	Result	RL	Diln Fac	Analyzed
Antimony	3.9	2.9	1.000	01/24/01
Arsenic	23	0.24	1.000	01/24/01
Barium	2,100	49	100.0	01/24/01
Beryllium	0.47	0.098	1.000	01/24/01
Cadmium	37	0.24	1.000	01/24/01
Chromium	85	0.49	1.000	01/24/01
Cobalt	10	0.98	1.000	01/24/01
Copper	1,100	49	100.0	01/24/01
Lead	7,000	15	100.0	01/24/01
Mercury	NA			
Molybdenum	ND	0.98	1.000	01/24/01
nickel	85	0.98	1.000	01/24/01
Selenium	ND	0.24	1.000	01/24/01
Silver	1.7	0.24	1.000	01/24/01
Thallium	ND	0.24	1.000	01/24/01
Vanadium	52	0.49	1.000	01/24/01
Zinc	23,000	200	200.0	01/25/01

- Not Analyzed

ND= Not Detected

RL= Reporting Limit

Page 1 of 1



California Title 26 Metals

Lab #:	149852	Prep:	METHOD
Client:	Pacific Gas & Electric	Analysis:	EPA 6010B
Project#:	0008-14		
Type:	BLANK	DiIn Fac:	1.000
Lab ID:	QC135631	Batch#:	61004
Matrix:	Wipe	Prepared:	01/23/01
Units:	ug/s	Analyzed:	01/24/01

Analyte	Result	RL
Antimony	ND	3.0
Arsenic	ND	0.25
Barium	ND	0.50
Beryllium	ND	0.10
Cadmium	ND	0.25
Chromium	ND	0.50
Cobalt	ND	1.0
Copper	ND	0.50
Lead	ND	0.15
Molybdenum	ND	1.0
Nickel	ND	1.0
Selenium	ND	0.25
Mercury	ND	0.25
Thallium	ND	0.25
Vanadium	ND	0.50
Zinc	ND	1.0

ND= Not Detected

RL= Reporting Limit

Page 1 of 1



California Title 26 Metals

Lab #:	149852	Prep:	METHOD
Client:	Pacific Gas & Electric	Analysis:	EPA 6010B
Project#:	0008-14		
Matrix:	Wipe	Batch#:	61004
Units:	ug/s	Prepared:	01/23/01
Diln Fac:	1.000	Analyzed:	01/24/01

Type: BS Lab ID: QC135632

Analyte	Spiked	Result	%REC	Limits
Antimony	25.00	23.05	92	80-120
Arsenic	5.000	4.840	97	80-120
Barium	100.0	97.50	98	80-120
Beryllium	2.500	2.445	98	80-120
Cadmium	2.500	2.365	95	80-120
Chromium	10.00	9.950	100	80-120
Cobalt	25.00	23.95	96	80-120
Copper	12.50	12.35	99	80-120
Lead	5.000	5.000	100	80-120
Molybdenum	20.00	20.10	101	80-120
Nickel	25.00	23.95	96	80-120
Selenium	5.000	4.545	91	80-120
Silver	2.500	2.420	97	80-120
Thallium	5.000	4.555	91	80-120
Vanadium	25.00	25.15	101	80-120
Zinc	25.00	23.40	94	80-120

a: BSD Lab ID: QC135633

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Antimony	25.00	24.05	96	80-120	4	35
Arsenic	5.000	4.850	97	80-120	0	35
Barium	100.0	96.50	97	80-120	1	35
Beryllium	2.500	2.425	97	80-120	1	35
Cadmium	2.500	2.355	94	80-120	0	35
Chromium	10.00	9.850	99	80-120	1	35
Cobalt	25.00	23.80	95	80-120	1	35
Copper	12.50	12.25	98	80-120	1	35
Lead	5.000	4.950	99	80-120	1	35
Molybdenum	20.00	19.95	100	80-120	1	35
Nickel	25.00	23.80	95	80-120	1	35
Selenium	5.000	4.575	92	80-120	1	35
Silver	2.500	2.435	97	80-120	1	35
Thallium	5.000	4.700	94	80-120	3	35
Vanadium	25.00	24.90	100	80-120	1	35
Zinc	25.00	23.15	93	80-120	1	35

California Title 26 Metals

Lab #:	149852	Prep:	EPA 3050
Client:	Pacific Gas & Electric	Analysis:	EPA 6010B
Project#:	0008-14		
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC135668	Batch#:	61013
Matrix:	Soil	Prepared:	01/23/01
Units:	mg/Kg	Analyzed:	01/24/01
Basis:	wet		

Analyte	Result	RL
Antimony	ND	3.0
Arsenic	ND	0.25
Barium	ND	0.50
Beryllium	ND	0.10
Cadmium	ND	0.25
Chromium	ND	0.50
Cobalt	ND	1.0
Copper	ND	0.50
Lead	ND	0.15
Molybdenum	ND	1.0
Nickel	ND	1.0
Selenium	ND	0.25
Silver	ND	0.25
Thallium	ND	0.25
Vanadium	ND	0.50
Zinc	ND	1.0

California Title 26 Metals

Lab #:	149852	Prep:	EPA 3050
Client:	Pacific Gas & Electric	Analysis:	EPA 6010B
Project#:	0008-14		
Matrix:	Soil	Batch#:	61013
Units:	mg/Kg	Prepared:	01/23/01
Basis:	wet	Analyzed:	01/24/01
Diln Fac:	1.000		

Type: BS Lab ID: QC135669

Analyte	Spiked	Result	RPDC	Limits
Antimony	25.00	23.65	95	73-111
Arsenic	5.000	4.810	96	74-110
Barium	100.0	94.50	95	76-110
Beryllium	2.500	2.215	89	77-110
Cadmium	2.500	2.260	90	75-112
Chromium	10.00	9.000	90	73-111
Cobalt	25.00	21.55	86	74-110
Copper	12.50	11.15	89	75-111
Lead	5.000	4.495	90	70-110
Molybdenum	20.00	17.65	88	75-110
Nickel	25.00	22.40	90	74-111
Selenium	5.000	4.350	87	73-111
Silver	2.500	2.175	87	70-115
Thallium	5.000	4.550	91	75-110
Vanadium	25.00	22.50	90	74-110
Zinc	25.00	22.30	89	68-110

Type: BSD Lab ID: QC135670

Analyte	Spiked	Result	RPDC	Limits	RPD	Lim
Antimony	25.00	23.55	94	73-111	0	20
Arsenic	5.000	4.750	95	74-110	1	20
Barium	100.0	96.00	96	76-110	2	23
Beryllium	2.500	2.220	89	77-110	0	20
Cadmium	2.500	2.275	91	75-112	1	20
Chromium	10.00	9.000	90	73-111	0	23
Cobalt	25.00	21.60	86	74-110	0	24
Copper	12.50	11.30	90	75-111	1	22
Lead	5.000	4.500	90	70-110	0	20
Molybdenum	20.00	17.85	89	75-110	1	20
Nickel	25.00	22.50	90	74-111	0	21
Selenium	5.000	4.415	88	73-111	1	20
Silver	2.500	2.195	88	70-115	1	39
Thallium	5.000	4.600	92	75-110	1	20
Vanadium	25.00	22.65	91	74-110	1	20
Zinc	25.00	22.70	91	68-110	2	22

California Title 26 Metals

Lab #:	149852	Prep:	EPA 3050
Client:	Pacific Gas & Electric	Analysis:	EPA 6010B
Project#:	0008-14		
Field ID:	ZZZZZZZZZZ	Diln Fac:	1.000
Type:	SDUP	Batch#:	61013
MSS Lab ID:	149846-001	Sampled:	01/18/01
Lab ID:	QC135671	Received:	01/22/01
Matrix:	Soil	Prepared:	01/23/01
Units:	mg/Kg	Analyzed:	01/24/01
Basis:	wet		

Analyte	MSS Result	Result	RL	RPD	Lim
Antimony	<2.885	ND	2.9	NC	48
Arsenic	1.615	1.679	0.24	4	39
Barium	43.65	51.67	0.48	17	29
Beryllium	0.2130	0.2316	0.096	8	21
Cadmium	1.260	1.440	0.24	13	27
Chromium	21.30	24.02	0.48	12	34
Cobalt	5.481	7.895	0.96	36 *	34
Copper	11.92	14.78	0.48	21	38
d	2.428	2.785	0.14	14	40
ybdenum	<0.9615	ND	0.96	NC	37
Nickel	14.71	20.05	0.96	31	31
Selenium	0.4380	ND	0.24	NC	39
Silver	<0.2404	ND	0.24	NC	46
Thallium	<0.2404	0.3962	0.24	NC	45
Vanadium	35.82	37.94	0.48	6	26
Zinc	14.76	16.70	0.96	12	34

*= Value outside of QC limits; see narrative

: Not Calculated

ND= Not Detected

RL= Reporting Limit

RPD= Relative Percent Difference

California Title 26 Metals

Lab #:	149852	Prep:	EPA 3050
Client:	Pacific Gas & Electric	Analysis:	EPA 6010B
Project#:	0008-14		
Field ID:	ZZZZZZZZZZ	Diln Fac:	1.000
Type:	SSPIKE	Batch#:	61013
MSS Lab ID:	149846-001	Sampled:	01/18/01
Lab ID:	QC135672	Received:	01/22/01
Matrix:	Soil	Prepared:	01/23/01
Units:	mg/Kg	Analyzed:	01/24/01
Basis:	wet		

Analyte	MSS Result	Spiked	Result	%REC	Limits
Antimony	ND	24.51	23.28	95	15-112
Arsenic	1.615	4.902	6.373	97	51-114
Barium	43.65	98.04	141.7	100	29-149
Beryllium	0.2130	2.451	2.333	87	56-116
Cadmium	1.260	2.451	3.495	91	35-128
Chromium	21.30	9.804	31.23	101	23-141
Cobalt	5.481	24.51	27.06	88	45-115
Copper	11.92	12.25	24.02	99	36-132
Lead	2.428	4.902	7.647	106	31-133
Tungsten	ND	19.61	17.11	87	34-121
Nickel	14.71	24.51	36.47	89	32-132
Selenium	0.4380	4.902	4.333	79	40-118
Silver	0.02740	2.451	2.137	86	36-137
Thallium	0.1000	4.902	4.672	93	55-109
Vanadium	35.82	24.51	58.33	92	22-142
Zinc	14.76	24.51	36.08	87	30-132



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

A N A L Y T I C A L R E P O R T

Prepared for:

Pacific Gas & Electric
245 Market Street
San Francisco, CA 94105

Date: 05-FEB-01
Lab Job Number: 149904
Project ID: 0008-04
Location: 408 Linda Ave

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis.

Reviewed by: Paul Prendergast
Project Manager

Reviewed by: [Signature]
Operations Manager

This package may be reproduced only in its entirety.

Laboratory Number: 149904
Client: Pacific Gas & Electric
Project Name: 408 Linda Ave
Project #: 0008-04
Receipt Date: 01/24/01

CASE NARRATIVE

This hardcopy data package contains sample results and batch QC results for four wipe samples received from the above referenced project on January 24, 2001. The samples were received ambient and intact.

PCB's (EPA 8082):

The recoveries for the decachlorobiphenyl surrogate were over the acceptable QC limits for all samples for this analysis. The recoveries for the TCMX surrogate were within acceptable QC limits so the quality of the sample data should not be affected. No other analytical problems were encountered.

REQUEST FOR ANALYSIS

Project #: 0008-04 Lab. Log #: 149906

Client: P.G+E Job Site: 408 LINDA AVE

Contact with results: BOBBIE KELLOGG Phone # (510) 786-9751 Fax # (510) 786-9625

Type of analysis: PLM LEAD TEM (Yamate II, AHERA) Other: PCB TAT: RUSH BY FRIDAY
 01-25-01

No. samples received: _____ No. samples analyzed: _____ Analyze to first positive?: Yes / No

Comments (including sample condition): _____

DATE SAMPLES COLLECTED: 1-23-01

LAB LOG	SAMPLE #	SAMPLE LOCATION AND DESCRIPTION
	<u>2</u>	<u>HEXANE, GAUZE WIPE / UPSTAIRS 3RD FLR FAN DUCT</u>
	<u>3</u>	<u>" " / UPSTAIRS 3RD FLOOR FAN BLADE</u>
	<u>5</u>	<u>" " / LARGE TRANSFORMER ROOM AIRDUCT</u>
	<u>7</u>	<u>" " / BLANK</u>
<u>END OF SAMPLES</u>		
<u>NOTE: FOUR SQUARE INCHES WIPED FOR EACH SAMPLE</u>		

Released by: [Signature]
 Received by: _____
 Released by: [Signature]
 Received by: [Signature]

Date: 1-23-01 Time: 5:30 PM
 Date: _____ Time: _____
 Date: 1-24-01 Time: 12:10 PM
 Date: 1-24-01 Time: 12:10



Polychlorinated Biphenyls (PCBs)

Lab #:	149904	Location:	408 Linda Ave
Client:	Pacific Gas & Electric	Prep:	EPA 3550
Project#:	0008-04	Analysis:	EPA 8082
Matrix:	Wipe	Sampled:	01/23/01
Units:	ug/s	Received:	01/24/01
Diln Fac:	1.000	Prepared:	01/25/01
Batch#:	61070	Analyzed:	01/26/01

Field ID: 2 Lab ID: 149904-001
Type: SAMPLE Cleanup Method: EPA 3665a

Analyte	Result	RL
Aroclor-1016	ND	2.5
Aroclor-1221	ND	2.5
Aroclor-1232	ND	2.5
Aroclor-1242	ND	2.5
Aroclor-1248	ND	2.5
Aroclor-1254	ND	2.5
Aroclor-1260	ND	2.5

Surrogate	%REC	Limits
TCMX	127	60-150
Decachlorobiphenyl	148 *	61-143

Field ID: 3 Lab ID: 149904-002
Type: SAMPLE Cleanup Method: EPA 3665a

Analyte	Result	RL
Aroclor-1016	ND	2.5
Aroclor-1221	ND	2.5
Aroclor-1232	ND	2.5
Aroclor-1242	ND	2.5
Aroclor-1248	ND	2.5
Aroclor-1254	ND	2.5
Aroclor-1260	ND	2.5

Surrogate	%REC	Limits
TCMX	140	60-150
Decachlorobiphenyl	171 *	61-143

Field ID: 5 Lab ID: 149904-003
Type: SAMPLE Cleanup Method: EPA 3665a

Analyte	Result	RL
Aroclor-1016	ND	2.5
Aroclor-1221	ND	2.5
Aroclor-1232	ND	2.5
Aroclor-1242	ND	2.5
Aroclor-1248	ND	2.5
Aroclor-1254	ND	2.5
Aroclor-1260	ND	2.5

Surrogate	%REC	Limits
TCMX	130	60-150
Decachlorobiphenyl	159 *	61-143

*= Value outside of QC limits; see narrative

ND= Not Detected

RL= Reporting Limit



Polychlorinated Biphenyls (PCBs)

Lab #:	149904	Location:	408 Linda Ave
Client:	Pacific Gas & Electric	Prep:	EPA 3550
Project#:	0008-04	Analysis:	EPA 8082
Matrix:	Wipe	Sampled:	01/23/01
Units:	ug/s	Received:	01/24/01
Diln Fac:	1.000	Prepared:	01/25/01
Batch#:	61070	Analyzed:	01/26/01

Field ID: 7
 Type: SAMPLE

Lab ID: 149904-004
 Cleanup Method: EPA 3665a

Analyte	Result	RL
Aroclor-1016	ND	2.5
Aroclor-1221	ND	2.5
Aroclor-1232	ND	2.5
Aroclor-1242	ND	2.5
Aroclor-1248	ND	2.5
Aroclor-1254	ND	2.5
Aroclor-1260	ND	2.5

Surrogate	%REC	Limits
TCMX	136	60-150
Decachlorobiphenyl	166 *	61-143

Type: BLANK
 Lab ID: QC135889

Cleanup Method: EPA 3665a

Analyte	Result	RL
Aroclor-1016	ND	2.5
Aroclor-1221	ND	2.5
Aroclor-1232	ND	2.5
Aroclor-1242	ND	2.5
Aroclor-1248	ND	2.5
Aroclor-1254	ND	2.5
Aroclor-1260	ND	2.5

Surrogate	%REC	Limits
TCMX	133	60-150
Decachlorobiphenyl	153 *	61-143

*= Value outside of QC limits; see narrative

ND= Not Detected

RL= Reporting Limit

Polychlorinated Biphenyls (PCBs)

Lab #:	149904	Location:	408 Linda Ave
Client:	Pacific Gas & Electric	Prep:	EPA 3550
Project#:	0008-04	Analysis:	EPA 8082
Matrix:	Wipe	Batch#:	61070
Units:	ug/s	Prepared:	01/25/01
Diln Fac:	1.000	Analyzed:	01/26/01

Type: BS
Lab ID: QC135890

Cleanup Method: EPA 3665a

Analyte	Spiked	Result	%REC	Limits
Aroclor-1260	20.00	22.18	111	58-124
Surrogate	%REC	Limits		
TCMX	129	60-150		
Decachlorobiphenyl	155 *	61-143		

Lab ID: BSD
QC135891

Cleanup Method: EPA 3665a

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Aroclor-1260	20.00	22.28	111	58-124	0	20
Surrogate	%REC	Limits				
TCMX	132	60-150				
Decachlorobiphenyl	163 *	61-143				

*= Value outside of QC limits; see narrative

RPD= Relative Percent Difference



Sara

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2323 Fifth Street, Berkeley, CA 94710. Phone (510) 486-0900

ANALYTICAL REPORT

Prepared for:

Pacific Gas & Electric
245 Market Street
San Francisco, CA 94105

Date: 12-FEB-01
Lab Job Number: 150056
Project ID: N/A
Location: Substation E

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis.

Reviewed by: Paul Prendergast
Project Manager

Reviewed by: [Signature]
Operations Manager

This package may be reproduced only in its entirety.

Laboratory Number: 150056
Client: Pacific Gas & Electric
Project Name: Substation E
Receipt Date: 02/01/01

CASE NARRATIVE

This hardcopy data package contains sample results and batch QC results for five wipe samples received from the above referenced project on February 1, 2001. The samples were received at ambient temperature and intact.

PCB's (EPA 8082):

The recoveries for the decachlorobiphenyl surrogates in sample ID's duct 2 (C&T ID 150056-003), duct 3 (C&T ID 150056-004) and the blank (C&T ID 150056-005) were over the acceptable QC limits. The recoveries for the TCMX surrogate were within acceptable QC limits for all samples so the quality of the sample data should not be affected. No other analytical problems were encountered.

CHAIN OF CUSTODY FORM

Page 1 of 1

Curtis & Tompkins, Ltd.

Analytical Laboratory Since 1878
 2323 Fifth Street
 Berkeley, CA 94710
 (510)486-0900 Phone
 (510)486-0532 Fax

C&T
 LOGIN # 150086

Analyses

Sampler: Bonnie Kellogg

Report To: SARA Everitt

Company: PG&E

Telephone: 415-973-0707

Fax:

Project No:

Project Name: Substation E

Project P.O.:

Turnaround Time: RUSH

Preservation Correct?
 Yes No N/A

Received Cold Ambient On Ice Intact

Laboratory Number	Sample ID.	Sampling Date Time	Matrix			# of Containers	Preservative				Field Notes
			Soil	Water	Waste		HCL	H ₂ SO ₄	HNO ₃	ICE	
FORATORY	FAW	2/1/01			✓						4" x 4"
	Duct 1	"			✓						"
	Duct 2	"			✓						"
	Duct 3	"			✓						"
FORATORY	Blank	"			✓						-
											HEXANE SOLVENT

Notes:
approx 100 cm each sample.

RELINQUISHED BY:
[Signature] 2/1/01 3:00 PM
 DATE/TIME

RECEIVED BY:
[Signature] 2/1/01 3:00 PM
 DATE/TIME

Signature

Polychlorinated Biphenyls (PCBs)

Lab #:	150056	Location:	Substation E
Client:	Pacific Gas & Electric	Prep:	EPA 3550
Project#:	STANDARD	Analysis:	EPA 8082
Matrix:	Wipe	Sampled:	02/01/01
Units:	ug/s	Received:	02/01/01
Diln Fac:	1.000	Prepared:	02/02/01
Batch#:	61253		

Field ID:	FAN	Analyzed:	02/02/01
Type:	SAMPLE	Cleanup Method:	EPA 3665a
Lab ID:	150056-001		

Analyte	Result	RL
Aroclor-1016	ND	2.5
Aroclor-1221	ND	2.5
Aroclor-1232	ND	2.5
Aroclor-1242	ND	2.5
Aroclor-1248	ND	2.5
Aroclor-1254	ND	2.5
Aroclor-1260	ND	2.5

Surrogate	%REC	Limits
TCMX	115	60-150
Decachlorobiphenyl	138	61-143

Field ID:	DUCT1	Analyzed:	02/03/01
Type:	SAMPLE	Cleanup Method:	EPA 3665a
Lab ID:	150056-002		

Analyte	Result	RL
Aroclor-1016	ND	2.5
Aroclor-1221	ND	2.5
Aroclor-1232	ND	2.5
Aroclor-1242	ND	2.5
Aroclor-1248	ND	2.5
Aroclor-1254	ND	2.5
Aroclor-1260	ND	2.5

Surrogate	%REC	Limits
TCMX	119	60-150
Decachlorobiphenyl	139	61-143

Field ID:	DUCT2	Analyzed:	02/03/01
Type:	SAMPLE	Cleanup Method:	EPA 3665a
Lab ID:	150056-003		

Analyte	Result	RL
Aroclor-1016	ND	2.5
Aroclor-1221	ND	2.5
Aroclor-1232	ND	2.5
Aroclor-1242	ND	2.5
Aroclor-1248	ND	2.5
Aroclor-1254	ND	2.5
Aroclor-1260	ND	2.5

Surrogate	%REC	Limits
TCMX	124	60-150
Decachlorobiphenyl	145 *	61-143

* = Value outside of QC limits; see narrative

ND= Not Detected
 RL= Reporting Limit
 Page 1 of 2



Polychlorinated Biphenyls (PCBs)

Lab #:	150056	Location:	Substation E
Client:	Pacific Gas & Electric	Prep:	EPA 3550
Project#:	STANDARD	Analysis:	EPA 8082
Matrix:	Wipe	Sampled:	02/01/01
Units:	ug/s	Received:	02/01/01
Diln Fac:	1.000	Prepared:	02/02/01
Batch#:	61253		

Field ID:	DUCT3	Analyzed:	02/03/01
Type:	SAMPLE	Cleanup Method:	EPA 3665a
Lab ID:	150056-004		

Analyte	Result	RL
Aroclor-1016	ND	2.5
Aroclor-1221	ND	2.5
Aroclor-1232	ND	2.5
Aroclor-1242	ND	2.5
Aroclor-1248	ND	2.5
Aroclor-1254	ND	2.5
Aroclor-1260	ND	2.5

Surrogate	%REC	Limits
TCMX	122	60-150
Decachlorobiphenyl	149 *	61-143

Field ID:	BLANK	Analyzed:	02/03/01
Type:	SAMPLE	Cleanup Method:	EPA 3665a
Lab ID:	150056-005		

Analyte	Result	RL
Aroclor-1016	ND	2.5
Aroclor-1221	ND	2.5
Aroclor-1232	ND	2.5
Aroclor-1242	ND	2.5
Aroclor-1248	ND	2.5
Aroclor-1254	ND	2.5
Aroclor-1260	ND	2.5

Surrogate	%REC	Limits
TCMX	120	60-150
Decachlorobiphenyl	151 *	61-143

Type:	BLANK	Analyzed:	02/02/01
Lab ID:	QC136592	Cleanup Method:	EPA 3665a

Analyte	Result	RL
Aroclor-1016	ND	2.5
Aroclor-1221	ND	2.5
Aroclor-1232	ND	2.5
Aroclor-1242	ND	2.5
Aroclor-1248	ND	2.5
Aroclor-1254	ND	2.5
Aroclor-1260	ND	2.5

Surrogate	%REC	Limits
Decachlorobiphenyl	104	60-150
	140	61-143

*= Value outside of QC limits; see narrative

ND= Not Detected

RL= Reporting Limit



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

A N A L Y T I C A L R E P O R T

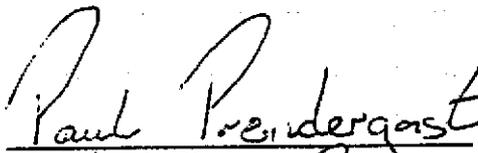
Prepared for:

Pacific Gas & Electric
245 Market Street
San Francisco, CA 94105

Date: 23-MAR-01
Lab Job Number: 150789
Project ID: N/A
Location: Substat.E-408 Linda Ave

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis.

Reviewed by:


Project Manager

Reviewed by:


Operations Manager

This package may be reproduced only in its entirety.

Laboratory Number: 150789
Client: Pacific, Gas & Electric
Project Name: Substation E, 408 Linda Avenue
Receipt Date: 03/09/01

CASE NARRATIVE

This hardcopy data package contains sample results and batch QC results for eleven wipe samples received from the above referenced project on March 9, 2001. The samples were received at ambient temperature and intact.

PCB's (EPA 8082):

The recoveries for the decachlorobiphenyl surrogate was over the acceptable QC limits for client ID's 010309-P6 (C&T ID 150789-006), 010309-P9 (C&T ID 150789-009) and 010309-P10 (C&T ID 150789-010). The recoveries for the TCMX surrogate were within acceptable QC limits so the quality of the sample data should not be affected.

The recoveries for the decachlorobiphenyl and the TCMX surrogate were over the acceptable QC limits for the blank spike. The recovery for the decachlorobiphenyl surrogate was over the acceptable QC limit for the blank spike duplicate. The TCMX surrogate was within acceptable QC limits for the blank spike duplicate so the quality of the sample data should not be affected. No other analytical problems were encountered. No analytical problems were encountered.

REQUEST FOR ANALYSIS

Project #: _____ Lab. Log #: _____

Client: _____ Job Site: _____

Contact with results: _____ Phone #: _____ Fax #: _____

Type of analysis: PLM LEAD TEM (Yamate II, AHERA) Other: _____ TAT: _____

No. samples received: _____ No. samples analyzed: _____ Analyze to first positive?: Yes / No

Comments (including sample condition): _____

DATE SAMPLES COLLECTED: _____

LAB LOG	SAMPLE #	SAMPLE LOCATION AND DESCRIPTION	
010309	P1	Exciter RM Sump near ladder - floor	PCB
010309	P2	Exciter RM Sump under old duct - wall	PCB
	P3	FILTER RM - West corner - floor	
	P4	" " Air shaft - FRONT OF REAR DOOR	-1710
	P5	AIR VENT pit - motor gener. North pit - floor	west side of NORTH PIT
	P6	AIR vent pit - motor gener. south pit floor	@ EAST
	P7	Motor RM 9' from E wall - mid floor	near panel S10
	P8	" " 2' from E wall - mid floor	panel
	P9	X-FORMER RM - under sink - floor	
	P10	FAN MEZZANINE - NORTH WALL	
	P11	" " EAST WALL	
		Painting floor with	

Released by: _____ Date: _____ Time: _____
 Received by: _____ Date: _____ Time: _____
 Released by: _____ Date: _____ Time: _____
 Received by: _____ Date: _____ Time: _____



Polychlorinated Biphenyls (PCBs)

Lab #:	150789	Location:	Substat.E-408 Linda Ave
Client:	Pacific Gas & Electric	Prep:	EPA 3550
Project#:	STANDARD	Analysis:	EPA 8082
Matrix:	Wipe	Sampled:	03/09/01
Units:	ug/s	Received:	03/09/01
Diln Fac:	1.000	Prepared:	03/13/01
Batch#:	62154		

Field ID:	010309-P1	Analyzed:	03/13/01
Type:	SAMPLE	Cleanup Method:	EPA 3665A
Lab ID:	150789-001		

Analyte	Result	RL
Aroclor-1016	ND	2.5
Aroclor-1221	ND	2.5
Aroclor-1232	ND	2.5
Aroclor-1242	ND	2.5
Aroclor-1248	ND	2.5
Aroclor-1254	ND	2.5
Aroclor-1260	ND	2.5

Surrogate	%REC	Limits
TCMX	88	60-150
Decachlorobiphenyl	143	61-143

Field ID:	010309-P2	Analyzed:	03/14/01
Type:	SAMPLE	Cleanup Method:	EPA 3665A
Lab ID:	150789-002		

Analyte	Result	RL
Aroclor-1016	ND	2.5
Aroclor-1221	ND	2.5
Aroclor-1232	ND	2.5
Aroclor-1242	ND	2.5
Aroclor-1248	ND	2.5
Aroclor-1254	ND	2.5
Aroclor-1260	ND	2.5

Surrogate	%REC	Limits
TCMX	94	60-150
Decachlorobiphenyl	138	61-143

Field ID:	010309-P3	Analyzed:	03/14/01
Type:	SAMPLE	Cleanup Method:	EPA 3665A
Lab ID:	150789-003		

Analyte	Result	RL
Aroclor-1016	ND	2.5
Aroclor-1221	ND	2.5
Aroclor-1232	ND	2.5
Aroclor-1242	ND	2.5
Aroclor-1248	ND	2.5
Aroclor-1254	ND	2.5
Aroclor-1260	ND	2.5

Surrogate	%REC	Limits
TCMX	77	60-150
Decachlorobiphenyl	125	61-143

*= Value outside of QC limits; see narrative

ND= Not Detected

RL= Reporting Limit

Page 1 of 4



Polychlorinated Biphenyls (PCBs)

Lab #:	150789	Location:	Substat. E-408 Linda Ave
Client:	Pacific Gas & Electric	Prep:	EPA 3550
Project#:	STANDARD	Analysis:	EPA 8082
Matrix:	Wipe	Sampled:	03/09/01
Units:	ug/s	Received:	03/09/01
Diln Fac:	1.000	Prepared:	03/13/01
Batch#:	62154		

Field ID: 010309-P4
 Type: SAMPLE
 Lab ID: 150789-004

Analyzed: 03/14/01
 Cleanup Method: EPA 3665A

Analyte	Result	RL
Aroclor-1016	ND	2.5
Aroclor-1221	ND	2.5
Aroclor-1232	ND	2.5
Aroclor-1242	ND	2.5
Aroclor-1248	ND	2.5
Aroclor-1254	ND	2.5
Aroclor-1260	ND	2.5

Surrogate	%REC	Limits
TCMX	72	60-150
Decachlorobiphenyl	123	61-143

Field ID: 010309-P5
 Type: SAMPLE
 Lab ID: 150789-005

Analyzed: 03/14/01
 Cleanup Method: EPA 3665A

Analyte	Result	RL
Aroclor-1016	ND	2.5
Aroclor-1221	ND	2.5
Aroclor-1232	ND	2.5
Aroclor-1242	ND	2.5
Aroclor-1248	ND	2.5
Aroclor-1254	ND	2.5
Aroclor-1260	ND	2.5

Surrogate	%REC	Limits
TCMX	69	60-150
Decachlorobiphenyl	117	61-143

Field ID: 010309-P6
 Type: SAMPLE
 Lab ID: 150789-006

Analyzed: 03/14/01
 Cleanup Method: EPA 3665A

Analyte	Result	RL
Aroclor-1016	ND	2.5
Aroclor-1221	ND	2.5
Aroclor-1232	ND	2.5
Aroclor-1242	ND	2.5
Aroclor-1248	ND	2.5
Aroclor-1254	ND	2.5
Aroclor-1260	ND	2.5

Surrogate	%REC	Limits
TCMX	104	60-150
Decachlorobiphenyl	145 *	61-143

*= Value outside of QC limits; see narrative

ND= Not Detected

RL= Reporting Limit



Polychlorinated Biphenyls (PCBs)

Lab #:	150789	Location:	Substat.E-408 Linda Ave
Client:	Pacific Gas & Electric	Prep:	EPA 3550
Project#:	STANDARD	Analysis:	EPA 8082
Matrix:	Wipe	Sampled:	03/09/01
Units:	ug/s	Received:	03/09/01
Diln Fac:	1.000	Prepared:	03/13/01
Batch#:	62154		

Field ID: 010309-P7
 Type: SAMPLE
 Lab ID: 150789-007

Analyzed: 03/14/01
 Cleanup Method: EPA 3665A

Analyte	Result	RL
Aroclor-1016	ND	2.5
Aroclor-1221	ND	2.5
Aroclor-1232	ND	2.5
Aroclor-1242	ND	2.5
Aroclor-1248	ND	2.5
Aroclor-1254	ND	2.5
Aroclor-1260	ND	2.5

Surrogate	%REC	Limits
TCMX	86	60-150
Decachlorobiphenyl	138	61-143

Field ID: 010309-P8
 Type: SAMPLE
 Lab ID: 150789-008

Analyzed: 03/14/01
 Cleanup Method: EPA 3665A

Analyte	Result	RL
Aroclor-1016	ND	2.5
Aroclor-1221	ND	2.5
Aroclor-1232	ND	2.5
Aroclor-1242	ND	2.5
Aroclor-1248	ND	2.5
Aroclor-1254	ND	2.5
Aroclor-1260	ND	2.5

Surrogate	%REC	Limits
TCMX	96	60-150
Decachlorobiphenyl	142	61-143

Field ID: 010309-P9
 Type: SAMPLE
 Lab ID: 150789-009

Analyzed: 03/14/01
 Cleanup Method: EPA 3665A

Analyte	Result	RL
Aroclor-1016	ND	2.5
Aroclor-1221	ND	2.5
Aroclor-1232	ND	2.5
Aroclor-1242	ND	2.5
Aroclor-1248	ND	2.5
Aroclor-1254	ND	2.5
Aroclor-1260	ND	2.5

Surrogate	%REC	Limits
TCMX	115	60-150
Decachlorobiphenyl	163 *	61-143

*= Value outside of QC limits; see narrative

ND= Not Detected

RL= Reporting Limit

Polychlorinated Biphenyls (PCBs)

Lab #:	150789	Location:	Substat.E-408 Linda Ave
Client:	Pacific Gas & Electric	Prep:	EPA 3550
Project#:	STANDARD	Analysis:	EPA 8082
Matrix:	Wipe	Sampled:	03/09/01
Units:	ug/s	Received:	03/09/01
Diln Fac:	1.000	Prepared:	03/13/01
Batch#:	62154		

Field ID: 010309-P10
 Type: SAMPLE
 Lab ID: 150789-010

Analyzed: 03/14/01
 Cleanup Method: EPA 3665A

Analyte	Result	RL
Aroclor-1016	ND	2.5
Aroclor-1221	ND	2.5
Aroclor-1232	ND	2.5
Aroclor-1242	ND	2.5
Aroclor-1248	ND	2.5
Aroclor-1254	ND	2.5
Aroclor-1260	ND	2.5

Surrogate	%REC	Limits
TCMX	97	60-150
Decachlorobiphenyl	157 *	61-143

Field ID: 010309-P11
 Type: SAMPLE
 Lab ID: 150789-011

Analyzed: 03/14/01
 Cleanup Method: EPA 3665A

Analyte	Result	RL
Aroclor-1016	ND	2.5
Aroclor-1221	ND	2.5
Aroclor-1232	ND	2.5
Aroclor-1242	ND	2.5
Aroclor-1248	ND	2.5
Aroclor-1254	ND	2.5
Aroclor-1260	ND	2.5

Surrogate	%REC	Limits
TCMX	91	60-150
Decachlorobiphenyl	135	61-143

Type: BLANK
 Lab ID: QC139850

Analyzed: 03/13/01
 Cleanup Method: EPA 3665A

Analyte	Result	RL
Aroclor-1016	ND	2.5
Aroclor-1221	ND	2.5
Aroclor-1232	ND	2.5
Aroclor-1242	ND	2.5
Aroclor-1248	ND	2.5
Aroclor-1254	ND	2.5
Aroclor-1260	ND	2.5

Surrogate	%REC	Limits
TCMX	109	60-150
Decachlorobiphenyl	139	61-143

*= Value outside of QC limits; see narrative

ND= Not Detected

RL= Reporting Limit



Polychlorinated Biphenyls (PCBs)

Lab #:	150789	Location:	Substat.E-408 Linda Ave
Client:	Pacific Gas & Electric	Prep:	EPA 3550
Project#:	STANDARD	Analysis:	EPA 8082
Matrix:	Wipe	Batch#:	62154
Units:	ug/s	Prepared:	03/13/01
Diln Fac:	1.000	Analyzed:	03/13/01

Type: BS
 Lab ID: QC139851

Cleanup Method: EPA 3665A

Analyte	Spiked	Result	%REC	Limits
Aroclor-1260	20.00	18.54	93	58-124

Surrogate	%REC	Limits
TCMX	161 *	60-150
Decachlorobiphenyl	226 *	61-143

Lab ID: BSD
 QC139852

Cleanup Method: EPA 3665A

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Aroclor-1260	20.00	19.24	96	58-124	4	20

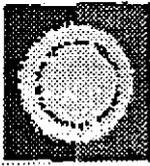
Surrogate	%REC	Limits
TCMX	136	60-150
Decachlorobiphenyl	194 *	61-143

*= Value outside of QC limits; see narrative

RPD= Relative Percent Difference

APPENDIX D

Asbestos Notification



**BAY AREA AIR QUALITY
MANAGEMENT DISTRICT**

939 ELLIS STREET
SAN FRANCISCO, CALIFORNIA 94109
(415) 771-6000

**Regulation 11, Rule 2
Asbestos Demolition/Renovation
NOTIFICATION FORM**

BAAQMD J# _____

Site Information

Site Address 408 Linda Avenue

City Piedmont Zip 94611-4415

Owner Name Pacific Gas and Electric Company Phone (415) 973-1259

Specific Location of Project Main floor of substation building

Single Family Dwelling Commercial Apartment Building Government Building School

Renovation Demolition Fire Training Planned Renovation* (as per Reg. 11-2-232)

Weekend Work Night Work (After 5 PM) * (Attach Work Schedule)

Cumulative Renovations (each less than 100 square or linear feet)

Start Date December 7, 2000 Completion Date _____

Material Description: Category II Non-Friable Transite board

Method(s) of Removal: Dry removal by hand

Check box if dry removal. In addition to filling this form, please attach a letter requesting conditional approval for dry removal.
(This includes, but is not limited to, shot/bead blasting of mastic.)

Total removal amounts of friable asbestos material only: ** _____ lin ft/ _____ sq ft/ _____ cu ft

** Indicate how much of this involves dry, bead-blast, or shot-blast removal: _____

BAAQMD N# _____ **Contractor Information**

Name De Con Environmental Service Contact Chris Kwoka

Mailing Address 23490 Connecticut St. Phone (510) 773-9136

City Hayward Zip 94545 Contractor Job No. _____

BAAQMD N# _____ **Disposal Site Information**

Landfill Name Altamont Landfill & Resources Recovery

City Livermore State Calif.

This form prepared by Wayne F. Yeager Title Sr. Environmental Engineer

Company Pacific Gas and Electric Company Address 245 Market St., N13J

City, state, zip San Francisco, California, 94105 Phone (415) 973-1259

Waste Transporter Information

Name Allwaste Transportation and Remediation Services EPA I.D. # CAD06354796
Address 12475 Allagas Ave City San Martin
Zip 95046 Phone (800) 321-1030 Contact Lee Soares

Survey Information

Name of person who completed the survey Linda Marshall Company Name Pacific Gas and Electric Co.
Address 3400 Crow Canyon Rd City San Ramon Zip 94583
Phone (925) 816-3197

Procedure, including analytical laboratory method employed, to locate and identify the presence of RACM. PLM is the required method. Samples were taken and analyzed by the PLM method.

Is asbestos present? Yes No

Government Ordered Demolition

Name _____ Title _____
Agency N/A Phone () _____
Date of Order Authorizing Ordered Demolition _____

Emergency Renovation

Date and Hour of Emergency _____
Description of event and an explanation of how the event has caused unsafe conditions or would cause equipment damage.
N/A

I certify that an individual trained in the provisions of this regulation (40 CFR Part 61, Subpart M) will be on site during the demolition or renovation and evidence that the required training has been accomplished by this person and will be available for inspection during normal business hours.

Signature of Contractor

Date

I certify that the above information is correct, and that I will comply with all of the requirements of the BAAQMD's Regulations, as well as all other applicable federal, state, and local requirements.

Signature of Contractor

Date

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

939 Ellis Street
San Francisco, CA 94109
(415) 771-6000

INSTRUCTIONS AND GENERAL INFORMATION

- Notifications must be complete to be considered in compliance with BAAQMD Regulations 11-2-401.3 and 11-2-401.4. Notifications lacking information will be returned. The ten-working day notification period will not start until a complete notification is submitted.
- This notification form may be used to notify the BAAQMD of demolition or asbestos removal (renovation) operations. Each of these operations requires separate notification. An Acknowledgement Letter will be mailed to the contractor within 2 or 3 days of receipt of the notification.
- Revisions to the information stated in the notification form can be made by phone, but must be followed up in writing using the Acknowledgement Letter form.
- If the job is postponed or cancelled, you must notify the District prior to the notified completion date or you will be subject to the applicable asbestos operations fee. If a job starts prior to the reported starting date or continues past the scheduled completion date as shown in the notification, this shall constitute a failure to notify.
- Notification is required for each renovation operation where the amount of Regulated Asbestos-Containing Material (RACM) is greater than or equal to 100 sq ft/linear or 35 cu ft.
- Notification is required for every demolition even where no Regulated Asbestos-Containing Material (RACM) is present.
- BAAQMD Regulation 11-2-401.3 requires that notification shall be provided to the APCO at least ten-working days prior to commencement of demolition/renovation, or as early as possible prior to commencement of emergency demolition/renovation. For single family dwellings or multiple family dwellings with four or fewer units, a start date of 72 hours rather than 10 working days is allowed if an additional fee is paid. Refer to Regulation 3, Schedule L for this additional fee. Section 401.3.15 requires that notification shall be submitted on a District-approved form (attached).
- Regulation 3, Schedule L authorizes fees for demolition/renovation operations. *Applicable fees must be paid at the time of notification.*
- Issuance of a BAAQMD Job # is not intended as a verification of compliance with District Regulation 11-2 or applicable federal, state or local requirements.

INSTRUCTIONS:

SPECIFIC LOCATION OF PROJECT: Indicate where the Demolition/Renovation is taking place within the Site Address.

Examples:

- Building 100A, 3rd floor
- Basement boiler room
- Medical building, Wing 2A

START DATE: Indicate a correct and accurate Start Date, not a prospective date. The Start Date is the date on which Regulated Asbestos-Containing Material (RACM) removal commences or the date on which demolition of the structure commences. Any change of start date must be notified prior to the date

originally notified for the job. Under no circumstances may the revised Start Date be earlier than ten working days before the start date of the original notification, unless an emergency notification has been made (see below).

MATERIAL DESCRIPTION: Indicate the type of friable asbestos material being removed.

Examples: . Pipe lagging and acoustical ceiling
 . Thermal system insulation
 . Asbestos insulated heating ducts

If notification is for demolition activity, indicate type of structure:

Examples: . Wood
 . Brick

DEMOLITION-FIRE TRAINING: Regulation 11-2-216 defines demolition as wrecking, intentional burning, moving or dismantling of any load-supporting structural member, or portion thereof, of a building, facility or ship. Notification is required if a structure is to be burned for fire training purposes. The ten-working day notification requirement must be met before commencement of fire training. Additionally, the District's Open Burning Notification Form must be sent to the District and the requirements of Regulation 5 must be met.

METHODS OF REMOVAL: Indicate the methods and procedures you will employ to comply with the District's Regulation 11-2 and EPA's 40 CFR 61.147 and 152. If method of asbestos removal involves dry removal, check dry removal box. Attach a letter to the notification form requesting conditional approval for dry removal. The letter must specify methods and procedures to be used to comply with Regulation 11-2-303.2.

If notification is for demolition activity, indicate method of demolition.

Examples: . Backhoe
 . Wrecking ball
 . Demolition by hand

REMOVAL AMOUNT: Indicate the amount of Regulated Asbestos-Containing Material (RACM) to be removed. If the job involves wet and dry removal, indicate the total for both. Indicate how much of this total amount involves dry removal on the following line. Note: Non-friable asbestos material is exempt from notification unless it is made friable during demolition, renovation or removal (see Regulation 11-2-222).

Regulated Asbestos-Containing Material (RACM) must be removed prior to demolition operations. The amount of asbestos for demolition notification is zero (0) amount.

EMERGENCY NOTIFICATION NUMBER: Under certain conditions, the ten-working day notification period may be waived. However, notification must be made by telephone. If the reason for proceeding immediately is deemed appropriate, you will be issued an emergency job number at this time. You must then submit the completed notification form and reference the emergency notification number in the upper right corner (BAAQMD J# _____). Note: All notices submitted under the Emergency Notification Procedure are subject to verification and approval by the District's inspection staff.

CONTRACTOR: Indicate the name of the contractor who is performing the demolition/renovation.

CONTRACTOR JOB NO.: Indicate your reference number, if any.

DISPOSAL SITE INFORMATION: Indicate the name of the disposal site where the Regulated Asbestos-Containing Material (RACM) will be deposited. All RACM must be removed prior to commencement of demolition operations.

WASTE TRANSPORTER INFORMATION: Indicate the name of the transporter of the Regulated Asbestos-Containing Material (RACM). The state of California considers RACM a hazardous waste. Therefore, a contractor is required to obtain an E.P.A. number to qualify as a hauler of waste.

SURVEY INFORMATION: Prior to commencement of any demolition or renovation, a survey shall be performed for the presence of Regulated Asbestos-Containing Material (RACM). This section is not applicable if the material to be renovated is declared as RACM and will be handled in accordance with the provisions of Regulation 11-2.

GOVERNMENT ORDERED DEMOLITION AND EMERGENCY RENOVATION: Reference the Emergency Notification procedure indicated above.

FAX: Notifications may be faxed to (415) 928-0338

For additional information contact the District's Air Quality Technician responsible for Asbestos Notifications at (415) 749-4762.

ASBFORM

To: Dennis Baker
Enforcement Division
Bay Area Air Quality Management District
939 Ellis Street
San Francisco, California

From: Wayne E. Yeager
Sr. Environmental Engineer
Pacific Gas and Electric Company
245 Market Street, N13J
San Francisco, Ca. 94105

Subject: Requesting conditional approval for dry removal of transite board.

Dear Sir,

As stated in the instructions, this is an additional letter requesting conditional approval for the dry removal of transite board from electrical equipment cabinets located on the main floor of the Piedmont substation.

Method of handling:

The transite board will be removed as a unit from the cabinet doors by manually unbolting the sheets. These sheets will be placed in a plastic liner in a lined asbestos roll-off bin. When the bin is full the plastic liner will cover the board (the first seal) and be labeled, then the container will be sealed (the second seal) and labeled for shipment. Wetting of the boards in place would not be a safe measure to take since these cabinet doors are on old electrical switch units. The switch units have been deactivated but should always be considered dangerous.

If you have any questions please call me at 415 - 973 - 1259 or call our contractor Chris Kwoka at 510-782-9136.

Thank you for your consideration.

Wayne E. Yeager

Wayne E. Yeager

Profile No: 538515

Stream: ASBESTOS, CONTAMINATED BUILDING DEBRIS
TSDF: ALTAMONT LANDFILL & RESOURCE RECOVERY

OT Proper Shipping Name
ASBESTOS, 9, NA2212 PG III

Alternate Proper
Shipping Descrip.:

State Codes: 151

EPA Codes: NON RCRA

Labels: CLASS 9

Phys. State: SOLID

SB-14 Stream: ASBESTOS

Non Haz. Mfst: True

Process: ASBESTO REMOVAL

Notes: DEBRIS, FUEL, OIL, PIPE, SOIL

ERG: 171

Tax Catg.: 2

Disp. Meth.: 03

RQ: 1

Active: True

Lbs/CuFt: 78

Lbs/Gal:

Tons/Yd: 1.05

Lbs/LinFoot

LDR: California

Composition

Range

Percent

Metal

Analysis: TCLP ppm

Limit: STLC ppm

ASBESTOS

80-100

MISC, CLEAN UP DEBRIS

0-20

FUEL OIL, ABSORBED

0-5

Search Manifest

Basic Non Haz Label and

PG+E Profile #

Please state on Non Haz Manifest
the "Piedmont SubStation" and
"Attention: Sara Everitt"

Thanks

APPENDIX E

Zep Cleaning Solution Information



Research & Development
1420 Seaboard Industrial B.
Atlanta, GA 30318
Phone: 404.352.1680
Fax: 404.350.6218
www.zep.com

facsimile transmittal

To: Mr Gary Dacaster Fax: 510-782-8584

From: Dan Pedgett Date: 2/28/01

Re: Zepox / PCP's Pages: 5

CC: Bruce Steadman, Bonda Powell (Zep)

Urgent For Review Please Comment Please Reply Please Recycle

Gary,

Attached is the information we have, though
not for Zepox, relative to PCP solubility
in several of our products.

The solvent in Dyna is very similar to
one of the components in Zepox (approx 10%)
and should work well.

I hope this information will prove helpful.

Mar 01 01 09:57a
MAR. -01' 01 (THU) 09:51
SENT BY: MET BALTIMORE

DECON Env. Svcs
-ATL R&D
11-23-88 3:35PM

510 732-6444
TEL: 404 3506218
3013541624
404 350 6268:R 2



MET ELECTRICAL TESTING COMPANY, INC.

REPORT

Attention: Mr. Larry Obert

ISSUED TO: ZEP Manufacturing Co.
1310 Seaboard Industrial Ave.,
Atlanta, GA 30318

DATE OF REPORT: 11/22/88
NW REPORT NO: 23023V

PROJECT: Product Evaluation for PCB
cleanup purposes

DESCRIPTION:

MET received three different ZEP Manufacturing products for evaluation of their solubility suitability for cleanup of PCB spills. These products were ZEP-RIDE, ZEP-EXCEED and ZEP-DYNA.

The products were first tested in straight solution form with the contaminated fluids to see if any of the solutions were at all miscible. Two different kinds of PCB solutions were used. One was contaminated oil with a specific gravity of 0.878. The other was Askarel, a PCB fluid approximately 65% - 85% pure PCB with a specific gravity of 1.56. ZEP-RIDE was used as concentrate and also as a diluted solution as indicated by the instructions from the container. ZEP-EXCEED and ZEP-DYNA were used straight from the container. Approximately 400 ml of each ZEP solution was used with approximately 5-15 ml of contaminated solutions. Solvent references of Hexane and 1,1,1-trichloroethane were tested along side so comparisons could be made.

The results of these comparisons are given below in scale form ranging from 1 to 10 with 10 being the most soluble and 1 being the least soluble. The solutions are also separated into two categories: solubility in oil and solubility in Askarel.

Continued on next page

Columbia, Md 410-381-2200

This report certifies that the above equipment has been tested in compliance with recognized standards or for safe use in a specified manner, or in accordance with Federal, State or Municipal regulations.
The report is accurate and true to the best of our knowledge

and belief. All equipment used in making physical determinations is accurate and bears recent and direct traceability to the NBS. The evaluations performed are in accordance with the laws for the practice of Professional Engineering.

[Signature]
Lance R. Smith





ZEP Manufacturing Co.
11/22/88
Page - 2 -

1. SOLUBILITY IN OIL:

<u>PRODUCT</u>	<u>SCALE RATING</u>
Hexane	9
1,1,1-Trichloroethane	10
ZEP-RIDE Concentrate	2
ZEP-RIDE Diluted	1
ZEP-EXCEED	10
ZEP-DYNA	9

2. SOLUBILITY IN ASKAREL:

<u>PRODUCT</u>	<u>SCALE RATING</u>
Hexane	10
1,1,1-Trichloroethane	9
ZEP-RIDE Concentrate	1
ZEP-RIDE Diluted	1
ZEP-EXCEED	9
ZEP-DYNA	10

Straight solubility was determined in quickness of the cleaning solution to incorporate the contaminated fluid without physical mixing.

As can be seen, ZEP-EXCEED and ZEP-DYNA showed very good solubility results whereas ZEP-RIDE'S was extremely poor.

In addition, ZEP-EXCEED and ZEP-DYNA showed greater than 40% dissolving (solubility) action without dropping out of solution. Tests were not conducted as to exactly at what percentage of contaminated material would be necessary to bring it out of solution.

The second set of tests were performed on concrete surfaces contaminated with known amounts of PCB laden oil and Askarel. ZEP-RIDE Concentrate, ZEP-EXCEED and ZEP-DYNA were used on surfaces contaminated with Askarel. ZEP-EXCEED and ZEP-DYNA were used on surfaces contaminated with oil. Each concrete surface (approximately 6 inches X 10 inches) was contaminated entirely and dried for 48 hours under heat lamps. Each surface was then sectioned in half. One half of the surface was sampled using a standard wipe test. This was accomplished in order to provide a background contamination level. The other half was then cleaned using each of the three cleaners. This was done by applying a liberal amount of cleaner to the surface, let stand for 5 minutes, then rinse twice with some more of the cleaner and let dry.

After the surface was dry, the area was sampled using a standard wipe test. Each sample submitted for evaluation of Polychlorinated Biphenyls (PCBs) was tested using analytical procedures including a microprocessor based gas chromatograph. The values produced are in micrograms per 100 square centimeters (ug/100 sq.cm.) and are computed by weight based upon the appropriate Aroclor or a peak by peak analysis as a reference.



ZEP Manufacturing Co.
11/22/88
Page - 3 -

A control number, the Analysis Number, has been arbitrarily assigned to each sample. This number is cross referenced for convenience and must be used if referring to the testing documentation.

CHEMICAL EVALUATION:

The results of the samples submitted for PCB contamination analysis are as follows:

<u>ANALYSIS #</u>	<u>SURFACE CONTAMINATED WITH</u>	<u>PARAMETERS</u>	<u>PCB CONCENTRATE</u>
C1673	Oil - Surface 1	initial wipe test	1.2 ug
C1674	Oil - Surface 1	ZEP-EXCEED cleaned	0.8 ug
C1675	Oil - Surface 2	initial wipe test	<0.8 ug
C1676	Oil - Surface 2	ZEP-DYNA cleaned	NDL
C1677	Askarel-Surface 3	initial wipe test	603.0 ug
C1678	Askarel-Surface 4	ZEP-RIDE cleaned	1164.0 ug
C1679	Askarel-Surface 4	initial wipe test	529 ug
C1680	Askarel-Surface 4	ZEP-EXCEED cleaned	101 ug
C1681	Askarel-Surface 5	initial wipe test	518 ug
C1682	Askarel-Surface 5	ZEP-DYNA cleaned	125 ug

*NDL= No Detectable Level

The following results indicate the cleaning ability in % of each solution in each application.

<u>SURFACES CONTAMINATED WITH OIL PRODUCT</u>	<u>% CLEAN (SOLUBILITY)</u>
ZEP-EXCEED	75.0 %
ZEP-DYNA	100.0 % *

*Based on a very small contamination amount

<u>SURFACES CONTAMINATED WITH ASKAREL PRODUCT</u>	<u>% CLEAN (SOLUBILITY)</u>
ZEP-RIDE Concentrate	0.00 % efficiency
ZEP-EXCEED	80.91 % efficiency
ZEP-DYNA	75.87 % efficiency

DISCUSSION OF RESULTS:
ZEP-RIDE either in concentrate or diluted showed very poor solubility and cleaning abilities. Both, ZEP-EXCEED and ZEP-DYNA showed exemplary cleaned abilities even on the porous concrete used in the laboratory. We believe these two products may prove to be useful in the cleanup of PCB spills.

Mar 01 01 09:58a

DECON Env. Svcs

510 732-6444

P.5

MAR -01' 01 (THU) 09:52

ATL R&D

TEL 404 3506218

P.005

SENT BY:MET BALTIMORE

:11-23-88 3:38PM :

301354:5244

404 350 6266:4 5



ZEP Manufacturing Co.
11/22/88
Page - 4 -

RECOMMENDATIONS:

Further tests should be designed to show ZEP-EXCEED and ZEP-DYNA'S usefulness in removing PCB contamination on various surfaces. Actual site cleanups should be provided to test the products efficiency. Dwell times (time interval cleanup material is allowed to stay on contaminated surface) should be thoroughly investigated.

Cleanup operations should include removing the material with a wet/dry vacuum and not by wiping with rags or absorbent pads. Vacuuming greatly reduces spreading the contaminated liquid.

Consideration should be given to the worker's use of personal protective equipment. I have not seen a Material Safety Data Sheet on any of the products but they may contain chemicals having low tolerance and exposure thresholds.

Another avenue of consideration might be to try ZEP-EXCEED and ZEP-DYNA in combination with each other as part of the cleaning process.

In all cases, the cleaners must have the ability to reduce the levels of contamination to those listed in 40 CFR Part 761, Subpart G. Presently those levels are 100 ug/100 square cm PCB for restricted areas and 10 ug/100 square cm for nonrestricted areas.

APPENDIX F

AIR MONITORING RESULTS

PHASE CONTRAST MICROSCOPY

NIOSH 7400A (4th Edition, #2, 8/15/94)

CLIENT: Pacific Gas and Electric
 P.O. Box 770000, Mail Code B24
 San Francisco, CA 94177

TEL#/FAX#: 415-973-6902 / 415-973-9201

DATE: 8/22/01
 KELLCO JOB#: 0008-14
 KELLCO LOGIN#: 010123L

PAGE#: 1 of 2
 ANALYST: E. Catbagan

CLIENT REF#:

LOCATION: Sub Station E
 408 Linda Avenue
 Piedmont, CA

ROTAMETER#: HV-45
 MONITORED BY: MARVIN PETERSON
 CERTIFICATION#: M0879

RECEIVED DATE: 1/23/01
 ANALYZED DATE: 1/23/01

MEDIUM: 25MM FILTER MEMBRANE
 STANDARD: 0.1 FIBERS/CC KELLCO CV: 0.208

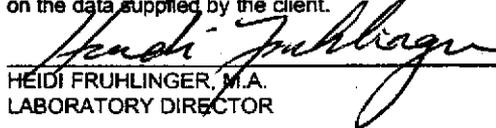
KELLCO ID#	LOCATION AND ACTIVITY	WORKER AND SS#	MASK TYPE	DATE	TIME (MIN)	FLOW (LPM)	VOL. (Liter)	LAB COUNTS		FIBERS /CC	L.O.Q.*	95% ONE-SIDED UCL	REMARKS
								FIBERS	FIELDS				
010123L-1	01, Small transformer regulator room. Loading Transite panels	Area		1/23/01	155	5.51	854.05	4.5	100	<0.003	0.045	0.037	
010123L-2	02, By dumpster. Loading Transite panels	Area		1/23/01	127	5.51	699.77						Could not read, sample covered with welding dust
010123L-3	03, Small transformer regulator room. Loading Transite panels	Area		1/23/01	100	5.51	551.00						Could not read, sample covered with welding dust
010123L-4	04, Small transformer regulator room. Loading Transite panels	Area		1/23/01	121	5.51	666.71	6.5	100	0.005	0.058	0.039	
010123L-5	05, Big room south end inside doorway. Loading Transite panels	Area		1/23/01	65	5.51	358.15						Could not read, sample covered with welding dust

* (U.C.L.) 95% one sided upper confidence limit for a single sample: [NIOSH 7400 method EQ: FIBERS/CC + (1.645*CV*STANDARD)]
 CV derived from the KELLCO CV program and the standard is 0.1 FIBERS/CC unless requested otherwise.

*(L.O.D.) Limit of detection for this method: 5.5 FIBERS/100 FIELDS per NIOSH 7400A.

*(L.O.Q.) Smallest fiber concentration that can be calculated for this sample with statistical reliability based on 78.5 FIBERS/100 FIELDS (NIOSH 7400 method). NIOSH has determined that the statistically optimal filter loading is between 100 and 1300 FIBERS/SQ. MM (or 78.5 FIBERS per 100 FIELDS and 205 FIBERS per 20 FIELDS.) Samples outside this range have an increased probability of variability and bias.

Samples are blank corrected. The 8 hour TWA assumes no exposure for the unsampled time of the 8 hour shift. Actual exposure values are based on the data supplied by the client.


 HEIDI FRUHLINGER, M.A.
 LABORATORY DIRECTOR

MASK HF Half Face Dual Cartridge
 TYPES: FF Full Face Dual Cartridge
 PAPR Powered Air Purifying Respirator
 SAR Supplied Air Respirator
 (blank) Not reported to the lab

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PHASE CONTRAST MICROSCOPY

NIOSH 7400A (4th Edition, #2, 8/15/94)

CLIENT: Pacific Gas and Electric
 P.O. Box 770000, Mail Code B24
 San Francisco, CA 94177

DATE: 8/22/01
 KELLCO JOB#: 0008-14
 KELLCO LOGIN#: 010123L

TEL#/FAX#: 415-973-6902 / 415-973-9201

PAGE#: 2 of 2
 ANALYST: E. Catbagan

CLIENT REF#:

ROTAMETER#: HV-45
 MONITORED BY: MARVIN PETERSON
 CERTIFICATION#: M0879

LOCATION: Sub Station E
 408 Linda Avenue
 Piedmont, CA

RECEIVED DATE: 1/23/01
 ANALYZED DATE: 1/23/01

MEDIUM: 25MM FILTER MEMBRANE
 STANDARD: 0.1 FIBERS/CC KELLCO CV: 0.208

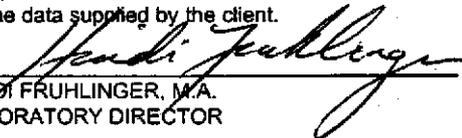
KELLCO ID#	LOCATION AND ACTIVITY	WORKER AND SS#	MASK TYPE	DATE	TIME (MIN)	FLOW (LPM)	VOL. (Liter)	LAB COUNTS		FIBERS /CC	L.O.Q.*	95% ONE-SIDED UCL	REMARKS
								FIBERS	FIELDS				
010123L-6	06, Blank							1.0	100				

* (U.C.L.) 95% one sided upper confidence limit for a single sample: $[NIOSH\ 7400\ method\ EQ:\ FIBERS/CC + (1.645 \cdot CV \cdot STANDARD)]$
 CV derived from the KELLCO CV program and the standard is 0.1 FIBERS/CC unless requested otherwise.

*(L.O.D.) Limit of detection for this method: 5.5 FIBERS/100 FIELDS per NIOSH 7400A.

*(L.O.Q.) Smallest fiber concentration that can be calculated for this sample with statistical reliability based on 78.5 FIBERS/100 FIELDS (NIOSH 7400 method). NIOSH has determined that the statistically optimal filter loading is between 100 and 1300 FIBERS/SQ. MM (or 78.5 FIBERS per 100 FIELDS and 205 FIBERS per 20 FIELDS.) Samples outside this range have an increased probability of variability and bias.

Samples are blank corrected. The 8 hour TWA assumes no exposure for the unsampled time of the 8 hour shift. Actual exposure values are based on the data supplied by the client.


 HEIDI FRUHLINGER, M.A.
 LABORATORY DIRECTOR

MASK HF Half Face Dual Cartridge
 TYPES: FF Full Face Dual Cartridge
 PAPR Powered Air Purifying Respirator
 SAR Supplied Air Respirator
 (blank) Not reported to the lab

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FLAME ATOMIC ABSORPTION SPECTROSCOPY
NIOSH Method 7082 for Airborne Lead Analysis

CLIENT#:1387

CLIENT: Pacific Gas and Electric
 P.O. Box 770000, Mail Code B24
 San Francisco, CA 94177
 TEL#/FAX#: 415-973-6902 / 415-973-9201

KELLCO JOB#: 0008-14
 KELLCO LOGIN#: 010131T

DATE COLLECTED: 1/31/01
 DATE RECEIVED: 1/31/01
 DATE ANALYZED: 2/1/01
 DATE REPORT: 8/22/01

CLIENT REF#:

LOCATION: 408 Linda St

PAGE#: 1 of 1

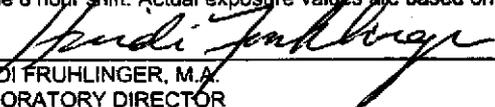
ANALYST: J. Neth

Q.C. Data	Measured Value	Percent Recovery
QC 60.0µg Spike:	213.0 µg	355.0 %
QC 5.0 ppm Std.:	4.86 ppm	97.2 %

RUSH

KELLCO ID#	CLIENT SAMPLE ID AND DESCRIPTION	WORKER SS#	DATE	TIME (min)	FLOW (liters/min)	VOL. (liters)	TOTAL LEAD (µg)	ACTUAL EXPOSURE (µg/m3)	8 HR TWA (µg/m3)
010131T-1	01, IWA, Mezzanine, East side Lead paint scrape	Area	1/31/01	422	6.64	2804.2	645.75	230.30	
010131T-2	02, IWA, 2nd floor, North side Lead paint scrape	Area	1/31/01	420	6.97	2927.4	621.0	212.16	
010131T-3	03, IWA, Mezzanine, center Lead paint scrape	Area	1/31/01	417	2.42	1011.2	234.6	232.05	
010131T-4	04, OWA, Personal Site monitor	M. Peterson 475-34-3777	1/31/01	416	2.51	1044.2	58.2	55.75	48.31

Standard and Spike values are reported for quality control purposes. OSHA Action is 30 µg/m3 for the 8 hour TWA. OSHA PEL is 50.0 µg/m3 for the 8 hour TWA. Reporting limit is 5.0 µg total lead. Total lead < 5.0 µg: lead not found at the detection limit of this method and instrument. Samples analyzed in accordance with EPA method 7420 for lead analysis by AA. NIOSH method 7082 for quantitation of lead is also referenced. This is an elemental analysis, not compound specific. Samples are not blank corrected. The 8 hour TWA assumes no exposure for the unsampled time of the 8 hour shift. Actual exposure values are based on the data supplied by the client.


 HEIDI FRUHLINGER, M.A.
 LABORATORY DIRECTOR

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FLAME ATOMIC ABSORPTION SPECTROSCOPY
NIOSH Method 7082 for Airborne Lead Analysis

CLIENT#: 1387

CLIENT: Pacific Gas and Electric

P.O. Box 770000, Mail Code B24

San Francisco, CA 94177

TEL#/FAX#: 415-973-6902 / 415-973-9201

CLIENT REF#:

LOCATION: Substation E
 408 Linda Avenue
 Piedmont, CA

KELCO JOB#: 0008-14

KELCO LOGIN#: 010201Y

DATE COLLECTED: 2/1/01

DATE RECEIVED: 2/1/01

DATE ANALYZED: 2/2/01

DATE REPORT: 2/2/01

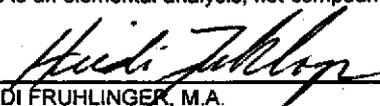
PAGE#: 1 of 2

ANALYST: J. Neth

Q.C. Data	Measured Value	Percent Recovery
QC 200.0µg Spike:	214.0 µg	107.0 %
QC 5.0 ppm Std.:	4.87 ppm	97.4 %
QC 10.0 ppm Std.:	9.82 ppm	98.2 %
QC NIST 2581 SRM (0.449%):	0.43 %	96.0 %

KELCO ID#	CLIENT SAMPLE ID AND DESCRIPTION	WORKER SS#	DATE	TIME (min)	FLOW (liters/min)	VOL. (liters)	TOTAL LEAD (µg)	ACTUAL EXPOSURE (µg/m3)	8 HR TWA (µg/m3)
010201Y-1	01, IWA, interior 2nd floor, south side center area Scrape paint	Area	2/1/01	346	3.47	1202.3	54.9	45.66	
010201Y-2	02, IWA, interior 2nd floor, east side next to restroom Scrape paint	Area	2/1/01	345	3.47	1198.9	58.35	48.91	
010201Y-3	03, Outdoors, fence at sidewalk btwn telephone pole & SE corner of building Soil remediation	Area	2/1/01	419	3.35	1403.6	<5.0	<3.56	
010201Y-4	04, Outdoors, SW corner of fence for apartment bldg NE of site bldg Soil remediation	Area	2/1/01	405	3.35	1356.8	<5.0	<3.68	
010201Y-5	05, IWA, inside building, south center area under stairs Scrape paint	Area	2/1/01	316	3.35	1058.6	80.55	76.06	

Standard, NIST 2581 Standard Reference Material and Spike values are reported for quality control purposes. OSHA Action is 30 µg/m3 for the 8 hour TWA. OSHA PEL is 50.0 µg/m3 for the 8 hour TWA. Reporting limit is 5.0 µg total lead. Samples analyzed in accordance with EPA method 7420 for lead analysis by AA. NIOSH method 7082 for quantitation of lead is also referenced. This is an elemental analysis, not compound specific.


 HEIDI FRUHLINGER, M.A.
 LABORATORY DIRECTOR

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NIOSH Method 7082 for Airborne Lead Analysis

CLIENT#:1387

CLIENT: Pacific Gas and Electric
 P.O. Box 770000, Mail Code B24
 San Francisco, CA 94177
 TEL#/FAX#: 415-973-6902 / 415-973-9201

KELCO JOB#: 0008-14
 KELCO LOGIN#: 010201Y

DATE COLLECTED: 2/1/01
 DATE RECEIVED: 2/1/01
 DATE ANALYZED: 2/2/01
 DATE REPORT: 2/2/01

CLIENT REF#:

LOCATION: Substation E
 408 Linda Avenue
 Piedmont, CA

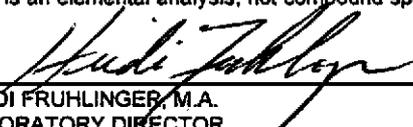
PAGE#: 2 of 2

ANALYST: J. Neth

Q.C. Data	Measured Value	Percent Recovery
QC 200.0µg Spike:	214.0 µg	107.0 %
QC 5.0 ppm Std.:	4.87 ppm	97.4 %
QC 10.0 ppm Std.:	9.82 ppm	98.2 %
QC NIST 2581 SRM (0.449%):	0.43 %	96.0 %

KELCO ID#	CLIENT SAMPLE ID AND DESCRIPTION	WORKER SS#	DATE	TIME (min)	FLOW (liters/min)	VOL (liters)	TOTAL LEAD (µg)	ACTUAL EXPOSURE (µg/m3)	8 HR TWA (µg/m3)
010201Y-6	06, Personal, in loader area Loader operator		2/1/01	378	2.34	884.5	<5.0	<5.65	<4.45
010201Y-7	07, Outdoors, fence at east side of site next to 420 Linda Soil remediation	Area	2/1/01	360	3.09	1110.6	<5.0	<4.50	
010201Y-8	08, Sidewalk outside bay doors on south side of building Soil remediation	Area	2/1/01	243	3.68	894.2	45.0	50.34	

Standard, NIST 2581 Standard Reference Material and Spike values are reported for quality control purposes. OSHA Action is 30 µg/m3 for the 8 hour TWA. OSHA PEL is 50.0 µg/m3 for the 8 hour TWA. Reporting limit is 5.0 µg total lead. Samples analyzed in accordance with EPA method 7420 for lead analysis by AA. NIOSH method 7082 for quantitation of lead is also referenced. This is an elemental analysis, not compound specific.


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FLAME ATOMIC ABSORPTION SPECTROSCOPY

NIOSH Method 7082 for Airborne Lead Analysis

CLIENT#: 1387

CLIENT: Pacific Gas and Electric
 P.O. Box 770000, Mail Code B24
 San Francisco, CA 94177

TEL#/FAX#: 415-973-6902 / 415-973-9201

CLIENT REF#:

LOCATION: 408 Linda Avenue
 Piedmont, CA

KELLCO JOB#: 0008-14
 KELLCO LOGIN#: 010202T

DATE COLLECTED: 2/2/01
 DATE RECEIVED: 2/2/01
 DATE ANALYZED: 2/5/01
 DATE REPORT: 2/6/01

PAGE#: 1 of 3

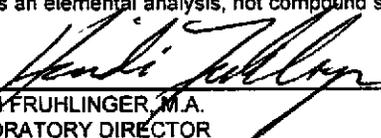
ANALYST: J. Neth

Q.C. Data	Measured Value	Percent Recovery
QC 200.0µg Spike:	208.0 µg	104.0 %
QC 5.0 ppm Std.:	4.99 ppm	99.8 %
QC 10.0 ppm Std.:	9.97 ppm	99.7 %
QC NIST 2581 SRM (0.449%):	0.43 %	95.0 %

RUSH

KELLCO ID#	CLIENT SAMPLE ID AND DESCRIPTION	WORKER SS#	DATE	TIME (min)	FLOW (liters/min)	VOL. (liters)	TOTAL LEAD (µg)	ACTUAL EXPOSURE (µg/m ³)	8 HR TWA (µg/m ³)
010202T-1	01, IWA, 2nd floor mezzanine, Southeast end Vacuuming & wet wiping	Area	2/2/01	435	3.35	1457.3	105.0	72.06	
010202T-2	02, IWA, 2nd floor, West Vacuuming & wet wiping	Area	2/2/01	433	3.35	1450.5	82.95	57.17	
010202T-3	03, IWA, 1st floor, West, by big door Vacuuming & wet wiping	Area	2/2/01	423	3.35	1417.0	28.95	20.43	
010202T-4	04, IWA, 1st floor, West, center room Vacuuming & wet wiping	Area	2/2/01	421	3.35	1410.3	105.6	74.89	
010202T-5	05, IWA, Outside, N. West corner, on fence Loading dirt	Area	2/2/01	285	3.35	954.8	<5.0	<5.24	

Standard, NIST 2581 Standard Reference Material and Spike values are reported for quality control purposes. OSHA Action is 30 µg/m³ for the 8 hour TWA. OSHA PEL is 50.0 µg/m³ for the 8 hour TWA. Reporting limit is 5.0 µg total lead. Samples analyzed in accordance with EPA method 7420 for lead analysis by AA. NIOSH method 7082 for quantitation of lead is also referenced. This is an elemental analysis, not compound specific.


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FLAME ATOMIC ABSORPTION SPECTROSCOPY
NIOSH Method 7082 for Airborne Lead Analysis

CLIENT#: 1387

CLIENT: Pacific Gas and Electric
 P.O. Box 770000, Mail Code B24
 San Francisco, CA 94177

TEL#/FAX#: 415-973-6902 / 415-973-9201

CLIENT REF#:

LOCATION: 408 Linda Avenue
 Piedmont, CA

KELLCO JOB#: 0008-14
 KELLCO LOGIN#: 010202T

DATE COLLECTED: 2/2/01
 DATE RECEIVED: 2/2/01
 DATE ANALYZED: 2/5/01
 DATE REPORT: 2/6/01

PAGE#: 2 of 3

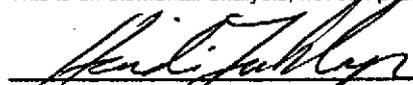
ANALYST: J. Neth

RUSH

Q.C. Data	Measured Value	Percent Recovery
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QC 10.0 ppm Std.:	9.97 ppm	99.7 %
QC NIST 2581 SRM (0.449%):	0.43 %	95.0 %

KELLCO ID#	CLIENT SAMPLE ID AND DESCRIPTION	WORKER SS#	DATE	TIME (min)	FLOW (liters/min)	VOL. (liters)	TOTAL LEAD (µg)	ACTUAL EXPOSURE (µg/m3)	8 HR TWA (µg/m3)
010202T-6	06, IWA, Outside, South on barrier fence Loading dirt	Area	2/2/01	291	3.35	974.8	<5.0	<5.13	
010202T-7	07, Personal, OWA Air monitoring	Marvin Peterson 475-34-3777	2/2/01	390	2.34	912.6	17.55	19.22	15.62
010202T-8	08, IWA, East side on barrier fence Loading dirt	Area	2/2/01	252	3.17	798.8	<5.0	<6.26	
010202T-9	09, IWA, Loader operator Digging & piling dirt	Area	2/2/01	128	3.17	405.8	<5.0	<12.32	
010202T-10	10, OWA, South side, West side of bldg, on barrier fence Digging & piling dirt	Area	2/2/01	140	3.35	469.0	<5.0	<10.66	

Standard, NIST 2581 Standard Reference Material and Spike values are reported for quality control purposes. OSHA Action is 30 µg/m3 for the 8 hour TWA. OSHA PEL is 50.0 µg/m3 for the 8 hour TWA. Reporting limit is 5.0 µg total lead. Samples analyzed in accordance with EPA method 7420 for lead analysis by AA. NIOSH method 7082 for quantitation of lead is also referenced. This is an elemental analysis, not compound specific.


 HEIDI FRUHLINGER, M.A.
 LABORATORY DIRECTOR

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FLAME ATOMIC ABSORPTION SPECTROSCOPY
NIOSH Method 7082 for Airborne Lead Analysis

CLIENT#:1387

CLIENT: Pacific Gas and Electric
 P.O. Box 770000, Mail Code B24
 San Francisco, CA 94177

TEL#/FAX#: 415-973-6902 / 415-973-9201

CLIENT REF#:

LOCATION: 408 Linda Avenue
 Piedmont, CA

KELLCO JOB#: 0008-14
 KELLCO LOGIN#: 010202T

DATE COLLECTED: 2/2/01
 DATE RECEIVED: 2/2/01
 DATE ANALYZED: 2/5/01
 DATE REPORT: 2/6/01

PAGE#: 3 of 3

ANALYST: J. Neth

Q.C. Data	Measured Value	Percent Recovery
QC 200.0µg Spike:	208.0 µg	104.0 %
QC 5.0 ppm Std.:	4.99 ppm	99.8 %
QC 10.0 ppm Std.:	9.97 ppm	99.7 %
QC NIST 2581 SRM (0.449%):	0.43 %	95.0 %

RUSH

KELLCO ID#	CLIENT SAMPLE ID AND DESCRIPTION	WORKER SS#	DATE	TIME (min)	FLOW (liters/min)	VOL. (liters)	TOTAL LEAD (µg)	ACTUAL EXPOSURE (µg/m3)	8 HR TWA (µg/m3)
010202T-11	11, Blank		2/2/01				<5.0		
010202T-12	12, Field Blank		2/2/01				<5.0		

Standard, NIST 2581 Standard Reference Material and Spike values are reported for quality control purposes. OSHA Action is 30 µg/m3 for the 8 hour TWA. OSHA PEL is 50.0 µg/m3 for the 8 hour TWA. Reporting limit is 5.0 µg total lead. Samples analyzed in accordance with EPA method 7420 for lead analysis by AA. NIOSH method 7082 for quantitation of lead is also referenced. This is an elemental analysis, not compound specific.


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FLAME ATOMIC ABSORPTION SPECTROSCOPY
NIOSH Method 7082 for Airborne Lead Analysis

CLIENT#:1387

CLIENT: Pacific Gas and Electric
 P.O. Box 770000, Mail Code B24
 San Francisco, CA 94177
 TEL#/FAX#: 415-973-6902 / 415-973-9201

KELLCO JOB#: 0008-14
 KELLCO LOGIN#: 010205FF

DATE COLLECTED: 2/5/01
 DATE RECEIVED: 2/5/01
 DATE ANALYZED: 2/6/01
 DATE REPORT: 2/9/01

CLIENT REF#:

LOCATION: Substation E
 408 Linda Ave
 Piedmont, CA

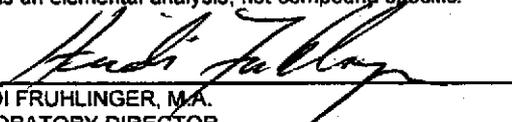
PAGE#: 1 of 2

ANALYST: J. Neth

Q.C. Data	Measured Value	Percent Recovery
QC 200.0µg Spike:	209.0 µg	104.5 %
QC 5.0 ppm Std.:	5.04 ppm	100.8 %
QC 10.0 ppm Std.:	9.97 ppm	99.7 %
QC NIST 2581 SRM (0.449%):	0.43 %	95.3 %

KELLCO ID#	CLIENT SAMPLE ID AND DESCRIPTION	WORKER SS#	DATE	TIME (min)	FLOW (liters/min)	VOL. (liters)	TOTAL LEAD (µg)	ACTUAL EXPOSURE (µg/m3)	8 HR TWA (µg/m3)
010205FF-1	01, 2nd floor mezzanine, center Lead paint clean up with high pressure washer	Area	2/5/01	400	3.35	1340.0	<5.0	<3.73	
010205FF-2	02, 2nd floor, west side Lead paint clean up with high pressure washer	Area	2/5/01	400	3.35	1340.0	<5.0	<3.82	
010205FF-3	03, 1st floor, center room Lead paint clean up with high pressure washer	Area	2/5/01	400	3.35	1340.0	5.55	4.14	
010205FF-4	04, 1st floor, west room by big doors Lead paint clean up with high pressure washer	Area	2/5/01	397	3.35	1329.9	<5.0	<3.76	
010205FF-5	05, West side bldg., outdoors, south end. Moved to east side 10:00 AM Loading soil	Area	2/5/01	397	3.35	1329.9	<5.0	<3.76	

Standard, NIST 2581 Standard Reference Material and Spike values are reported for quality control purposes. OSHA Action is 30 µg/m3 for the 8 hour TWA. OSHA PEL is 50.0 µg/m3 for the 8 hour TWA. Reporting limit is 5.0 µg total lead.
 Samples analyzed in accordance with EPA method 7420 for lead analysis by AA.
 NIOSH method 7082 for quantitation of lead is also referenced.
 This is an elemental analysis, not compound specific.


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FLAME ATOMIC ABSORPTION SPECTROSCOPY
NIOSH Method 7082 for Airborne Lead Analysis

CLIENT#: 1387

CLIENT: Pacific Gas and Electric
 P.O. Box 770000, Mail Code B24
 San Francisco, CA 94177

TEL#/FAX#: 415-973-6902 / 415-973-9201

CLIENT REF#:

LOCATION: Substation E
 408 Linda Ave
 Piedmont, CA

KELLCO JOB#: 0008-14
 KELLCO LOGIN#: 010205FF

DATE COLLECTED: 2/5/01
 DATE RECEIVED: 2/5/01
 DATE ANALYZED: 2/6/01
 DATE REPORT: 2/9/01

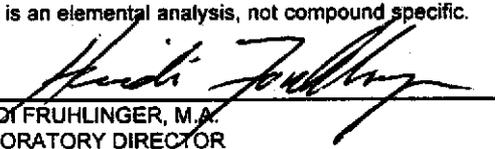
PAGE#: 2 of 2

ANALYST: J. Neth

Q.C. Data	Measured Value	Percent Recovery
QC 200.0µg Spike:	209.0 µg	104.5 %
QC 5.0 ppm Std.:	5.04 ppm	100.8 %
QC 10.0 ppm Std.:	9.97 ppm	99.7 %
QC NIST 2581 SRM (0.449%):	0.43 %	95.3 %

KELLCO ID#	CLIENT SAMPLE ID AND DESCRIPTION	WORKER SS#	DATE	TIME (min)	FLOW (liters/min)	VOL. (liters)	TOTAL LEAD (µg)	ACTUAL EXPOSURE (µg/m3)	8 HR TWA (µg/m3)
010205FF-6	06, Operator Loading soil	L. Johnson	2/5/01	392	2.43	954.5	<5.0	<5.26	<4.29
010205FF-7	07, East side of bldg., outdoors, southwest end Loading soil	Area	2/5/01	337	3.35	1128.9	<5.0	<4.43	
010205FF-8	08, Blank		2/5/01				<5.0		
010205FF-9	09, Box Blank		2/5/01				<5.0		

Standard, NIST 2581 Standard Reference Material and Spike values are reported for quality control purposes. OSHA Action is 30 µg/m3 for the 8 hour TWA. OSHA PEL is 50.0 µg/m3 for the 8 hour TWA. Reporting limit is 5.0 µg total lead. Samples analyzed in accordance with EPA method 7420 for lead analysis by AA. NIOSH method 7082 for quantitation of lead is also referenced. This is an elemental analysis, not compound specific.


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NIOSH Method 7082 for Airborne Lead Analysis

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San Francisco, CA 94177

TEL#/FAX#: 415-973-6902 / 415-973-9201

CLIENT REF#:

LOCATION: Substation E
 408 Linda Ave
 Piedmont, CA

KELLCO JOB#: 0008-14
 KELLCO LOGIN#: 010206M

DATE COLLECTED: 2/6/01
 DATE RECEIVED: 2/6/01
 DATE ANALYZED: 2/7/01
 DATE REPORT: 2/12/01

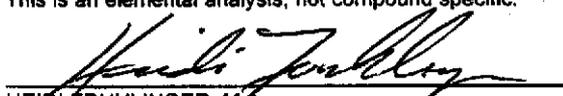
PAGE#: 1 of 2

ANALYST: J. Neth

Q.C. Data	Measured Value	Percent Recovery
QC 200.0µg Spike:	205.0 µg	102.5 %
QC 5.0 ppm Std.:	4.98 ppm	99.6 %
QC 10.0 ppm Std.:	9.89 ppm	98.9 %
QC NIST 2581 SRM (0.449%):	0.43 %	95.1 %

KELLCO ID#	CLIENT SAMPLE ID AND DESCRIPTION	WORKER SS#	DATE	TIME (min)	FLOW (liters/min)	VOL. (liters)	TOTAL LEAD (µg)	ACTUAL EXPOSURE (µg/m3)	8 HR TWA (µg/m3)
010206M-1	01, 2nd floor mezzanine, center	Area	2/6/01	395	3.35	1323.3	<5.0	<3.78	
010206M-2	02, 2nd floor, West side	Area	2/6/01	395	3.35	1323.3	<5.0	<3.78	
010206M-3	03, 1st floor center room, South center	Area	2/6/01	395	3.35	1323.3	<5.0	<3.78	
010206M-4	04, 1st floor center room, Northwest	Area	2/6/01	395	3.35	1323.3	<5.0	<3.78	
010206M-5	05, Outside, Southwest on barrier fence Loading dirt	Area	2/6/01	395	3.35	1323.3	<5.0	<3.78	

Standard, NIST 2581 Standard Reference Material and Spike values are reported for quality control purposes. OSHA Action is 30 µg/m3 for the 8 hour TWA. OSHA PEL is 50.0 µg/m3 for the 8 hour TWA. Reporting limit is 5.0 µg total lead. Samples analyzed in accordance with EPA method 7420 for lead analysis by AA. NIOSH method 7082 for quantitation of lead is also referenced. This is an elemental analysis, not compound specific.


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NIOSH Method 7082 for Airborne Lead Analysis

CLIENT#:1387

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 P.O. Box 770000, Mail Code B24
 San Francisco, CA 94177

TEL#/FAX#: 415-973-6902 / 415-973-9201

CLIENT REF#:

LOCATION: Substation E
 408 Linda Ave
 Piedmont, CA

KELLCO JOB#: 0008-14
 KELLCO LOGIN#: 010206M

DATE COLLECTED: 2/6/01
 DATE RECEIVED: 2/6/01
 DATE ANALYZED: 2/7/01
 DATE REPORT: 2/12/01

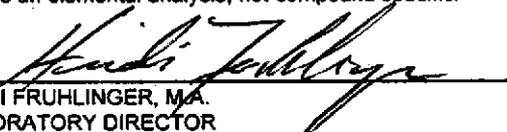
PAGE#: 2 of 2

ANALYST: J. Neth

Q.C. Data	Measured Value	Percent Recovery
QC 200.0µg Spike:	205.0 µg	102.5 %
QC 5.0 ppm Std.:	4.98 ppm	99.6 %
QC 10.0 ppm Std.:	9.89 ppm	98.9 %
QC NIST 2581 SRM (0.449%):	0.43 %	95.1 %

KELLCO ID#	CLIENT SAMPLE ID AND DESCRIPTION	WORKER SS#	DATE	TIME (min)	FLOW (liters/min)	VOL. (liters)	TOTAL LEAD (µg)	ACTUAL EXPOSURE (µg/m3)	8 HR TWA (µg/m3)
010206M-6	06, Outside, East side on barrier fence by 420 Linda Loading dirt	Area	2/6/01	394	3.35	1319.9	<5.0	<3.79	
010206M-7	07, Personal Loader operator	Larry Johnson	2/6/01	390	2.51	978.9	<5.0	<5.11	<4.15
010206M-8	08, Personal	Marvin Peterson 475-34-3777	2/6/01	391	2.51	981.4	<5.0	<5.10	<4.15
010206M-9	09, Blank		2/6/01				<5.0		
010206M-10	10, Box Blank		2/6/01				<5.0		

Standard, NIST 2581 Standard Reference Material and Spike values are reported for quality control purposes. OSHA Action is 30 µg/m3 for the 8 hour TWA. OSHA PEL is 50.0 µg/m3 for the 8 hour TWA. Reporting limit is 5.0 µg total lead. Samples analyzed in accordance with EPA method 7420 for lead analysis by AA. NIOSH method 7082 for quantitation of lead is also referenced. This is an elemental analysis, not compound specific.


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NIOSH Method 7082 for Airborne Lead Analysis

CLIENT#: 1387

CLIENT: Pacific Gas and Electric
 P.O. Box 770000, Mail Code B24
 San Francisco, CA 94177

TEL#/FAX#: 415-973-6902 / 415-973-9201

CLIENT REF#:

LOCATION: Substation E
 408 Linda Ave
 Piedmont, CA

KELLCO JOB#: 0008-14
 KELLCO LOGIN#: 010207V

DATE COLLECTED: 2/7/01
 DATE RECEIVED: 2/7/01
 DATE ANALYZED: 2/8/01
 DATE REPORT: 2/12/01

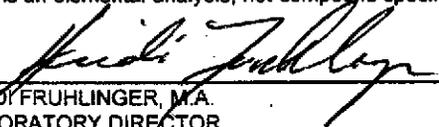
PAGE#: 1 of 2

ANALYST: J. Neth

Q.C. Data	Measured Value	Percent Recovery
QC 200.0µg Spike:	207.0 µg	103.5 %
QC 5.0 ppm Std.:	5.01 ppm	100.2 %
QC 10.0 ppm Std.:	10.08 ppm	100.8 %
QC NIST 2581 SRM (0.449%):	0.43 %	95.5 %

KELLCO ID#	CLIENT SAMPLE ID AND DESCRIPTION	WORKER SS#	DATE	TIME (min)	FLOW (liters/min)	VOL. (liters)	TOTAL LEAD (µg)	ACTUAL EXPOSURE (µg/m3)	8 HR TWA (µg/m3)
010207V-1	01, 2nd floor mezzanine, center No lead work	Area	2/7/01	360	4.23	1522.8	<5.0	<3.28	
010207V-2	02, 2nd floor West, by steps No lead work	Area	2/7/01	359	4.23	1518.6	<5.0	<3.29	
010207V-3	03, 1st floor, center room, South center No lead work	Area	2/7/01	357	4.23	1510.1	<5.0	<3.31	
010207V-4	04, Outside South barrier fence, SW by dumpster Loading dirt	Area	2/7/01	362	4.23	1531.3	<5.0	<3.27	
010207V-5	05, Outside East barrier fence by 420 Linda Loading dirt	Area	2/7/01	362	4.23	1531.3	<5.0	<3.27	

Standard, NIST 2581 Standard Reference Material and Spike values are reported for quality control purposes. OSHA Action is 30 µg/m3 for the 8 hour TWA. OSHA PEL is 50.0 µg/m3 for the 8 hour TWA. Reporting limit is 5.0 µg total lead.
 Samples analyzed in accordance with EPA method 7420 for lead analysis by AA.
 NIOSH method 7082 for quantitation of lead is also referenced.
 This is an elemental analysis, not compound specific.


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FLAME ATOMIC ABSORPTION SPECTROSCOPY
NIOSH Method 7082 for Airborne Lead Analysis

CLIENT#:1387

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 P.O. Box 770000, Mail Code B24
 San Francisco, CA 94177

TEL#/FAX#: 415-973-6902 / 415-973-9201

CLIENT REF#:

LOCATION: Substation E
 408 Linda Ave
 Piedmont, CA

KELCO JOB#: 0008-14
 KELCO LOGIN#: 010207V

DATE COLLECTED: 2/7/01
 DATE RECEIVED: 2/7/01
 DATE ANALYZED: 2/8/01
 DATE REPORT: 2/12/01

PAGE#: 2 of 2

ANALYST: J. Neth

Q.C. Data	Measured Value	Percent Recovery
QC 200.0µg Spike:	207.0 µg	103.5 %
QC 5.0 ppm Std.:	5.01 ppm	100.2 %
QC 10.0 ppm Std.:	10.08 ppm	100.8 %
QC NIST 2581 SRM (0.449%):	0.43 %	95.5 %

KELCO ID#	CLIENT SAMPLE ID AND DESCRIPTION	WORKER SS#	DATE	TIME (min)	FLOW (liters/min)	VOL. (liters)	TOTAL LEAD (µg)	ACTUAL EXPOSURE (µg/m3)	8 HR TWA (µg/m3)
010207V-6	06, 1st floor center room, NW corner No lead work	Area	2/7/01	354	4.23	1497.4	<5.0	<3.34	
010207V-7	07, Personal, bobcat operator Bobcat operator	Larry Johnson	2/7/01	340	2.94	999.6	<5.0	<5.0	<3.54
010207V-8	08, North end center on fence by Apt bldg Loading & digging dirt	Area	2/7/01	335	4.12	1380.2	<5.0	<3.62	
010207V-9	09, Blank		2/7/01				<5.0		
010207V-10	10, Box Blank		2/7/01				<5.0		

Standard, NIST 2581 Standard Reference Material and Spike values are reported for quality control purposes. OSHA Action is 30 µg/m3 for the 8 hour TWA. OSHA PEL is 50.0 µg/m3 for the 8 hour TWA. Reporting limit is 5.0 µg total lead. Samples analyzed in accordance with EPA method 7420 for lead analysis by AA. NIOSH method 7082 for quantitation of lead is also referenced. This is an elemental analysis, not compound specific.


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NIOSH Method 7082 for Airborne Lead Analysis

CLIENT#:1387

CLIENT: Pacific Gas and Electric

P.O. Box 770000, Mail Code B24

San Francisco, CA 94177

TEL#/FAX#: 415-973-6902 / 415-973-9201

CLIENT REF#:

LOCATION: Substation E
 408 Linda Ave
 Piedmont, CA

KELLCO JOB#: 0008-14
 KELLCO LOGIN#: 010208W

DATE COLLECTED: 2/8/01
 DATE RECEIVED: 2/9/01
 DATE ANALYZED: 2/9/01
 DATE REPORT: 2/15/01

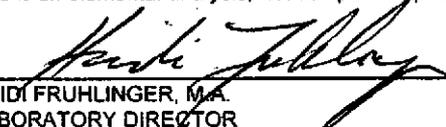
PAGE#: 1 of 2

ANALYST: J. Neth

Q.C. Data	Measured Value	Percent Recovery
QC 200.0µg Spike:	209.0 µg	104.5 %
QC 5.0 ppm Std.:	4.97 ppm	99.4 %
QC 10.0 ppm Std.:	9.94 ppm	99.4 %
QC NIST 2581 SRM (0.449%):	0.43 %	94.9 %

KELLCO ID#	CLIENT SAMPLE ID AND DESCRIPTION	WORKER SS#	DATE	TIME (min)	FLOW (liters/min)	VOL. (liters)	TOTAL LEAD (µg)	ACTUAL EXPOSURE (µg/m3)	8 HR TWA (µg/m3)
010208W-1	01, 1st floor, West room, South side at bay doors Soil remediation outdoors, cutting ducts & removing indoors	Area	2/8/01	411	3.94	1619.3	20.55	12.69	
010208W-2	02, 1st floor, center room at South side of concrete rack Soil remediation outdoors, cutting ducts & removing indoors	Area	2/8/01	411	4.12	1693.3	6.60	3.90	
010208W-3	03, 2nd floor, center area at S.W. stairs to West room Soil remediation outdoors, cutting ducts & removing indoors	Area	2/8/01	410	4.01	1644.1	5.85	3.56	
010208W-4	04, Outdoors, 15 ft S.W. of bldg on barrier fence at sidewalk Soil remediation outdoors, cutting ducts & removing indoors	Area	2/8/01	409	3.97	1625.8	<5.0	<3.08	
010208W-5	05, Outdoors, 15 ft N.W. of bldg on apartment fence Soil remediation outdoors, cutting ducts & removing indoors	Area	2/8/01	409	3.59	1468.3	<5.0	<3.41	

Standard, NIST 2581 Standard Reference Material and Spike values are reported for quality control purposes. OSHA Action is 30 µg/m3 for the 8 hour TWA. OSHA PEL is 50.0 µg/m3 for the 8 hour TWA. Reporting limit is 5.0 µg total lead.
 Samples analyzed in accordance with EPA method 7420 for lead analysis by AA.
 NIOSH method 7082 for quantitation of lead is also referenced.
 This is an elemental analysis, not compound specific.


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FLAME ATOMIC ABSORPTION SPECTROSCOPY
NIOSH Method 7082 for Airborne Lead Analysis

CLIENT#: 1387

CLIENT: Pacific Gas and Electric
 P.O. Box 770000, Mail Code B24
 San Francisco, CA 94177

TEL#/FAX#: 415-973-6902 / 415-973-9201

CLIENT REF#:

LOCATION: Substation E
 408 Linda Ave
 Piedmont, CA

KELCO JOB#: 0008-14
 KELCO LOGIN#: 010208W

DATE COLLECTED: 2/8/01
 DATE RECEIVED: 2/9/01
 DATE ANALYZED: 2/9/01
 DATE REPORT: 2/15/01

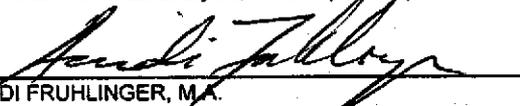
PAGE#: 2 of 2

ANALYST: J. Neth

Q.C. Data	Measured Value	Percent Recovery
QC 200.0µg Spike:	209.0 µg	104.5 %
QC 5.0 ppm Std.:	4.97 ppm	99.4 %
QC 10.0 ppm Std.:	9.94 ppm	99.4 %
QC NIST 2581 SRM (0.449%):	0.43 %	94.9 %

KELCO ID#	CLIENT SAMPLE ID AND DESCRIPTION	WORKER	DATE	TIME (min)	FLOW (liters/min)	VOL. (liters)	TOTAL LEAD (µg)	ACTUAL EXPOSURE (µg/m3)	8 HR TWA (µg/m3)
		SS#							
010208W-6	06, On barrier fence at N.W. corner of 420 Linda property Soil remediation outdoors, cutting ducts & removing indoors	Area	2/8/01	409	3.60	1472.4	<5.0	<3.40	
010208W-7	07, On barrier fence at S.E. corner of PG&E site Soil remediation outdoors, cutting ducts & removing indoors	Area	2/8/01	410	3.31	1355.1	<5.0	<3.69	
010208W-8	08, Outdoors on barrier fence at sidewalk outside bay doors Soil remediation outdoors, cutting ducts & removing indoors	Area	2/8/01	400	4.01	1604.0	<5.0	<3.12	
010208W-9	09, Field Blank		2/8/01				<5.0		
010208W-10	10, Box Blank		2/8/01				<5.0		

Standard, NIST 2581 Standard Reference Material and Spike values are reported for quality control purposes. OSHA Action is 30 µg/m3 for the 8 hour TWA. OSHA PEL is 50.0 µg/m3 for the 8 hour TWA. Reporting limit is 5.0 µg total lead.
 Samples analyzed in accordance with EPA method 7420 for lead analysis by AA.
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 P.O. Box 770000, Mail Code B24
 San Francisco, CA 94177

TEL#/FAX#: 415-973-6902 / 415-973-9201

CLIENT REF#:

LOCATION: Substation E
 408 Linda Ave
 Piedmont, CA

KELCO JOB#: 0008-14
 KELCO LOGIN#: 010209Q

DATE COLLECTED: 2/9/01
 DATE RECEIVED: 2/9/01
 DATE ANALYZED: 2/12/01
 DATE REPORT: 2/15/01

PAGE#: 1 of 2

ANALYST: J. Neth

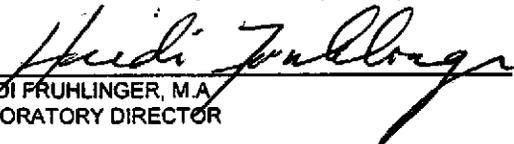
Q.C. Data	Measured Value	Percent Recovery
QC 200.0µg Spike:	213.0 µg	106.5 %
QC 5.0 ppm Std.:	5.00 ppm	100.0 %
QC 10.0 ppm Std.:	9.97 ppm	99.7 %
QC NIST 2581 SRM (0.449%):	0.43 %	96.7 %

KELCO ID#	CLIENT SAMPLE ID AND DESCRIPTION	WORKER SS#	DATE	TIME (min)	FLOW (liters/min)	VOL. (liters)	TOTAL LEAD (µg)	ACTUAL EXPOSURE (µg/m3)	8 HR TWA (µg/m3)
010209Q-1	01, 1st floor. S.E. room, North doorway Equipment mobilization & component (panels) removal	Area	2/9/01	320	3.94	1260.8	<5.0	<3.97	
010209Q-2	02, 1st floor, North doorway (door open) Equipment mobilization & component (panels) removal	Area	2/9/01	320	3.59	1148.8	6.00	5.22	
010209Q-3	03, 1st floor, center area, South end of concrete racks Equipment mobilization & component (panels) removal	Area	2/9/01	320	4.01	1283.2	7.20	5.61	
010209Q-4	04, 1st floor, S.W. room South end next to bay doors Equipment mobilization & component (panels) removal	Area	2/9/01	320	4.01	1283.2	8.85	6.90	
010209Q-5	05, 1st floor, S.W. room, N.W. corner Equipment mobilization & component (panels) removal	Area	2/9/01	320	4.01	1283.2	10.95	8.53	

Standard, NIST 2581 Standard Reference Material and Spike values are reported for quality control purposes. OSHA Action is 30 µg/m3 for the 8 hour TWA. OSHA PEL is 50.0 µg/m3 for the 8 hour TWA. Reporting limit is 5.0 µg total lead.

Samples analyzed in accordance with EPA method 7420 for lead analysis by AA. NIOSH method 7082 for quantitation of lead is also referenced.

This is an elemental analysis, not compound specific.


 HEIDI FRUHLINGER, M.A.
 LABORATORY DIRECTOR

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FLAME ATOMIC ABSORPTION SPECTROSCOPY
NIOSH Method 7082 for Airborne Lead Analysis

CLIENT#:1387

CLIENT: Pacific Gas and Electric
 P.O. Box 770000, Mail Code B24
 San Francisco, CA 94177

TEL#/FAX#: 415-973-6902 / 415-973-9201

CLIENT REF#:

LOCATION: Substation E
 408 Linda Ave
 Piedmont, CA

KELCO JOB#: 0008-14
 KELCO LOGIN#: 010209Q

DATE COLLECTED: 2/9/01
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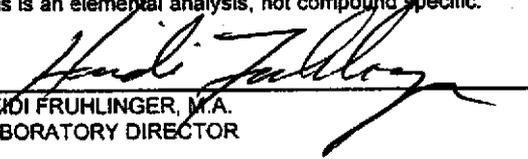
PAGE#: 2 of 2

ANALYST: J. Neth

Q.C. Data	Measured Value	Percent Recovery
QC 200.0µg Spike:	213.0 µg	106.5 %
QC 5.0 ppm Std.:	5.00 ppm	100.0 %
QC 10.0 ppm Std.:	9.97 ppm	99.7 %
QC NIST 2581 SRM (0.449%):	0.43 %	96.7 %

KELCO ID#	CLIENT SAMPLE ID AND DESCRIPTION	WORKER SS#	DATE	TIME (min)	FLOW (liters/min)	VOL. (liters)	TOTAL LEAD (µg)	ACTUAL EXPOSURE (µg/m3)	8 HR TWA (µg/m3)
010209Q-6	06, 2nd floor, center area at top of East stairs Equipment mobilization & component (panels) removal	Area	2/9/01	318	4.01	1275.2	6.30	4.94	
010209Q-7	07, Outdoors on barrier fence at sidewalk adj to S.E. corner of bldg Equipment mobilization & component (panels) removal	Area	2/9/01	315	3.17	998.6	<5.0	<5.01	
010209Q-8	08, Outdoors on barrier fence at sidewalk next to bay doors Equipment mobilization & component (panels) removal	Area	2/9/01	315	3.17	998.6	<5.0	<5.01	
010209Q-9	09, Field Blank		2/9/01				<5.0		
010209Q-10	10, Box Blank		2/9/01				<5.0		

Standard, NIST 2581 Standard Reference Material and Spike values are reported for quality control purposes. OSHA Action is 30 µg/m3 for the 8 hour TWA. OSHA PEL is 50.0 µg/m3 for the 8 hour TWA. Reporting limit is 5.0 µg total lead. Samples analyzed in accordance with EPA method 7420 for lead analysis by AA. NIOSH method 7082 for quantitation of lead is also referenced. This is an elemental analysis, not compound specific.


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NIOSH Method 7082 for Airborne Lead Analysis

CLIENT#:1387

CLIENT: Pacific Gas and Electric
 P.O. Box 770000, Mail Code B24
 San Francisco, CA 94177
 TEL#/FAX#: 415-973-6902 / 415-973-9201

KELLCO JOB#: 0008-14
 KELLCO LOGIN#: 010212L

DATE COLLECTED: 2/12/01
 DATE RECEIVED: 2/12/01
 DATE ANALYZED: 2/13/01
 DATE REPORT: 2/15/01

CLIENT REF#:

LOCATION: Substation E
 408 Linda Ave
 Piedmont, CA

PAGE#: 1 of 2

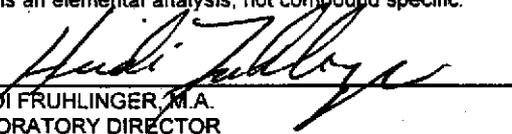
ANALYST: J. Neth

Q.C. Data	Measured Value	Percent Recovery
QC 200.0µg Spike:	213.0 µg	106.5 %
QC 5.0 ppm Std.:	4.94 ppm	98.8 %
QC 10.0 ppm Std.:	9.90 ppm	99.0 %
QC NIST 2581 SRM (0.449%):	0.42 %	94.3 %

Rush

KELLCO ID#	CLIENT SAMPLE ID AND DESCRIPTION	WORKER SS#	DATE	TIME (min)	FLOW (liters/min)	VOL (liters)	TOTAL LEAD (µg)	ACTUAL EXPOSURE (µg/m3)	8 HR TWA (µg/m3)
010212L-1	01, 2nd floor, center Painting, encaping, scraping loose lead paint	Area	2/12/01	375	5.45	2043.7	9.30	4.55	
010212L-2	02, 2nd floor mezzanine, South end Painting, encaping, scraping loose lead paint	Area	2/12/01	373	5.45	2032.8	6.60	3.25	
010212L-3	03, 1st floor, center room Painting, encaping, scraping loose lead paint	Area	2/12/01	374	5.45	2038.3	6.75	3.31	
010212L-4	04, 1st floor, office Northwest Painting, encaping, scraping loose lead paint	Area	2/12/01	376	5.45	2049.2	<5.0	<2.44	
010212L-5	05, Outside big doors Painting, encaping, scraping loose lead paint	Area	2/12/01	376	5.45	2049.2	<5.0	<2.44	

Standard, NIST 2581 Standard Reference Material and Spike values are reported for quality control purposes. OSHA Action is 30 µg/m3 for the 8 hour TWA. OSHA PEL is 50.0 µg/m3 for the 8 hour TWA. Reporting limit is 5.0 µg total lead. Samples analyzed in accordance with EPA method 7420 for lead analysis by AA. NIOSH method 7082 for quantitation of lead is also referenced. This is an elemental analysis, not compound specific.


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FLAME ATOMIC ABSORPTION SPECTROSCOPY
NIOSH Method 7082 for Airborne Lead Analysis

CLIENT#: 1387

CLIENT: Pacific Gas and Electric
 P.O. Box 770000, Mail Code B24
 San Francisco, CA 94177

TEL#/FAX#: 415-973-6902 / 415-973-9201

CLIENT REF#:

LOCATION: Substation E
 408 Linda Ave
 Piedmont, CA

KELLCO JOB#: 0008-14
 KELLCO LOGIN#: 010212L

DATE COLLECTED: 2/12/01
 DATE RECEIVED: 2/12/01
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 DATE REPORT: 2/15/01

PAGE#: 2 of 2

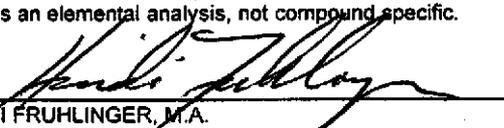
ANALYST: J. Neth

Q.C. Data	Measured Value	Percent Recovery
QC 200.0µg Spike:	213.0 µg	106.5 %
QC 5.0 ppm Std.:	4.94 ppm	98.8 %
QC 10.0 ppm Std.:	9.90 ppm	99.0 %
QC NIST 2581 SRM (0.449%):	0.42 %	94.3 %

Rush

KELLCO ID#	CLIENT SAMPLE ID AND DESCRIPTION	WORKER SS#	DATE	TIME (min)	FLOW (liters/min)	VOL. (liters)	TOTAL LEAD (µg)	ACTUAL EXPOSURE (µg/m3)	8 HR TWA (µg/m3)
010212L-6	06, Personal Monitoring	Marvin Peterson	2/12/01	373	2.34	872.8	<5.0	<5.73	<4.45
010212L-7	07, Personal Encap, scrape loose paint		2/12/01	369	2.34	863.5	<5.0	<5.79	<4.45
010212L-8	08, Blank		2/12/01				<5.0		

Standard, NIST 2581 Standard Reference Material and Spike values are reported for quality control purposes. OSHA Action is 30 µg/m3 for the 8 hour TWA. OSHA PEL is 50.0 µg/m3 for the 8 hour TWA. Reporting limit is 5.0 µg total lead.
 Samples analyzed in accordance with EPA method 7420 for lead analysis by AA.
 NIOSH method 7082 for quantitation of lead is also referenced.
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San Francisco, CA 94177

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CLIENT REF#:

LOCATION: Substation E
 408 Linda Ave
 Piedmont, CA

KELLCO JOB#: 0008-14
 KELLCO LOGIN#: 0102130

DATE COLLECTED: 2/13/01
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 DATE REPORT: 2/19/01

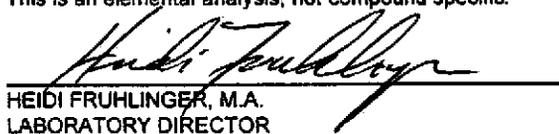
PAGE#: 1 of 2

ANALYST: J. Neth

Q.C. Data	Measured Value	Percent Recovery
QC 200.0µg Spike:	210.0 µg	105.0 %
QC 5.0 ppm Std.:	4.93 ppm	98.6 %
QC 10.0 ppm Std.:	9.95 ppm	99.5 %
QC NIST 2581 SRM (0.449%):	0.43 %	94.9 %

KELLCO ID#	CLIENT SAMPLE ID AND DESCRIPTION	WORKER SS#	DATE	TIME (min)	FLOW (liters/min)	VOL. (liters)	TOTAL LEAD (µg)	ACTUAL EXPOSURE (µg/m3)	8 HR TWA (µg/m3)
0102130-1	01, 2nd Mezzanine, center Painting over loose lead paint	Area	2/13/01	400	5.45	2180.0	8.70	3.99	
0102130-2	02, 2nd Floor mezzanine, South center Painting over loose lead paint	Area	2/13/01	400	5.45	2180.0	10.35	4.75	
0102130-3	03, Center room, center Painting over loose lead paint	Area	2/13/01	400	5.45	2180.0	<5.0	<2.29	
0102130-4	04, Office, Northwest corner Painting over loose lead paint	Area	2/13/01	400	5.45	2180.0	<5.0	<2.29	
0102130-5	05, Outside big doors Painting over loose lead paint	Area	2/13/01	383	5.45	2087.3	<5.0	<2.40	

Standard, NIST 2581 Standard Reference Material and Spike values are reported for quality control purposes. OSHA Action is 30 µg/m3 for the 8 hour TWA. OSHA PEL is 50.0 µg/m3 for the 8 hour TWA. Reporting limit is 5.0 µg total lead. Samples analyzed in accordance with EPA method 7420 for lead analysis by AA. NIOSH method 7082 for quantitation of lead is also referenced. This is an elemental analysis, not compound specific.


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NIOSH Method 7082 for Airborne Lead Analysis

CLIENT#:1387

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 P.O. Box 770000, Mail Code B24
 San Francisco, CA 94177

TEL#/FAX#: 415-973-6902 / 415-973-9201

CLIENT REF#:

LOCATION: Substation E
 408 Linda Ave
 Piedmont, CA

KELCO JOB#: 0008-14
 KELCO LOGIN#: 0102130

DATE COLLECTED: 2/13/01
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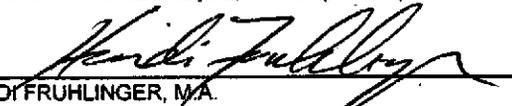
PAGE#: 2 of 2

ANALYST: J. Neth

Q.C. Data	Measured Value	Percent Recovery
QC 200.0µg Spike:	210.0 µg	105.0 %
QC 5.0 ppm Std.:	4.93 ppm	98.6 %
QC 10.0 ppm Std.:	9.95 ppm	99.5 %
QC NIST 2581 SRM (0.449%):	0.43 %	94.9 %

KELCO ID#	CLIENT SAMPLE ID AND DESCRIPTION	WORKER SS#	DATE	TIME (min)	FLOW (liters/min)	VOL. (liters)	TOTAL LEAD (µg)	ACTUAL EXPOSURE (µg/m3)	8 HR TWA (µg/m3)
0102130-6	06, Personal, pump Painting over loose lead paint		2/13/01	370	2.34	865.8	<5.0	<5.77	<4.45
0102130-7	07, Blank		2/13/01				<5.0		
0102130-8	08, Box Blank		2/13/01				<5.0		

Standard, NIST 2581 Standard Reference Material and Spike values are reported for quality control purposes. OSHA Action is 30 µg/m³ for the 8 hour TWA. OSHA PEL is 50.0 µg/m³ for the 8 hour TWA. Reporting limit is 5.0 µg total lead. Samples analyzed in accordance with EPA method 7420 for lead analysis by AA. NIOSH method 7082 for quantitation of lead is also referenced. This is an elemental analysis, not compound specific.


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FLAME ATOMIC ABSORPTION SPECTROSCOPY

NIOSH Method 7082 for Airborne Lead Analysis

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CLIENT: Pacific Gas and Electric

P.O. Box 770000, Mail Code B24

San Francisco, CA 94177

TEL#/FAX#: 415-973-6902 / 415-973-9201

CLIENT REF#:

LOCATION: Substation E
408 Linda Ave
Piedmont, CA

KELLCO JOB#: 0008-14

KELLCO LOGIN#: 010214R

DATE COLLECTED: 2/14/01

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PAGE#: 1 of 2

ANALYST: J. Neth

Q.C. Data	Measured Value	Percent Recovery
QC 200.0µg Spike:	204.0 µg	102.0 %
QC 5.0 ppm Std.:	4.94 ppm	98.8 %
QC 10.0 ppm Std.:	9.89 ppm	98.9 %
QC NIST 2581 SRM (0.449%):	0.43 %	95.3 %

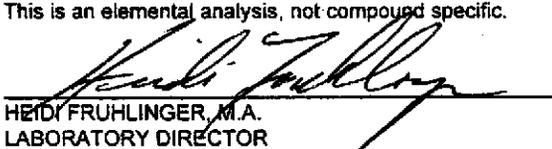
Rush

KELLCO ID#	CLIENT SAMPLE ID AND DESCRIPTION	WORKER SS#	DATE	TIME (min)	FLOW (liters/min)	VOL. (liters)	TOTAL LEAD (µg)	ACTUAL EXPOSURE (µg/m ³)	8 HR TWA (µg/m ³)
010214R-1	01, 2nd floor, center Painting over loose lead paint	Area	2/14/01	390	5.45	2125.5	35.55	16.72	
010214R-2	02, 2nd floor mezzanine, South end Painting over loose lead paint	Area	2/14/01	389	5.45	2120.0	20.25	9.55	
010214R-3	03, 1st floor, center room Painting over loose lead paint	Area	2/14/01	390	5.45	2125.5	26.10	12.28	
010214R-4	04, 1st floor, office area, Southwest Painting over loose lead paint	Area	2/14/01	389	5.45	2120.0	13.05	6.16	
010214R-5	05, Outside big doors, South wall Painting over loose lead paint	Area	2/14/01	390	5.45	2125.5	<5.0	<2.35	

Standard, NIST 2581 Standard Reference Material and Spike values are reported for quality control purposes. OSHA Action is 30 µg/m³ for the 8 hour TWA. OSHA PEL is 50.0 µg/m³ for the 8 hour TWA. Reporting limit is 5.0 µg total lead.

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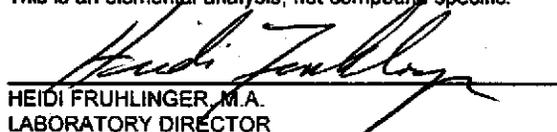
ANALYST: J. Neth

Q.C. Data	Measured Value	Percent Recovery
QC 200.0µg Spike:	204.0 µg	102.0 %
QC 5.0 ppm Std.:	4.94 ppm	98.8 %
QC 10.0 ppm Std.:	9.89 ppm	98.9 %
QC NIST 2581 SRM (0.449%):	0.43 %	95.3 %

Rush

KELLCO ID#	CLIENT SAMPLE ID AND DESCRIPTION	WORKER SS#	DATE	TIME (min)	FLOW (liters/min)	VOL. (liters)	TOTAL LEAD (µg)	ACTUAL EXPOSURE (µg/m3)	8 HR TWA (µg/m3)
010214R-6	06, Personal Painting	Maurice Williams, Sr	2/14/01	240	2.34	561.6	<5.0	<9.51	<4.75
010214R-7	07, Blank		2/14/01				<5.0		

Standard, NIST 2581 Standard Reference Material and Spike values are reported for quality control purposes. OSHA Action is 30 µg/m3 for the 8 hour TWA. OSHA PEL is 50.0 µg/m3 for the 8 hour TWA. Reporting limit is 5.0 µg total lead.
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