APPENDIX C
REGULATORY DATA AND OTHER REPORTS

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
ALEX BRISCOE, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

March 13, 2015

Ms. Pennie Barger
Apex Refrigeration Corp. and
Pellegrini Refrigeration & Restaurant Equipment Co.
1550 Park Avenue
Emeryville, CA 94608
(sent via electronic mail to: pelco1969@sbcglobal.net)

Subject: Landowner Identification for Case Closure Consideration for Fuel Leak Case No. RO0003069 and GeoTracker Global ID T1000002519, Pellegrini Refrigeration & Restaurant Equipment Company, 1550 Park Avenue, Emeryville, CA 94608

Dear Ms. Barger:

Alameda County Environmental Health (ACEH) is considering the above referenced site for potential case closure. As you are aware a site investigation and groundwater monitoring for underground storage tank leaks has been performed at the subject property to which you are named as the primary or active responsible parties.

List of Landowners Form

Pursuant to Section 25297.15 (a) of the California Health and Safety Code, Alameda County Environmental Health (ACEH), the local agency, shall not consider cleanup or site closure proposals from the primary or active responsible party, issue a closure letter, or make a determination that no further action is required with respect to a site upon which there was an unauthorized release of hazardous substances from an underground storage tank subject to this chapter unless all current record owners of fee title to the site of the proposed action have been notified of the proposed action by the primary or active responsible party. ACEH is required to notify the primary or active responsible party of their requirement to certify in writing to the local agency that the notification requirement in the above-mentioned regulation has been satisfied and to provide the local agency with a complete mailing list of all record fee title owners.

To satisfy this requirement, please complete the enclosed *List of Landowners Form*, and mail it back to ACEH by the date identified below.

Site Management Requirements

ACEH staff has evaluated the case file and believes the case may be eligible for closure. Closure would be under a commercial land use scenario with site management requirements, as residual soil contamination remains in soil beneath the site. Additionally, soil concentration data for the upper five feet of soil indicate residual soil concentrations up to 1,200 milligrams per kilogram (mg/kg) of Total petroleum Hydrocarbons as gasoline (TPHg), 4,700 mg/kg TPH as diesel (TPHd), and 2,500 mg/kg TPH as motor oil (TPHmo). The concentration of TPHd exceeds Human Health Direct Exposure Soil Screening Levels for a Commercial / Industrial Worker Exposure Scenario (Table K-2; 1,100 mg/kg TPHd) and the Construction / Trench Worker Exposure Scenario (Table K-3; 900 mg/kg TPHd) as identified by the San Francisco Bay Regional Water Quality Control Board (RWQCB) Environmental Screening Levels (ESLs) issued in conjunction with the *User's Guide: Derivation and Application of Environmental Screening Levels*, as revised in December 2013. Specifically, according to the RWQCB the TPHd concentration exceeds the non-cancer Hazard Quotient of 1 for these scenarios. Therefore, ACEH will require preparation of a Site Management Plan addressing potential contaminants of concern should excavation or construction activities occur in areas of residual contamination. These activities require planning and

implementation of appropriate health and safety procedures by the responsible party (or current property owner/developer) prior to and during excavation and construction activities.

Re-evaluation of this case is required if land uses changes to any residential or other conservative land use or any redevelopment occurs as residual contamination is documented to remain in the soil beneath the site.

This site is to be entered into the City of Emeryville Permit Tracking System due to the residual contamination on site.

Public Participation

Public participation is a requirement for the Corrective Action Plan and case closure processes. In order to notify potentially affected members of the public of the potential fuel leak case closure, *Notification of Potential Case Closure* will be distributed to addresses in the immediate vicinity. The *Notification of Potential Case Closure* requests that landowners or residents submit any comments or questions to ACEH regarding potential case closure. ACEH will consider all comments from the public prior to potential case closure.

Prior to distribution of the notification, please return the List of Landowner form to ensure that the current landowner is included in this process.

Monitoring Well Destruction and Waste Removal Activities

After public comments have been addressed you will be requested to destroy site monitoring wells and remove any remaining investigation, remediation, and well destruction derived waste from the site.

ACEH will request the well destruction in a separate letter following the conclusion of the public notification period.

TECHNICAL REPORT REQUEST

Please upload technical reports to the ACEH ftp site (Attention: Mark Detterman), and to the State Water Resources Control Board's Geotracker website, in accordance with the specified file naming convention below, according to the following schedule:

- **April 24, 2015** – Return of *List of Landowner Form* (email preferred)
- **May 15, 2015 –** Site Management Plan
  (file name: RO0003069_SITE_MANAGE_R_yyyy-mm-dd)

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

Thank you for your cooperation. Should you have any questions, please contact me at (510) 567--6876 or send me an electronic mail message at mark.detterman@acgov.org.

Sincerely,

Mark Detterman, PG, CEG
Senior Hazardous Materials Specialist

Enclosures: Attachment 1 – Responsible Party (ies) Legal Requirements / Obligations
Electronic Report Upload (ftp) Instructions

Attachment 2 - *List of Landowners Form*

cc: Michael Lamphere, Lamphere Law Offices, 900 Larkspur Landing Circle, Suite 179; Larkspur, CA 94939, (sent via electronic mail to MLamphere@lampherelaw.com)

Erik Oehlschlager, Engineering / Remediation Resources Group, Inc, 4585 Pacheco Blvd, Suite 200, Martinez, CA 94553; (sent via electronic mail to erik.oehlschlager@errg.com)

Dilan Roe, ACEH, (sent via electronic mail to: dilan.roe@acgov.org)
Mark Detterman, ACEH, (sent via electronic mail to mark.detterman@acgov.org)

Attachment 1

Responsible Party(ies) Legal Requirements / Obligations

REPORT REQUESTS

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form. The electronic copy replaces paper copies and is expected to be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program FTP site are provided on the attached "Electronic Report Upload Instructions." Submission of reports to the Alameda County FTP site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) GeoTracker website. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitoring wells, and other data to the GeoTracker database over the Internet. Beginning July 1, 2005, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is required in GeoTracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.waterboards.ca.gov/water_issues/programs/ust/electronic_submittal/).

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to $10,000 per day for each day of violation.

Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)	**REVISION DATE:** May 15, 2014
	ISSUE DATE: July 5, 2005
	PREVIOUS REVISIONS: October 31, 2005; December 16, 2005; March 27, 2009; July 8, 2010, July 25, 2010
SECTION: Miscellaneous Administrative Topics & Procedures	**SUBJECT:** Electronic Report Upload (ftp) Instructions

The Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities.

REQUIREMENTS

- **Please do not submit reports as attachments to electronic mail.**
- Entire report including cover letter must be submitted to the ftp site as **a single portable document format (PDF) with no password protection**.
- It is **preferable** that reports be converted to PDF format from their original format, (e.g., Microsoft Word) rather than scanned.
- **Signature pages and perjury statements must be included and have either original or electronic signature.**
- **Do not password protect the document**. Once indexed and inserted into the correct electronic case file, the document will be secured in compliance with the County's current security standards and a password. **Documents with password protection will not be accepted**.
- Each page in the PDF document should be rotated in the direction that will make it easiest to read on a computer monitor.
- Reports must be named and saved using the following naming convention:

  RO#_Report Name_Year-Month-Date (e.g., RO#5555_WorkPlan_2005-06-14)

Submission Instructions

1) Obtain User Name and Password
   a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
      i) Send an e-mail to deh.loptoxic@acgov.org
   b) In the subject line of your request, be sure to include **"ftp PASSWORD REQUEST"** and in the body of your request, include the **Contact Information, Site Addresses**, and the **Case Numbers (RO# available in Geotracker) you will be posting for**.

2) Upload Files to the ftp Site
   a) Using Internet Explorer (IE4+), go to ftp://alcoftp1.acgov.org
      (i) Note: Netscape, Safari, and Firefox browsers will not open the FTP site as they are NOT being supported at this time.
   b) Click on Page located on the Command bar on upper right side of window, and then scroll down to Open FTP Site in Windows Explorer.
   c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
   d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
   e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.

3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
   a) Send email to deh.loptoxic@acgov.org notify us that you have placed a report on our ftp site.
   b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name @acgov.org. (e.g., firstname.lastname@acgov.org)
   c) The subject line of the e-mail must start with the RO# followed by **Report Upload**. (e.g., Subject: RO1234 Report Upload) If site is a new case without an RO#, use the street address instead.
   d) If your document meets the above requirements and you follow the submission instructions, you will receive a notification by email indicating that your document was successfully uploaded to the ftp site.

LIST OF LANDOWNERS FORM

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

CERTIFIED LIST OF RECORD FEE TITLE OWNERS FOR:

Site Name: Pellegrini Refrigeration & Restaurant Equipment Company

Address: 1550 Park Avenue

City, State, Zip: Emeryville, CA 94608

Record ID #: RO0002982

Please fill out item 1 if there are multiple site landowners (attach an extra sheet if necessary). If you are the sole site landowner, skip item 1 and fill out item 2.

1. In accordance with Section 25297.15(a) of Chapter 6.7 of the California Health & Safety Code, I, _____ (name of primary responsible party), certify that the following is a complete list of current record fee title owners and their mailing addresses for the above site:

   Name: _____

   Address: _____

   City, State, Zip: _____
   E-mail Address: _____

   Name: _____

   Address: _____

   City, State, Zip: _____
   E-mail Address: _____

   Name: _____

   Address: _____

   City, State, Zip: _____
   E-mail Address: _____

2. In accordance with Section 25297.15(a) of Chapter 6.7 of the California Health & Safety Code, I _____, certify that I am the sole landowner for the above site.

   Sincerely,

_____	_____	_____	_____
Signature of Primary Responsible Party	Printed Name	Date	E-mail Address

PELCO SALES AND SERVICE
A DIVISION OF APEX REFRIGERATION

RECEIVED
By Alameda County Environmental Health at 11:07 am, Jan 28, 2015

January 27, 2015

Mr. Mark E. Detterman
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Transmittal
December 2014 Groundwater Monitoring
Apex Refrigeration, Inc., Fuel Leak Case No. RO0003069, Emeryville, California

Dear Mr. Detterman:

Apex Refrigeration, Inc, (Apex) is pleased to submit this report to document December 2014 groundwater monitoring activities conducted at Apex, located at 1550 Park Avenue in Emeryville, California. This report was prepared by Engineering/Remediation Resources Group, Inc. (ERRG) on behalf of Apex in compliance with Alameda County Environmental Health directives related to Fuel Leak Case No. RO0003069.

> *I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge*.

If you have any questions, please contact me at (510) 653-9850 or via e-mail at pelco1969@sbcglobal.com.

Sincerely,

Pennie Barger

Pennie Barger
Secretary-Treasure

enc: Data Transmittal, December 2014 Groundwater Monitoring, Apex Refrigeration, Inc., Fuel Leak Case No. RO0003069, Emeryville, California

cc: Brad Hall, ERRG
Pennie Barger, Apex Refrigeration, Inc.
Michael O. Lamphere, Lamphere Law Offices
ERRG Project File

ERRG
Engineering/Remediation Resources Group, Inc.
4585 Pacheco Blvd., Suite 200
Martinez, CA 94553
P: 925.969.0750
F: 925.969.0751
www.errg.com

January 27, 2015 Ref.: 2013-094

Mr. Mark E. Detterman
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Data Transmittal
December 2014 Groundwater Monitoring
Apex Refrigeration, Inc., Fuel Leak Case No. RO0003069, Emeryville, California

Dear Mr. Detterman:

Engineering/Remediation Resources Group, Inc. (ERRG) has prepared this data transmittal to summarize activities conducted in December 2014 to monitor groundwater at the Apex Refrigeration, Inc. facility (hereinafter referred to as "the Site"), located at 1550 Park Avenue in Emeryville, California (Enclosure 1, Figure 1). The data presented in this transmittal are intended to supplement and update results presented in the "Data Gaps Investigation Summary Report, Apex Refrigeration, Inc., 1550 Park Avenue, Emeryville, California," which ERRG submitted to Alameda County Environmental Health (ACEH) in July 2014.

On February 3, 2014, ACEH requested that quarterly groundwater monitoring be initiated upon installation of monitoring well MW-1 (Enclosure 1, Figure 2), which was installed in April 2014[1]. Quarterly groundwater monitoring, originally scheduled for June and September 2014, was delayed while Apex was securing necessary funding from the State of California's Underground Storage Tank Cleanup Fund. As a result, ERRG did not mobilize to the Site to perform groundwater monitoring until September 26, and December 29, 2014. Results from the September 2014 groundwater monitoring event were submitted to ACEH in a letter report dated October 31, 2014[2].

The purpose of the groundwater monitoring events was to collect groundwater samples from monitoring well MW-1 for analysis of total petroleum hydrocarbons (TPH) and total dissolved solids to verify previous results. TPH was previously identified at elevated concentrations in a grab groundwater sample collected from well S4, which is collocated with well MW-1.

On December 29, 2014, ERRG personnel gauged the monitoring well with an oil/water interface probe to verify that light nonaqueous-phase liquid was not present in the well as floating free product. No free product was detected in the well, and depth to water was measured at 2.13 feet below top of casing. Prior to sample collection, three well volumes were purged with a disposable bailer and water quality

[1] ACEH, 2014. Letter regarding Modified Data Gap Work Plan Approval: Fuel Leak Case No. RO0003069 and GeoTracker Global ID T1000002519, Pelligrini Refrigeration & Restaurant Equipment Company, 1550 Park Avenue, Emeryville, CA 94608. From Mark Detterman. To Pennie Barger. February 3.

[2] ERRG, 2014. "Data Transmittal, September 2014 Groundwater Monitoring, Apex Refrigeration, Inc., Fuel Leak Case No. RO0003069, Emeryville, California." October 31."

parameters (temperature, pH, and electrical conductivity) were measured using an YSI 556 water quality instrument. Samples were then collected from well MW-1.

Samples were submitted to Curtis & Tompkins Laboratories in Berkeley, California, for analysis of:

- TPH-extractables (TPH as diesel and TPH as motor oil) by U.S. Environmental Protection Agency (EPA) Method 8015B (with silica gel cleanup)
- TPH-purgeables (TPH as gasoline) by EPA Method 8015B
- TDS by Standard Method 2540C

Sample results were compared with the San Francisco Bay Regional Water Quality Control Board's (SFRWQCB) environmental screening levels (ESLs) for TPH[3] and the water quality objective for TDS[4], respectively. Comparison results indicated the following:

- TPH as diesel was detected at a concentration of 250 micrograms per liter (µg/L), which was less than the ESL of 640 µg/L (i.e., groundwater is not a potential drinking water resource) but greater than the ESL of 100 µg/L (i.e., groundwater is a potential drinking water resource)
- TPH as motor oil was not detected at a concentration greater than its reporting limit
- TPH as gasoline was detected at a concentration of 63 µg/L, which was less than the ESL of 500 µg/L (i.e., groundwater is not a potential drinking water resource) and less than the ESL of 100 µg/L (i.e., groundwater is a potential drinking water resource)
- TDS was detected at a concentration of 220 milligram per liter (mg/L), which was less than the water quality objective for TDS of 500 mg/L

The TPH results were significantly less than results for the grab groundwater sample collected at S4 (i.e., TPH-d at 83,000 µg/L, TPH-mo at 5,200 µg/L, and TPH-g at 7,100 µg/L) and less than the September 2014 groundwater samples collected at MW-1 (i.e., TPH-d at 350 µg/L, and TPH-g at 170 µg/L). The TPH concentrations at S4, which are skewed orders of magnitude higher than TPH concentrations at well MW-1, indicate that TPH contamination in groundwater at the site is significantly less than originally suspected. A decline in TDS concentration compared to September 2014 results suggests that Fall 2014 rain events in November and December provided fresh water infiltration into shallow groundwater beneath the site.

On January 8, 2015, Envirosource, Inc. removed one 55 gallon drum of investigation derived waste (IDW) soil and one 55 gallon drum of IDW purge water from the Site to be disposed of at licensed and appropriately classed disposal facilities.

Enclosure 2 includes the groundwater monitoring field logs. Enclosure 3, Tables 1 and 2, summarizes all of the site's historical analytical results for soil and groundwater samples. Enclosure 3, Table 3, presents an updated Conceptual Site Model, and Enclosure 4 provides the laboratory analytical report for the December 2014 groundwater monitoring event. Enclosure 5 includes manifests for the transportation and disposal of soil and water drums.

[3] SFRWQCB, 2013. Table F-1a, "Groundwater Screening Levels (groundwater is a current or potential drinking water resource)" and Table F-1b, "Groundwater Screening Levels (groundwater is not a current or potential drinking water resource)" found in the Detailed Lookup Tables at: <http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/esl.shtml>.

[4] SFRWQCB, 2013. Table 3-5: Water Quality Objectives for Municipal Supply in ""San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan)." June 29 (incorporating all amendments approved by the Office of Administrative Law). Available Online at: http://www.waterboards.ca.gov/sanfranciscobay/basin_planning.shtml.

ERRG

Apex Refrigeration, Inc. has fulfilled all ACEH directives regarding Fuel Leak Case No. RO0003069 with the submittal of this report. Therefore, ERRG requests that ACEH review the case to determine if Site closure can be granted.

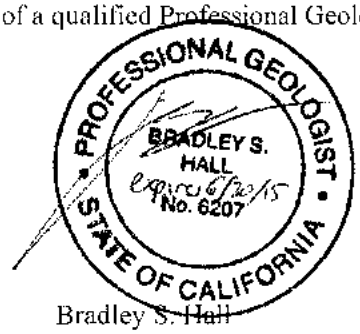
If you have any questions or comments regarding this data transmittal, please contact me at (925) 839-2274 or at erik.oehlschlager@errg.com.

Sincerely,

Erik Oehlschlager
Project Manager

CERTIFICATION

This document was prepared under the direction and supervision of a qualified Professional Geologist.

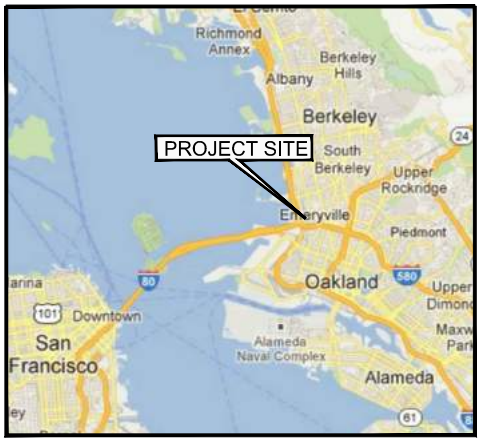


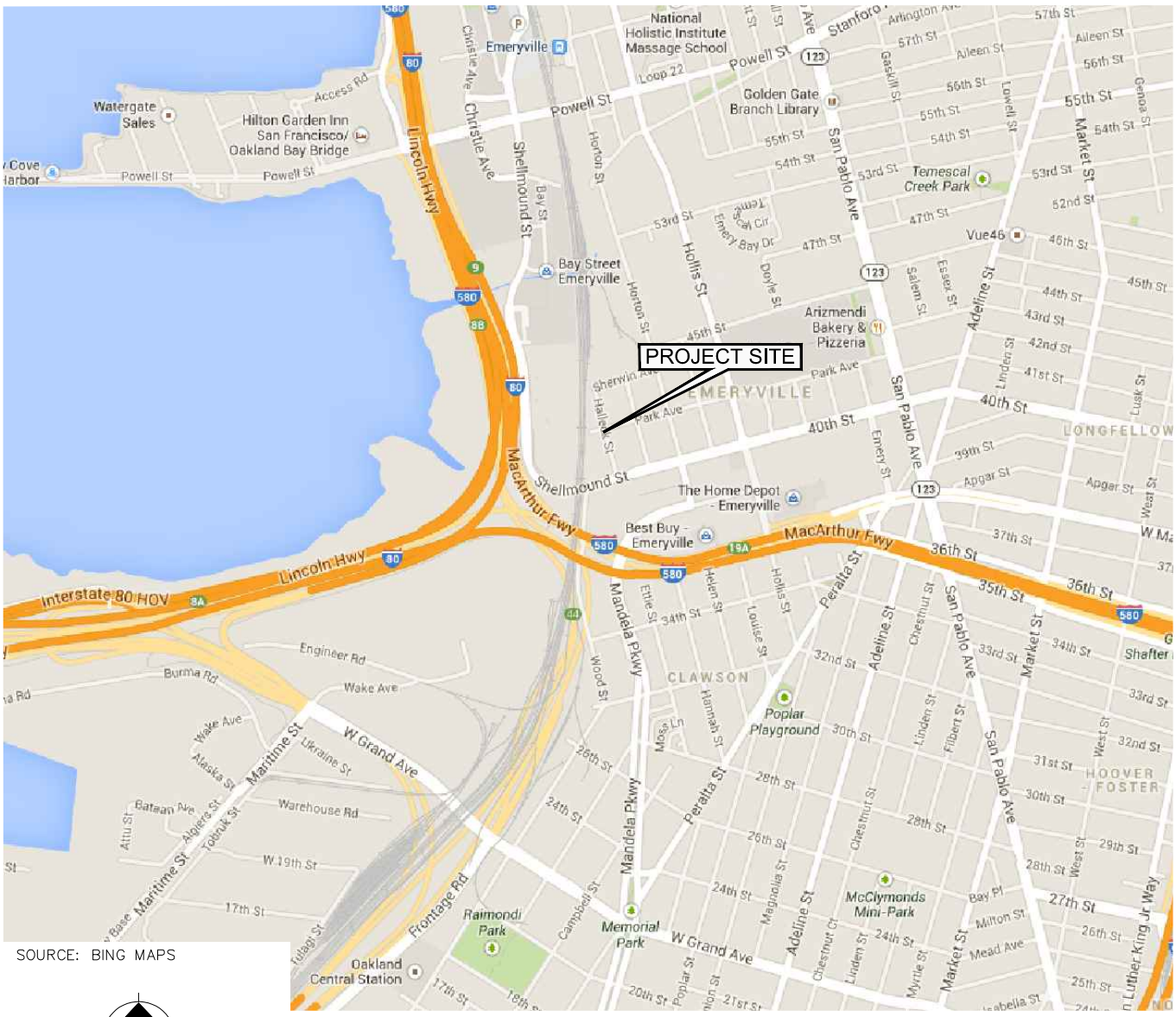
Bradley S. Hall
Professional Geologist No. 6207

Enclosure:
1 – Figures
2 – Field Logs
3 – Tables
4 – Laboratory Analytical Report (Job Number 263614)
5 – Manifests

cc:
Brad Hall, ERRG
Pennie Barger, Apex Refrigeration, Inc.
Michael O. Lamphere, Lamphere Law Offices
ERRG Project File

Enclosure 1. Figures





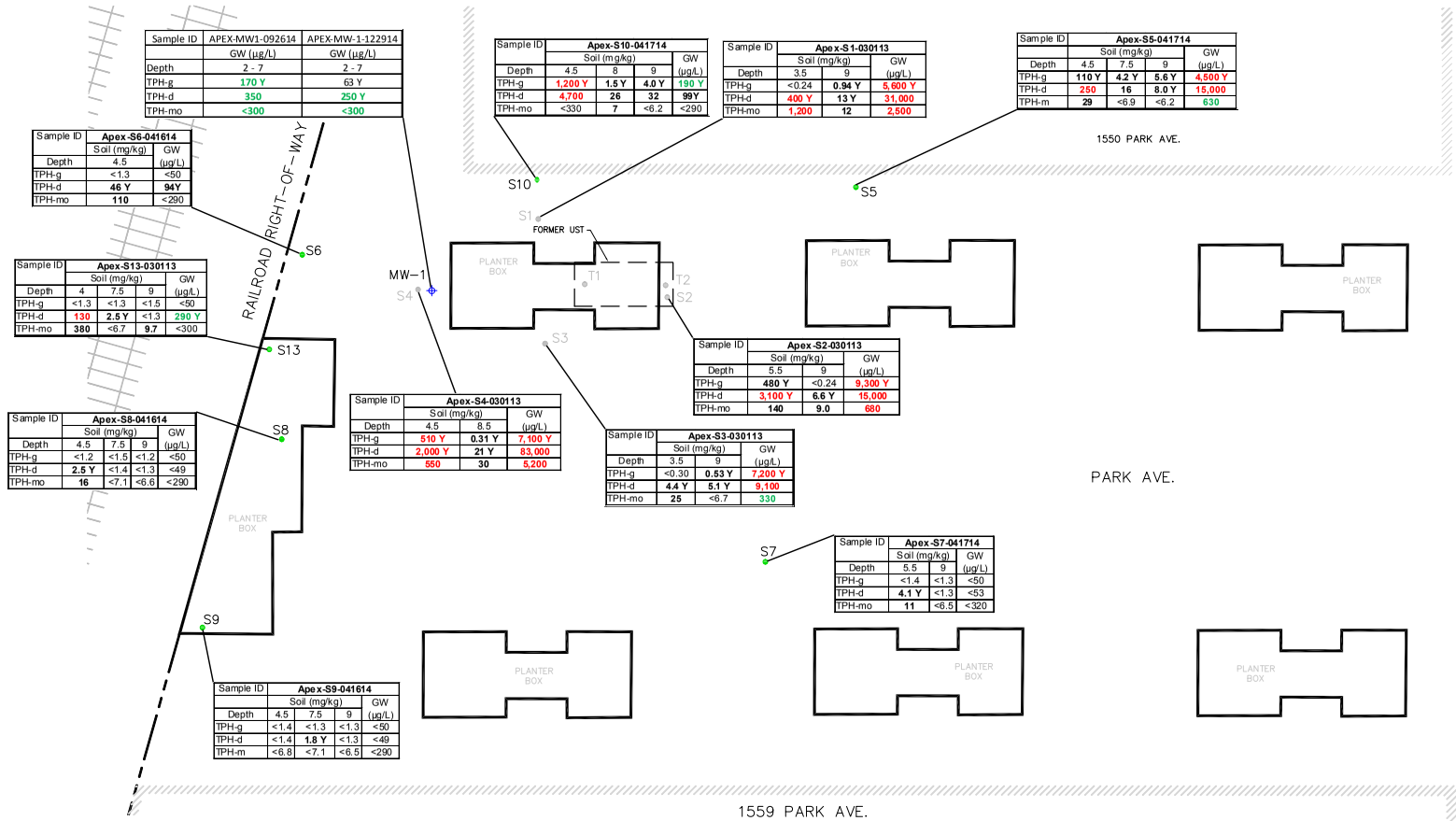
SOURCE: BING MAPS

0' 1200'

APPROXIMATE SCALE: 1"=1200'

Engineering/Remediation Resources Group, Inc. 4585 Pacheco Blvd., Suite 200 Martinez, California 94553 (925) 969-0750	CLIENT: APEX REFRIGERATION, INC. EMERYVILLE, CALIFORNIA	SITE LOCATION MAP			
	LOCATION: 1550 PARK AVENUE EMERYVILLE, CALIFORNIA	DRAWN BY: RDB 10/27/14	CHECKED BY: EKO 10/27/14	PROJECT NO. 2013-094	FIG NO. 1

FILE NAME: N:\Graphics\2013\2013-094 APEX Emeryville\Fig1.dwg LAYOUT NAME: 1 PLOTTED: Monday, October 27, 2014 - 6:46am



Sample ID	APEX-MW1-092614	APEX-MW-1-122914
	GW (µg/L)	GW (µg/L)
Depth	2 - 7	2 - 7
TPH-g	170 Y	63 Y
TPH-d	350	250 Y
TPH-mo	<300	<300

Sample ID	Apex-S10-041714			
	Soil (mg/kg)			GW
Depth	4.5	8	9	(µg/L)
TPH-g	1,200 Y	1.5 Y	4.0 Y	190 Y
TPH-d	4,700	26	32	99Y
TPH-mo	<330	7	<6.2	<290

Sample ID	Apex-S1-030113		
	Soil (mg/kg)		GW
Depth	3.5	9	(µg/L)
TPH-g	<0.24	0.94 Y	5,600 Y
TPH-d	400 Y	13 Y	31,000
TPH-mo	1,200	12	2,500

Sample ID	Apex-S5-041714			
	Soil (mg/kg)			GW
Depth	4.5	7.5	9	(µg/L)
TPH-g	110 Y	4.2 Y	5.6 Y	4,600 Y
TPH-d	250	16	8.0 Y	15,000
TPH-m	29	<6.9	<6.2	630

Sample ID	Apex-S6-041614	
	Soil (mg/kg)	GW
Depth	4.5	(µg/L)
TPH-g	<1.3	<50
TPH-d	46 Y	94Y
TPH-mo	110	<290

Sample ID	Apex-S13-030113			
	Soil (mg/kg)			GW
Depth	4	7.5	9	(µg/L)
TPH-g	<1.3	<1.3	<1.5	<50
TPH-d	130	2.5 Y	<1.3	290 Y
TPH-mo	380	<6.7	9.7	<300

Sample ID	Apex-S4-030113		
	Soil (mg/kg)		GW
Depth	4.5	8.5	(µg/L)
TPH-g	510 Y	0.31 Y	7,100 Y
TPH-d	2,000 Y	21 Y	83,000
TPH-mo	550	30	5,200

Sample ID	Apex-S2-030113		
	Soil (mg/kg)		GW
Depth	5.5	9	(µg/L)
TPH-g	480 Y	<0.24	9,300 Y
TPH-d	3,100 Y	6.6 Y	15,000
TPH-mo	140	9.0	680

Sample ID	Apex-S3-030113		
	Soil (mg/kg)		GW
Depth	3.5	9	(µg/L)
TPH-g	<0.30	0.53 Y	7,200 Y
TPH-d	4.4 Y	5.1 Y	9,100
TPH-mo	25	<6.7	330

Sample ID	Apex-S8-041614			
	Soil (mg/kg)			GW
Depth	4.5	7.5	9	(µg/L)
TPH-g	<1.2	<1.5	<1.2	<50
TPH-d	2.5 Y	<1.4	<1.3	<49
TPH-mo	16	<7.1	<6.6	<290

Sample ID	Apex-S7-041714		
	Soil (mg/kg)		GW
Depth	5.5	9	(µg/L)
TPH-g	<1.4	<1.3	<50
TPH-d	4.1 Y	<1.3	<53
TPH-mo	11	<6.5	<320

Sample ID	Apex-S9-041614			
	Soil (mg/kg)			GW
Depth	4.5	7.5	9	(µg/L)
TPH-g	<1.4	<1.3	<1.3	<50
TPH-d	<1.4	1.8 Y	<1.3	<49
TPH-m	<6.8	<7.1	<6.5	<290

NOTES:

1 = SFRWQCB ESLs, Table B-2, Shallow Soil Screening Levels (≤3m bgs), Commercial/Industrial Land Use (groundwater is not a current or potential drinking water resource), December, 2013.

2 = SFRWQCB ESLs, Table A-2, Shallow Soil Screening Levels (≤3m bgs), Commercial/Industrial Land Use (groundwater is a current or potential drinking water resource), December, 2013.

d = diesel

Depth = feet below ground surface

ESLs = environmental screening levels

GW = groundwater

ID = identification

mg/kg = milligrams per kilogram

µg/L = micrograms per liter

SFRWQCB = San Francisco Bay Regional Water Quality Control Board

TPH = total petroleum hydrocarbons

TPH-g = total petroleum hydrocarbons as gasoline

TPH-d = total petroleum hydrocarbons as diesel

TPH-mo = total petroleum hydrocarbons as motor oil

Y = sample resembles chromatographic pattern, which does not resemble standard

25 = sample result exceeds the laboratory reporting limit

130 = sample result exceeds ESLs where groundwater is a current or potential drinking water resource

330 = sample results is less than ESLs for " is not a drinking water resource" but greater than for "is a drinking water source"

LEGEND:

S3 — PREVIOUS SOIL SAMPLE LOCATION

S5 — SOIL AND GROUNDWATER SAMPLE LOCATION

MW-1 — GROUNDWATER MONITORING WELL

Environmental Screening Levels				
	Soil (mg/kg)		Groundwater (µg/L)	
TPH-g	500 [1]	500 [2]	500 [1]	100 [2]
TPH-d	110 [1]	110 [2]	640 [1]	100 [2]
TPH-mo	500 [1]	500 [2]	640 [1]	100 [2]

Engineering/Remediation Resources Group, Inc.
4585 Pacheco Blvd, Suite 200
Martinez, California 94553
(925) 969-0750
ERRG

CLIENT:	APEX REFRIGERATION, INC. EMERYVILLE, CALIFORNIA	TPH CONCENTRATIONS IN SOIL AND GROUNDWATER			
LOCATION:	1550 PARK AVENUE EMERYVILLE, CALIFORNIA	DRAWN BY: SC 01/20/15	CHECKED BY: EKO 01/20/15	PROJECT NO. 2013-094	FIG NO. 2

FILE NAME: N:\Graphics\2013\2013-094 APEX Emeryville\Fig2-GW.dwg LAYOUT NAME: 2 PLOTTED: Tuesday, January 20, 2015 - 11:45am

Enclosure 2. Field Logs

DAILY FIELD ACTIVITY LOG

Prepared by: Joshua M. Osborne
Day: Monday
Project Name: APEX
Weather: Sunny
Site Visitors:

Client: ~~DTSC~~ APEX
Date: 12/29/14
Project No.: 2013-094
Page: 1 of 1

Description of Field Activities:

1300 - Arrived onsite at APEX Refrigeration
1303 - Introduced self to Penny and called Erik O. to notify him of my arrival
1310 - Setting up for sampling and conducting H+S meeting.
1330 - opening up well cap.
1345 - Depth measurements
PTP = No product
DTW = 2.13'
DTB = 6.93'
Calculated purge volume = 1.296 gal ≈ 4900 mL
1400 - Began taking 3 purge volumes
1430 - Took sample APEX-MW1-122914
1448 - Took sample APEX-MW1-122914-FD
1513 - Emptying purge waters into 55-gal drum onsite.
1515 - Packing up Equipment
1525 - Departing site.

Signed: Joshua Osborne Date: 12/29/14

ERRG

Depth-to-Water and Depth-to-Product Measurement

Apex Former UST Site

1550 Park Avenue

Emeryville, CA

Well I.D.	Date (MM/DD/YY)	Time (HHMM)	Depth to Product (feet btoc)	Depth to Water (feet btoc)	Depth to Bottom (feet btoc)	Comments
S12/MW-1	12/29/14	1345	No Prod.	2.13	6.93	No sheen

Groundwater Purge and Sampling Form

ERRG

PROJECT NO:	2013-004	WELL ID:	APEX-MW-1 ~~APEX~~
DATE:	12/29/14	SAMPLE ID:	APEX-MW-1-122914
CLIENT NAME:	APEX	PURGED BY:	SMD
LOCATION:	Apex Refridgeration	SAMPLED BY:	SMD
ARRIVAL:		DEPARTURE:	

Casing Diameter (innder diameter) 1.5"
Casing Volume. (gal/foot of depth) 0.09

1 casing = 0.432 gal

Total Depth (feet) = 6.93' Depth to Water (feet): 2.13'

Purge Calc: 6.93' (TD) - 2.13' (DTW) = 4.8 (Column of water) x 0.09 (Casing volume) x 0.432 (Casing volume) x 3 (Three casing volumes) = 1.296 (Calculated Purge)

Time Started: 1400

Time (2400hr)	Volume (gal)	Temp. (F)	Conductivity (µmhos/cm)	pH (units)	EC (µS/cm)	Depth to Water (ft)	Pumped Dry (Y/N)
1405	0.432	13.97	~~299~~	10.39	294	2.13'	slightly turbid
1415	0.864	13.13		10.28	306	2.13'	"
1425	1.296	13.13		10.40	305	2.13'	"
Total gallons purged:		1.296			Sample Time:	1430	

PURGING EQUIPMENT

Active Extraction Well Pump ___ Bailer (Teflon) X
Portable Submersible Pump ___ Bailer (PVC) ___
Other ___ Bailer (Stain. Steel) ___
Pump Depth ___ Dedicated ___

SAMPLING EQUIPMENT

Sampling Port ___ Bailer (Teflon) X
Portable Submersible Pump ___ Bailer (PVC) ___
Peristaltic Pump ___ Bailer (Stain. Steel) ___
Other ___

Well Integrity: Good: X Fair: ☐ Poor: ☐

Remarks: ___

Signature: [signature] Reviewed by 12/29/14

EQUIPCO RENTALS

YSI 556MPS RENTAL
CALIBRATION CERTIFICATE

SERVICE TECHNICIAN: WDG DATE: 12.26.14

INSTRUMENT INFORMATION

RENTAL I.D. NUMBER: YSI-556.32
SERIAL#:
CUSTOMER.

CALIBRATION INFORMATION

PARAMETERS:	STANDARDS:	PASS ( )	LOT#
1. CONDUCTIVITY	1000 µMhos	X	39512
2. pH ZERO	pH 7	X	39250
3. pH SLOPE	pH 4	X	39081
pH SLOPE	pH 10	X	39540
4. DISSOLVED OXYGEN	Air Calibration Barometric pressure = 760mmHg	X	N/A
5. REDOX (ORP)	232 mV (YSI Zobell solution)	X	121114

2100 Meridian Park Boulevard, Concord, CA. 94520 Phone (925) 609-1088 Fax (925) 609-1080

Enclosure 3. Tables

Table 1. Soil Boring Analytical Results

Location	Sample Date	Sample Name	Depth (feet bgs)	Total Petroleum Hydrocarbons (by EPA Method 8015B) (mg/kg)			Purgeable Aromatics (Select VOCs by EPA Method 8260B) (µg/kg)						Priority Pollutant Polycyclic Aromatic Hydrocarbons (EPA Method 8270 SIM) (µg/kg)															
				TPH-gasoline	TPH-diesel[1]	TPH-motor oil[1]	MTBE	Benzene	Toluene	Ethylbenzene	m,p-Xylenes	o-Xylenes	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo(a)anthracene	Chrysene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(a)pyrene	Indeno(1,2,3-cd)pyrene	Dibenz(a,h)anthracene	Benzo(g,h,i)perylene
		SFRWQCB ESLs [2]		*500*	*110*	*500*	*0.023*	*0.044*	*2.9*	*3.3*	*2.3*	*2.3*	*1.2*	*13*	*16*	*8.9*	*11*	*2.8*	*40*	*85*	*1.3*	*13*	*1.3*	*1.3*	*0.13*	*1.3*	*0.38*	*27*
		SFRWQCB ESLs [3]		*500*	*110*	*500*	*8.4*	*1.2*	*9.3*	*4.7*	*11*	*11*	*4.8*	*13*	*19*	*8.9*	*11*	*2.8*	*40*	*85*	*1.3*	*13*	*1.3*	*1.3*	*0.13*	*1.3*	*0.38*	*27*
S1	3/1/2013	Apex-S1-3.5-030113	3.5	<0.24	**400 Y**	**1,200**	<5.9	<5.9	<5.9	<5.9	<5.9	<5.9	<29	<29	<29	<29	**240**	**42**	**490**	**570**	**180**	**310**	**270**	**81**	**170**	**57**	<29	**67**
S1	3/1/2013	Apex-S1-9.0-030113	9	**0.94 Y**	**13 Y**	**12**	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.4	<6.4	<6.4	<6.4	**18**	<6.4	**9.2**	**9.8**	<6.4	<6.4	<6.4	<6.4	<6.4	<6.4	<6.4	<6.4
S2	3/1/2013	Apex-S2-5.5-030113	5.5	**480 Y**	**3,100 Y**	**140**	<680	<680	<680	<680	<680	<680	<34	<34	**46**	<34	<34	<34	<34	<34	<34	<34	<34	<34	<34	<34	<34	<34
S2	3/1/2013	Apex-S2-9.0-030113	9	<0.24	**6.6 Y**	**9.0**	<6.2	<6.2	<6.2	<6.2	<6.2	<6.2	<6.5	<6.5	<6.5	<6.5	<6.5	<6.5	<6.5	<6.5	<6.5	<6.5	<6.5	<6.5	<6.5	<6.5	<6.5	<6.5
S3	3/1/2013	Apex-S3-3.5-030113	3.5	<0.30	**4.4 Y**	**25**	<6.8	<6.8	<6.8	<6.8	<6.8	<6.8	<7.0	<7.0	<7.0	<7.0	**7.2**	<7.0	**11**	**15**	<7.0	**7**	**8.7**	<7.0	**8.1**	**7.2**	<7.0	**10**
S3	3/1/2013	Apex-S3-9.0-030113	9	**0.53 Y**	**5.1 Y**	<6.7	<6.2	<6.2	<6.2	<6.2	<6.2	<6.2	<6.7	<6.7	<6.7	<6.7	<6.7	<6.7	<6.7	<6.7	<6.7	<6.7	<6.7	<6.7	<6.7	<6.7	<6.7	<6.7
S4	3/1/2013	Apex-S4-4.5-030113	4.5	**510 Y**	**2,000 Y**	**550**	<330	<330	<330	<330	<330	<330	<26	<26	<26	<26	<26	**44**	<26	<26	<26	<26	<26	<26	<26	<26	<26	<26
S4	3/1/2013	Apex-S4-8.5-030113	9	**0.31 Y**	**21 Y**	**30**	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<6.5	<6.5	<6.5	<6.5	<6.5	<6.5	<6.5	<6.5	<6.5	<6.5	<6.5	<6.5	<6.5	<6.5	<6.5	<6.5
S5	4/17/2014	APEX-S5-4.5-041714	4.5	**110 Y**	**250**	**29**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S5	4/17/2014	APEX-S5-7.5-041714	7.5	**4.2 Y**	**16**	<6.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S5	4/17/2014	APEX-S5-9.0-041714	9	**5.6 Y**	**8.0 Y**	<6.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S6	4/16/2014	APEX-S6-4.5-041614	4.5	<1.3	**46 Y**	**110**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S7	4/17/2014	APEX-S7-5.5-041714	5.5	<1.4	**4.1 Y**	**11**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S7	4/17/2014	APEX-S7-9.0-041714	9	<1.3	<1.3	<6.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S8	4/16/2014	APEX-S8-4.5-041614	4.5	<1.2	**2.5 Y**	**16**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S8	4/16/2014	APEX-S8-7.5-041614	7.5	<1.5	<1.4	<7.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S8	4/16/2014	APEX-S8-9.0-041614	9	<1.2	<1.3	<6.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S9	4/16/2014	APEX-S9-4.5-041614	4.5	<1.4	<1.4	<6.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S9	4/16/2014	APEX-S9-7.5-041614	7.5	<1.3	**1.8Y**	<7.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S9	4/16/2014	APEX-S9-9.0-041614	9	<1.3	<1.3	<6.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S10	4/17/2014	APEX-S10-4.5-041714	4.5	**1,200 Y**	**4,700**	<330	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S10	4/17/2014	APEX-S10-8.0-041714	8	**1.5 Y**	**26**	**7.1**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S10	4/17/2014	APEX-S10-9.0-041714	9	**4.0 Y**	**32**	<6.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S13	4/17/2014	APEX-S13-4.0-041714	4	<1.3	**130**	**380**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S13	4/17/2014	APEX-S13-7.5-041714	7.5	<1.3	**2.5 Y**	<6.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S13	4/17/2014	APEX-S13-9.0-041714	9	<1.5	<1.3	**9.7**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

1 = Analysis run with silica gel cleanup

2 = SFRWQCB ESLs, Table A-2, "Shallow Soil Screening Levels (≤3 m bgs), Commercial/Industrial Land Use (groundwater is a current or potential drinking water resource)," December 2013

3 = SFRWQCB ESLs, Table B-2, "Shallow Soil Screening Levels (≤3 m bgs), Commercial/Industrial Land Use (groundwater is **not** a current or potential drinking water resource)," December 2013

Bold = Sample result exceeds the laboratory reporting limit for the given analyte

Bold Red = Sample result exceeds the SFRWQCB ESLs

bgs = below ground surface

EPA = U.S. Environmental Protection Agency

ESLs = environmental screening levels

mg/kg = milligrams per kilogram

MTBE = methyl tert-butyl ether

NA = not analyzed

SFRWQCB = San Francisco Bay Regional Water Quality Control Board

TPH = total petroleum hydrocarbons

VOCs = volatile organic compounds

Y = sample resembles chromatographic pattern, which does not resemble standard

<0.30 = sample result is less than the laboratory reporting limit for the given analyte

µg/kg = micrograms per kilogram

Table 2. Grab Groundwater Analytical Results

Location	Sample Date	Sample Name	Depth (feet bgs)	Total Dissolved Solids (by SM 2540C) (mg/L)	Total Petroleum Hydrocarbons (by EPA Method 8015B) (µg/L)			Purgeable Aromatics (Select VOCs by EPA Method 8260B) (µg/L)						Priority Pollutant Polycyclic Aromatic Hydrocarbons (EPA Method 8270 SIM) (µg/L)															
				Total Dissolved Solids	TPH-gasoline	TPH-diesel[1]	TPH-motor oil[1]	MTBE	Benzene	Toluene	Ethylbenzene	m,p-Xylenes	o-Xylenes	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo (a) anthracene	Chrysene	Benzo (b) fluoranthene	Benzo (k) fluoranthene	Benzo (a) pyrene	Indeno (1,2,3-cd) pyrene	Dibenz (a,h) anthracene	Benzo (g,h,i) perylene
SFRWQCB ESLs [2]				*NL*	*100*	*100*	*100*	*5.0*	*1.0*	*40*	*30*	*20*	*20*	*6.1*	*30*	*20*	*3.9*	*4.6*	*0.73*	*8.0*	*2.0*	*0.027*	*0.35*	*0.056*	*0.056*	*0.014*	*0.056*	*0.016*	*0.10*
SFRWQCB ESLs [3]				*NL*	*500*	*640*	*640*	*1800*	*27*	*130*	*43*	*100*	*100*	*24*	*30*	*23*	*3.9*	*4.6*	*0.73*	*8.0*	*2.0*	*0.027*	*0.35*	*0.056*	*0.056*	*0.014*	*0.056*	*0.25*	*0.10*
Water Quality Objectives for Municipal Supply [4]				*500*	*NL*	*NL*	*NL*	*130/5.0*	*1.0*	*150*	*700*	*1,750*	*1,750*	*NL*	*NL*	*NL*	*NL*	*NL*	*NL*	*NL*	*NL*	*NL*	*NL*	*NL*	*NL*	*NL*	*NL*	*NL*	*NL*
S1	3/1/2013	Apex-S1-GW-030113	3.5–9.0	NA	**5,600 Y**	**31,000**	**2,500**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.9**	<0.7	**0.8**	**1.9**	**5.8**	**2.2**	**1.2**	**1.3**	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7
S2	3/1/2013	Apex-S2-GW-030113	3.5–9.0	NA	**9,300 Y**	**15,000**	**680**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.7	<0.7	**0.9**	<0.7	**2.4**	**1.3**	**1.6**	**1.7**	<0.7	**1.0**	**0.9**	<0.7	<0.7	<0.7	<0.7	<0.7
S3	3/1/2013	Apex-S3-GW-030113	4.0–9.0	NA	**7,200 Y**	**9,100**	**330**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
S4	3/1/2013	Apex-S4-GW-030113	4.0–9.0	NA	**7,100 Y**	**83,000**	**5,200**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
S5	4/17/2014	APEX-S5-GW-041714	4.5–7.0	NA	**4,500 Y**	**15,000**	**630**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S6	4/16/2014	APEX-S6-GW-041614	4.5–6.0	NA	<50	**94 Y**	<290	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S7	4/17/2014	APEX-S7-GW-041714	5.5–7.0	NA	<50	<53	<320	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S8	4/16/2014	APEX-S8-GW-041614	4.5–6.0	NA	<50	<49	<290	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S9	4/16/2014	APEX-S9-GW-041614	4.75–6.0	NA	<50	<49	<290	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S10	4/17/2014	APEX-S10-GW-041714	4.0–6.0	NA	**190 Y**	<52	<310	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S10	4/17/2014	APEX-S14-GW-041714	4.0–6.0	NA	**180 Y**	**99 Y**	<290	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S13	4/17/2014	APEX-S13-GW-041714	4.25–6.0	NA	<50 [5]	**290 Y** [5]	<300 [5]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW1	9/26/2014	APEX-MW1-092614	2.0-7.0	**1,220**	**170 Y**	**350**	<300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW1	9/26/2014	APEX-MW1-092614-FD	2.0-7.0	**1,280**	**160 Y**	**350**	<300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW1	12/29/2014	APEX-MW1-122914	2.0-7.0	**220**	**63 Y**	**250 Y**	<300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW1	12/29/2014	APEX-MW1-122914-FD	2.0-7.0	**240**	**58 Y**	**250 Y**	<300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

1 = Analysis run with silica gel cleanup

2 = SFRWQCB ESL, Table F-1a, "Groundwater Screening Levels (groundwater is a current or potential drinking water resource)," December 2013.

3 = SFRWQCB ESL, Table F-1b, "Groundwater Screening Levels (groundwater is not a current or potential drinking water resource)," December 2013.

4 = SFRWQCB Basin Plan, Table 3-5: Water Quality Objectives for Municipal Supply

5 = prepared and analyzed outside of hold time

Bold = Result is greater than the laboratory reporting limits for the given parameter but does not exceed listed comparison value

Bold Blue = Result exceeds parameter objective in SFRWQCB Basin Plan, Table 3-5: Water Quality Objectives for Municipal Supply

Bold Green = Result is less than SFRWQCB ESL for "is **not** a drinking water resource" but greater than for "is a drinking water source"

Bold Red = Sample result exceeds the SFRWQCB ESL

bgs = below ground surface
EPA = U.S. Environmental Protection Agency
ESLs = environmental screening levels
MTBE = methyl tert-butyl ether
NA = not analyzed
NL = not listed
SFRWQCB = San Francisco Bay Regional Water Quality Control Board
TPH = total petroleum hydrocarbons
VOCs = volatile organic compounds
Y = sample resembles chromatographic pattern, which does not resemble standard
<0.30 = sample result is less than the laboratory reporting limit for the given analyte

Table 3. Site Conceptual Model

SCM Element	SCM Sub-Element	Description	Data Gap	How to Address
Geology and Hydrogeology	Regional	***Geology:*** The hills along Emeryville and along the San Francisco Peninsula, as well as the down-warped bay plain in between, are part of the central California Coast Range Province. The rock exposed in the hills and underlying the sedimentary deposits of the Bay plain consists of Tertiary-aged sediments and volcanic rock. The uplift of the hills resulted in erosion and deposition of thick alluvial fan deposits on the Bay plain, known as Alameda formation. Approximately 540 feet of tertiary to early quaternary sediments overlies bedrock beneath Emeryville. The unconsolidated sedimentary deposits include artificial fill, estuarine deposits known as Bay Mud, the Merritt sand, Yerba Buena Mud, and the Alameda Formation (Engineering-Science, 1988). The closest major fault, the Hayward Fault, is located about 3 miles east of the property. While the site is located in a seismically active area, it is not within an Alquist-Priolo Special Studies active fault zone, the legislatively defined zone of restricted land use 200 feet around an active fault due to the high probability of ground rupture. ***Hydrogeology:*** Freshwater aquifer beneath Emeryville includes most of the porous sands and gravels of the Alameda and Temescal alluvial deposits and the Merritt Sand. The aquifers are recharged by rainfall on exposed areas of the porous formations, primarily between the SP right-of-way and the Oakland Hills to the east. The water flows downgradient toward the bay. The fresh water contacts higher-density saltwater in the vicinity of the bay margin. The regional groundwater flow direction is westward toward the bay, although local variations may occur due to variations in topography and subsurface lithology. The depth to groundwater varies seasonally and has been measured historically in the site vicinity between 3 to 8 feet bgs (Engineering-Science, 1988).	None	N/A
	Site	***Geology:*** Based on boring logs completed during the initial investigation and this data gaps investigation, the uppermost soil is composed of various fill material, including loam, aggregate base, and gravelly matrices at depths ranging to approximately 1 and 5 feet bgs, with the deepest fill material occurring in the area of the former UST. Below fill material, the soil transitions into native dark-colored clays and extends to at least 9 feet bgs. ***Hydrogeology:*** Shallow groundwater has been encountered at depths of approximately 3 to 5.5 feet bgs. The hydraulic gradient and groundwater flow direction have not been specifically evaluated at the site but is presumed to be to the west in the direction of the bay. The groundwater gradient approximately 1,800 feet north of the site is reported to be 0.033 feet per foot in a westerly direction at the Pfizer Pigments site located at 4650 Shellmound in Emeryville, California (SWRCB, 2010).	None	N/A
Surface Water Bodies	Regional	The closest surface water body is San Francisco Bay, located approximately 1,500 feet to the west of the site.	None	NA
Nearby Wells	Regional	DWR and ACPWA well searches identified one well within a one mile radius of 1550 Park Avenue, Emeryville, California. The well is listed as an industrial use well and is located approximately 0.65 miles to the southeast (upgradient). One domestic well was identified approximately one mile north (sidegradient) of 1550 Park Avenue. Five wells, catagorized as either industrial or irrigation use, were found to be one mile or greater in distance from 1550 Park Avenue, Emeryville, California. No municipal wells were identified in the search.	None	NA
Unauthorized Release	Site	A unauthorized petroleum release was discovered adjacent to the building located at 1550 Park Avenue in Emeryville, California, when a UST was discovered in November 2009 during a street improvement project. The tank was measured to be approximately 10 feet long and 5 feet in diameter, with a calculated volume capacity of 1,500 gallons. The release was stopped when the UST was removed and approximately 20 tons of surrounding soil was excavated and 2,200 gallons of oily water was pumped from the tank and excavation. Results of subsequent soil and groundwater samples revealed the following chemicals of concern associated with the release: TPH-diesel, TPH-gasoline, TPH-motor oil, and benzo(b)fluoranthene.	None	NA
Free Product	Site	Previous data appear to suggest the presence of LNAPL. One shallow monitoring well was installed using hand auger drilling methods. The well is located where the highest total TPH concentrations were reported in a grab groundwater sample (TPH-d: 83,000 µg/L). The well is screened across the water table to allow any LNAPL that is present to infiltrate the well. LNAPL is not present in the well based on measurements with an oil/water interface probe in April, September, and December 2014. Groundwater sampling results from MW-1 in September and December 2014 show TPH-g and TPH-d concentrations of 170 & 63 µg/L and 350 & 250 µg/L, respectively. TPH-mo was not detected in groundwater at MW-1 (<300 µg/L).	None	NA
Secondary Source	Site	Soil and grab groundwater samples have been collected from 11 boring locations surrounding the former UST. Seven boring locations form an outer perimeter surrounding the former UST. Comparison of soil and groundwater results with ESLs indicate only three of the seven perimeter locations (S5 to the east, S10 to the north, and S13 to the west) have TPH concentrations exceeding the ESLs. TPH concentrations in soil are highly elevated at S10 and slightly exceed ESLs at S5 and S13. TPH concentrations in groundwater are highly elevated at S5 and slightly exceed ESLs at S10 and S13. No ESL exceedances are found in intermediate and deep soil samples from 7.5 to 9 feet bgs. Based on the soil data, the vertical contamination appears to be confined between approximately 3 to 7 feet bgs, primarily near the water table. TPH concentrations in Soil and groundwater slightly exceeded ESLs at S13, but TPH concentrations in soil and groundwater approximately 15 feet to the south and north of S13 and other locations southwest and southeast did not exceed ESLs. Monitoring well MW-1 groundwater sampling results from September and December 2014 show that grab groundwater concentrations in this location skew orders of magnitude higher than those obtained from S4. In September 2014 concentration of Total Dissolved Solids (TDS) at MW-1 was 1,220 mg/L and exceeds the objective concentration of 500 mg/L listed in SFRWQCB's Basin Plan Table 3-5: Water Quality Objective for Municipal Supply. In December 2014, TDS concentration decreased to 220 mg/L, presumably due to fresh water infiltration resulting from Fall 2014 rain events in November and December. Although, areal extent of soil and groundwater contamination is not fully defined east and north of the former UST, sufficient data exists west (down gradient) and south (side gradient) to conclude it is likely that secondary source soils are localized close to the former UST between 3 and 7 feet bgs and that groundwater contaminants are below appropriate ESLs. Comparison of September 2014 TDS results from MW-1 with the Basin Plan's water quality objectives for municipal supply indicate that shallow groundwater at the site is not a suitable municpal supply and that ESLs where groundwater is not a current or potential drinking water resource are appropriate for the site. Secondary source LNAPL is not present at the site based on measurements with an oil/water interface probe at MW-1 in April, September, and December 2014. Monitoring well MW-1 groundwater sampling results from September and December 2014 show that grab groundwater concentrations (TPH-g: 7,100 µg/L, TPH-d: 83,000 µg/L, TPH-mo: 5,200 µg/L) in this location skew orders of magnitude higher than those obtained from MW-1 (TPH-g: 170 & 63 µg/L, TPH-d: 350 & 250 µg/L, TPH-mo: <300 µg/L) and that groundwater concentrations are below appropriate ESLs. Secondary source soils are generally localized close to the former UST location which is overlain by numerous utiilities and cosmetic elements of the City of Emeryville's recent street improvemnts. These two factors make further soil removal impracticable beyond the soil removal activities undertaken by the City of Emeryville during their discovery and removal of the former UST during the street improvement project.	None	NA
Vapor Intrusion to Indoor Air	Site	The lack of volatile compounds in soil and groundwater beneath the site, in the vicinity of the release, at concentrations exceeding the vapor intrusion levels of concern suggest vapor intrusion is not a risk at the site.	None	N/A
Preferential Pathways	Site	Numerous utility lines were located in the vicinity of the former UST, generally at depths from 2 to 4.5 feet bgs. One soil boring (S7) was located along the main storm drain line, which drains in an upgradient direction of the former UST, to evaluate potential preferential pathways for contaminant migration. TPH concentrations in groundwater were non-detect, and concentrations in soil were either non-detect or less than ESLs.	None	N/A

Notes:

ACPWA = Alameda County Public Works Agency
bgs = ESLs
DWR = California Department of Water Resources
ESLs = environmental screening levels
LNAPL = light non-aqueous phase liquid
N/A = not applicable
SCM = site conceptual model
TPH-d = total petroleum hydrocarbons as diesel
TPH-g = total petroleum hydrocarbons as gasoline
TPH-total petroleum hydrocarbons as motor oil
TDS = total dissolved solids
UST = underground storage tank
µg/L = micrograms per liter

Enclosure 4. Laboratory Analytical Reports (Job Number 263614)

Level II Data Validation Report

Project: APEX Refrigeration, Inc.

Laboratory: Curtis & Tompkins, Ltd.

2323 Fifth Street
Berkeley, California 94710
CA ELAP# 2896; NELAP# 4044-001

Samples: APEX-MW-1-122914, APEX-MW-1-122914, TB-122914

Laboratory Report(s): 263614

Date of Sample Submission	Laboratory Reports
12/29/2014	263614

	Analysis		
Criteria	TPH-g EPA 8015B	TPH-d, mo EPA 8015B	TDS EPA SM2540C
BS/BSD	NA	X	NA
Holding Time	X	X	X
LCS	X	NA	X
Method Blank	X	X	X
MS/MSD	X	NA	NA
Trip Blank	X	NA	NA
RLs	X	X	X
SDUP	NA	NA	X
Surrogate Recovery	X	X	NA

Notes:

BS = Blank spike
BSD = Blank spike duplicate
EPA = U.S. Environmental Protection Agency
J = Estimated value
LCS = Laboratory control spike
MDLs = method detection limits
MS = Matrix spike
MSD = Matrix spike duplicate
NA = not applicable
RLs = Reporting limits
SDUP = an aliquot that is identical to another aliquot from the same sample that is analyzed to indicate precision of analytical results
TDS = total dissolved solids
VOCs = volatile organic compounds
X = quality control criteria were met
µg/L = micrograms per liter

Summary:

According to this Level II data validation, the data in the laboratory analytical reports provided by Curtis & Tompkins, Ltd. are usable for their intended purpose.


Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

4585 Pacheco Blvd.
Martinez, CA 94553

Location : APEX
Level : II

Sample ID	Lab ID
APEX-MW-1-122914	263614-001
APEX-MW-1-122914-FD	263614-002
TB-122914	263614-003

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 signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature:  Date: 01/08/2015

Tracy Babjar
Project Manager
tracy.babjar@ctberk.com
(510) 204-2226

CA ELAP# 2896, NELAP# 4044-001

Samples Received: **12/29/14**

This data package contains sample and QC results for three water samples, requested for the above referenced project on 12/29/14. The samples were received cold and intact.

TPH-Purgeables and/or BTXE by GC (EPA 8015B):
No analytical problems were encountered.

TPH-Extractables by GC (EPA 8015B):
No analytical problems were encountered.

Total Dissolved Solids (TDS) (SM2540C):
No analytical problems were encountered.

CHAIN OF CUSTODY

263614

Laboratory: Curtis & Tompkins
Contact: Tracy Babjar
Phone: (510) 486-0900

Date: 12/29/2014
Page: 1
of: 1

4585 Pacheco Boulevard
Martinez, CA 94553
Phone: (925) 969-0750
ERRG

Project Manager: Erik Oehlschlager **Project Name:** APEX
FAX / EMAIL Results to: erik.oehlschlager@errg.com
Samplers: Josh Osborne **Project #:** 2013-094

Turn Around Time: 5 day

	Sample ID	Lab ID	Date/Time	Matrix	Preserv.	ANALYSES: TPH-g: EPA 8015B	TPH-d, mo: (EPA 8015B w/ silica gell cleanup	TDS	Number of Containers
1	APEX-MW-1-122914		12/29/14 1430	Water	HCl/None	X	X	X	6
2	APEX-MW-1-122914-FD		12/29/14 1445	Water	HCl/None	X	X	X	6
3	TB-122914		Lab Prepared			X			1

SPECIAL INSTRUCTIONS/COMMENTS

Relinquished by (Sampler)	Relinquished by (Sampler)	Relinquished by (Sampler)
(Signature) (Time): 3:55 pm	(Signature) (Time):	(Signature) (Time):
(Printed Name) (Date): Josh Osborne 12/29/14	(Printed Name) (Date):	(Printed Name) (Date):
(Company): ERRG	(Company):	(Company):
Received By:	Received By:	Received By:
(Signature) (Time): Tracy Babjar 3:55	(Signature) (Time):	(Signature) (Time):
(Printed Name) (Date): Tracy Babjar 12/29/14	(Printed Name) (Date):	(Printed Name) (Date):
(Company): CalT	(Company):	(Company):

Total # Containers: 13

Head Space Y / N

Received in Good Condition (Cold)? Y / N

Conforms to Record? Y / N

intact & cold.

ChainofCustody.xls

Shipping info_____

2A. Were custody seals present? .... ☐ YES (circle) on cooler on samples ☒ NO
How many _____ Name_____ Date_____

2B. Were custody seals intact upon arrival? _____ YES NO (N/A)

3. Were custody papers dry and intact when received?_____ (YES) NO

4. Were custody papers filled out properly (ink, signed, etc)? _____ (YES) NO

5. Is the project identifiable from custody papers? (If so fill out top of form)___ (YES) NO

6. Indicate the packing in cooler: (if other, describe)_____

☒ Bubble Wrap ☐ Foam blocks ☒ Bags ☐ None
☐ Cloth material ☐ Cardboard ☐ Styrofoam ☐ Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C

Type of ice used: ☒ Wet ☐ Blue/Gel ☐ None Temp(°C) 4.7

☐ Samples Received on ice & cold without a temperature blank; temp. taken with IR gun

☐ Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present?_____ YES (NO)
If YES, what time were they transferred to freezer?_____

9. Did all bottles arrive unbroken/unopened?_____ (YES) NO

10. Are there any missing / extra samples? _____ YES (NO)

11. Are samples in the appropriate containers for indicated tests? _____ (YES) NO

12. Are sample labels present, in good condition and complete? _____ (YES) NO

13. Do the sample labels agree with custody papers? _____ (YES) NO

14. Was sufficient amount of sample sent for tests requested? _____ (YES) NO

15. Are the samples appropriately preserved? _____ (YES) NO N/A

16. Did you check preservatives for all bottles for each sample? _____ YES NO (N/A)

17. Did you document your preservative check? _____ YES NO (N/A)

18. Did you change the hold time in LIMS for unpreserved VOAs? _____ YES NO (N/A)

19. Did you change the hold time in LIMS for preserved terracores? _____ YES NO (N/A)

20. Are bubbles > 6mm absent in VOA samples? _____ (YES) NO N/A

21. Was the client contacted concerning this sample delivery? _____ YES (NO)
If YES, Who was called?_____ By_____ Date:_____

COMMENTS

_____

_____

_____

_____

_____

_____

Rev 10, 9/12

Client Sample ID : APEX-MW-1-122914 Laboratory Sample ID : 263614-001

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	63	Y	50	ug/L	As Recd	1.000	EPA 8015B	EPA 5030B
Diesel C10-C24	250	Y	50	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
Total Dissolved Solids	220		10	mg/L	TOTAL	1.000	SM2540C	METHOD

Client Sample ID : APEX-MW-1-122914-FD Laboratory Sample ID : 263614-002

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	58	Y	50	ug/L	As Recd	1.000	EPA 8015B	EPA 5030B
Diesel C10-C24	250	Y	50	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
Total Dissolved Solids	240		10	mg/L	TOTAL	1.000	SM2540C	METHOD

Client Sample ID : TB-122914 Laboratory Sample ID : 263614-003

No Detections

Y = Sample exhibits chromatographic pattern which does not resemble standard

Batch#: 219056

Field ID: APEX-MW-1-122914 Lab ID: 263614-001
Type: SAMPLE

Analyte	Result	RL
Gasoline C7-C12	63 Y	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	104	77-128

Field ID: APEX-MW-1-122914-FD Lab ID: 263614-002
Type: SAMPLE

Analyte	Result	RL
Gasoline C7-C12	58 Y	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	98	77-128

Field ID: TB-122914 Lab ID: 263614-003
Type: SAMPLE

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	90	77-128

Type: BLANK Lab ID: QC772080

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	90	77-128

Y= Sample exhibits chromatographic pattern which does not resemble standard
ND= Not Detected
RL= Reporting Limit

Type:	LCS	Diln Fac:	1.000
Lab ID:	QC771919	Batch#:	219056
Matrix:	Water	Analyzed:	01/05/15
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	1,092	109	80-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	97	77-128

Field ID:	ZZZZZZZZZZ	Batch#:	219056
MSS Lab ID:	263637-001	Sampled:	12/30/14
Matrix:	Water	Received:	12/30/14
Units:	ug/L	Analyzed:	01/05/15
Diln Fac:	1.000		

Type: MS Lab ID: QC771921

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	<12.82	2,000	1,750	87	74-120

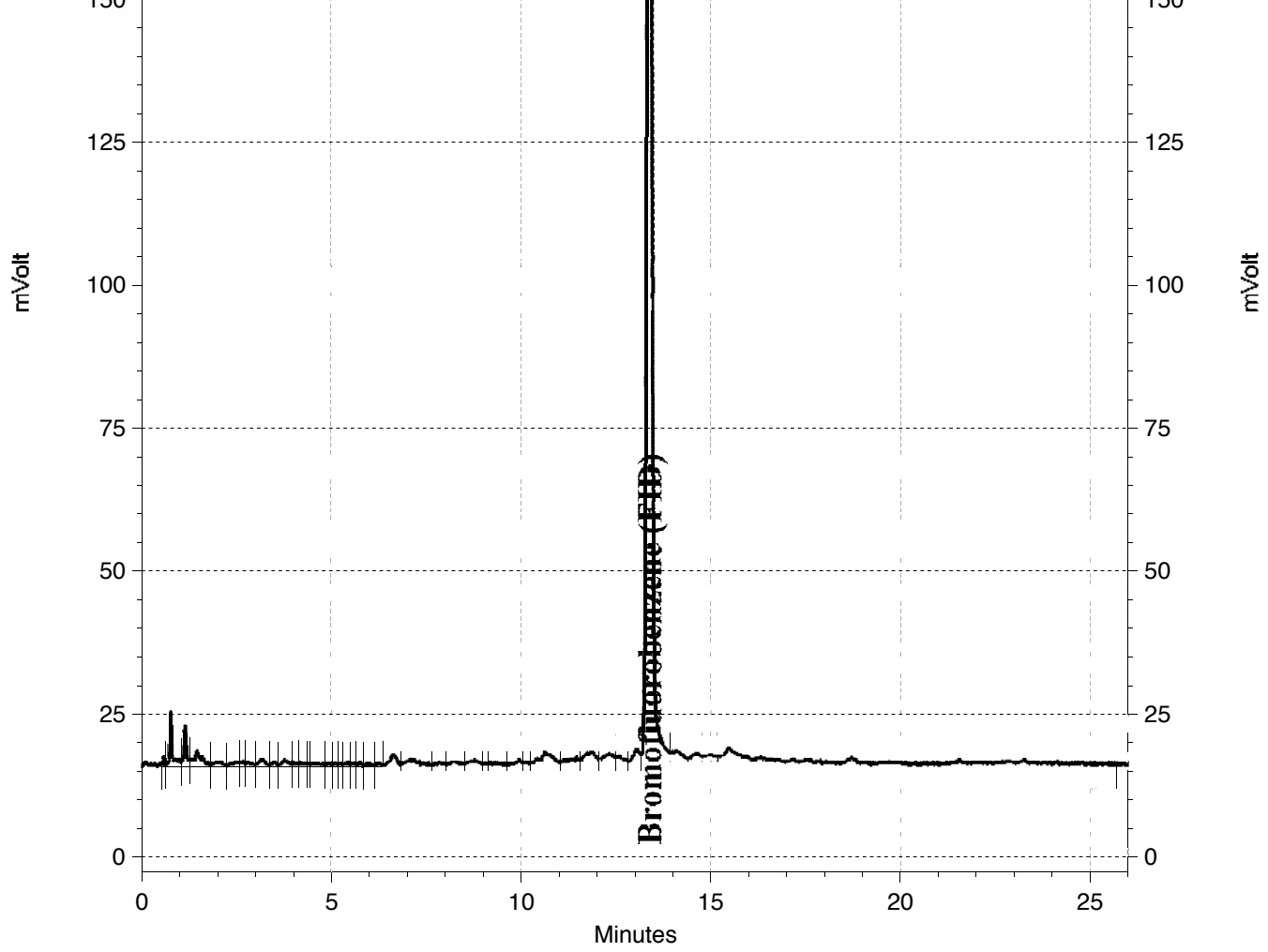
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	107	77-128

Type: MSD Lab ID: QC771922

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	1,715	86	74-120	2	27

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	105	77-128

RPD= Relative Percent Difference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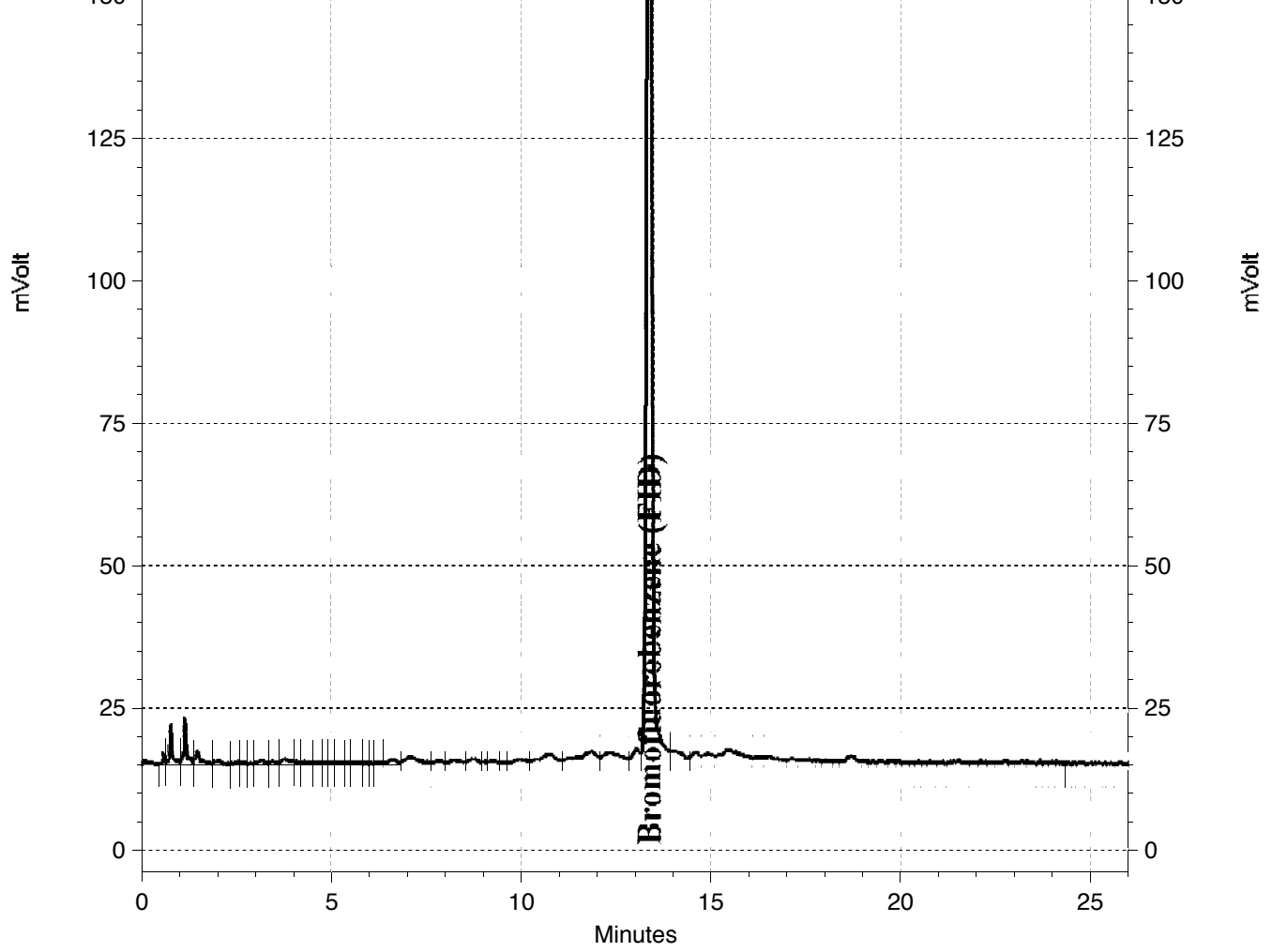
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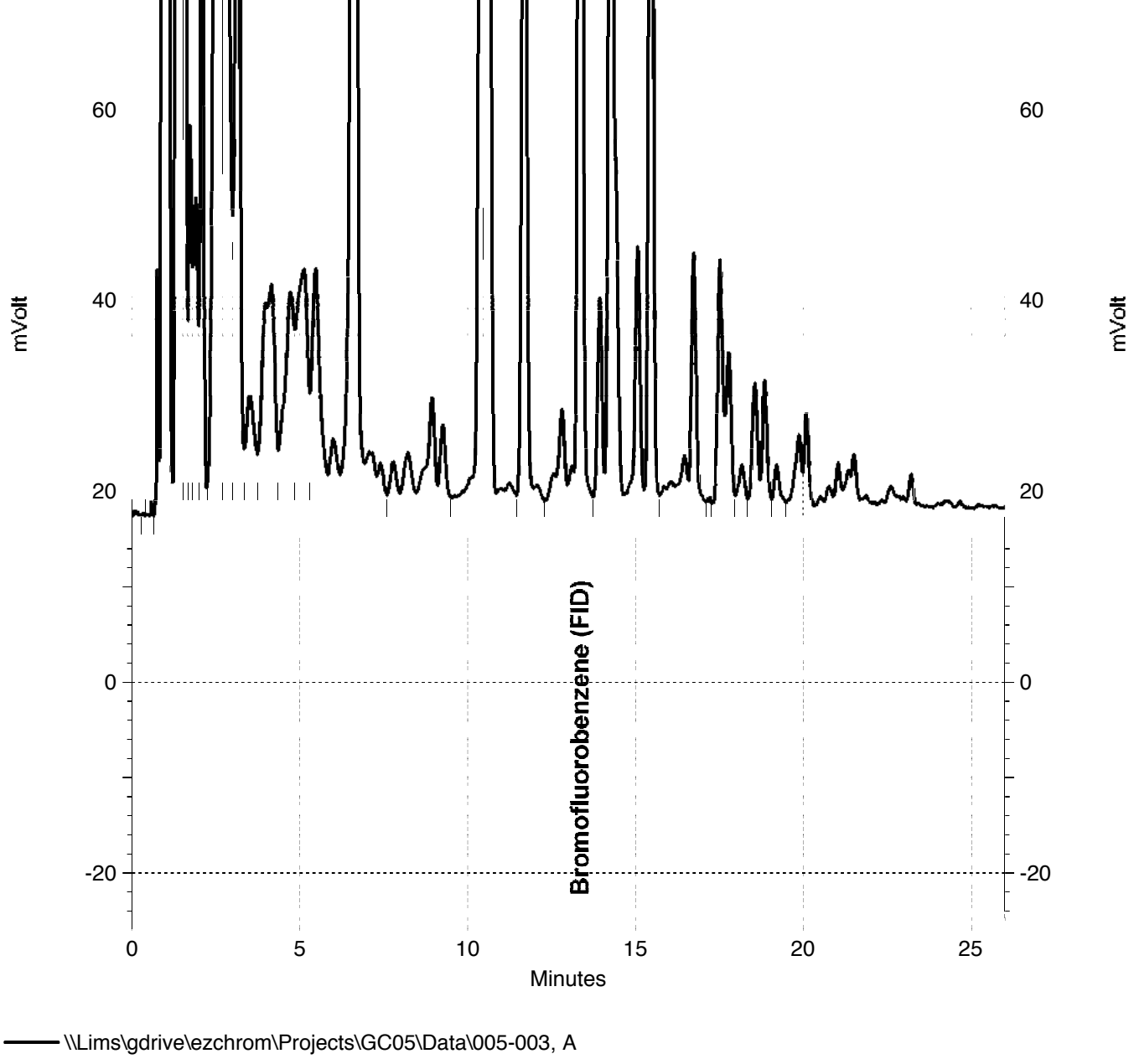
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20
25
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Units:	ug/L	Received:	12/29/14
Diln Fac:	1.000	Prepared:	12/30/14
Batch#:	218969	Analyzed:	12/31/14

Field ID: APEX-MW-1-122914 Lab ID: 263614-001
Type: SAMPLE Cleanup Method: EPA 3630C

Analyte	Result	RL
Diesel C10-C24	250 Y	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
o-Terphenyl	105	66-129

Field ID: APEX-MW-1-122914-FD Lab ID: 263614-002
Type: SAMPLE Cleanup Method: EPA 3630C

Analyte	Result	RL
Diesel C10-C24	250 Y	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
o-Terphenyl	102	66-129

Type: BLANK Cleanup Method: EPA 3630C
Lab ID: QC771572

Analyte	Result	RL
Diesel C10-C24	ND	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
o-Terphenyl	79	66-129

Y= Sample exhibits chromatographic pattern which does not resemble standard
ND= Not Detected
RL= Reporting Limit

Matrix:	Water	Batch#:	218969
Units:	ug/L	Prepared:	12/30/14
Diln Fac:	1.000	Analyzed:	12/31/14

Type: BS Cleanup Method: EPA 3630C
Lab ID: QC771573

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,001	80	61-120

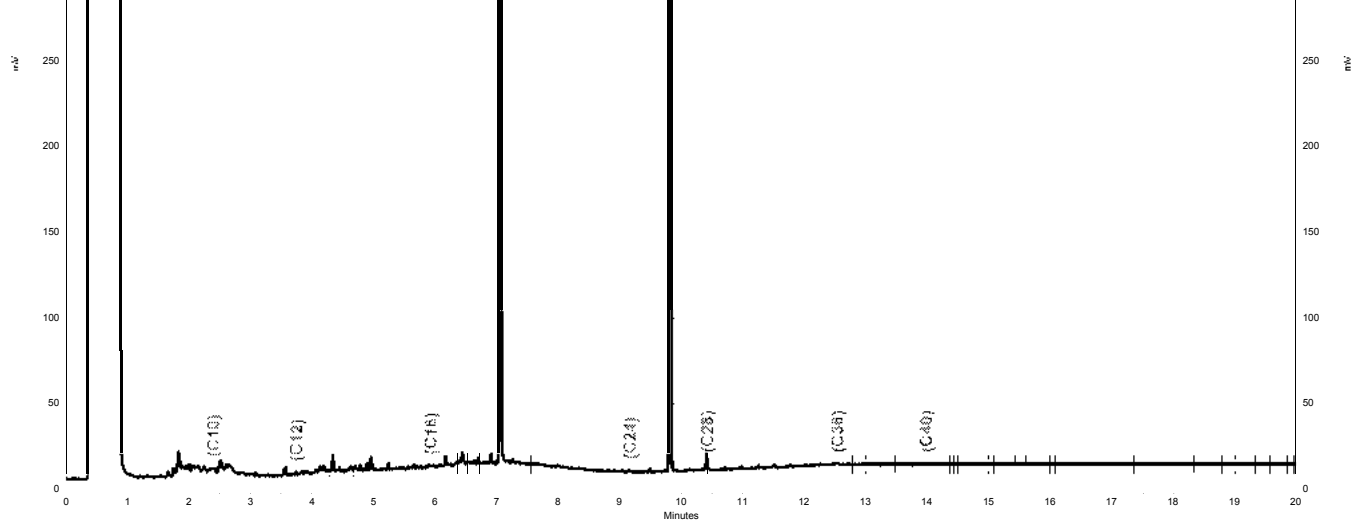
Surrogate	%REC	Limits
o-Terphenyl	108	66-129

Type: BSD Cleanup Method: EPA 3630C
Lab ID: QC771574

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	2,179	87	61-120	9	45

Surrogate	%REC	Limits
o-Terphenyl	110	66-129

RPD= Relative Percent Difference



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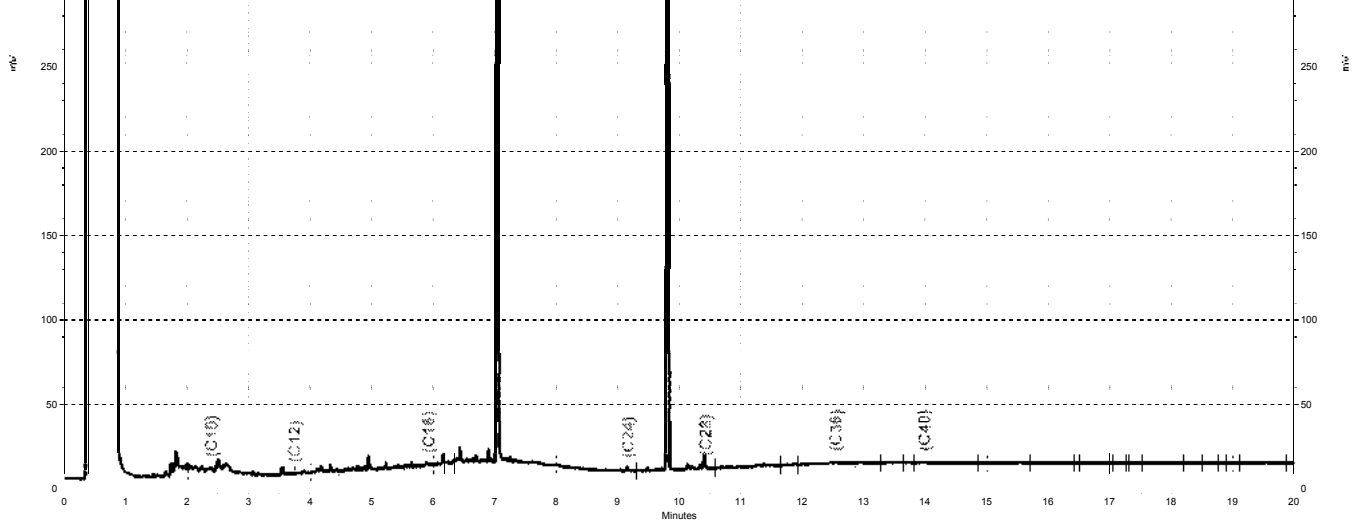

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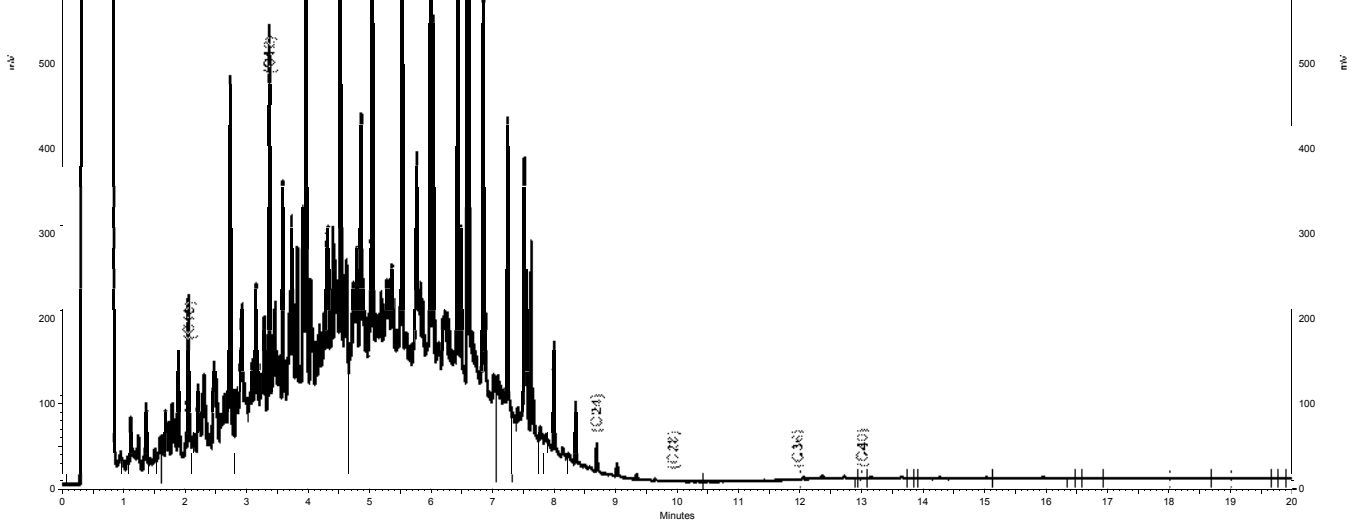

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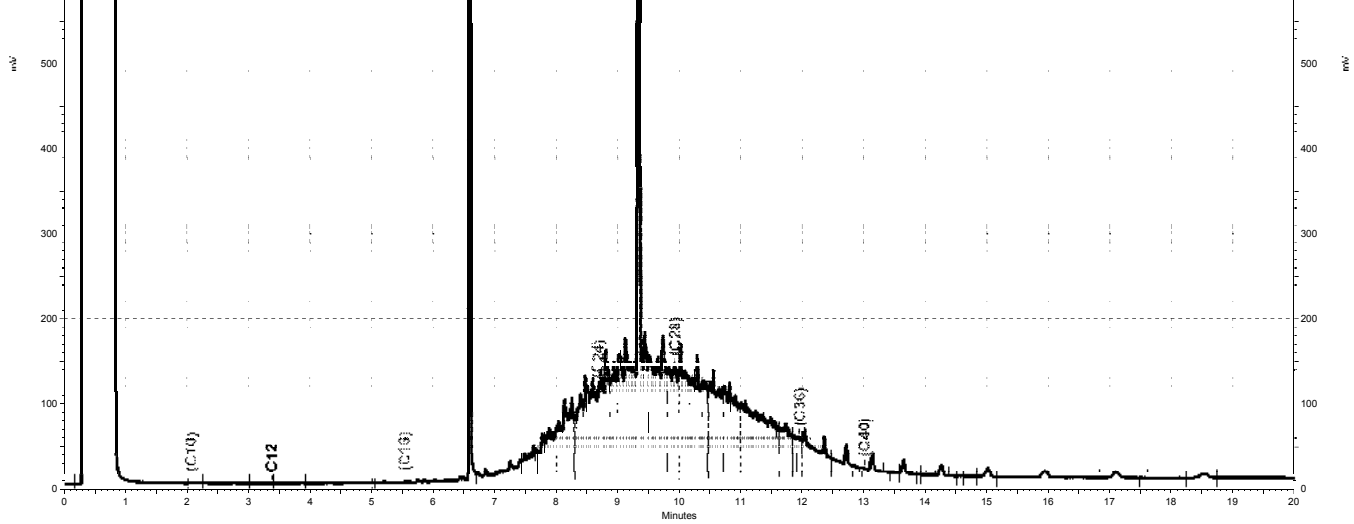

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Matrix:	Water	Sampled:	12/29/14
Units:	mg/L	Received:	12/29/14
Diln Fac:	1.000	Analyzed:	01/05/15

Field ID	Type	Lab ID	Result	RL
APEX-MW-1-122914	SAMPLE	263614-001	220	10
APEX-MW-1-122914-FD	SAMPLE	263614-002	240	10
	BLANK	QC772128	ND	10

ND= Not Detected
RL= Reporting Limit

Analyte:	Total Dissolved Solids	Diln Fac:	1.000
Field ID:	ZZZZZZZZZZ	Batch#:	219108
MSS Lab ID:	263610-001	Sampled:	12/29/14
Matrix:	Water	Received:	12/29/14
Units:	mg/L	Analyzed:	01/05/15

Type	Lab ID	MSS Result	Spiked	Result	RL	%REC	Limits	RPD	Lim
LCS	QC772129		104.0	96.00		92	74-120		
SDUP	QC772130	708.0		746.0	10.00			5	5

RL= Reporting Limit
RPD= Relative Percent Difference

Enclosure 5. Manifests

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of 1	3. Emergency Response Phone (800) 368-4778	4. Waste Tracking Number 1211490

GENERATOR

5. Generator's Name and Mailing Address
APEX REFRIGERATION CORP DBA PELCO DISTRIBUTORS
1550 PARK AVE
EMERYVILLE CA 94608
Generator's Phone: 510 653-3250

Generator's Site Address (if different than mailing address)
1550 PARK AVENUE
EMERYVILLE CA 94608

6. Transporter 1 Company Name: ENVIRONMENTAL RECOVERY SERVICES, INC. — U.S. EPA ID Number: CAR000186201

7. Transporter 2 Company Name: — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
DEMENNO KERDOON
2000 N. ALAMEDA ST
COMPTON CA 90222
Facility's Phone: 310 537-7100
U.S. EPA ID Number: CAT080013352

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1.	NON HAZARDOUS,LIQUID (MONITORING WATER)	1	DM	55	G
2.					
3.					
4.					

13. Special Handling Instructions and Additional Information
981\ 18179-1550 - MONITORING WATER 1X55 GAL ** ERS W.O.# 110104 - ECS * CONTRACTOR: ERRG **
BILL TO ENVIROSERV ** WEAR PROPER PPE

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name — Signature — Month 1 Day 8 Year 15

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name — Signature — Month 1 Day 8 Year 15
Transporter 2 Printed/Typed Name: — Signature: — Month Day Year

DESIGNATED FACILITY

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name — Signature — Month Day Year

169-BLC-O 6 10498 (Rev. 9/09) COPY

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of 1	3. Emergency Response Phone (800) 368-4778	4. Waste Tracking Number 12311491

GENERATOR

5. Generator's Name and Mailing Address
APEX REFRIGERATION CORP DBA PELCO DISTRIBUTORS
1550 PARK AVE
EMERYVILLE CA 94608
Generator's Phone: 510 653-9850

Generator's Site Address (if different than mailing address)
1550 PARK AVENUE
EMERYVILLE CA 94608

6. Transporter 1 Company Name: ENVIRONMENTAL RECOVERY SERVICES, INC. — U.S. EPA ID Number: CAR000188201

7. Transporter 2 Company Name: — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
US ECOLOGY
HWY 95, 12 MILES SOUTH
BEATTY NV 89003
Facility's Phone: 775 553-2203
U.S. EPA ID Number: NVT330010000

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1.	NON HAZARDOUS, SOLID (SOIL)	1	DM	450	P
2.					
3.					
4.					

13. Special Handling Instructions and Additional Information
9811 * 07-0 - MONITORING SOIL 1Y55UM ** ERS W.O.# 110104 - ECB * CONTRACTOR: ERRG **
BILL TO ENVIROSERV ** WEAR PROPER PPE

14. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: Fennie [illegible] — Signature: [signature] — Month 1 Day 8 Year 15

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: [illegible] — Signature: [signature] — Month 1 Day 8 Year 15
Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
17b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name — Signature — Month Day Year

P&D ENVIRONMENTAL, INC.
55 Santa Clara Avenue, Suite 240
Oakland, CA 94610
(510) 658-6916

March 12, 2010
Report 0494.R1

Mr. Michael Roberts
City Of Emeryville
1333 Park Avenue
Emeryville, CA 94608

SUBJECT: **UNDERGROUND STORAGE TANK REMOVAL REPORT**
1550 Park Avenue
Emeryville, CA

Dear Mr. Roberts:

P&D Environmental, Inc. (P&D) is pleased to present this report documenting the removal of one 1,400-gallon capacity underground storage tank (UST) from the subject site. Based on the type of petroleum hydrocarbons detected in and beneath the UST, the UST formerly contained heating oil. The UST was removed from the site on February 8, 2010. A Site Location Map (Figure 1), a Site Plan (Figure 2) and a Site Plan Detail (Figure 3) showing the locations of the UST at the site are attached with this report.

All sample collection was performed under the supervision of a professional geologist. This report is prepared in accordance with guidelines set forth in the document "Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites" dated August 10, 1990 and "Appendix A - Workplan for Initial Subsurface Investigation" dated August 20, 1991.

BACKGROUND

On or about November 6, 2009 an UST was discovered adjacent to the building located at 1550 Park Avenue in Emeryville, California during excavation for redevelopment and re-surfacing of the sidewalk and adjacent street. The street, curb and gutter adjacent to the south side of the UST were excavated to a depth of approximately four feet below grade as part of the redevelopment project. The top of the UST was encountered at a depth of approximately one foot below grade, and the UST was measured to be approximately 10 feet long. No pipes were observed to be connected to the UST. However, an opening in the top of the tank allowed access to the UST interior. The UST was measured to be approximately 5 feet in diameter. The UST was filled almost entirely with water and a layer of floating black, viscous fluid that exhibited a strong oily odor and that resembled Bunker C heating oil.

FIELD ACTIVITIES

UST Content Characterization

On December 9, 2009 approximately 700 gallons of oily water was pumped from the UST by Clearwater Environmental, Inc. (Clearwater) of Union City, California in preparation for UST removal. The fluid was hauled from the site as a non-RCRA hazardous waste liquid by Clearwater to the Clearwater Environmental disposal facility in Silver Springs, Nevada using uniform hazardous waste manifest # 004449810 JJK. Clearwater is a State-certified hazardous waste hauler. A copy of the manifest is attached with this report.

At the time that the liquids were pumped from the UST, a sample of the liquid designated as UST Oil was collected by P&D personnel for laboratory analysis. The sample was collected into two 40-milliliter VOA vials that were preserved with hydrochloric acid by inserting a rod into the UST and allowing the viscous liquid that coated the rod to flow off of the rod into the containers. The VOA vials were capped with Teflon-lined screw caps and stored in a cooler with ice pending delivery to the laboratory. Chain of custody procedures were observed for all sample handling.

The sample was analyzed for fuel fingerprint analysis using EPA Methods 3550C/8015B. The laboratory results identified the sample as consisting of fuel oil and possibly bunker oil, and the laboratory report included a chromatogram of the sample analysis. A copy of the laboratory report and chain of custody documentation is attached with this report.

Additional Liquid Removal

Prior to removal of the UST, the area of excavation was marked with white paint, Underground Service Alert was notified for buried utility location, a permit application for UST removal was submitted and approved with the Alameda County Department of Environmental Health (ACDEH), the date of removal was scheduled with the ACDEH inspector and the City of Emeryville Fire Department inspector, and PG&E was scheduled to secure the utility pole located at the east end of the UST.

During January and early February 2010 substantial rain events filled the excavated area adjacent to the UST with water. In the days prior to the scheduled UST removal, the UST was observed to be filled with water to a height equivalent to the water level in the adjacent excavated area. On the morning of February 8, 2010 (the scheduled day for UST removal) Clearwater returned to the site and pumped 1375 gallons of water from the UST and the adjacent excavated area. The water was hauled from the site by Clearwater with non-hazardous waste manifest #7951 to the Alviso Independent Oil facility in Alviso, California. Clearwater returned to the site on February 8, 2010 and removed approximately 120 gallons of water from the UST and oily water from the bottom of the UST pit. The water was hauled from the site by Clearwater with non-hazardous waste manifest #6833 to the Alviso Independent Oil facility in Alviso, California. Copies of the non-hazardous waste manifests are attached with this report.

UST Removal and Soil Sample Collection

On February 8, 2010 the west and south sides of the UST were excavated and the UST was removed from the UST pit by IMX, Inc. of Oakland, California (IMX). The soil excavated from around the UST was discolored blue-gray and exhibited a strong oily odor. Prior to removal of the UST from the pit, the UST atmosphere was inerted using dry ice. A LEL/oxygen meter was used to evaluate the UST atmosphere, and the meter readings showed 0% LEL and 12.8% oxygen. Inspector George Warren from the City of Emeryville Fire Department was onsite and approved removal of the UST from the UST pit.

At the time of UST removal, a high voltage electrical conduit associated with the utility pole located immediately at the east end of the UST was observed to be located on top of the northeast corner of the UST. It appeared that the top of the UST had been depressed to provide space for the placement of the conduit at the time that the conduit was installed.

Following removal of the UST from the pit, the UST was visually inspected. The UST was measured to be 5 feet in diameter and 10 feet in length with a calculated volume of approximately 1500 gallons. The UST was constructed of single wall bare steel with riveted seams. The exterior of the UST appeared to be in good condition, with rust scaling observed primarily around the entire UST exterior at an elevation midway between the top and the bottom of the UST. No evidence of holes, cracks, or pitting from substantial corrosion was observed. However, a hole was observed at the west end of the UST at the southwest corner where a rivet was observed to be missing at an elevation approximately midway between the top and the bottom of the UST. It was unclear if the rivet was dislodged during the UST removal activities. Mr. Barney Chan of the ACDEH was present at the site to observe the UST removal and the UST condition following removal.

Following removal of the UST from the pit, water with a discontinuous layer of black oil floating on the water was observed to be present in the UST pit at a depth of approximately 6 feet below the ground surface. Mr. Chan of the ACDEH determined that an inadequate amount of water was present in the bottom of the UST pit for water sample collection. As described above, the water was removed from the UST pit by Clearwater.

Following removal of the water from the bottom of the UST pit, loose fill surrounding the UST consisting of sand and gravel that had fallen into the pit from the pit walls was removed from the bottom of the UST pit and a total of two soil samples were collected from the pit bottom using a backhoe bucket (one soil sample was collected from each end of the pit). Soil sample T1 was collected from the west end of the pit at a depth of approximately 7 feet below grade and soil sample T2 was collected from the east end of the pit at a depth of approximately 6 feet below grade.

The soil from the pit bottom consisted of clayey silt. The soil samples were collected from relatively undisturbed soil in the backhoe bucket by removing loose soil from the vicinity of the teeth of the bucket and pushing a 2-inch diameter 6-inch long stainless steel tube into the relatively undisturbed soil. No odor was detected in the sampled soil. The tubes were filled entirely to ensure that no head space was present in the tubes. The ends of the tubes were then sequentially covered with aluminum foil and plastic end caps. The tubes were then labeled and stored in a cooler with ice pending delivery to the laboratory. Chain of custody procedures were observed for all sample handling. The sample collection locations are shown in Figure 3. A copy

of the County of Alameda Underground Tank System Closure Inspection Report dated February 8, 2010 is attached with this report.

Following soil sample collection from the UST pit, the bottom one half foot of the construction excavation located to the south of the UST pit was excavated and stockpiled. The area of excavation is shown in Figure 3. All excavated soil from the UST pit and from the adjacent construction excavation was transported to a nearby City yard where it was stockpiled on a sheet of visqueen. A total of 4 stainless steel tubes were filled with soil from different locations in the stockpile by manually pushing the tubes into the soil for disposal characterization purposes. The samples were to be composited at the laboratory and were designated as SP1. The tubes were sealed, labeled and stored as described above. Following sample collection the stockpile was covered with plastic and secured, pending removal from the site.

Although a vent pipe was observed on the building wall immediately to the north of the east end of the UST, excavation at the base of the vent pipe revealed that the vent pipe was not connected to the UST. The vent pipe penetrated the building wall below the ground surface. The vent pipe was cut off at the building exterior and the pipe was capped.

Photographs showing the UST prior to removal, the construction excavation located to the south of the UST, the UST following removal, the missing rivet from the UST, and the oily water in the UST pit are attached with this report.

Following soil sample collection from the UST pit bottom, the UST pit was backfilled with material provided by the City of Emeryville and compacted. City of Emeryville Dennis McGowan was onsite to verify that backfilling and compaction was performed in accordance with City requirements.

UST Transportation and Destruction

Following removal of soil from the UST exterior and removal of remaining liquids from the UST interior, the UST was loaded onto an Ecology Control Industries (ECI) truck and transported with uniform hazardous waste manifest # 002135627 JJK to the ECI facility in Richmond, California. ECI is a State-certified hazardous waste hauler, and the ECI Richmond facility is a State-certified Transport, Storage and Disposal Facility. The UST was subsequently cut and destroyed at the ECI facility. Copies of the manifest and certificate of destruction are attached with this report.

Unauthorized Release Report

An Underground Storage Tank Unauthorized Release (Leak)/Contamination Site Report was subsequently completed by the City of Emeryville naming the property owner adjacent to the UST as the responsible party. A copy of the report was provided electronically to Mr. Chan at the ACDEH on March 8, 2010. A copy of the report is also attached with this report.

Soil Disposal

On March 10, 2010 a total of 20.29 tons of soil was transported from the site by IMX to the Republic Services Vasco Road Landfill in Livermore, California with two non-numbered non-hazardous waste manifests. Copies of the manifests and the landfill WeighMaster Certificates are attached with this report.

LABORATORY ANALYSIS

The two soil samples collected from the UST pit bottom (T1 and T2) and the composite sample collected from the soil stockpile (SP1) were analyzed for Total Petroleum Hydrocarbons as Diesel (TPH-D) using EPA Method 3550C in conjunction with modified EPA Method 8015C; and for benzene, toluene, ethylbenzene, and xylenes (BTEX) , 1,2-dibromomethane (EDB), and for 1,2-dichloroethane (1,2-DCA) by EPA Method 5030B in conjunction with EPA Method 8260B. In addition, the stockpile soil sample was also analyzed for LUFT 5 metals (cadmium, total chromium, lead, nickel and zinc) using EPA Methods 3050B in conjunction with EPA Method 6010B, and for STLC total chromium using California 22 WET extraction methods and EPA Method 6010B for disposal characterization purposes.

The laboratory analytical results of the tank pit bottom samples show that BTEX, EDB and 1,2-DCA were not detected in any of the samples. TPH-D was detected in the tank pit bottom samples T1 and T2 and in the soil stockpile composite sample at concentrations of 15, 5.8 and 830 milligrams per kilogram (mg/kg), respectively. In the composite soil stockpile sample the metals total chromium, lead, nickel and zinc were detected at concentrations of 54, 26, 57 and 110 mg/kg, respectively, and the STLC total chromium result was 0.23 mg/L. The tank pit bottom sample results are summarized in Table 1, and the soil stockpile sample results are summarized in Table 2. Copies of the laboratory reports and chain of custody documentation are attached with this report.

DISCUSSION AND RECOMMENDATIONS

Visual observation of the groundwater in the UST pit and the results of the soil samples collected from beneath the UST show that soil and groundwater beneath the UST has been impacted by petroleum hydrocarbons. Based on the UST ownership being identified as the adjacent property owner at 1550 Park Avenue, P&D recommends that no further action be taken by the City of Emeryville.

DISTRIBUTION

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

LIMITATIONS

This report was prepared solely for the use of The City of Emeryville. The content and conclusions provided by P&D in this assessment are based on information collected during our investigation, which may include, but not be limited to, visual site inspections; interviews with the site owner,

regulatory agencies and other pertinent individuals; review of available public documents; subsurface exploration and our professional judgment based on said information at the time of preparation of this document. Any subsurface sample results and observations presented herein are considered to be representative of the area of investigation; however, geological conditions may vary between borings and may not necessarily apply to the general site as a whole. If future subsurface or other conditions are revealed which vary from these findings, the newly revealed conditions must be evaluated and may invalidate the findings of this report.

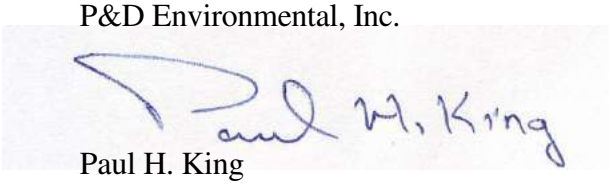
This report is issued with the understanding that it is the responsibility of the owner, or his representative, to ensure that the information contained herein is brought to the attention of the appropriate regulatory agencies, where required by law. Additionally, it is the sole responsibility of the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

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

Should you have any questions, please do not hesitate to contact us at (510) 658-6916.

Sincerely,

P&D Environmental, Inc.



Paul H. King
Professional Geologist #5901
Expires: 12/31/11

Attachments:

Table 1 Summary of Pit Bottom Soil Sample Laboratory Analytical Results
Table 2 Summary of Soil Stockpile Laboratory Analytical Results
Site Location Map (Figure 1)
Site Plan Aerial Photograph (Figure 2)
Site Plan Detail Showing UST (Figure 3)
Uniform Hazardous Waste Manifest #004449810 JJK dated 12/9/09 for liquid from UST
Non-Hazardous Waste Manifest #7951 dated 2/8/10 for water from UST and UST Pit
Non-Hazardous Waste Manifest #6833 dated 2/8/10 for water from UST and UST Pit
Uniform Hazardous Waste Manifest #002135627 JJK dated 2/8/10 for UST disposal
Certificate of Tank Destruction (1) for tank # 34019
County of Alameda Underground Tank System Closure Inspection Report dated 2/8/10 (2 pp)
Photographs
Underground Storage Tank Unauthorized Release (Leak)/Contamination Site Report
Non-Hazardous Waste Manifests dated 3/10/10 for soil stockpile disposal
WeighMaster Certificates # 05769 and 05880
Laboratory Analytical Reports and Chain of Custody Documentation

PHK
0494.R1

TABLES

TABLE 1
SUMMARY OF PIT BOTTOM SOIL SAMPLE ANALYTICAL RESULTS

Sample ID	Sample Date	TPH-D	Benzene	Toluene	Ethyl-benzene	Total Xylenes	EDB	1,2-DCA
T1-7.0	2/8/2010	15, a	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.004	ND<0.004
T2-6.0	2/8/2010	5.8, b	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.004	ND<0.004

NOTES
TPH-G = Total Petroleum Hydrocarbons as Gasoline.
EDB = 1,2-Dibromoethane.
1,2-DCA = 1,2-Dichloroethane.
ND = Not Detected.
a = Laboratory analytical note: diesel-range compounds are signififcant; no recognizable pattern.
b = Laboratory analytical note: aged diesel is significant.
All results reported in milligrams per kilogram (mg/kg) unless otherwise noted.

TABLE 2
SUMMARY OF SOIL STOCKPILE SAMPLE ANALYTICAL RESULTS

Sample ID	Sample Date	TPH-D	Benzene	Toluene	Ethyl-benzene	Total Xylenes	EDB	1,2-DCA
SP1	2/8/2010	830, c,d	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.004	ND<0.004

NOTES

TPH-G = Total Petroleum Hydrocarbons as Gasoline.
EDB = 1,2-Dibromoethane.
1,2-DCA = 1,2-Dichloroethane.
ND = Not Detected.
c = Laboratory analytical note: unmodified or weakly modified diesel-range compounds are present.
d = Laboratory analytical note: Stoddard solvent/ mineral spirit(?)
The metals total chromium, lead, nickel, and zinc were detected at concentrations of 54, 26, 57, and 110 mg/kg, respectively. The total chromium STLC analysis result was 0.23 milligrams per liter (mg/l).
All results reported in milligrams per kilogram (mg/kg) unless otherwise noted.

FIGURES

Figure 1
Site Location Map
City of Emeryville
1550 Park Avenue
Emeryville, California

N

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

P&D Environmental, Inc.
55 Santa Clara Ave., Suite 240
Oakland, CA 94610

0 1,000 2,000
Scale In Feet

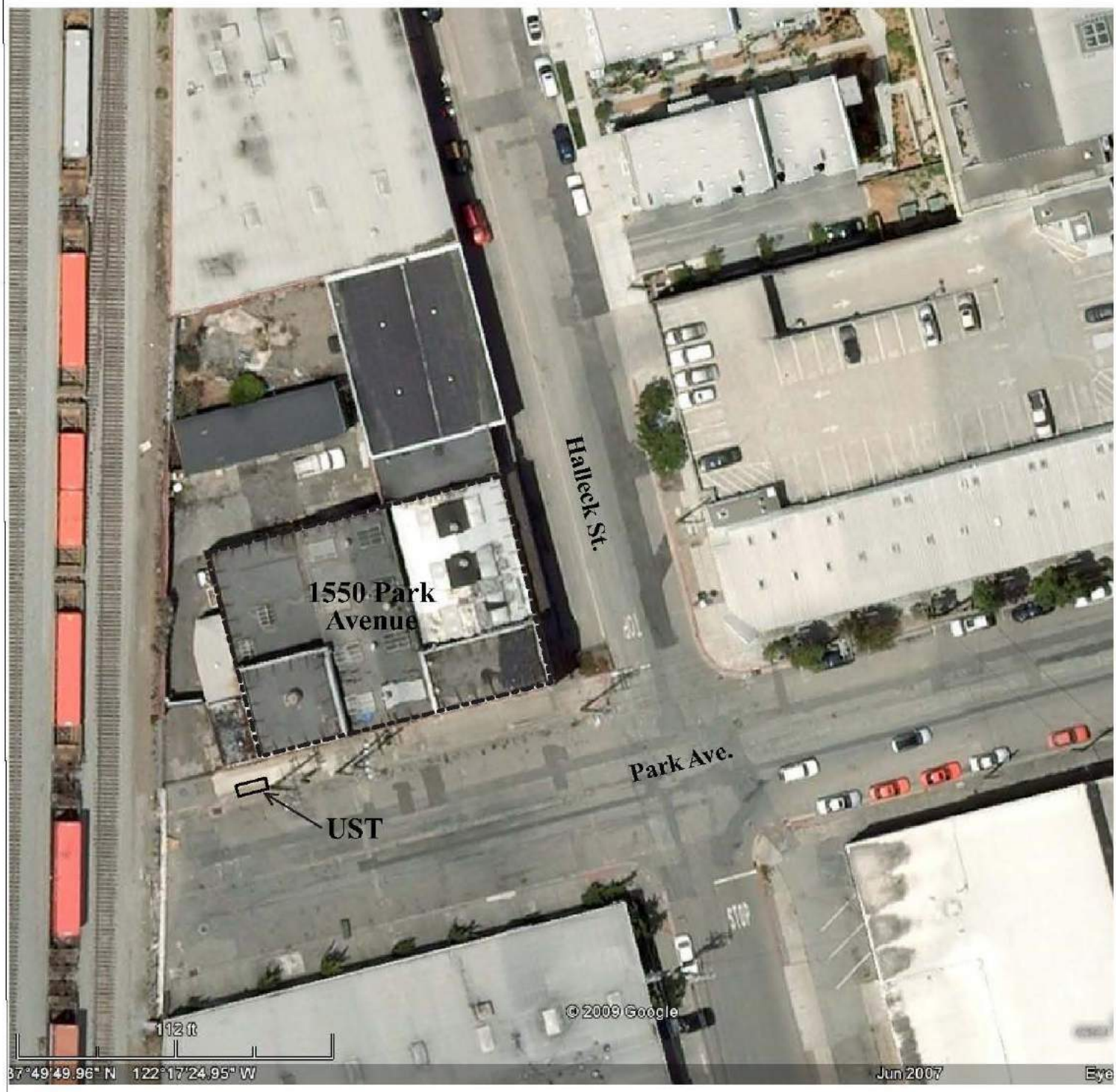


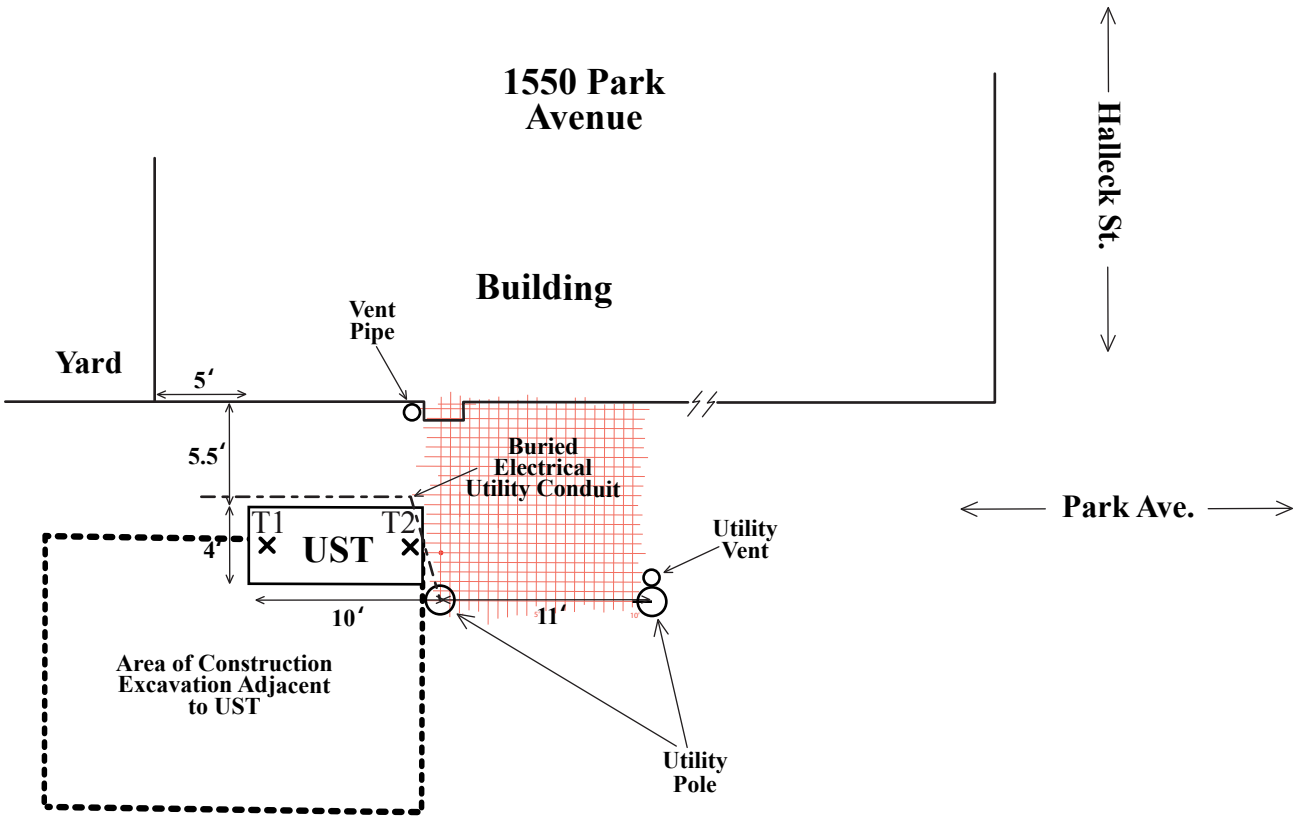
Figure 2
Site Plan Aerial Photograph
City of Emeryville
1550 Park Avenue
Emeryville, California

N

Aerial Photograph from
Google Earth, June 2007

P&D Environmental, Inc.
55 Santa Clara Ave., Suite 240
Oakland, CA 94610

0 25 50
Scale in Feet



LEGEND

T2 × Soil Sample Collection Location

Figure 3
Site Plan Detail Showing UST
City of Emeryville
1550 Park Avenue
Emeryville, California

N

P&D Environmental, Inc.
55 Santa Clara Ave., Suite 240
Oakland, CA 94610

0 5 10
Scale in Feet

LIQUID AND UST MANIFESTS

Job # 0494

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number
2. Page 1 of 1
3. Emergency Response Phone
4. Manifest Tracking Number: **00449810 JJK**

5. Generator's Name and Mailing Address

CITY OF EMERYVILLE
1333 PARK AVE
EMERYVILLE CA 94608

Generator's Phone: 510 596-4333

Generator's Site Address (if different than mailing address)

1550 PARK AVE
EMERYVILLE CA 94608

6. Transporter 1 Company Name: UNI WASTE — U.S. EPA ID Number

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address — U.S. EPA ID Number

CLEARWATER ENVIRONMENTAL
2430 ALMOND DRIVE
SILVER SPRINGS NV 89429

Facility's Phone: (775)577-9001

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. NON RCRA HAZARDOUS WASTE LIQUID					
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information

WEAR PPE, ERG # 171

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name | Signature | Month Day Year

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name | Signature | Month Day Year
Transporter 2 Printed/Typed Name | Signature | Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) | Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name | Signature | Month Day Year

GENERATOR | INT'L | TRANSPORTER | DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

GENERATOR'S INITIAL COPY

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.	2. Page 1 of 1	3. Document Number 7951

GENERATOR

4. Generator's Name and Mailing Address

Emeryville Redevelopment
1333 Park Ave
Emeryville, CA 94608
Generator's Phone 510-596-4300

Site:
1550 Park Ave
Emeryville, CA 94608

5. Transporter Company Name	6. US EPA ID Number	7. Transporter Phone
CLEARWATER ENVIRONMENTAL	CAR000007013	(510) 476-1740

8. Designated Facility Name and Site Address	9. US EPA ID Number	10. Facility's Phone
ALVISO INDEPENDENT OIL 5002 ARCHER STREET ALVISO, CA 95002	CAL000161743	(510) 476-1740

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Non-Hazardous waste, Liquid	001	TT	01373	G
b.				

15. Special Handling Instructions and Additional Information

Wear PPE
Emergency Contact
(510) 476-1740
Attn: Kirk Hayward

Handling Codes for Wastes Listed Above	
11a.	11b.

16. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to state or federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name	Signature	Month	Day	Year
Paul H. King	Paul H. King	2	8	10

TRANSPORTER

17. Transporter Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Mike Stone	Mike Stone	2	8	10

FACILITY

18. Discrepancy Indication Space

19. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 18.

Printed/Typed Name	Signature	Month	Day	Year
Charles Santos		2	8	10

WHITE – ORIGINAL (Return to Generator) YELLOW – TSDF (Retain Copy) PINK – TRANSPORTER COPY GOLDENROD – GENERATOR'S COPY

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.

2. Page 1 of 1

3. Document Number: 6833

GENERATOR

4. Generator's Name and Mailing Address
EMERYVILLE REDEVELOPMENT
1333 PARK AVE.
EMERYVILLE, CA. 94608
Generator's Phone (510) 596-4300

SITE:
1550 PARK AVE.
EMERYVILLE, CA.

5. Transporter Company Name: CLEARWATER ENVIRONMENTAL
6. US EPA ID Number: CAR000007013
7. Transporter Phone: (510) 476-1740

8. Designated Facility Name and Site Address
ALVISO INDEPENDENT OIL
5002 ARCHER STREET
ALVISO, CA 95002
9. US EPA ID Number: CAL000161743
10. Facility's Phone: (510) 476-1740

11. Waste Shipping Name and Description	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol
a. Non-Hazardous waste, Liquid	001	TT	0120	G
b.				

15. Special Handling Instructions and Additional Information
Wear PPE
Emergency Contact
(510) 476-1740
Attn: Kirk Hayward

Handling Codes for Wastes Listed Above

11a.	11b.

TRANSPORTER

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to state or federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name	Signature	Month	Day	Year
Paul H. King	Paul H. King	2	8	10

17. Transporter Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
MIKE STONE	Mike Stone	2	8	10

FACILITY

18. Discrepancy Indication Space

19. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 18.

Printed/Typed Name	Signature	Month	Day	Year
Charles Seales		2	5	10

WHITE – ORIGINAL (Return to Generator) YELLOW – TSDF (Retain Copy) PINK – TRANSPORTER COPY GOLDENROD – GENERATOR'S COPY

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: CAC002648803
2. Page 1 of: 1
3. Emergency Response Phone: 800-321-5479
4. Manifest Tracking Number: 002135627 JJK

GENERATOR

5. Generator's Name and Mailing Address
CITY OF EMERYVILLE
1550 PARK AVE
EMERYVILLE, CA 94608 ALAMEDA
Generator's Phone: 510-595-4333

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: Ecology Control Industries
U.S. EPA ID Number: CAD982039173

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
ECOLOGY CONTROL INDUSTRIES
255 PARR BOULEVARD
RICHMOND, CA 94801
U.S. EPA ID Number: CAD009466392
Facility's Phone: 510-235-1300

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. NON RCRA HAZARDOUS WASTE SOLID (EMPTY STORAGE TANK)	001	TP	1000	P	512
	2.			0		
	3.			0		
	4.			0		

14. Special Handling Instructions and Additional Information
EQ JOB #52T4049
TANK #3d019
WEAR PROPER PPE WHEN HANDLING

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ME Roberts for EPW
Signature: ME Roberts
Month: 12 Day: 8 Year: 10

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: SHON SPENCE
Signature: Shon Spence
Month: 12 Day: 8 Year: 10
Transporter 2 Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H129 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: James Wilcox
Signature: James Wilcox
Month: 02 Day: 08 Year: 10

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Tank Processing JOB #: 52T4048
TANK CERTIFICATION

********** PART 1 – To be completed by the Customer**********

CUSTOMER: P&D ENV GENERATOR: CITY OF EMERYVILLE State Waste Codes: 512

LOCATION: EMERYVILLE EPA I.D.# CAC002648803 EPA Waste Codes:

TRANSPORTER: ECI MANIFEST # 002135630JJK

	TANK 1	TANK 2	TANK 3	TANK 4	TANK 5	TANK 6
TANK #:	34019					
CAPACITY:	1500 G					
DIAMETER:	5					
LENGTH:	10					
STEEL/GLASS:	ST					
LAST CONTAINED:	FO					

LG = Leaded Gas, UG = Unleaded Gas, D = Diesel, UO = Used Oil, FO = Fuel Oil
Specify the material Last Contained if other than above.

LAND DISPOSAL RESTRICTION NOTIFICATION FORM

The waste represented on this manifest is not generated by a chemical manufacturing plant, coke-by product recovery plant of petroleum refinery. As such, it is not regulated under 40 CFR Part 61, Subpart FF (NESHAPS for Benzene Operations).

_____Pursuant to 40 CFR 268.7 I am notifying Ecology Control Industries that the material described by the above manifest is a nonwastewater, Non-RCRA solid hazardous waste and not currently subject to EPA Land Disposal Restrictions.

_____Pursuant to CCR 22 66268.7 I am notifying Ecology Control Industries that the material described by the manifest is a metal containing Non-RCRA solid hazardous waste (662683.29(g)), and an organics containing Non-RCRA solid hazardous waste (66268.29(k)). The treatment standards for these wastes have been repealed. This waste is no longer subject to land disposal restrictions.

I am an authorized agent/representative of the generator. I certify that all information submitted in this and associated documents is complete and accurate to the best of my knowledge. The tanks on the transport equipment have been numbered to correspond with the information provided above. In the event that the tanks do not correspond to the form, I will pay any and all costs incurred in rectifying the discrepancies between the tank(s) and the form. In the event that the tank(s) contain excessive solids or liquids, I agree to pay the cost of preparation, transportation and disposal/recycling of the excess material according to the schedule of charges in effect at the time of receipt of the tank(s). Further, I will not hold Ecology Control Industries responsible for any damage to tanks which occurs after the tanks are removed from the ground.

AUTHORIZED REPRESENTATIVE

SIGNATURE: ME Roberts DATE: 2/8/10

PRINT NAME: ME Roberts TITLE: Sr. Civil Eng.

CERTIFICATE OF TANK DESTRUCTION

CERTIFICATE

CERTIFIED SERVICES COMPANY

256 Parr Boulevard · Richmond, California 94801
Phone # 510-235-1393

CUSTOMER: P & D ENVIRONMENTAL, INC **JOB NO:** 52T4048

GENERATOR: CITY OF EMERYVILLE
1550 PARK AVE, EMERYVILLE, CA 94608

FOR: ECOLOGY CONTROL INDUSTRIES **TANK NO.:** 34019

LOCATION: RICHMOND **DATE:** 2/25/10

LAST PRODUCT: FUEL OIL **TEST METHOD:** VISUAL GASTECH/1314 SMPN

This is to certify that I have personally determined that this is in accordance with the American Petroleum Institute and have found the condition to be in accordance with its assigned designation. This certificate is based on conditions existing at the time the inspection herein set forth was completed and is issued subject to compliance with all qualifications and instructions.

TANK SIZE : 1, 500 GALLONS CONDITION: SAFE FOR FIRE

REMARKS:

OXYGEN 20.9% LOWER EXPLOSIVE LIMIT LESS THAN 0.1% ECOLOGY CONTROL INDUSTRIES HEREBY CERTIFIES THAT THE ABOVE NUMBERED TANK HAS BEEN CUT OPEN, PROCESSED AND THEREFORE, DESTROYED AT OUR PERMITTED HAZARDOUS WASTE FACILITY. ECOLOGY CONTROL INDUSTRIES HAS THE APPROPRIATE PERMITS FOR AND HAS ACCEPTED THE TANK SHIPPED TO US FOR PROCESSING.

In the event of any physical or atmospheric changes affecting the gas-free conditions of the above tanks, or if in any doubt, immediately stop all hot work and contact the undersigned. This permit is valid for 24 hours if no physical or atmospheric changes occur.

STANDARD SAFETY DESIGNATION

SAFE FOR MEN: Means that in the compartment or space so designated (a) The oxygen content of the atmosphere is at least 19.5 percent by volume; and that (b) Toxic materials in the atmosphere are within permissible concentrations; and (c) In the judgment of the Inspector's certificate.

SAFE FOR FIRE: Means that in the compartment so designated (a) The concentration of flammable materials in the atmosphere is below 10 percent of the lower explosive limit; and that (b) in the judgment of the Inspector, the residues are not capable of producing a higher concentration that permitted under existing atmospheric conditions in the presence of fire and while maintained as directed on the Inspector's certificate, and further, (c) All adjacent spaces have either been cleaned sufficiently to prevent the spread of fire, are satisfactorily inerted, or in the case of fuel tanks, have been treated as deemed necessary by the Inspector.

The undersigned representative acknowledges receipt of this certificate and understands the conditions and limitations under which it was issued.

James Wilcox

REPRESENTATIVE TITLE INSPECTOR

COUNTY INSPECTION REPORT

COUNTY OF ALAMEDA
UNDERGROUND TANK SYSTEM CLOSURE INSPECTION REPORT

For Use By the County of Alameda, Environmental Health

Facility Name: City of Emeryville Contractor's name: IMX Inc

Address: 1550 Park Ave City: Emeryville Zip: 94608

Project Contact: Michael Roberts / Paul King Phone No.: 510-596-4333 / 510-658-6916

Tank ID No.	#1					
Size	~1500 GALLONS					
Construction Material	Steel					
Single/Double Wall (Single circled)						
Backfill Type	gravel/clay/silt					
Oxygen <10%	12.9					
LEL <20%	0.0					
Tank Condition	rusty covered top but no holes observed					
Soil/Groundwater Condition	GW appears impacted w/PHC					
Soil Sample Depth	7' bgs + 6' bgs					
Number and Description of Soil/Groundwater Samples *(Indicate Sample Locations on Site Plan.)*	Bld; T-1; T-2; spoils; T-1 ~7' bgs T-2 ~6' bgs					

Disposition of Tank Contents: unknown **Piping:** ☐ Rinsed/Tested/Capped. (None) **Rinsate:** ☐ Shipped on Manifest. (None)

Tank & Piping Transport: ☑ Shipped on Manifest; ☑ Transporter Name Same as on Application.

Sampling: ☑ Evidence Tape; ☐ Chain of Custody; ☑ Samples Refrigerated; Pipeline Samples Taken ☐ Yes, ☑ No *(If no, explain why in Comments.)*

Soil: ☑ Soil Stored on ~~Bermed~~ Plastic & Covered; ☐ Soil Returned to Excavation. Site Plan: ☑ Attached. (drawn) No piping/line observed

Comments/Special Conditions: Stockpiled soils taken to nearby City site for security. Tank pit will be backfilled w/pea gravel + secured.

Inspector: Barney Chan Agency: ACDEH Date: 2-8-10 Start Time: 12:00 Stop Time: ______

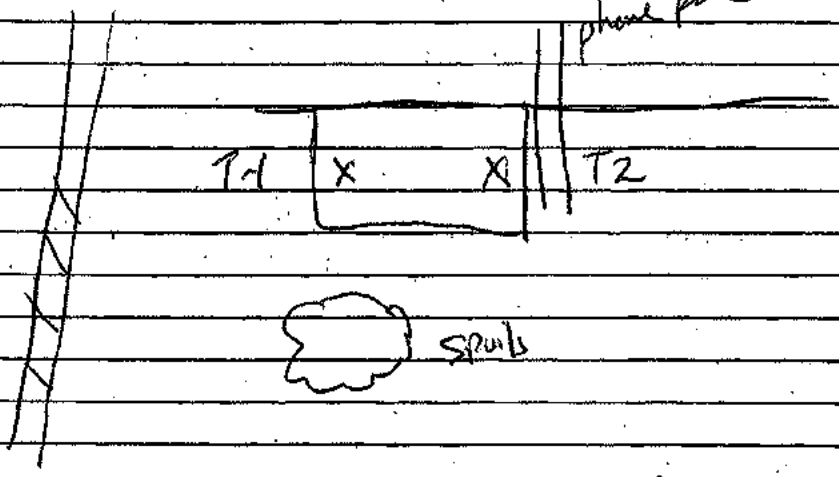
Signature of Contractor/Authorized Agent: x Paul M. King Date: 2-8-10 Page ____ of ____

ALAMEDA COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH
Certified Unified Program Agency (CUPA)
1131 Harbor Bay Parkway, Alameda, CA 94502-6577
Phone (510) 567-6700; Fax (510) 337-9335

INSPECTION NOTES

1550 Park Ave Emeryville – Barney Chan of ACDEH
Onsite to observe the removal of 1 – approx 1000 gal UST. Assumed to be a fuel oil tank
Tank located adjacent to power line being supported by PG+E truck w/ brace
Consultant: Paul King + Michael Deshone
City of Emeryville: Michael ~~Roberts~~ ~~Deshone~~ Roberts
Emeryville FD present: G. Warren OKed removal

Apparent GW w/ foaming / oily sheen indicating an unauthorized release had occurred
As much GW as possible was pumped from the tank pit.
Tank hauled by ECI, Universite – GW tanker hauler
No observed holes in tank
GW did not recharge enough to sample.
An unauthorized leak report should be submitted



Spoils to be transported to City yard for ~~Storage~~ Storage prior to disposal
T-1 ~7' bgs West end moist silty clay, no odors observed
T-2 ~6' bgs East end " " " " " "
4 discrete samples of the stockpile taken to be composited + run at the lab

2-810 X David H. King

Page ____ of ____

PHOTOGRAPHS

- **UST prior to removal**
- **Construction excavation located to the south of UST**
- **UST following removal**
- **Missing rivet from UST**
- **Oily water in UST pit**

UST prior to removal

Construction excavation located to the south of UST

UST following removal

Missing rivet from UST

Oily water in UST pit

UNAUTHORIZED RELEASE FORM

UNDERGROUND STORAGE TANK UNAUTHORIZED RELEASE (LEAK) / CONTAMINATION SITE REPORT

EMERGENCY ☐ Yes ☒ No

HAS STATE OFFICE OF EMERGENCY SERVICES REPORT BEEN FILED? ☐ Yes ☒ No

REPORT DATE

CASE #

FOR LOCAL AGENCY USE ONLY

I HEREBY CERTIFY THAT I AM A DESIGNATED GOVERNMENT EMPLOYEE AND THAT I HAVE REPORTED THIS INFORMATION TO LOCAL OFFICIALS PURSUANT TO SECTION 25180.7 OF THE HEALTH AND SAFETY CODE.

SIGNED _____ DATE

REPORTED BY

NAME OF INDIVIDUAL FILING REPORT: Markus Niebanck

PHONE: (510) 596-4356

SIGNATURE

REPRESENTING
☐ LOCAL AGENCY ☐ REGIONAL BOARD
☐ OWNER/OPERATOR ☒ OTHER

COMPANY OR AGENCY NAME: City of Emeryville

ADDRESS: 1333 Park Avenue (STREET) Emeryville (CITY) CA (STATE) 94608 (ZIP)

RESPONSIBLE PARTY

NAME: Pellegrini Refridge & Rest Equip Co ☐ Unknown

CONTACT PERSON: Pennie Barger

PHONE: (510) 653-9850

ADDRESS: 1550 Park Avenue (STREET) Emeryville (CITY) CA (STATE) 94608 (ZIP)

SITE LOCATION

FACILITY NAME (IF APPLICABLE): Same as above

OPERATOR

PHONE: ( )

ADDRESS: Same as above (STREET) (CITY) (COUNTY) (ZIP)

CROSS STREET

IMPLEMENTING AGENCIES

LOCAL AGENCY AGENCY NAME: Alameda County Environmental Health - Barney Chan

PHONE: (510) 567-6765

REGIONAL BOARD

PHONE: ( )

SUBSTANCES INVOLVED

(1) NAME: Heating Oil — QUANTITY LOST (GALLONS) ☒ Unknown

(2) ☐ Unknown

DISCOVERY/ABATEMENT

DATE DISCOVERED: 2/8/2010

HOW DISCOVERED ☐ Tank Test ☒ Tank Removal ☐ Nuisance Conditions ☐ Inventory Control ☐ Subsurface Monitoring ☐ Other

DATE DISCHARGE BEGAN ☒ UNKNOWN

HAS DISCHARGE BEEN STOPPED? ☐ YES ☐ NO IF YES, DATE

METHOD USED TO STOP DISCHARGE (CHECK ALL THAT APPLY)
☐ Remove Contents ☒ Close Tank
☐ Repair Tank ☐ Change Procedure
☐ Replace Tank ☐ Other
☐ Repair Piping

SOURCE/CAUSE

SOURCE OF DISCHARGE
☐ Tank Leak ☐ Piping Leak ☒ Unknown ☐ Other

CAUSE(S)
☐ Overfill ☐ Corrosion ☐ Rupture/Failure ☒ Unknown ☐ Spill ☐ Other

CASE TYPE

CHECK ONE ONLY
☒ Undetermined ☐ Soil Only ☐ Groundwater ☐ Drinking Water – (CHECK ONLY IF WATER WELLS HAVE ACTUALLY BEEN AFFECTED)

CURRENT STATUS

CHECK ONE ONLY
☒ No Action Taken
☐ Leak Being Confirmed
☐ Remediation Plan
☐ Preliminary Site Assessment Workplan Submitted
☐ Preliminary Site Assessment Underway
☐ Case Closed (Cleanup Completed or Unnecessary)
☐ Pollution Characterization
☐ Post Cleanup Monitoring in Progress
☐ Cleanup Underway

REMEDIAL ACTION

CHECK APPROPRIATE ACTION(S)
☐ Cap Site (CD)
☐ Contamination Barrier (CB)
☐ Vacuum Extract (VE)
☐ Excavate & Dispose (ED)
☐ Excavate & Treat (ET)
☒ No Action Required (NA)
☐ Remove Free Product (FP)
☐ Pump & Treat Groundwater (GT)
☐ Treatment At Hookup (HU)
☐ Enhanced Bio Degradation (IT)
☐ Replace Supply (RS)
☐ Vent Soil (VS)
☐ Other

COMMENTS

SOIL DISPOSAL DOCUMENTATION

REPUBLIC SERVICES, INC.

NON-HAZARDOUS WASTE MANIFEST

GENERATOR INFORMATION

Generator Name: EMERYVILLE REDEVELOPMENT AGENCY

Address: 1333 PARK AVE.

City: EMERYVILLE County:

State: CA Zip: 94608

CUSTOMER/BILLING INFORMATION

Billing Name: P&D ENVIRONMENTAL

Address: 55 SANTA CLARA AVE. STE. 200

City: OAKLAND County:

State: CA Zip: 94611

Site Location (if different): 1333 PARK BLVD, EMERYVILLE

Republic Services Approval #	Description of Waste	Volume/Weight	Expiration Date	Container Type
3850102938	CONTAMINATED SOIL-ADC	20/TONS	12/31/2010	

*Attach Additional Sheet if necessary

I hereby certify that the above described materials are non-hazardous wastes as defined by 40 CFR 261 or any applicable state law. Further, that the above named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

[signature] [signature] 3/10/10

Generator/Authorized Agent Name **Signature** **Date Shipped**

TRANSPORTER INFORMATION

Transporter Name: IMA inc DOT# 60421

Transporter Address: 850 5TH ave Truck Number: 009

oakland Ca. 94806 Phone Number: 510-530-9368

I certify no hazardous waste or other regulated substance was knowingly introduced to the waste while in my custody. The waste transported in this vehicle is the waste identified above, to the best of my knowledge.

Martin Castillo [signature] 3/10/10

Name of Authorized Agent Signature Date Delivered

DISPOSAL SITE INFORMATION

Site Name: **VASCO ROAD LANDFILL** **Phone No.** **925 447 0491**

Site Address: **4001 VASCO ROAD LIVERMORE, CA**

I hereby acknowledge receipt of the above described materials.

Jason [signature] 3-10-10

Name (Print or Type) Signature Date Received

REPUBLIC SERVICES, INC.

NON-HAZARDOUS WASTE MANIFEST

GENERATOR INFORMATION

Generator Name: EMERYVILLE REDEVELOPMENT AGENCY

Address: 1333 PARK AVE.

City: EMERYVILLE County: _____

State: CA Zip: 94608

Site Location (if different): 1333 PARK BLVD, EMERYVILLE

CUSTOMER/BILLING INFORMATION

Billing Name: P&D ENVIRONMENTAL

Address: 55 SANTA CLARA AVE. STE. 200

City: OAKLAND County: _____

State: CA Zip: 94611

Republic Services Approval #	Description of Waste	Volume/Weight	Expiration Date	Container Type
3850102938	CONTAMINATED SOIL-ADC	20/TONS	12/31/2010	

*Attach Additional Sheet if necessary

I hereby certify that the above described materials are non-hazardous wastes as defined by 40 CFR 261 or any applicable state law. Further, that the above named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

Martin Castillo — Signature — 3/10/10

Generator/Authorized Agent Name **Signature** **Date Shipped**

TRANSPORTER INFORMATION

Transporter Name: TMT INC

Transporter Address: 850 5TH AVE Oakland CA 94606

DOT# 60421

Truck Number: 009

Phone Number: 510-530-9368

I certify no hazardous waste or other regulated substance was knowingly introduced to the waste while in my custody. The waste transported in this vehicle is the waste identified above, to the best of my knowledge.

Martin Castillo — Signature — 3/10/10

Name of Authorized Agent Signature Date Delivered

DISPOSAL SITE INFORMATION

Site Name: VASCO ROAD LANDFILL **Phone No.** 925 447 0491

Site Address: 4001 VASCO ROAD LIVERMORE, CA

I hereby acknowledge receipt of the above described materials.

_____ — _____ — 3-10-10

Name (Print or Type) Signature Date Received

REPUBLIC SERVICES
VASCO ROAD LANDFILL
4001 N, Vasco Road, Livermore, CA 94551
(925) 447-0491

05769

SITE	TICKET	GRID
01	047470	0000

WEIGHMASTER: JASON V

DATE IN	TIME IN
10 March 2010	10:07 am

DATE OUT	TIME OUT
10 March 2010	10:50 am

VEHICLE: 9

REFERENCE	ORIGIN
	EMERYVILLE

021260
P&D ENVIRONMENTAL
55 SANTA CLARA AVE, STE. 200
OAKLAND, CA 94611

Contract: 3850102938

01 Gross Weight 47,040.00 lb
Tare Weight 25,980.00 lb
Net Weight 21,060.00 lb 10.53 TN

Inbound - SCALE TICKET

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
10.53	TN	SW-CONT SOIL				
1.00	LD	ENVIRONMENTAL FEE				
1.00	LD	FUEL RECOVERY FEE				

WARNING: Transporting any unauthorized hazardous waste to this facility for disposal is prohibited by law. Persons violating this prohibition are subject to civil and criminal prosecution.
All children must remain in vehicles.
Absolutely no salvaging allowed.

WEIGHMASTER CERTIFICATE
THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 12700) of Division 5 of the California Business and Professions Code, administered by the division of Measurement Standards of the California Department of Food & Agriculture.

NET AMOUNT
TENDERED
CHANGE

Driver: _____

Weighmaster: _____

CUSTOMER

REPUBLIC SERVICES
VASCO ROAD LANDFILL
4001 N, Vasco Road, Livermore, CA 94551
(925) 447-0491

05880

SITE	TICKET	GRID
01	047570	0000

WEIGHMASTER: JASON U

DATE IN	TIME IN
10 March 2010	2:32 pm
DATE OUT	**TIME OUT**
10 March 2010	3:08 pm

VEHICLE: 1

REFERENCE	ORIGIN
	EMERYVILLE

021260
P&D ENVIRONMENTAL
85 SANTA CLARA AVE, STE. 200
OAKLAND, CA 94611

Contract: 3850102938

00 Gross Weight 45,300.00 lb
Tare Weight 25,780.00 lb
Net Weight 19,520.00 lb 9.76 TN

Inbound - SCALE TICKET

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
9.76	TN	SW-CONT SOIL				
1.00	LD	ENVIRONMENTAL FEE				
1.00	LD	FUEL RECOVERY FEE				

WARNING: Transporting any unauthorized hazardous waste to this facility for disposal is prohibited by law. Persons violating this prohibition are subject to civil and criminal prosecution.
All children must remain in vehicles.
Absolutely no salvaging allowed.

WEIGHMASTER CERTIFICATE
THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 12700) of Division 5 of the California Business and Professions Code, administered by the division of Measurement Standards of the California Department of Food & Agriculture.

NET AMOUNT
TENDERED
CHANGE

Driver: _____

Weighmaster: _____

CUSTOMER

LABORATORY ANALYTICAL REPORTS

- **McCampbell work order #0912246 - UST contents sample**
- **McCampbell work order #1002229 - UST pit bottom soil samples**
- **McCampbell work order #1002217 - stock pile soil sample organics results**
- **McCampbell work order #1002217 addon A - stock pile soil sample LUFT 5 metals results**
- **McCampbell work order #1002217 addon B - stock pile soil sample Total Chromium STLC results**

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

P & D Environmental 55 Santa Clara, Ste.240 Oakland, CA 94610	Client Project ID: #0494; City of Emeryville	Date Sampled: 12/09/09
		Date Received: 12/09/09
	Client Contact: Paul King	Date Reported: 12/10/09
	Client P.O.:	Date Completed: 12/10/09

WorkOrder: 0912246

December 10, 2009

Dear Paul:

Enclosed within are:

1) The results of the **1** analyzed sample from your project: **#0494; City of Emeryville,**
2) A QC report for the above sample,
3) A copy of the chain of custody, and
4) An invoice for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing

McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

P & D ENVIRONMENTAL, INC.
55 Santa Clara Ave, Suite 240
Oakland, CA 94610
(510) 658-6916

0912246

RUSH

CHAIN OF CUSTODY RECORD

PROJECT NUMBER: 0494

PROJECT NAME: CITY OF EMERYVILLE
1550 PARK AVE
EMERYVILLE

SAMPLED BY: (PRINTED AND SIGNATURE)
MICHAEL DESCHENES Michael Deschenes

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	ANALYSIS(ES): 5-Oil Fingerprint	PRESERVATIVE	REMARKS
UST OIL	12/9/09	0930	OIL		2	X	ICE	24 hr RUSH Turnaround Time

RELINQUISHED BY: (SIGNATURE) Michael Deschenes — DATE 12/9/09 — TIME
RECEIVED BY: (SIGNATURE)

RELINQUISHED BY: (SIGNATURE) — DATE 12/9/09 — TIME 1400
RECEIVED BY: (SIGNATURE)

RELINQUISHED BY: (SIGNATURE) — DATE — TIME
RECEIVED FOR LABORATORY BY: (SIGNATURE)

TOTAL NO. OF SAMPLES (THIS SHIPMENT): 1
TOTAL NO. OF CONTAINERS (THIS SHIPMENT): 2

LABORATORY: MC CAMPBELL ANALYTICAL

LABORATORY CONTACT: ANGELA RYDELINS

LABORATORY PHONE NUMBER: (925) 252-9262

SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( )YES (X)NO

Results and billing to:
P&D Environmental, Inc.
lab@pdenviro.com

REMARKS: 2 VOA'S

ICE / t° 7.2
GOOD CONDITION ✓ — APPROPRIATE ✓
HEAD SPACE ABSENT ___ — CONTAINERS ___
DECHLORINATED IN LAB ✓ — PRESERVED IN LAB ___
PRESERVATION: VOAS | O&G | METALS | OTHER

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0912246 **ClientCode: PDEO**

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
Paul King
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610
(510) 658-6916 FAX 510-834-0152

Email: lab@pdenviro.com
cc:
PO:
ProjectNo: #0494; City of Emeryville

Bill to:
Accounts Payable
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610

Requested TAT: 1 day

Date Received: **12/09/2009**
Date Printed: **12/09/2009**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below) 1	2	3	4	5	6	7	8	9	10	11	12
0912246-001	UST OIL	Oil	12/9/2009 9:30	☐	A											

Test Legend:

1	G-MBTEX_Oil	2		3		4		5	
6		7		8		9		10	
11		12							

The following SampID: 001A contains testgroup.

Prepared by: Maria Venegas

Comments: 24hr Rush

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.

McCampbell Analytical, Inc.
"When Quality Counts"

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Telephone: 877-252-9262 Fax: 925-252-9269

Sample Receipt Checklist

Client Name: **P & D Environmental**

Date and Time Received: **12/9/2009 2:44:44 PM**

Project Name: **#0494; City of Emeryville**

Checklist completed and reviewed by: Maria Venegas

WorkOrder N°: **0912246** Matrix Oil

Carrier: Rob Pringle (MAI Courier)

Chain of Custody (COC) Information

Chain of custody present?	Yes ☑	No ☐
Chain of custody signed when relinquished and received?	Yes ☑	No ☐
Chain of custody agrees with sample labels?	Yes ☑	No ☐
Sample IDs noted by Client on COC?	Yes ☑	No ☐
Date and Time of collection noted by Client on COC?	Yes ☑	No ☐
Sampler's name noted on COC?	Yes ☑	No ☐

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	NA ☑
Shipping container/cooler in good condition?	Yes ☑	No ☐	
Samples in proper containers/bottles?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature	Cooler Temp: 7.2°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☐	No ☐	No VOA vials submitted ☑
Sample labels checked for correct preservation?	Yes ☑	No ☐	
Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	

(Ice Type: WET ICE)

** NOTE: If the "No" box is checked, see comments below.*

Client contacted: Date contacted: Contacted by:

Comments:

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Telephone: 877-252-9262 Fax: 925-252-9269

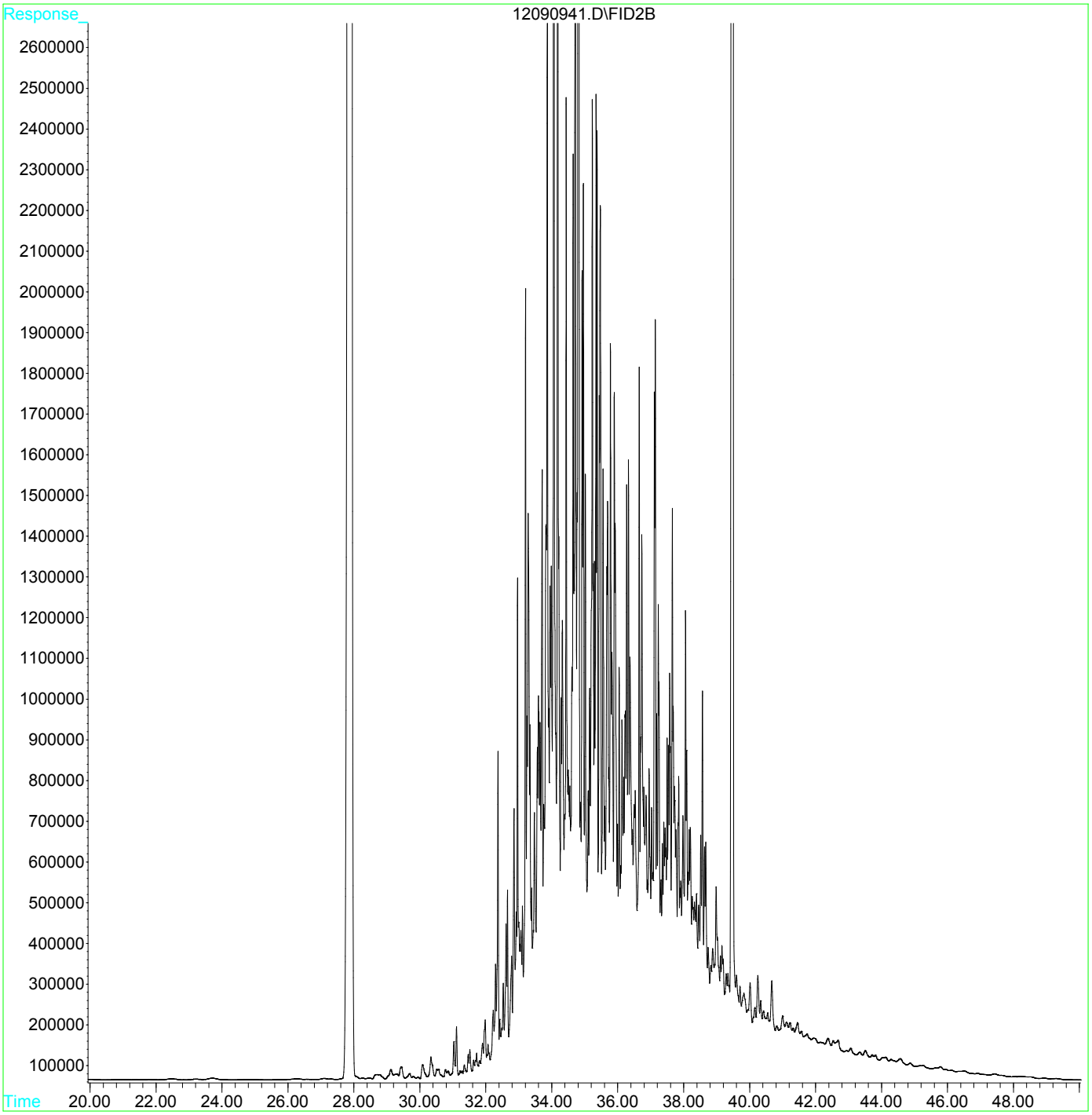
P & D Environmental	Client Project ID: #0494; City of Emeryville	Date Sampled: 12/09/09
		Date Received: 12/09/09
55 Santa Clara, Ste.240	Client Contact: Paul King	Date Extracted: 12/09/09
Oakland, CA 94610	Client P.O.:	Date Analyzed 12/10/09

Fuel FingerPrint *

Extraction method SW3550C Analytical methods SW8015B Work Order: 0912246

Lab ID	Client ID	Matrix	Fuel Fingerprint
0912246-001A	UST OIL	O	This sample shows a significant hydrocarbon pattern that resembles fuel oil, possibly bunker oil. Chromatograms enclosed.

File : D:\HPCHEM\GC11\DATAB\12090941.D
Operator : Thu
Acquired : 10 Dec 2009 9:59 am using AcqMethod GC11AW.M
Instrument : GC-11
Sample Name: 0912246-001A OIL RE
Misc Info : TPH(FF)_O
Vial Number: 71



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QC SUMMARY REPORT FOR SW8015B

W.O. Sample Matrix: Oil QC Matrix: Soil BatchID: 47521 WorkOrder 0912246

EPA Method SW8015B **Extraction SW3550C** **Spiked Sample ID: 0912243-012A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH-Diesel (C10-C23)	ND	20	101	101	0	111	112	0.888	70 - 130	30	70 - 130	30
%SS:	105	50	101	101	0	95	97	2.56	70 - 130	30	70 - 130	30

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

BATCH 47521 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0912246-001A	12/09/09 9:30 AM	12/09/09	12/10/09 9:59 AM				

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

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

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

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

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

DHS ELAP Certification 1644

QA/QC Officer

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

P & D Environmental	Client Project ID: #0494; City of Emeryville	Date Sampled: 02/08/10
		Date Received: 02/09/10
55 Santa Clara, Ste.240	Client Contact: Paul King	Date Reported: 02/11/10
Oakland, CA 94610	Client P.O.:	Date Completed: 02/11/10

WorkOrder: 1002229

February 11, 2010

Dear Paul:

Enclosed within are:

1) The results of the **2** analyzed samples from your project: **#0494; City of Emeryville,**
2) A QC report for the above samples,
3) A copy of the chain of custody, and
4) An invoice for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing

McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

P & D ENVIRONMENTAL, INC.
55 Santa Clara Ave, Suite 240
Oakland, CA 94610
(510) 658-6916

1002229

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

PROJECT NUMBER:	PROJECT NAME:
0494	CITY OF EMERYVILLE 1550 PARK AVE. EMERYVILLE, CA

SAMPLED BY: (PRINTED AND SIGNATURE) MICHAEL DESCHENES

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	ANALYSIS(ES): TPH-D	BTEX, EDB, EDC BY 8260	PRESERVATIVE	REMARKS
T1 - 7.0	2/8/10	13:35	SIL		1	X	X	ICE	NORMAL TURN AROUND
T2 - 6.0	2/8/10	14:00	SIL		1	X	X	ICE	" " "

ICE/t° 1.4°C ✓
GOOD CONDITION ✓ APPROPRIATE CONTAINERS ✓
HEAD SPACE ABSENT
DECHLORINATED IN LAB PRESERVED IN LAB
PRESERVATION VOAS | O&G | METALS | OTHER

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)
Michael Deschenes	2/9/10	550	
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)
	2/9/10	550	
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)

TOTAL NO. OF SAMPLES (THIS SHIPMENT): 2
TOTAL NO. OF CONTAINERS (THIS SHIPMENT): 2
LABORATORY: MC CAMPBELL ANALYTICAL
LABORATORY CONTACT: ANGELA RYDELINS
LABORATORY PHONE NUMBER: (877) 252-9262
SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( )YES (X)NO

Results and billing to:
P&D Environmental, Inc.
lab@pdenviro.com

REMARKS:

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1002229 **ClientCode: PDEO**

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
Paul King
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610
(510) 658-6916 FAX 510-834-0152

Email: lab@pdenviro.com
cc:
PO:
ProjectNo: #0494; City of Emeryville

Bill to:
Accounts Payable
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610

Requested TAT: 5 days

Date Received: **02/09/2010**
Date Printed: **02/09/2010**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1002229-001	T1 - 7.0	Soil	2/8/2010 13:35	☐	A	A										
1002229-002	T2 - 6.0	Soil	2/8/2010 14:00	☐	A	A										

Test Legend:

1	MBTEXOXY-8260B_S	2	TPH(D)_S	3		4		5	
6		7		8		9		10	
11		12							

Prepared by: Shino Hamilton

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.

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Sample Receipt Checklist

Client Name: **P & D Environmental**

Date and Time Received: **2/9/2010 8:02:10 PM**

Project Name: **#0494; City of Emeryville**

Checklist completed and reviewed by: Shino Hamilton

WorkOrder N°: **1002229** Matrix Soil

Carrier: Rob Pringle (MAI Courier)

Chain of Custody (COC) Information

Chain of custody present?	Yes ☑	No ☐
Chain of custody signed when relinquished and received?	Yes ☑	No ☐
Chain of custody agrees with sample labels?	Yes ☑	No ☐
Sample IDs noted by Client on COC?	Yes ☑	No ☐
Date and Time of collection noted by Client on COC?	Yes ☑	No ☐
Sampler's name noted on COC?	Yes ☑	No ☐

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	NA ☑
Shipping container/cooler in good condition?	Yes ☑	No ☐	
Samples in proper containers/bottles?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature	Cooler Temp: 1.4°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☐	No ☐	No VOA vials submitted ☑
Sample labels checked for correct preservation?	Yes ☑	No ☐	
Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	

(Ice Type: WET ICE)

** NOTE: If the "No" box is checked, see comments below.*

Client contacted: Date contacted: Contacted by:

Comments:

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Telephone: 877-252-9262 Fax: 925-252-9269

P & D Environmental 55 Santa Clara, Ste.240 Oakland, CA 94610	Client Project ID: #0494; City of Emeryville	Date Sampled: 02/08/10
		Date Received: 02/09/10
	Client Contact: Paul King	Date Extracted: 02/09/10
	Client P.O.:	Date Analyzed: 02/10/10

BTEX + EDB and 1,2-DCA by GC/MS*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1002229

Lab ID	1002229-001A	1002229-002A			Reporting Limit for DF =1	
Client ID	T1 - 7.0	T2 - 6.0				
Matrix	S	S				
DF	1	1			S	W
Compound	**Concentration**				mg/kg	ug/L
Benzene	ND	ND			0.005	NA
1,2-Dibromoethane (EDB)	ND	ND			0.004	NA
1,2-Dichloroethane (1,2-DCA)	ND	ND			0.004	NA
Ethylbenzene	ND	ND			0.005	NA
Toluene	ND	ND			0.005	NA
Xylenes	ND	ND			0.005	NA
Surrogate Recoveries (%)						
%SS1:	116	117				
%SS2:	105	104				
Comments						

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

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

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

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Telephone: 877-252-9262 Fax: 925-252-9269

P & D Environmental	Client Project ID: #0494; City of Emeryville	Date Sampled: 02/08/10
		Date Received: 02/09/10
55 Santa Clara, Ste.240	Client Contact: Paul King	Date Extracted: 02/09/10
Oakland, CA 94610	Client P.O.:	Date Analyzed 02/09/00-02/10/10

Total Extractable Petroleum Hydrocarbons*

Extraction method SW3550C Analytical methods: SW8015B Work Order: 1002229

Lab ID	Client ID	Matrix	TPH-Diesel (C10-C23)	DF	% SS	Comments
1002229-001A	T1 - 7.0	S	15	1	109	e3
1002229-002A	T2 - 6.0	S	5.8	1	111	e2

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

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

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

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:

e2) diesel range compounds are significant; no recognizable pattern
e3) aged diesel is significant

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

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Telephone: 877-252-9262 Fax: 925-252-9269

QC SUMMARY REPORT FOR SW8015B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 48557 WorkOrder 1002229

EPA Method SW8015B **Extraction SW3550C** **Spiked Sample ID: 1002172-001A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH-Diesel (C10-C23)	120	40	109	113	1.14	104	106	1.66	70 - 130	30	70 - 130	30
%SS:	101	25	95	108	12.9	95	97	1.95	70 - 130	30	70 - 130	30

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

BATCH 48557 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1002229-001A	02/08/10 1:35 PM	02/09/10	02/09/00 9:36 PM	1002229-002A	02/08/10 2:00 PM	02/09/10	02/10/10 6:02 PM

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

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

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

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

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

DHS ELAP Certification 1644

QA/QC Officer

McCampbell Analytical, Inc.
"When Quality Counts"

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Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 48587 WorkOrder 1002229

EPA Method SW8260B **Extraction SW5030B** **Spiked Sample ID: 1002201-004a**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
tert-Amyl methyl ether (TAME)	ND	0.050	75.9	77.2	1.68	86.2	80.3	7.02	70 - 130	30	70 - 130	30
Benzene	ND	0.050	94.4	98.7	4.42	105	100	4.93	70 - 130	30	70 - 130	30
t-Butyl alcohol (TBA)	ND	0.25	84.8	81.9	3.52	95.1	89.2	6.37	70 - 130	30	70 - 130	30
1,2-Dibromoethane (EDB)	ND	0.050	98.4	101	2.13	115	106	7.46	70 - 130	30	70 - 130	30
1,2-Dichloroethane (1,2-DCA)	ND	0.050	93.2	96.4	3.32	106	100	5.55	70 - 130	30	70 - 130	30
Diisopropyl ether (DIPE)	ND	0.050	89	91.5	2.83	103	94	9.03	70 - 130	30	70 - 130	30
Ethyl tert-butyl ether (ETBE)	ND	0.050	90.3	92.9	2.82	103	95	7.83	70 - 130	30	70 - 130	30
Methyl-t-butyl ether (MTBE)	ND	0.050	85.3	87.9	2.95	98.1	91.5	6.96	70 - 130	30	70 - 130	30
Toluene	ND	0.050	105	107	1.36	118	112	5.86	70 - 130	30	70 - 130	30
%SS1:	103	0.13	111	112	1.08	113	112	0.775	70 - 130	30	70 - 130	30
%SS2:	121	0.13	111	112	0.523	113	114	0.0106	70 - 130	30	70 - 130	30

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

BATCH 48587 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1002229-001A	02/08/10 1:35 PM	02/09/10	02/10/10 8:33 PM	1002229-002A	02/08/10 2:00 PM	02/09/10	02/10/10 9:12 PM

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

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

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

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

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

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

DHS ELAP Certification 1644

QA/QC Officer

McCampbell Analytical, Inc.
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Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

P & D Environmental	Client Project ID: #0494; City of Emeryville	Date Sampled: 02/08/10
		Date Received: 02/09/10
55 Santa Clara, Ste.240	Client Contact: Paul King	Date Reported: 02/11/10
Oakland, CA 94610	Client P.O.:	Date Completed: 02/11/10

WorkOrder: 1002217

February 11, 2010

Dear Paul:

Enclosed within are:

1) The results of the **1** analyzed sample from your project: **#0494; City of Emeryville,**
2) A QC report for the above sample,
3) A copy of the chain of custody, and
4) An invoice for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing

McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

P & D ENVIRONMENTAL, INC.
55 Santa Clara Ave, Suite 240
Oakland, CA 94610
(510) 658-6916

1002217

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

PROJECT NUMBER:	PROJECT NAME:
0494	CITY OF EMERYVILLE 1550 PARK AVE EMERYVILLE, CA

SAMPLED BY: (PRINTED AND SIGNATURE) Michael DESCHENES Michael Deschenes

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	ANALYSIS(ES): TPH-D	BTEX, EDB, EDC BY 8260					PRESERVATIVE	REMARKS
SP1	2/8/10	14:30	SIL	SOIL EXCAVATED FROM UST REMOVAL EXCAVATION	4	X	X					ICE	NORMAL TURN AROUND

ICE/T° 1.4°C
GOOD CONDITION ✓
HEAD SPACE ABSENT
DECHLORINATED IN LAB
PRESERVATION: VOAS | O&G | METALS | OTHER
APPROPRIATE CONTAINERS ✓
PRESERVED IN LAB

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)
Michael Deschenes	2/9/10	530	
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)
	2/9/10	530	
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)

TOTAL NO. OF SAMPLES (THIS SHIPMENT): 1
TOTAL NO. OF CONTAINERS (THIS SHIPMENT): 4

LABORATORY: MC CAMPBELL ANALYTICAL
LABORATORY CONTACT: ANGELA RYDELINS
LABORATORY PHONE NUMBER: (877) 252-9262

SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( )YES (X)NO

Results and billing to:
P&D Environmental, Inc.
lab@pdenviro.com

REMARKS: PLEASE COMPOSITE CONTAINERS SP1 PRIOR TO ANALYSIS.

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1002217 **ClientCode: PDEO**

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
Paul King
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610
(510) 658-6916 FAX 510-834-0152

Email: lab@pdenviro.com
cc:
PO:
ProjectNo: #0494; City of Emeryville

Bill to:
Accounts Payable
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610

Requested TAT: 5 days

Date Received: **02/09/2010**
Date Printed: **02/09/2010**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1002217-001	SP1	Soil	2/8/2010 14:30	☐	A	A										

Test Legend:

1	MBTEXOXY-8260B_S	2	TPH(D)_S	3		4		5	
6		7		8		9		10	
11		12							

Prepared by: Shino Hamilton

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

Sample Receipt Checklist

Client Name: **P & D Environmental**

Date and Time Received: **2/9/2010 6:34:36 PM**

Project Name: **#0494; City of Emeryville**

Checklist completed and reviewed by: Shino Hamilton

WorkOrder N°: **1002217** Matrix Soil

Carrier: Rob Pringle (MAI Courier)

Chain of Custody (COC) Information

Chain of custody present?	Yes ☑	No ☐
Chain of custody signed when relinquished and received?	Yes ☑	No ☐
Chain of custody agrees with sample labels?	Yes ☑	No ☐
Sample IDs noted by Client on COC?	Yes ☑	No ☐
Date and Time of collection noted by Client on COC?	Yes ☑	No ☐
Sampler's name noted on COC?	Yes ☑	No ☐

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	NA ☑
Shipping container/cooler in good condition?	Yes ☑	No ☐	
Samples in proper containers/bottles?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature	Cooler Temp: 1.4°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☐	No ☐	No VOA vials submitted ☑
Sample labels checked for correct preservation?	Yes ☑	No ☐	
Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	

(Ice Type: WET ICE)

** NOTE: If the "No" box is checked, see comments below.*

Client contacted: Date contacted: Contacted by:

Comments:

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Telephone: 877-252-9262 Fax: 925-252-9269

P & D Environmental	Client Project ID: #0494; City of Emeryville	Date Sampled: 02/08/10
		Date Received: 02/09/10
55 Santa Clara, Ste.240	Client Contact: Paul King	Date Extracted: 02/09/10
Oakland, CA 94610	Client P.O.:	Date Analyzed: 02/10/10

BTEX + EDB and 1,2-DCA by GC/MS*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1002217

Lab ID	1002217-001A				Reporting Limit for DF =1	
Client ID	SP1					
Matrix	S					
DF	1				S	W
Compound	**Concentration**				mg/kg	ug/L
Benzene	ND				0.005	NA
1,2-Dibromoethane (EDB)	ND				0.004	NA
1,2-Dichloroethane (1,2-DCA)	ND				0.004	NA
Ethylbenzene	ND				0.005	NA
Toluene	ND				0.005	NA
Xylenes	ND				0.005	NA
Surrogate Recoveries (%)						
%SS1:	107					
%SS2:	84					
Comments						

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

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

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

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Telephone: 877-252-9262 Fax: 925-252-9269

P & D Environmental	Client Project ID: #0494; City of Emeryville	Date Sampled: 02/08/10
		Date Received: 02/09/10
55 Santa Clara, Ste.240	Client Contact: Paul King	Date Extracted: 02/09/10
Oakland, CA 94610	Client P.O.:	Date Analyzed 02/10/10

Total Extractable Petroleum Hydrocarbons*

Extraction method SW3550C Analytical methods: SW8015B Work Order: 1002217

Lab ID	Client ID	Matrix	TPH-Diesel (C10-C23)	DF	% SS	Comments
1002217-001A	SP1	S	830	10	103	e1,e11

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

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

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

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:

e1) unmodified or weakly modified diesel is significant
e11) stoddard solvent/mineral spirit (?)

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"

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QC SUMMARY REPORT FOR SW8015B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 48557 WorkOrder 1002217

EPA Method SW8015B **Extraction SW3550C** **Spiked Sample ID: 1002172-001A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH-Diesel (C10-C23)	120	40	109	113	1.14	104	106	1.66	70 - 130	30	70 - 130	30
%SS:	101	25	95	108	12.9	95	97	1.95	70 - 130	30	70 - 130	30

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

BATCH 48557 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1002217-001A	02/08/10 2:30 PM	02/09/10	02/10/10 7:13 PM				

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

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

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

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

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

DHS ELAP Certification 1644

QA/QC Officer

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QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 48587 WorkOrder 1002217

EPA Method SW8260B **Extraction SW5030B** **Spiked Sample ID: 1002201-004a**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
tert-Amyl methyl ether (TAME)	ND	0.050	75.9	77.2	1.68	86.2	80.3	7.02	70 - 130	30	70 - 130	30
Benzene	ND	0.050	94.4	98.7	4.42	105	100	4.93	70 - 130	30	70 - 130	30
t-Butyl alcohol (TBA)	ND	0.25	84.8	81.9	3.52	95.1	89.2	6.37	70 - 130	30	70 - 130	30
1,2-Dibromoethane (EDB)	ND	0.050	98.4	101	2.13	115	106	7.46	70 - 130	30	70 - 130	30
1,2-Dichloroethane (1,2-DCA)	ND	0.050	93.2	96.4	3.32	106	100	5.55	70 - 130	30	70 - 130	30
Diisopropyl ether (DIPE)	ND	0.050	89	91.5	2.83	103	94	9.03	70 - 130	30	70 - 130	30
Ethyl tert-butyl ether (ETBE)	ND	0.050	90.3	92.9	2.82	103	95	7.83	70 - 130	30	70 - 130	30
Methyl-t-butyl ether (MTBE)	ND	0.050	85.3	87.9	2.95	98.1	91.5	6.96	70 - 130	30	70 - 130	30
Toluene	ND	0.050	105	107	1.36	118	112	5.86	70 - 130	30	70 - 130	30
%SS1:	103	0.13	111	112	1.08	113	112	0.775	70 - 130	30	70 - 130	30
%SS2:	121	0.13	111	112	0.523	113	114	0.0106	70 - 130	30	70 - 130	30

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

BATCH 48587 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1002217-001A	02/08/10 2:30 PM	02/09/10	02/10/10 7:55 PM				

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

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

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

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

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

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

DHS ELAP Certification 1644

QA/QC Officer

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Telephone: 877-252-9262 Fax: 925-252-9269

P & D Environmental	Client Project ID: #0494; City of Emeryville	Date Sampled: 02/08/10
		Date Received: 02/09/10
55 Santa Clara, Ste.240	Client Contact: Paul King	Date Reported: 02/11/10
Oakland, CA 94610	Client P.O.:	Date Completed: 02/18/10

WorkOrder: 1002217

February 22, 2010

Dear Paul:

Enclosed within are:

1) The results of the **1** analyzed sample from your project: **#0494; City of Emeryville,**
2) A QC report for the above sample,
3) A copy of the chain of custody, and
4) An invoice for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing

McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

P & D ENVIRONMENTAL, INC.
55 Santa Clara Ave, Suite 240
Oakland, CA 94610
(510) 658-6916

1002217

CHAIN OF CUSTODY RECORD

PROJECT NUMBER: 0494

PROJECT NAME: CITY OF EMERYVILLE 1550 PARK AVE EMERYVILLE, CA

SAMPLED BY: (PRINTED AND SIGNATURE) MICHAEL DESCHENES [signature]

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	ANALYSIS(ES): TPH-G	BTEX EDB EDC BY 8260	LUFT 5 metals added 2/11/10 [illegible]				PRESERVATIVE	REMARKS
SP1	2/8/10	14:30	SOIL	SOIL EXCAVATED FROM UST REMOVAL EXCAVATION	4	X	X	(X)				ICE	NORMAL TURN AROUND

ICE/t° 1.4°C
GOOD CONDITION ✓
HEAD SPACE ABSENT ___
DECHLORINATED IN LAB ___
APPROPRIATE CONTAINERS ✓
PRESERVED IN LAB ___
PRESERVATION: VOAS | O&G | METALS | OTHER

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)
[signature]	2/9/10	530	[signature]
[signature]	2/9/10	530	[signature]
			RECEIVED FOR LABORATORY BY: (SIGNATURE)

TOTAL NO. OF SAMPLES (THIS SHIPMENT): 1
TOTAL NO. OF CONTAINERS (THIS SHIPMENT): 4

LABORATORY: MC CAMPBELL ANALYTICAL
LABORATORY CONTACT: ANGELA RYDELIUS
LABORATORY PHONE NUMBER: (877) 252-9262

SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( ) YES (X) NO

Results and billing to:
P&D Environmental, Inc.
lab@pdenviro.com

REMARKS: PLEASE COMPOSITE CONTAINERS SP1 PRIOR TO ANALYSIS.

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 100221 A **ClientCode: PDEO**

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
Paul King
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610
(510) 658-6916 FAX 510-834-0152

Email: lab@pdenviro.com
cc:
PO:
ProjectNo: #0494; City of Emeryville

Bill to:
Accounts Payable
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610

Requested TAT: 5 days
Date Received: **02/09/2010**
Date Add-On: **02/17/2010**
Date Printed: **02/17/2010**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1002217-001	SP1	Soil	2/8/2010 14:30	☐	A											

Test Legend:

1	LUFT_S	2		3		4		5	
6		7		8		9		10	
11		12							

Prepared by: Shino Hamilton

Comments: Luft added 2/17/10 per email 5 day

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.

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Telephone: 877-252-9262 Fax: 925-252-9269

P & D Environmental 55 Santa Clara, Ste.240 Oakland, CA 94610	Client Project ID: #0494; City of Emeryville	Date Sampled: 02/08/10
		Date Received: 02/09/10
	Client Contact: Paul King	Date Extracted: 02/17/10
	Client P.O.:	Date Analyzed: 02/18/10

LUFT 5 Metals*

Extraction method: SW3050B Analytical methods: SW6010B Work Order: 1002217

Lab ID	Client ID	Matrix	Extraction Type	Cadmium	Chromium	Lead	Nickel	Zinc	DF	% SS	Comments
001A	SP1	S	TOTAL	ND	54	26	57	110	1	101	

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	TOTAL	NA	NA	NA	NA	NA	NA
	S	TOTAL	1.5	1.5	5.0	1.5	5.0	mg/Kg

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

means surrogate diluted out of range; ND means not detected above the reporting limit/method detection limit; N/A means not applicable to this sample or instrument.

TOTAL = Hot acid digestion of a representative sample aliquot.
TRM = Total recoverable metals is the "direct analysis" of a sample aliquot taken from its acid-preserved container.
DISS = Dissolved metals by direct analysis of 0.45 µm filtered and acidified sample.

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
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Telephone: 877-252-9262 Fax: 925-252-9269

QC SUMMARY REPORT FOR 6010C

W.O. Sample Matrix: Soil QC Matrix: Soil WorkOrder 1002217

EPA Method SW6010B **Extraction SW3050B** **BatchID: 48824** **Spiked Sample ID: 1002217-001A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	Spiked	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	mg/Kg	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
Cadmium	ND	50	99.2	98.3	0.861	10	92.4	100	8.22	75 - 125	25	75 - 125	25
Chromium	54	50	NR	NR	NR	10	78.9	89.6	12.7	75 - 125	25	75 - 125	25
Lead	26	50	87	79.8	5.36	10	84.3	84.3	0	75 - 125	25	75 - 125	25
Nickel	57	50	NR	NR	NR	10	83.1	93.2	11.5	75 - 125	25	75 - 125	25
Zinc	110	500	94.8	94.4	0.387	100	89.4	88.4	1.10	75 - 125	25	75 - 125	25
%SS:	101	250	101	100	1.18	250	94	101	6.39	70 - 130	20	70 - 130	20

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

BATCH 48824 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1002217-001A	02/08/10 2:30 PM	02/17/10	02/18/10 1:51 PM				

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

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

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not applicable to this method.

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

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Telephone: 877-252-9262 Fax: 925-252-9269

P & D Environmental	Client Project ID: #0494; City of Emeryville	Date Sampled: 02/08/10
		Date Received: 02/09/10
55 Santa Clara, Ste.240	Client Contact: Paul King	Date Reported: 03/03/10
Oakland, CA 94610	Client P.O.:	Date Completed: 03/03/10

WorkOrder: 1002217

March 03, 2010

Dear Paul:

Enclosed within are:

1) The results of the **1** analyzed sample from your project: **#0494; City of Emeryville,**
2) A QC report for the above sample,
3) A copy of the chain of custody, and
4) An invoice for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing

McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

P & D ENVIRONMENTAL, INC.
55 Santa Clara Ave, Suite 240
Oakland, CA 94610
(510) 658-6916

1002217

CHAIN OF CUSTODY RECORD

PROJECT NUMBER: 0494

PROJECT NAME: CITY OF EMERYVILLE 1550 PARK AVE EMERYVILLE, CA

SAMPLED BY: (PRINTED AND SIGNATURE) MICHAEL DESCHENES [signature]

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	ANALYSIS(ES): TPH-g	BTEX, EDB, EDC BY 8260	LUFT 5 metals added 2/11/10 5 day	STLC Cr 24hr added 3/1/10 per email			PRESERVATIVE	REMARKS
SP1	2/8/10	14:30	SOIL	SOIL EXCAVATED FROM UST REMOVAL EXCAVATION	4	X	X	(X)	X			ICE	NORMAL TURN AROUND

ICE/t° 1.4°C
GOOD CONDITION ✓
HEAD SPACE ABSENT
DECHLORINATED IN LAB
APPROPRIATE CONTAINERS ✓
PRESERVED IN LAB
PRESERVATION VOAS | O&G | METALS | OTHER

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)
[signature]	2/9/10	2:50	[signature]
[signature]	2/9/10	5:30	[signature]
			RECEIVED FOR LABORATORY BY: (SIGNATURE)

TOTAL NO. OF SAMPLES (THIS SHIPMENT): 1
TOTAL NO. OF CONTAINERS (THIS SHIPMENT): 4

LABORATORY: MC CAMPBELL ANALYTICAL
LABORATORY CONTACT: ANGELA RYDELIUS
LABORATORY PHONE NUMBER: (877) 252-9262

SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( ) YES (X) NO

Results and billing to:
P&D Environmental, Inc.
lab@pdenviro.com

REMARKS: PLEASE COMPOSITE CONTAINERS SP1 PRIOR TO ANALYSIS.

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 100221 B **ClientCode: PDEO**

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
Paul King
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610
(510) 658-6916 FAX 510-834-0152

Email: lab@pdenviro.com
cc:
PO:
ProjectNo: #0494; City of Emeryville

Bill to:
Accounts Payable
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610

Requested TAT: 5 days
Date Received: **02/09/2010**
Date Add-On: **03/01/2010**
Date Printed: **03/01/2010**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1002217-001	SP1	Soil	2/8/2010 14:30	☐	A											

Test Legend:

1	STLC_METALS_S	2		3		4		5	
6		7		8		9		10	
11		12							

Prepared by: Shino Hamilton

Comments: Luft added 2/17/10 per email 5 day. STLC Cr (24hr) added 03/01/10 per email.

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.

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Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

P & D Environmental	Client Project ID: #0494; City of Emeryville	Date Sampled: 02/08/10
		Date Received: 02/09/10
55 Santa Clara, Ste.240	Client Contact: Paul King	Date Extracted: 03/01/10-03/03/10
Oakland, CA 94610	Client P.O.:	Date Analyzed: 03/03/10

ICP Metals*

Extraction method: CA Title 22 Analytical methods: SW6010B Work Order: 1002217

Lab ID	Client ID	Matrix	Extraction Type	Chromium	DF	% SS	Comments
1002217-001A	SP1	S	WET	0.23	1	N/A	

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	TOTAL	NA	µg/L
	S	WET	0.05	mg/L

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

means surrogate diluted out of range; ND means not detected above the reporting limit/method detection limit; N/A means not applicable to this sample or instrument.

WET = Waste Extraction Test, i.e., STLC (Soluble Threshold Limit Concentration).
DI WET = Waste Extraction Test using DI water (DI STLC).

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

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Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

QC SUMMARY REPORT FOR SW6010B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 48971 WorkOrder 1002217

EPA Method SW6010B **Extraction CA Title 22** **Spiked Sample ID: N/A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/L	mg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
Chromium	N/A	1	N/A	N/A	N/A	94.3	95.4	1.16	N/A	N/A	75 - 125	25

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

BATCH 48971 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1002217-001A	02/08/10 2:30 PM	03/01/10	03/03/10 5:18 PM				

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

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

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not applicable to this method.

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

DHS ELAP Certification 1644

QA/QC Officer

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

Alameda County CC4580
Environmental Health Services
1131 Harbor Bay Pkwy., #250
Alameda CA 94502-6577
(510)567-6700 FAX(510)337-9335

May 6, 1996

REMEDIAL ACTION COMPLETION CERTIFICATION

Mr. John Pelligrini
Pelligrini & Refrigeration
1550 Park Avenue
Emeryville, California 94608

RE: Pelco Distributors
1550 Park Avenue, Emeryville, California 94608
STID # 4042

Dear Mr. Pelligrini:

This letter confirms the completion of site investigation and remedial action for the 1,500 gallon gasoline underground storage tank removed on January 10, 1994 at the above described location. Enclosed is the Case Closure Summary for the referenced site for your records.

Based upon the available information, including the current land use, and with the provision that the information provided to this agency was accurate and representative of site conditions, no further action related to the gasoline underground storage tank release is required.

This notice is issued pursuant to a regulation contained in Title 23, California Code of Regulations, Division 3, Chapter 16, Section 2721 (e). If a change in the present land use is proposed, the property owner must promptly notify this agency.

Please contact Susan L. Hugo at (510) 567-6780 if you have any questions regarding this matter.

Sincerely,

Mee Ling Tung, Director

Enclosure

c: Gordon Coleman, Acting Chief, Environmental Protection - files
Kevin Graves, RWQCB
Mike Harper, SWRCB (with enclosure)

01-2127

CASE CLOSURE SUMMARY
Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION **Date: November 28, 1995**

Agency name: **Alameda County-HazMat** Address: **1131 Harbor Bay Parkway**
City/State/Zip: **Alameda, CA 94502** Phone: **(510) 567-6700**
Responsible staff person: **Susan Hugo** Title: **Sr. Hazardous Materials Spec.**

II. CASE INFORMATION

Site facility name: **Pelco Distributors**
Site facility address: **1550 Park Avenue, Emeryville, CA 94608**
RB LUSTIS Case No: **N/A** Local Case No./LOP Case No.: **4042**
URF filing date: **1/13/94** SWEEPS No: **N/A**

Responsible Parties:	Addresses:	Phone Numbers:
Mr. John Pelligrini **Pellegrini & Refrigeration**	**1550 Park Avenue** **Emeryville, CA 94608**	

Tank No:	Size in gal.:	Contents:	Closed in-place or removed?:	Date:
1	**1,500 gal.**	**Gasoline**	**Removed**	**1/10/94**

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: **Hole found in the former tank**

Site characterization complete? **YES**

Date approved by oversight agency: **5/13/94**

Monitoring Wells installed? **YES** Number: **1 (one)**

Proper screened interval? **YES**

Highest GW depth below ground surface: **3.7 feet** Lowest depth: **4.25 feet**

Flow direction: **Predominantly west towards the SF Bay**

Most sensitive current use: **Industrial**

Are drinking water wells affected? **NO** Aquifer name: **NA**

Is surface water affected? **NO** Nearest affected SW name: **NA**

Off-site beneficial use impacts (addresses/locations): **NA**

Report(s) on file? **YES** Where is report(s) filed? **Alameda County**
1131 Harbor Bay Parkway
Alameda, CA 94502-6577

Treatment and Disposal of Affected Material:

Material	Amount (include units)	Action (Treatment of Disposal w/destination)	Date
Tank	1,500 gal	Disposed at H & H Service Co. San Francisco, CA	1/10/94
Piping	NA		
Free Product	NA		
Soil	20 yards	Redwood Landfill, Novato, CA	3/10/94
Groundwater	110 gal purged water from the excavation	Unknown	
Barrels	NA		

III. RELEASE AND SITE CHARACTERIZATION INFORMATION (Continued)

Maximum Documented Contaminant Concentrations - - Before and After Cleanup

Contaminant	Soil (ppm)		Water (ppb)	
	Before	After	* Before	After
TPH (Gas)	ND<1.0	-	2,700	ND<50
Benzene	ND<0.005	-	24	ND<0.5
Toluene	ND<0.005	-	24	ND<0.5
Xylene	ND<0.005	-	61	ND<0.5
Ethylbenzene	ND<0.005	-	20	ND<0.5
Lead	9.3	-	-	-

*** Grab groundwater sample from the excavation**

Comments (Depth of Remediation, etc.):

One 1,500 gallon gasoline underground storage tank was removed on January 10, 1994. Inspection of the tank during the removal activities revealed one small pin hole in the middle of the UST. Strong hydrocarbon staining and odor was present in the excavated soil. A sheen was also observed in the groundwater found in the excavation.

The composite soil sample (from three discreet stockpile samples) showed up to 39 ppm TPH gasoline, 0.05 ppm benzene, 0.086 ppm toluene, 0.061 ppm ethyl benzene, and 0.25 ppm xylene. However, the samples (S-1 & S-2) collected from the native soil beneath the ends of the UST at five feet depth did not detect any petroleum hydrocarbon contamination.

On January 11, 1994, approximately 110 gallons of water was removed from the excavation. A grab water sample was collected the next day (January 12, 1994) and the analytical results showed petroleum hydrocarbon concentrations as presented above. On February 16, 1994, an additional grab groundwater sample was collected to verify the previous results. The second grab groundwater sample revealed petroleum hydrocarbon contamination up to 690 ppb TPH gasoline, 5.6 ppb benzene, 5.7 ppb toluene, 1.6 ppb ethyl benzene, and 18 ppb xylenes.

IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? **Undetermined**

Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? **Undetermined**

Does corrective action protect public health for current land use? **YES**
Site management requirements: **NA**

Should corrective action be reviewed if land use changes? **YES**

Monitoring wells Decommissioned: **NO** (pending case closure)
Number Decommissioned: **0** Number Retained: **1**

List enforcement actions taken: **None**

List enforcement actions rescinded: **None**

V. LOCAL AGENCY REPRESENTATIVE DATA

Name: **Susan L. Hugo** Title: **Sr. Hazardous Materials Specialist**
Signature: Susan L Hugo Date: 11/28/95

Reviewed by
Name: **Dale Klettke** Title: **Hazardous Materials Specialist**
Signature: Dale Klettke Date: 11/30/95

Name: **Thomas Peacock** Title: **Sup. Hazardous Materials Specialist**
Signature: Thomas Peacock Date: 12-29-95

VI. RWQCB NOTIFICATION

Date Submitted to RB: 12/1/95 RB Response: Approved
RWQCB Staff Name: **Kevin Graves** Title: **Water Resources Control Engineer**
Date: 12/27/95

VII. ADDITIONAL COMMENTS, DATA, ETC.

On June 22, 1994, one shallow groundwater monitoring well was installed within 10 feet of the former tank area in the assumed downgradient flow direction (based on the regional groundwater flow in the area and the groundwater data collected from two neighboring sites - Sherwin Williams located at 1450 Sherwin Avenue & City of Emeryville located at 1333 Park Avenue). The boring was drilled to a total depth of 13.5 feet and the well was screened at approximately 5 feet to 13 feet depth. Both soil and groundwater samples collected during the well construction activities did not detect any contamination. The well was sampled again in February 10, 1995 and showed no detectable concentration of petroleum hydrocarbon.

Based on the data submitted for the referenced site, the potential beneficial uses of the groundwater do not appear to be impacted by the release associated with the UST. Therefore, this office recommends that no further work is required regarding the former gasoline UST at the subject site.

LEGEND

NOTE: REFERENCE: USGS 7.5 MINUTE SERIES QUADRANGLE MAP OAKLAND WEST, CALIFORNIA PHOTOREVISED 1980

N

0 2,000

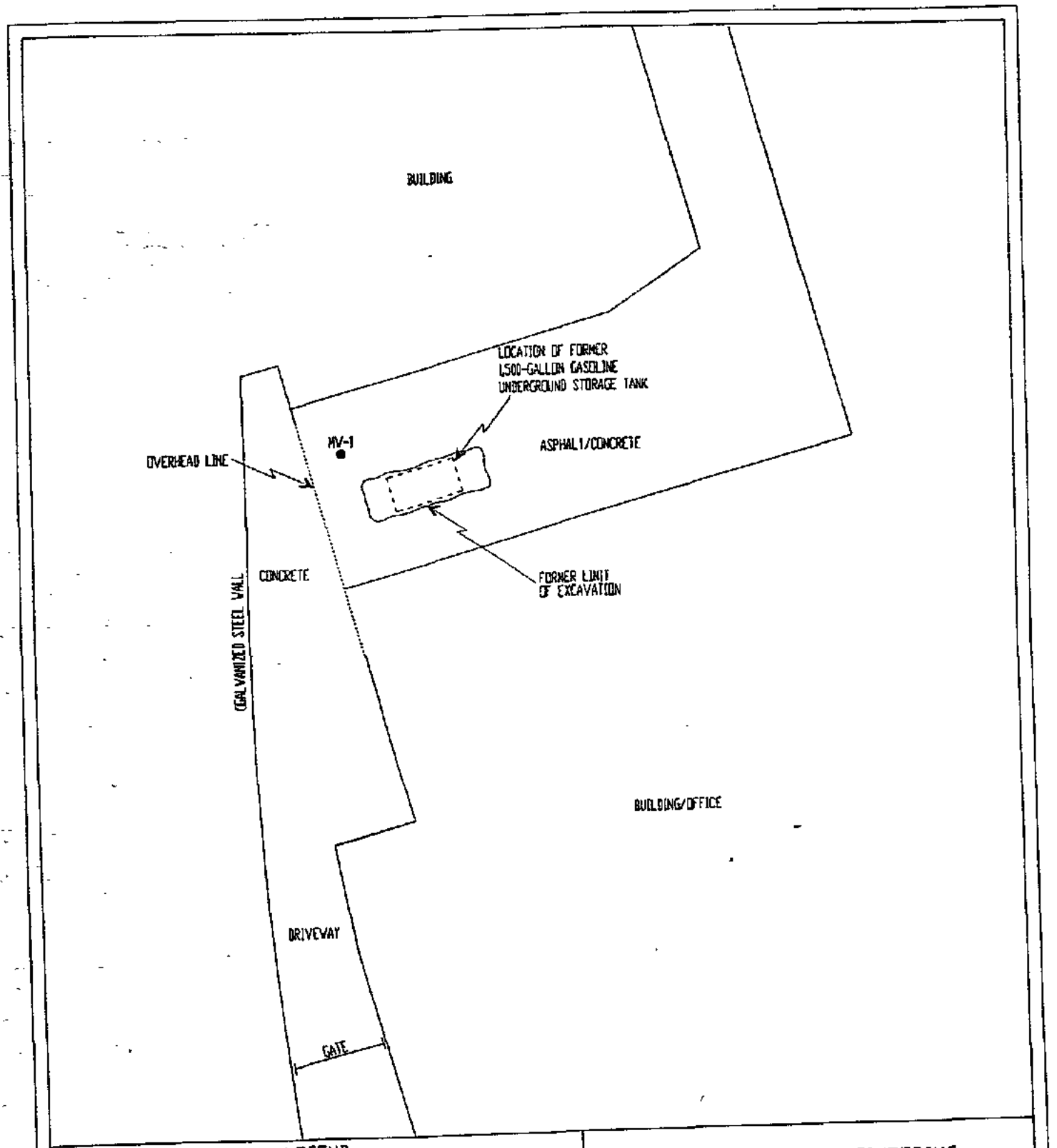
SCALE IN FEET

TANK PROTECT ENGINEERING

SITE VICINITY MAP

PELLEGRINI REFRIGERATION & RESTAURANT EQUIPMENT CO.
1550 PARK AVENUE
EMERYVILLE, CA 94608

DATE	6/30/94
FIGURE	1
FILE #	294-0
DRAWN BY	TM
CHECKED BY	RA



LEGEND

MW-1 ● NAME AND LOCATION OF GROUNDWATER MONITORING WELL

-N-

0 20

SCALE IN FEET

TANK PROTECT ENGINEERING

SITE PLAN

PELLEGRINI REFRIGERATION
& RESTAURANT EQUIPMENT CO.
1550 PARK AVENUE
EMERYVILLE, CA 94608

DATE	6/30/94
FIGURE	2
FILE #	294-2
DRAWN BY	TN
CHECKED BY	LH

TABLE 1
SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS
(ppm[1])

Sample ID Name	Date	Depth (Feet)	TPHG	Benzene	Toluene	Ethyl-Benzene	Xylenes	Total Lead
S-1	01/10/94	5.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	NA[2]
S-2	01/10/94	5.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	9.3
STK-1,2,3	01/10/94	1.5-2.0	39.0	0.051	0.086	0.061	0.250	NA

[1] PARTS PER MILLION

[2] NOT ANALYZED

TABLE 2
SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS
(ppb[1])

Sample ID Name	Date	TPHG	Benzene	Toluene	Ethyl-Benzene	Xylenes
WS-1	01/12/94	2,700	24	24	20	61
WS-1A	02/16/94	690	5.6	5.7	1.6	18

[1] PARTS PER BILLION

TABLE 1
SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS
(ppm[1])

mple ID Name	Date	Depth (Feet)	TPHG	Benzene	Toluene	Ethyl-Benzene	Xylenes
W-1	06/22/94	5.0-5.5	<.500	<.0050	<.0050	<.0050	<.015

ARTS PER MILLION

TABLE 2
SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS
(ppb[1])

Sample ID Name	Date	TPHG	Benzene	Toluene	Ethyl-Benzene	Xylenes
MW-1	06/28/94	<50	<0.50	<0.50	<0.50	<0.50
MW-2	06/28/94	<50	<0.50	<0.50	<0.50	<0.50

[1] PARTS PER BILLION

[2] TRIP BLANK

ce Analysis Laboratory, Inc.
3423 Investment Boulevard, #8 • Hayward, California 94545
Telephone (510) 783-6960
Facsimile (510) 783-1512

TAL

LOG NUMBER: 5217
DATE SAMPLED: 02/10/95
DATE RECEIVED: 02/10/95
DATE ANALYZED: 02/18/95
DATE REPORTED: 02/22/95

CUSTOMER: Tank Protect Engineering

REQUESTER: Jeff Farhoomand

PROJECT: No. 294-021095, Pel, 1550 Park Avenue

Sample Type: Water

Method and Constituent:	Units	MW-1 Concentration	MW-1 Reporting Limit	MW-2 Grip blank per John Murdoch 3/2/95 Concentration	MW-2 Reporting Limit	Method Blank Concentration	Method Blank Reporting Limit
DHS Method:							
Total Petroleum Hydrocarbons as Gasoline	ug/l	ND	50	ND	50	ND	50
Modified EPA Method 8020 for:							
Benzene	ug/l	ND	0.50	ND	0.50	ND	0.50
Toluene	ug/l	ND	0.50	ND	0.50	ND	0.50
Ethylbenzene	ug/l	ND	0.50	ND	0.50	ND	0.50
Xylenes	ug/l	ND	1.5	ND	1.5	ND	1.5

QC Summary:

% Recovery: 118
% RPD: 4.1

Concentrations reported as ND were not detected at or above the reporting limit.

Louis W. DuPuis
Quality Assurance/Quality Control Manager

LOG OF EXPLORATORY BORING

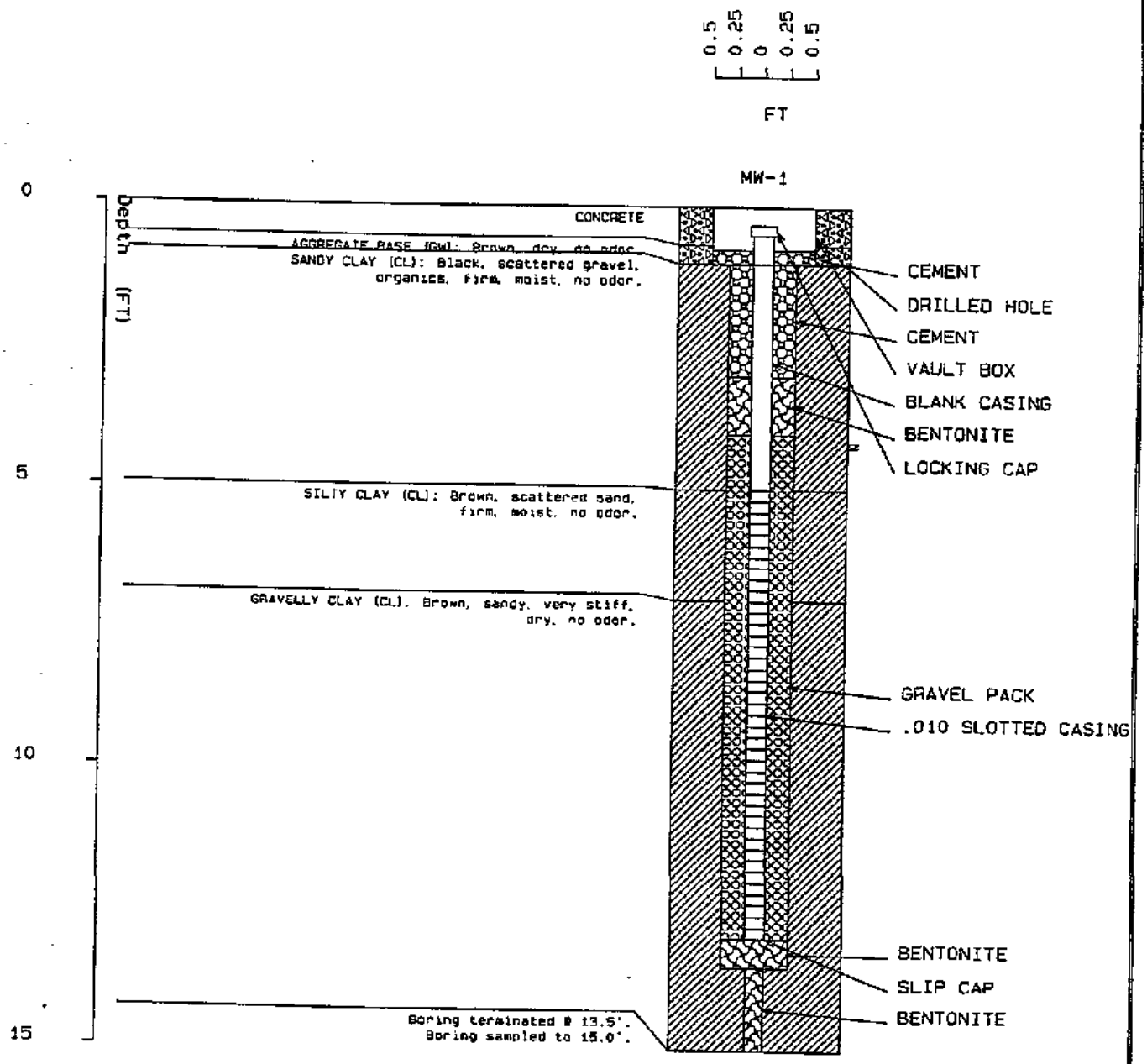
PROJECT NUMBER 294 BORING NO. MW-1

PROJECT NAME 1550 Park Avenue, Emeryville, CA

BY LNH DATE 6/22/94 SURFACE ELEV. 8 FT

RECOVERY (FT/FT)	OVA (PPM)	PENETRATION (BLOWS/FT)	GROUND WATER LEVELS	DEPTH IN FT.	SAMPLES	LITHOGRAPHIC COLUMN	DESCRIPTION
				1			CONCRETE
							AGGREGATE BASE (GW): Brown, dry, no odor.
				2			SANDY CLAY (CL): Black, scattered gravel, organics, firm, moist, no odor.
				3			
				4			
1.5/1.5	16	6	▽	5			SILTY CLAY (CL): Brown, scattered sand, firm, moist, wet at 5.5', no odor.
				6			
				7			GRAVELLY CLAY (CL): Brown, sandy, very stiff, dry, no odor.
				8			
1.5/1.5	-	24		9			
				10			
				11			
				12			Boring terminated @ 13.5'. Boring sampled to 15.0'.
				13			
1.0/1.5	-	22		14			
				15			

REMARKS: Boring drilled with continuous-flight, hollow-stem, 8-inch O.D. augers. Samples collected in a 2.0-inch I.D. California sampler.



LEGEND ▽ Static Water Level

GW CL

WELL ID : MW-1

1550 PARK AVENUE, EMERYVILLE, CA

TANK PROTECT ENGINEERING

Figure :

REPLY MESSAGE SET

TO

Alameda County Health Care Services Agen
Department of Environmental Health
Hazardous Materila Program
80 Swan Way, Room 200
Oakland, CA 94621

RETURN TO

PELLEGRINI REFRIGERATION AND RESTAURANT EQUIPMENT
1550 PARK AVE., EMERYVILLE, CA 94608
PHONE (415) 653-9850
1617 HARRISON ST., SAN FRANCISCO, 94103
PHONE (415) 626-5822

MESSAGE

—FOLD

Subject Groundwater Monitoring Well Installation Report **Date** July 6, 1994

Above report enclosed as per Tank Protect Engineering instructions.

94 JUL 13 AM 10:56
ALCO HAZMAT

By Frances L. Foster

REPLY

Date By

Return White to Sender • Keep Pink • Fold in Center
Return Address Fits Standard # 10 Window Envelope

STD 4042

GROUNDWATER MONITORING WELL INSTALLATION REPORT

PELLEGRINI REFRIGERATION
& RESTAURANT EQUIPMENT CO.
1550 PARK AVENUE
EMERYVILLE, CA 94608

Prepared For:
MR. JOHN PELLEGRINI
PELLEGRINI REFRIGERATION
& RESTAURANT EQUIPMENT CO.
1550 PARK AVENUE
EMERYVILLE, CA 94608

Submitted By:
TANK PROTECT ENGINEERING (429-8088)
Of Northern California, Inc.
June 30, 1994

Project Number 294

John V. Mrakovich, Ph.D.
Registered Geologist

Jeff J. Farhoomand, M.S.
Civil Engineer

GROUNDWATER MONITORING WELL INSTALLATION REPORT

PELLEGRINI REFRIGERATION
& RESTAURANT EQUIPMENT CO.
1550 PARK AVENUE
EMERYVILLE, CA 94608

Prepared For:
MR. JOHN PELLEGRINI
PELLEGRINI REFRIGERATION
& RESTAURANT EQUIPMENT CO.
1550 PARK AVENUE
EMERYVILLE, CA 94608

June 30, 1994

This report has been prepared by the staff of **Tank Protect Engineering of Northern California, Inc.** under direction of an Engineer and/or Geologist whose seal(s) and/or signature(s) appear hereon.

The findings, recommendations, specifications or professional opinions are presented, within the limits prescribed by the client, after being prepared in accordance with generally accepted professional engineering and geologic practice. We make no other warranty, either expressed or implied.

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B. REDWOOD LANDFILL, INC., WASTE GENERATOR'S AGREEMENT & CERTIFICATE OF RESPONSIBILITY

C. SHERWIN-WILLIAMS CO., AND CITY OF EMERYVILLE GROUNDWATER GRADIENT MAPS

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N. STATEMENT OF QUALIFICATIONS

1.0 INTRODUCTION

The site is located at 1550 Park Avenue in the City of Emeryville in Alameda County, California (see Figure 1). The site is occupied by Pellegrini Refrigeration & Restaurant Equipment Co. (PRRE). PRRE's contact person is Mr. John Pellegrini; telephone number (510) 653-9850.

On January 10, 1994, Tank Protect Engineering of Northern California, Inc. (TPE) removed a 1,500-gallon, underground, gasoline fuel tank and associated piping from the subject site (see Figure 2). Analytical results for native soil samples collected from beneath the ends of the underground storage tank at depths of about 5 feet were nondetectable for total petroleum hydrocarbons as gasoline (TPHG). However, analytical results from composite sample (STK-1,2,3) collected from the stockpiled soil detected TPHG at a concentration of 39 parts per million (ppm). Additionally, a groundwater "grab" sample (WS-1), collected from the bottom of the excavation, detected TPHG at a concentration of 2,700 parts per billion (ppb). A second groundwater "grab" sample (WS-1A), collected from the bottom of the excavation to confirm sample WS-1 results, detected TPHG at a concentration of 690 ppb. As a result of the contamination, the Alameda County Health Care Services Agency (ACHCSA) required that a groundwater investigation be conducted to determine the vertical and lateral extent of groundwater contamination and suggested that the investigation may consist of installing 1 groundwater monitoring well in the verified downgradient direction (of groundwater flow) from the former tank location.

TPE submitted a May 9, 1994 TANK CLOSURE REPORT AND WORKPLAN FOR GROUNDWATER MONITORING WELL INSTALLATION (WP) to PRRE and the ACHCSA for their review, comment, and approval. The WP proposed to install 1 groundwater monitoring well in the estimated downgradient direction of the former underground gasoline tank based on gradient information obtained from a review of the California Regional Water Quality Control Board (CRWQCB) - San Francisco Bay Region's files of documented leaking underground fuel tanks (LUFT). The WP was conditionally approved by the ACHCSA in a June 6, 1994 letter (see Appendix A). A condition of the ACHCSA's letter was to provide disposal documentation of the above mentioned stockpiled soil; documentation is provided in Appendix B.

This GROUNDWATER MONITORING WELL INSTALLATION REPORT (GMWIR) documents work conducted by TPE and results of chemical analyses of soil and groundwater samples.

2.0 GROUNDWATER INVESTIGATION

As an investigation of groundwater contamination, TPE conducted the following scope of work:

- Conducted a file review at the CRWQCB'S office to investigate vicinity and site groundwater flow direction.
- Obtained a well installation permit.
- Notified Underground Service Alert (USA) to locate utilities in the area.
- Drilled 1 soil boring to further investigate the horizontal and vertical extent of vadose zone soil contamination and for conversion into a groundwater monitoring well.
- Collected soil samples from the boring at approximately 5-foot depth intervals for construction of a boring log and for selection for chemical analysis.
- Analyzed the vadose zone soil sample collected from a depth of about 5.0 feet for TPHG and benzene, toluene, ethylbenzene, and xylenes (BTEX).
- Converted the boring into a 2-inch diameter casing groundwater monitoring well.
- Developed, purged, and sampled groundwater from the monitoring well for chemical analysis for TPHG and BTEX; also analyzed 1 trip blank sample for TPHG and BTEX.

- Prepared this GMWIR.

Details of the above scope of work are presented below.

2.1 File Review

To establish a location for a groundwater monitoring well, a representative of TPE reviewed the CRWQCB's files on May 5, 1994 to investigate if any groundwater monitoring wells exist in the vicinity of the subject site. This information is useful in estimating groundwater depth and gradient beneath the site.

Two nearby sites were found during the file review. The sites are:

Sherwin-Williams Co.
1450 Sherwin Avenue
Emeryville, California

City of Emeryville
1333 Park Avenue
Emeryville, California

Groundwater flow directions at the above 2 sites indicate Sherwin-Williams Co. (SHERWIN) is located about 500 feet up and crossgradient and City of Emeryville (COE) is located about 1,500 feet upgradient from the subject site. On January 5, 1994, groundwater flow direction at the SHERWIN facility was west-northwesterly. Groundwater flow directions for the COE site, measured for 4 consecutive quarters from March 17 through December 30, 1992, ranged from west-southwest to west-northwest (see Appendix C for SHERWIN and COE site gradient maps).

Based on the groundwater flow directions at the above 2 sites, TPE proposed to the ACHCSA, in a telephone conversation on June 13, 1994, that a well be installed at the location shown in Figure 2. The location is within 10 feet and in the estimated downgradient direction of the former underground tank location in accordance with the

CRWQCB's "Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites", dated August 10, 1990.

2.2 Predrilling Activities

Before commencing drilling activities, TPE obtained a well installation permit [(number 94372) see Appendix A] from the Alameda County Flood Control and Water Conservation District, Water Resources Management Zone 7; visited the site to mark the proposed soil boring location; and notified USA to locate utilities in the area.

2.3 Soil Boring and Sampling Procedures

The vertical and horizontal limits of potential soil contamination were further investigated while drilling the soil boring for construction of groundwater monitoring well MW-1 on June 22, 1994. See Appendices D and E for TPE's protocols relative to hollow-stem auger drilling and soil sampling procedures and waste handling and decontamination procedures.

The exploratory boring for well MW-1 was drilled to a total depth of about 13.5 feet by State of California licensed PC Exploration, Inc. (C-57 Water Well Driller Contractor's License Number 265556) using 8-inch diameter, hollow-stem, auger drilling equipment and sampled to a depth of about 15 feet with a California split-spoon sampler. The augers were steam-cleaned before drilling to minimize the potential of introducing off-site contamination to the boring. Representative soil samples were collected at approximately 5-foot depth intervals below the ground surface by advancing a California split-spoon sampler, equipped with 2-inch diameter by 6-inch long brass tubes, into the undisturbed soil beyond the tip of the augers. The sampling equipment was cleaned before each sampling event by washing with a trisodium phosphate solution and rinsing in tap water.

All vadose zone soil samples were field-screened for the presence of hydrocarbon contamination as evidenced by stains, odors, and headspace analysis using a Gastech, Inc., Trace-Techtor hydrocarbon vapor tester (HVT). Headspace analysis was

conducted by partially filling a quart-size plastic bag with a soil sample, sealing the bag air tight, and placing the bag in the sun and allowing volatilization of hydrocarbons, if any, into the air space of the bag. After a minimum of about 15 minutes of volatilization, the air space of the bag was sampled by the HVT and the response was recorded in ppm.

The vadose zone soil sample collected from a depth of about 5.0 feet, at the groundwater interface, was selected for chemical analysis for TPHG and BTEX. After collecting the sample, the brass tube ends were covered with Teflon sheeting and capped with plastic end-caps. The tube was then labeled to show site name, project number, date and time sampled, sample name and depth, and sampler name; sealed in a quart-size plastic bag; and placed in an iced-cooler for transport to California Department of Health Services (DHS) certified Trace Analysis Laboratory, Inc. (TAL), located in Hayward, California, accompanied by chain-of-custody documentation (see Appendix F for TPE's protocol relative to sample handling procedures).

A detailed boring log was prepared from auger return material and split-spoon samples (see Appendix G). The soil was logged according to the Unified Soil Classification System under the direction of a California Registered Geologist.

Drill cuttings were stored on site in a 55-gallon steel drum. The drum was labeled to show contents, date stored, suspected contaminant, expected date of removal, company name, contact person, and telephone number.

2.3.1 Results of Chemical Analyses

The soil sample collected at a depth of about 5.0 feet was analyzed for TPHG and BTEX by the DHS Method and Modified United States Environmental Protection Agency (EPA) Method 8020, respectively.

Analytical results were nondetectable for TPHG and BTEX.

Analytical results are summarized in Table 1 and documented with a certified analytical report and chain-of-custody in Appendix H.

2.4 Groundwater Monitoring Well Installation, Development, and Sampling

The following discussion documents groundwater monitoring well construction, development, and sampling procedures; and results of chemical analyses. See Appendices I, J, K, and L for TPE's protocols relative to groundwater monitoring well construction, development, and sampling procedures; and quality assurance and quality control procedures (QA/QC).

2.4.1 Groundwater Monitoring Well Installation

The boring for well MW-1 was drilled to a total depth of about 13.5 feet. Confined groundwater was encountered at a depth of about 5.5 feet. Groundwater stabilized at a depth of about 4.0 feet.

The boring was converted into a monitoring well by installing 2-inch diameter, flush-threaded, schedule 40, polyvinyl chloride (PVC) casing and 0.010-inch machine-slotted screen. The bottom of the boring was sealed with bentonite to a depth of about 13.0 feet. The screen was constructed to range in depth from about 5.0 feet to 13.0 feet. A sand pack of number 2/12 filter sand was placed in the annular space from a depth of about 13.0 feet to about 4.0 feet below the ground surface. About 1.0 foot of bentonite was placed above the sand pack followed by a neat cement slurry to within about 0.5 foot of ground surface. A traffic rated, bolt-locked, vault box was set in concrete to protect the well. A locking well cap with lock was installed on the well casing.

2.4.2 Groundwater Monitoring Well Development

On June 23, 1994, TPE developed well MW-1 (see Appendix M for Record of Well Development). Before development, depth to water was measured from the top-of-casing (TOC) to the nearest 0.01 foot using an electronic Solinst water level meter. A minimum of 3 repetitive measurements were made for each depth determination to ensure accuracy. The well was checked for floating product using a dedicated polyethylene bailer; no floating product, sheen, or odor was detected.

The well was developed using a 1.7-inch, positive displacement, PVC hand pump until the well was free of sand, silt, and turbidity or no further improvement was apparent. A total of 55 gallons of water were developed from the well.

Development water was stored on site in a 55-gallon steel drum labeled to show contents, date filled, suspected contaminant, company name, contact person, and telephone number.

2.4.3 Groundwater Monitoring Well Sampling

On June 28, 1994, TPE sampled well MW-1 (see Appendix M for Record of Water Sampling). Prior to sampling, depth to stabilized water was measured and recorded as discussed above in section 2.4.2 Groundwater Monitoring Well Development and the well was purged a minimum of 3 wetted well volumes and until temperature, pH, and electrical conductivity stabilized. A water sample was collected in sterilized glass vials having Teflon-lined screw caps, immediately sealed in the vials, and labeled to include: date, time, sample location, project number, and sampler name. The sample and a trip blank were immediately stored in an iced-cooler and delivered to DHS certified Priority Environmental Labs (PEL) located in Milpitas, California, accompanied by chain-of-custody documentation.

Purge water was stored on site in a 55-gallon steel drum labeled to show contents, date filled, suspected contaminant, company name, contact person, and telephone number.

2.4.3.1 Results of Chemical Analyses

The water sample from well MW-1 and a trip blank sample were analyzed for TPHG and BTEX by EPA Method 5030/8015 and EPA Method 602, respectively.

No TPHG or BTEX were detected in the sample collected from monitoring well MW-1 or from the trip blank (sample I.D. MW-2).

Analytical results are summarized in Table 2 and documented with a certified analytical report and chain-of-custody in Appendix H.

3.0 RECOMMENDATIONS

3.1 Vadose Zone Soil

TPE recommends that no more investigation of the vadose zone soil be conducted.

3.2 Groundwater

TPE recommends that quarterly groundwater monitoring be implemented for TPHG and BTEX for 3 additional consecutive quarters to establish a trend of chemical concentrations for well MW-1. After groundwater analytical data from 4 consecutive quarters has been collected, the data will be reviewed and site closure may be considered at that time.

The next sampling event is due on or about September 28, 1994.

4.0 STUDY LIMITATIONS

This GMWIR is based on subsurface exploration and laboratory analyses of soil and groundwater samples. The chemical analytical results for the samples are considered applicable to that borehole or location from which they were collected. The soil encountered in the boring is believed to be representative of the site; however, the soil may vary in character between observation points. The conclusions contained herein are based on the field observations, analytical data, and professional judgement which is in accordance with current standards of professional practice. Representations made of soil and groundwater conditions between sample locations are extrapolations based on professional opinions and judgements and accepted industry practice. Therefore, TPE cannot and will not provide guarantees, certifications, or warranties that the

subject property is or is not free of all contaminated soil or groundwater and such assessments are provided only in order that the client may make an informed decision.

The extent of testing and data collection directly affects the statistical confidence level of all work performed. As a practical matter, to reach or even approach a 100 percent statistical confidence level would be prohibitively expensive. Therefore, if a reassessment of the subject property becomes necessary in the future, TPE will not reassess the area at its own cost. No other warranty is expressed or implied.

The findings and conclusions of this report are valid as of the present time; however, the passing of time could change the conditions of the subsurface due to natural processes or the influence of man. Accordingly, the findings of this report may be invalidated, wholly or partly, by changes beyond TPE's control. Therefore, this report should not be relied upon after an extended period of time without being reviewed by a Civil Engineer or Registered Geologist.

5.0 STATEMENT OF QUALIFICATIONS

A statement of qualifications for the lead professional involved in this project is included in Appendix N.

LEGEND

NOTE: REFERENCE: USGS 7.5 MINUTE SERIES QUADRANGLE MAP OAKLAND WEST, CALIFORNIA PHOTOREVISED 1980

-N-

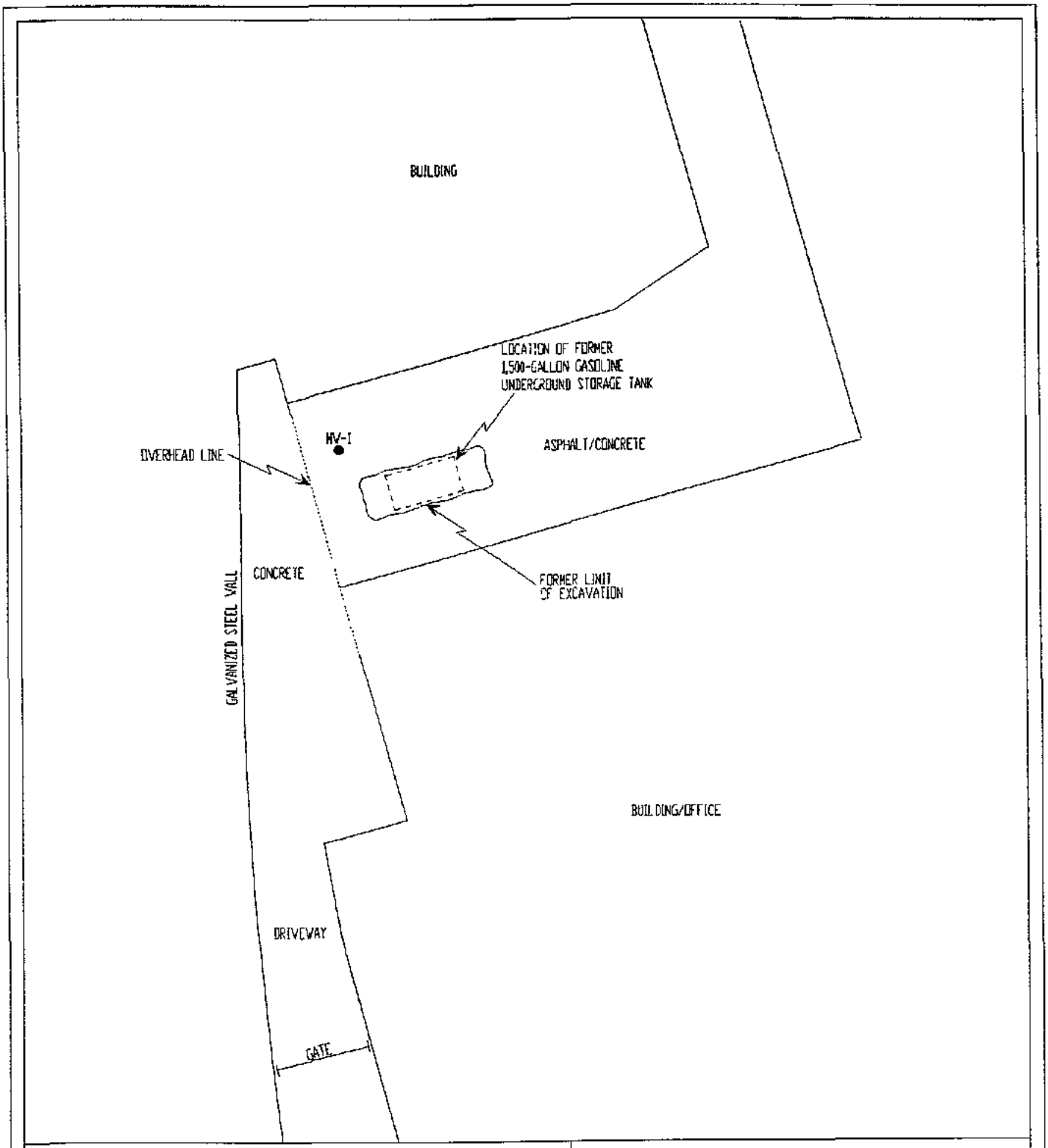
0 2,000
SCALE IN FEET

TANK PROTECT ENGINEERING

SITE VICINITY MAP

PELLEGRINI REFRIGERATION & RESTAURANT EQUIPMENT CO.
1550 PARK AVENUE
EMERYVILLE, CA 94608

DATE	6/30/94
FIGURE	1
FILE #	294-0
DRAWN BY	TM
CHECKED BY	RA



LEGEND

MW-1 NAME AND LOCATION OF GROUNDWATER MONITORING WELL

-N-

0 20

SCALE IN FEET

TANK PROTECT ENGINEERING

SITE PLAN

PELLEGRINI REFRIGERATION & RESTAURANT EQUIPMENT CO.
1550 PARK AVENUE
EMERYVILLE, CA 94608

DATE	6/30/94
FIGURE	2
FILE #	294-2
DRAWN BY	TM
CHECKED BY	LH

TABLE 1
SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS
(ppm[1])

Sample ID Name	Date	Depth (Feet)	TPHG	Benzene	Toluene	Ethyl-Benzene	Xylenes
MW-1	06/22/94	5.0-5.5	<.500	<.0050	<.0050	<.0050	<.015

[1] PARTS PER MILLION

TABLE 2

SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS

(ppb[1])

Sample ID Name	Date	TPHG	Benzene	Toluene	Ethyl-Benzene	Xylenes
MW-1	06/28/94	<50	<0.50	<0.50	<0.50	<0.50
MW-2	06/28/94	<50	<0.50	<0.50	<0.50	<0.50

[1] PARTS PER BILLION

[2] TRIP BLANK

APPENDIX A

- ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY, JUNE 6, 1994 LETTER
- ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, WATER RESOURCES MANAGEMENT, ZONE 7 DRILLING PERMIT APPLICATION

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RAFAT A. SHAHID, ASST. AGENCY DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
State Water Resources Control Board
Division of Clean Water Programs
UST Local Oversight Program
80 Swan Way, Rm 200
Oakland, CA 94621
(510) 271-4530

June 6, 1994
STID# 4042

Mr. John Pellegrini
Pelco Distributors
1550 Park Avenue
Emeryville, California 94608

RE: Tank Closure Report and Work Plan for Groundwater Monitoring Well Installation - Pellegrini Refrigeration & Restaurant Equipment Co., 1550 Park Avenue, Emeryville, CA 94608

Dear Mr. Pellegrini:

This office has completed review of the Tank Closure Report and Work Plan for Groundwater Monitoring Well Installation (May 9, 1994), prepared and submitted by Tank Protect Engineering for the referenced site.

Based on this review, the basic elements of the workplan is acceptable provided the following items are addressed:

1) During borehole advancement, soil samples must be collected at a minimum of every five feet in the unsaturated zone, significant changes in lithology and where field screening identifies the presence of contaminants. The selection of samples chosen for laboratory analysis should be based primarily on field evidence. A minimum of one sample submitted for analysis from each boring must be from the saturated/ unsaturated zone interface.

2) A minimum of 24 hours, and preferably 72 hours should pass between well development and purging/sampling.

3) Wells should be surveyed to an accuracy of 0.01 foot and referenced to a common bench mark such as mean sea level (MSL).

4) Please submit a copy of the monitoring well construction diagrams.

5) Please provide this office with documentation of the disposal of the stockpiled soil.

6) Please notify this office at least 72 hours in advance for the start up of the work plan implementation so a site visit can be arranged by a representative from this office.

7) Groundwater monitoring well must be installed in the verified downgradient location of the former underground storage tank. The use of groundwater data from neighboring sites to determine groundwater flow direction must be documented and the rationale must be explained.

8) Groundwater samples must be analyzed every quarter for the following target compounds: TPH gasoline, benzene, ethyl benzene, toluene, and xylene. Measurement of groundwater elevation must be incorporated in the quarterly monitoring program. After four quarters of sampling, the monitoring program will be evaluated and/or the site will be recommended for closure.

Response to items #4 and #5 should be included in the report to be submitted to this office following completion of this investigation. Report must be submitted within **45 days** after workplan implementation.

Until cleanup is complete, you will need to submit reports to this office every three months (or at a more frequent interval, if specified at any time by this agency). In addition, the following items must be incorporated in your future reports or workplans:

- a cover letter from the responsible party or tank owner stating the accuracy of the report and whether he/she concurs with the conclusions and recommendations in the report or workplan

- site map delineating contamination contours for soil and groundwater based on recent data should be included and the status of the investigation and cleanup must be identified

- proposed continuing or next phase of investigation / cleanup activities must be included to inform this department of the responsible party or tank owner's intention

- any changes in the groundwater flow direction and gradient based on the measured data since the last sampling event must be explained

- historical records of groundwater level in each well must be tabulated to indicate the fluctuation in water levels

- tabulate analytical results from all previous sampling events; provide laboratory reports (including quality control/quality assurance) and chain of custody documentation

All reports and proposals must be submitted under seal of a California Registered Geologist or Registered Civil Engineer with a statement of qualifications for each lead professionals involved with the project.

Please contact me at (510) 271-4530 if you have any questions concerning this letter.

Sincerely,

Susan L. Hugo

Susan L. Hugo
Senior Hazardous Materials Specialist

cc: Rafat A. Shahid, Asst. Agency Director, Environmental Health
Gil Jensen, Alameda County District Attorney's Office
Edgar B. Howell, Chief, Hazardous Materials Division - files
John Mrakovich, Ph.D., Tank Protect Engineering
2821 Whipple Road, Union City, CA 94587

ZONE 7 WATER AGENCY

5997 PARKSIDE DRIVE PLEASANTON, CALIFORNIA 94588 VOICE (510) 484-2600
FAX (510) 462-3914

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 1550 Park Avenue
Emeryville, CA 94608

CLIENT
Name Pellegrini Refrigeration
Address 1550 Park Ave. Voice 510-653-9850
City Emeryville Zip 94608

APPLICANT
Name Tank Protect Engineering of Northern California Inc. Fax 510-429-6089
Address 2821 Whipple Rd Voice 429-8098
City Union City Zip 94587

TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Cathodic Protection		General	
Water Supply		Contamination	
Monitoring	X	Well Destruction	

PROPOSED WATER SUPPLY WELL USE
Domestic ___ Industrial ___ Other ___
Municipal ___ Irrigation ___

DRILLING METHOD:
Mud Rotary ___ Air Rotary ___ Auger X
Cable ___ Other ___

DRILLER'S LICENSE NO. C57 266556

WELL PROJECTS
Drill Hole Diameter 8 in. Maximum
Casing Diameter 2 in. Depth 20 ft.
Surface Seal Depth 5 ft. Number 1

GEOTECHNICAL PROJECTS
Number of Borings ___ Maximum
Hole Diameter ___ in. Depth ___ ft.

ESTIMATED STARTING DATE 6-22-94
ESTIMATED COMPLETION DATE 6-22-94

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE Rae Huckins Date 6-14-94

FOR OFFICE USE

PERMIT NUMBER 94372
LOCATION NUMBER ___

PERMIT CONDITIONS

Circled Permit Requirements Apply

(A.) GENERAL
1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date.
2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well Projects, or drilling logs and location sketch for geotechnical projects.
3. Permit is void if project not begun within 90 days of approval date.

(B.) WATER WELLS, INCLUDING PIEZOMETERS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

C. GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

D. CATHODIC. Fill hole above anode zone with concrete placed by tremie.

E. WELL DESTRUCTION. See attached.

Approved Wyman Hong Date 29 Jun 94
Wyman Hong

91992

APPENDIX B

REDWOOD LANDFILL, INC., WASTE GENERATOR'S AGREEMENT & CERTIFICATE OF RESPONSIBILITY

REDWOOD LANDFILL, INC.
WASTE GENERATOR'S AGREEMENT & CERTIFICATE OF RESPONSIBILITY

GENERATOR INFORMATION

*Generator Name: See below
Generating Facility Name: Pelco Distributors
Facility Address: 1550 Park Avenue
City: Emeryville State: CA
General Site Activity: Parts Distributors
Contact Name: John Pellegrini
Title:
Phone: 510/653-9852
Zip: 94608

WASTE INFORMATION

General Waste Description: Gasoline Contaminated Soil

Process Generating Waste: Underground Storage Tank (Gasoline)

Has this waste ever been handled or disposed of as hazardous? If yes, explain NO

Quantity: 20 cubic yards/tons/gallons (circle one) 100 % Solids

Are any hazardous or potentially hazardous materials stored or used on site? (POTW's exempt from this question)
Yes (No) If yes, please list:

ANALYTICAL DATA (Attach Lab Report and Chain of Custody)

I certify that this information is truly representative of the above mentioned waste. I agree to notify Redwood if there is a change in the generating process that would result in a change in the waste. I certify that all samples were collected according to EPA SW-846 and that the appropriate chain of custody was attached.

Initial

GENERATOR'S CERTIFICATION

In Consideration of the acceptance of materials to be deposited at its Landfill, the undersigned represents and agrees for the benefit of REDWOOD LANDFILL, INC. as follows:

1. The material deposited does not constitute any hazardous waste classified as such by the State of California, the Federal Government, or any other agency having jurisdiction over the Landfill;

2. The material does not contain any ignitable, reactive, corrosive or toxic substances;

3. The undersigned agrees to hold REDWOOD LANDFILL, INC. harmless from any claim, liability, damage, or expense including reasonable attorney's fees arising out of the violation or untruth of any of the foregoing statements.

Printed name Lee Hukins Title/Company Geologist/Tank Protect Engin

Generator Signature Lee Hukins For Pelco Distributors Date 4/12/94

FACILITY DECISION			BILLING INFORMATION		
	Accept	Reject		Accept	Reject
Comments:			Comments:		
wastegt.vis			RLI Account No.:		

* Pellegrini Refrigeration & Restaurant Equipment Co.

APPENDIX C

SHERWIN-WILLIAMS CO., AND CITY OF EMERYVILLE
GROUNDWATER GRADIENT MAPS

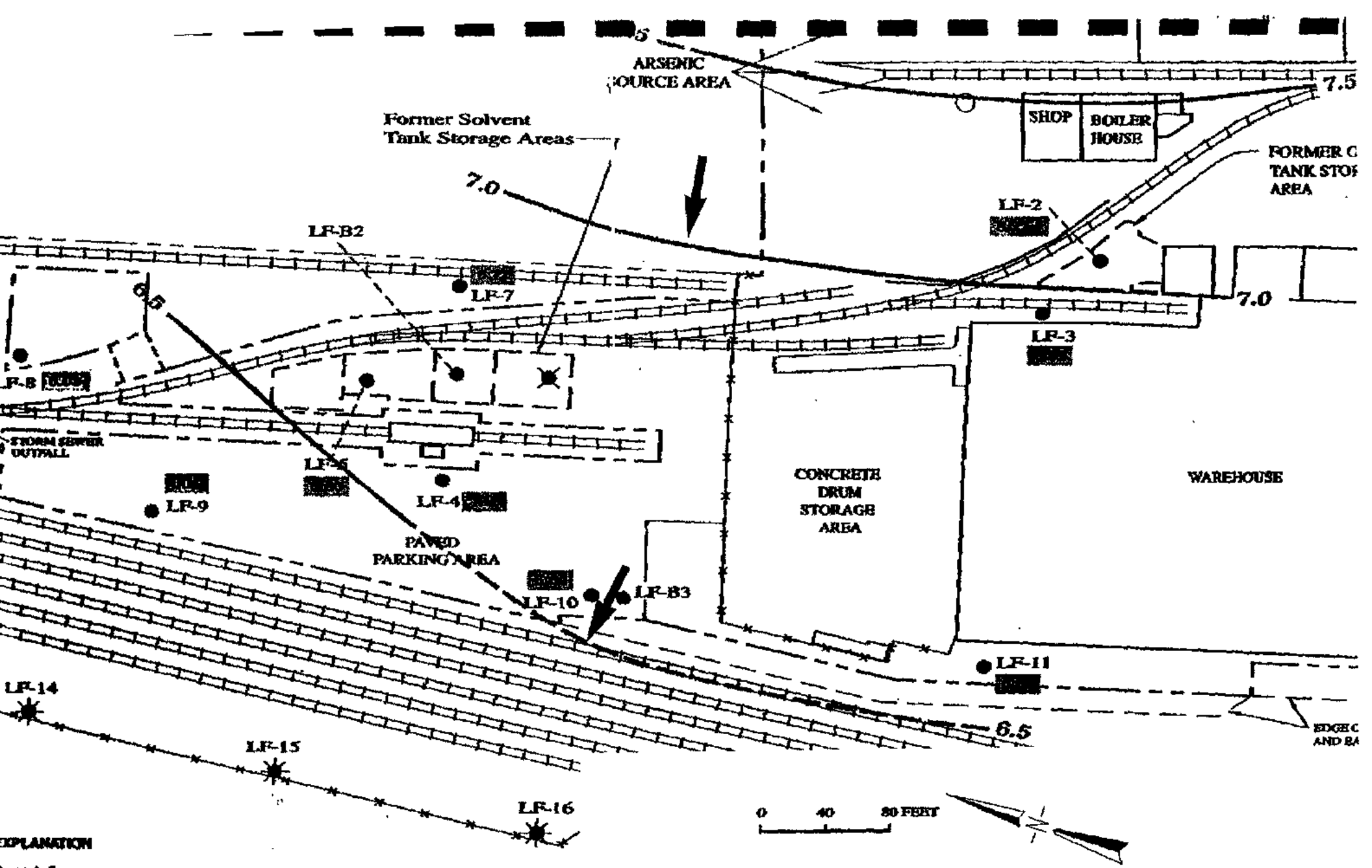
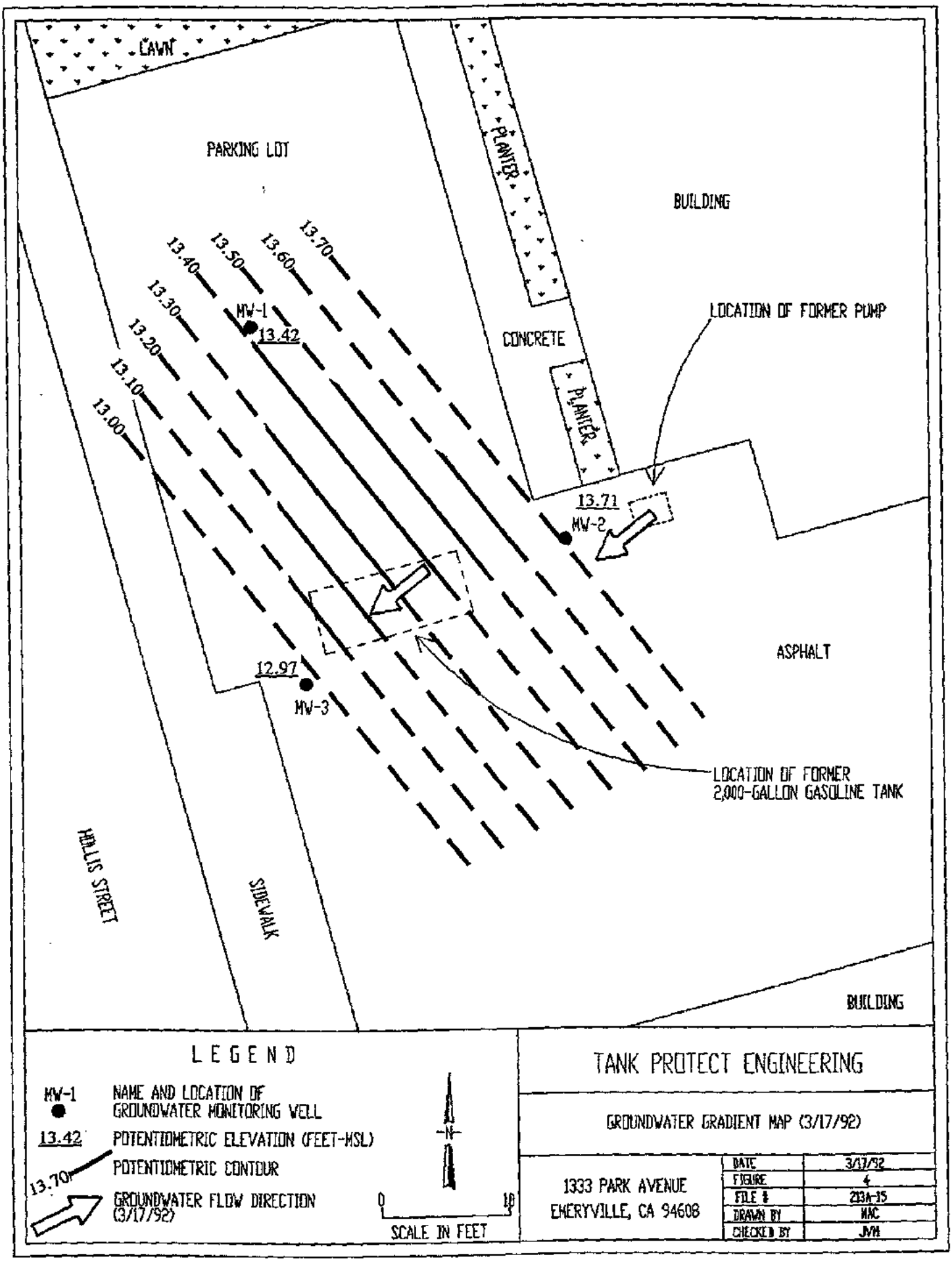


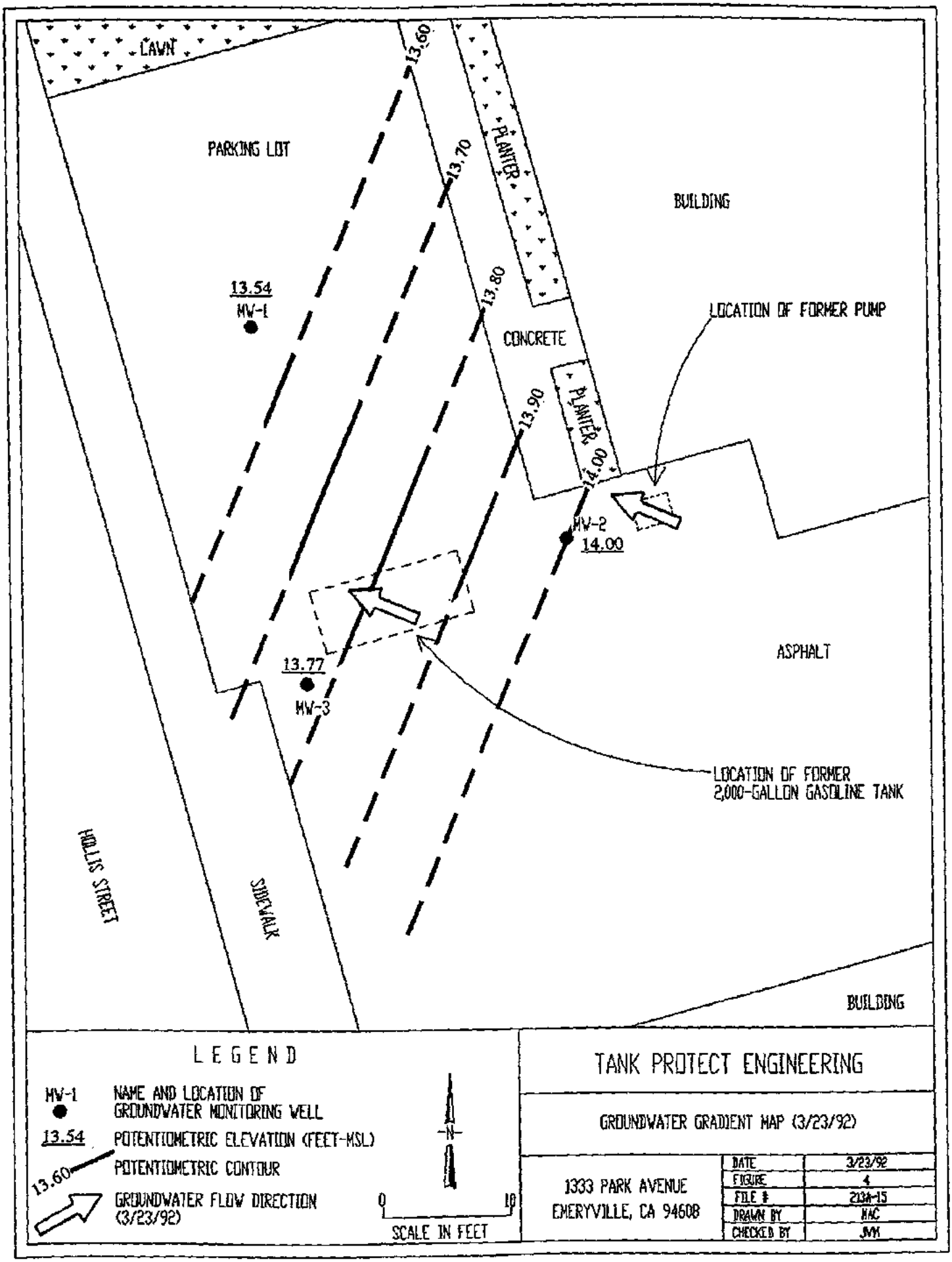
Figure 3:
A-ZONE GROUND-WATER ELEVATION MAP
JANUARY 5, 1994

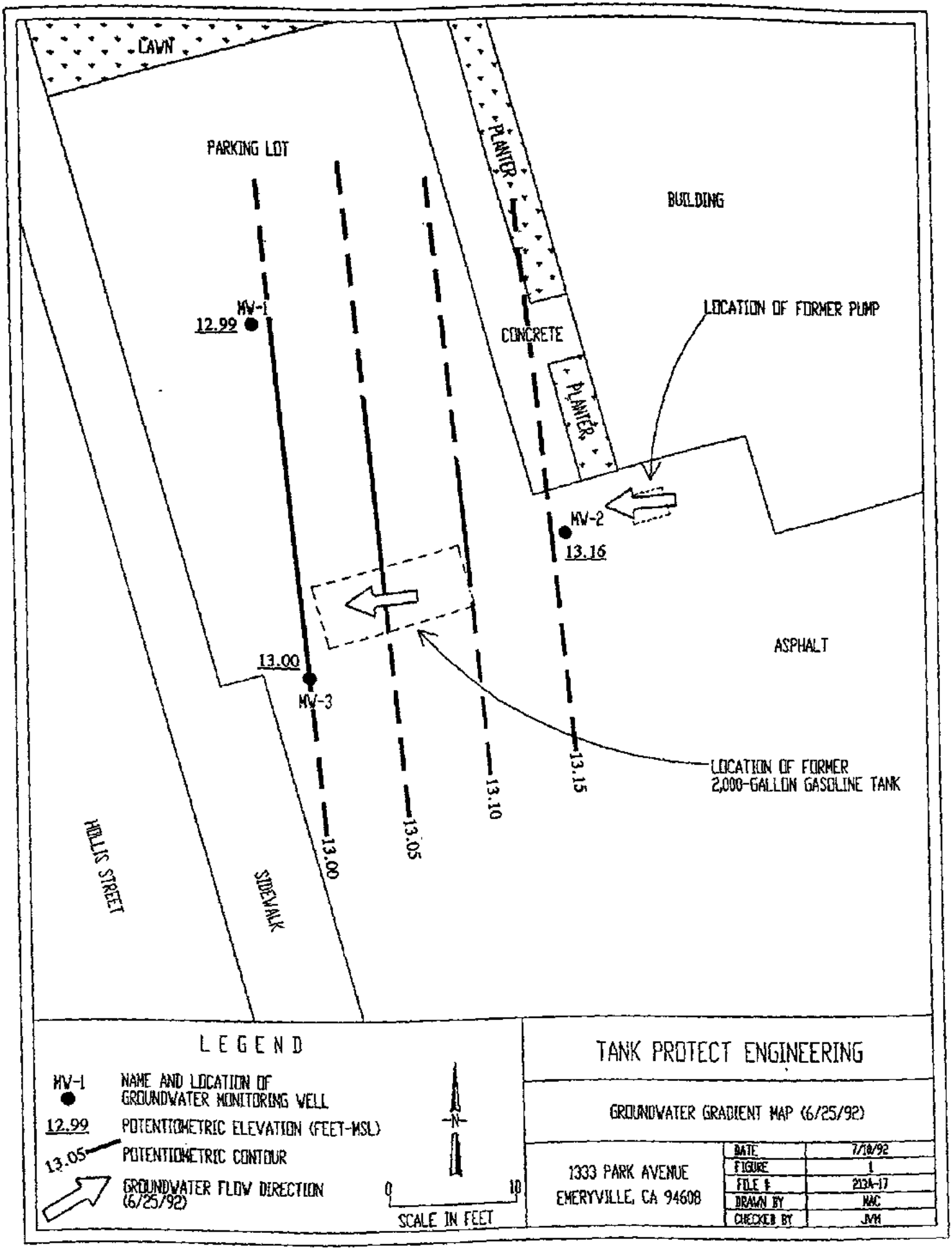
SHERWIN-WILLIAMS CO.
1450 SHERWIN AVENUE
EMERYVILLE, CA

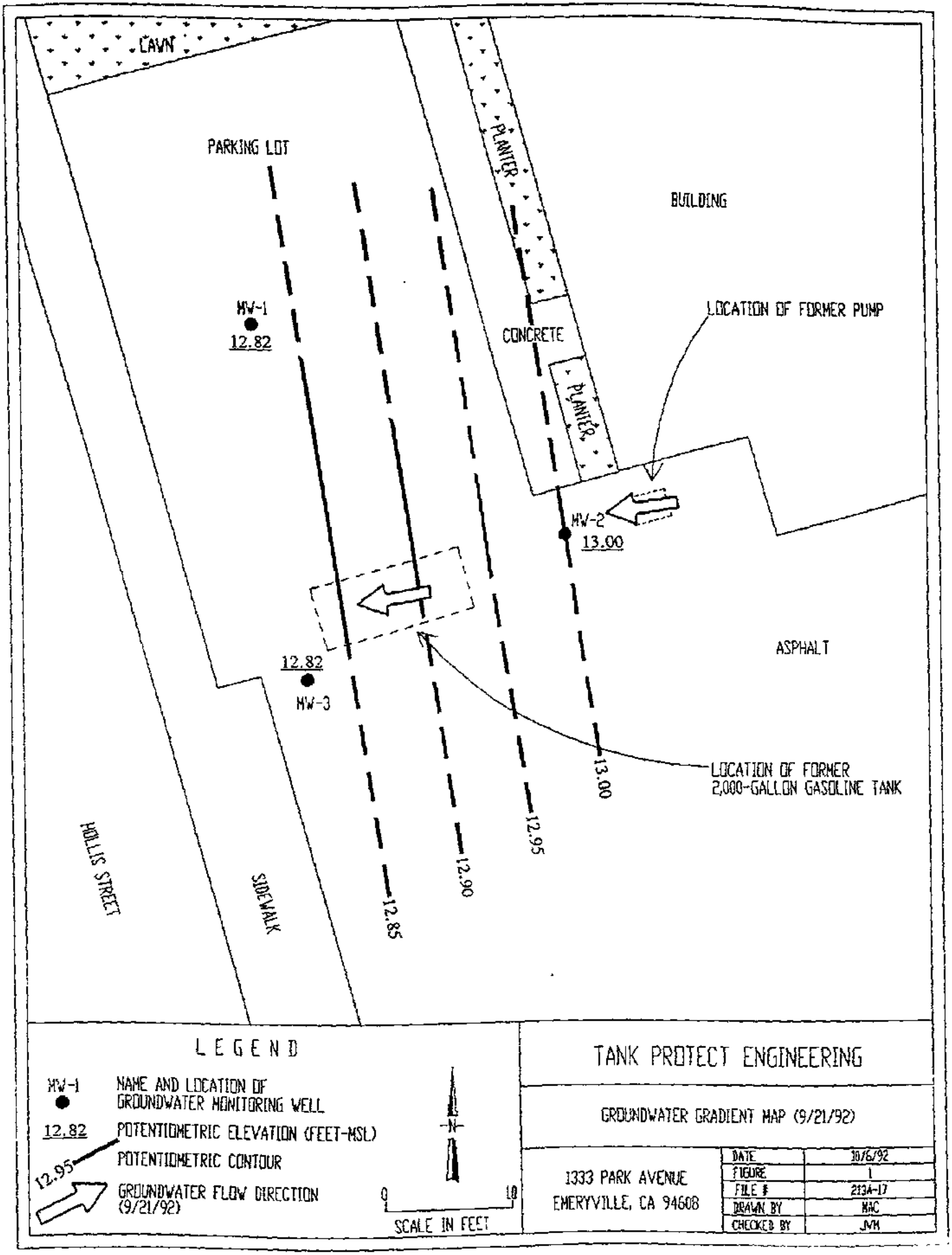
Project No. 1563

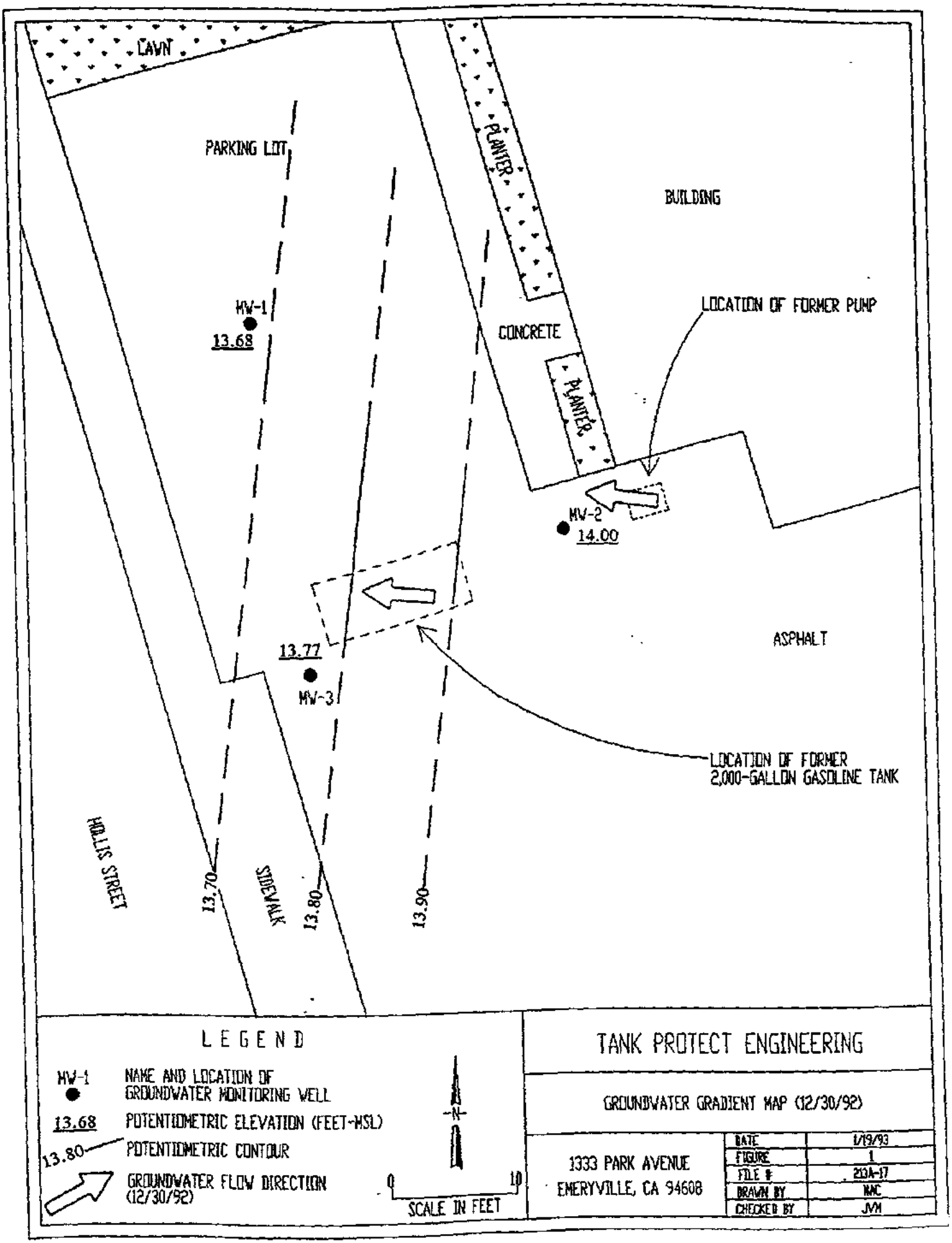
LEVINE•FRICKE


LAWN
PARKING LOT
PLANTER
BUILDING
13.70
13.60
13.50
13.40
13.30
13.20
13.10
13.00
MW-1
13.42
LOCATION OF FORMER PUMP
CONCRETE
PLANTER
13.71
MW-2
ASPHALT
12.97
MW-3
LOCATION OF FORMER
2,000-GALLON GASOLINE TANK
HOLLIS STREET
SIDEWALK
BUILDING
LEGEND
MW-1 NAME AND LOCATION OF GROUNDWATER MONITORING WELL
13.42 POTENTIOMETRIC ELEVATION (FEET-MSL)
13.70 POTENTIOMETRIC CONTOUR
GROUNDWATER FLOW DIRECTION (3/17/92)
N
0
10
SCALE IN FEET
TANK PROTECT ENGINEERING
GROUNDWATER GRADIENT MAP (3/17/92)
1333 PARK AVENUE
EMERYVILLE, CA 94608
DATE 3/17/92
FIGURE 4
FILE # 203A-15
DRAWN BY MAC
CHECKED BY JVM


LAWN
PARKING LOT
13.60
13.70
PLANTER
BUILDING
13.80
13.54
MW-1
LOCATION OF FORMER PUMP
CONCRETE
13.90
PLANTER
14.00
MW-2
14.00
13.77
MW-3
ASPHALT
LOCATION OF FORMER
2,000-GALLON GASOLINE TANK
HOLLIS STREET
SIDEWALK
BUILDING
LEGEND
MW-1 NAME AND LOCATION OF GROUNDWATER MONITORING WELL
13.54 POTENTIOMETRIC ELEVATION (FEET-MSL)
13.60 POTENTIOMETRIC CONTOUR
GROUNDWATER FLOW DIRECTION (3/23/92)
N
0
10
SCALE IN FEET
TANK PROTECT ENGINEERING
GROUNDWATER GRADIENT MAP (3/23/92)
1333 PARK AVENUE
EMERYVILLE, CA 94608
DATE 3/23/92
FIGURE 4
FILE # 2134-15
DRAWN BY MAC
CHECKED BY JMM


LAWN
PARKING LOT
PLANTER
BUILDING
MW-1
12.99
CONCRETE
LOCATION OF FORMER PUMP
PLANTER
MW-2
13.16
13.00
MW-3
ASPHALT
LOCATION OF FORMER
2,000-GALLON GASOLINE TANK
13.15
13.10
13.05
13.00
HOLLIS STREET
SIDEWALK
LEGEND
MW-1 NAME AND LOCATION OF GROUNDWATER MONITORING WELL
12.99 POTENTIOMETRIC ELEVATION (FEET-MSL)
13.05 POTENTIOMETRIC CONTOUR
GROUNDWATER FLOW DIRECTION (6/25/92)
N
0
10
SCALE IN FEET
TANK PROTECT ENGINEERING
GROUNDWATER GRADIENT MAP (6/25/92)
1333 PARK AVENUE
EMERYVILLE, CA 94608
DATE 7/10/92
FIGURE 1
FILE # 2134-17
DRAWN BY MAC
CHECKED BY JVH


LAWN
PARKING LOT
PLANTER
BUILDING
MW-1
12.82
CONCRETE
PLANTER
LOCATION OF FORMER PUMP
MW-2
13.00
ASPHALT
12.82
MW-3
LOCATION OF FORMER
2,000-GALLON GASOLINE TANK
13.00
12.95
12.90
12.85
HOLLIS STREET
SIDEWALK
LEGEND
MW-1
NAME AND LOCATION OF
GROUNDWATER MONITORING WELL
12.82
POTENTIOMETRIC ELEVATION (FEET-MSL)
12.95
POTENTIOMETRIC CONTOUR
GROUNDWATER FLOW DIRECTION
(9/21/92)
N
0
10
SCALE IN FEET
TANK PROTECT ENGINEERING
GROUNDWATER GRADIENT MAP (9/21/92)
1333 PARK AVENUE
EMERYVILLE, CA 94608
DATE 10/6/92
FIGURE 1
FILE # 213A-17
DRAWN BY MAC
CHECKED BY JVM


LAWN
PARKING LOT
PLANTER
BUILDING
MW-1
13.68
CONCRETE
LOCATION OF FORMER PUMP
PLANTER
MW-2
14.00
13.77
MW-3
ASPHALT
LOCATION OF FORMER
2,000-GALLON GASOLINE TANK
HOLLIS STREET
13.70
SIDEWALK
13.80
13.90
LEGEND
MW-1 NAME AND LOCATION OF GROUNDWATER MONITORING WELL
13.68 POTENTIOMETRIC ELEVATION (FEET-MSL)
13.80 POTENTIOMETRIC CONTOUR
GROUNDWATER FLOW DIRECTION (12/30/92)
N
0
10
SCALE IN FEET
TANK PROTECT ENGINEERING
GROUNDWATER GRADIENT MAP (12/30/92)
1333 PARK AVENUE
EMERYVILLE, CA 94608
DATE 1/19/93
FIGURE 1
FILE # 213A-17
DRAWN BY MAC
CHECKED BY JVH

APPENDIX D

HOLLOW-STEM AUGER DRILLING AND SOIL SAMPLING PROCEDURES

APPENDIX D

HOLLOW-STEM AUGER DRILLING AND SOIL SAMPLING PROCEDURES

Undisturbed soil samples will be recovered from soil without introducing liquids into the borings. At a minimum, soil samples as core will be taken at 5-foot depth intervals, changes in lithology, and when encountering apparent soil contamination to termination depth, or through the aquifer zone of interest for lithologic logging.

Borings will be drilled with a hollow-stem auger and sampled with a California or modified California-type split-spoon sampler. Soil samples will be of sufficient volume to perform the analyses which may be required, including replicate analyses.

Soil from all borings will be described in detail using the Unified Soil Classification System and will be logged under the direction of a geologist, civil engineer, or engineering geologist who is registered or certified by the State of California and is experienced in the use of the Unified Soil Classification System.

All wet zones above the free water zone will be noted and accurately logged.

Soil samples will be collected in clean brass or stainless steel sampling tubes in the split-spoon. Sediment traps will be used when unconsolidated sands and gravels fall from the sampler during retrieval. The brass tubes will be cut apart using a clean knife. The ends of the tubes will be covered with Teflon sheets or aluminum foil beneath plastic end caps and sealed with electrical or duct tape and properly labeled. In lieu of electrical or duct tape, the tubes may be individually sealed in plastic bags. The samples will be stored on ice at a temperature of 4 degrees Celsius.

Drill cuttings will be stored on site in 55-gallon drums or covered with plastic sheeting. Analytical results will be submitted immediately to the site owner for determination of appropriate disposal procedures. The soil borings not completed as wells will be backfilled with a cement grout.

APPENDIX E

WASTE HANDLING AND DECONTAMINATION PROCEDURES

APPENDIX E

WASTE HANDLING AND DECONTAMINATION PROCEDURES

Decontamination: Any drilling, sampling or field measurement equipment that comes into contact with soil or groundwater will be properly decontaminated prior to its use at the site and after each incident of contact with the soil or groundwater being investigated. Proper decontamination is essential to obtain samples that are representative of environmental conditions and to accurately characterize the extent of soil and groundwater contamination. Hollow-stem auger flights and the drill bit will be steam-cleaned between the drilling of each well.

All sample equipment, including the split-tube sampler and brass tubes, will be cleaned by washing with trisodium phosphate detergent, followed by rinsing with potable water. Where required by specific regulatory guidelines, a nonphosphate detergent will be used.

Waste Handling: Waste materials generated during site characterization activities will be handled and stored as hazardous waste and will be stored on site in appropriately labeled containers. Waste materials anticipated include excavated soil, drill cuttings, development and purge water, water generated during aquifer testing, water generated during decontamination, and used personnel protection equipment such as gloves and Tyvek. The site owner will be responsible for providing the storage containers and will be responsible for the disposal of the waste materials. Drill cuttings from individual borings will be stored separately in drums or covered by plastic sheeting and the appropriate disposal procedure will be determined by the site owner or TPE following receipt of the soil sample analytical results. Drums will be labeled to show material stored, known or suggested contaminant, date stored, expected removal date, company name, contact, and telephone number.

APPENDIX F

SAMPLE HANDLING PROCEDURES

APPENDIX F

SAMPLE HANDLING PROCEDURES

Soil and groundwater samples will be packaged carefully to avoid breakage or contamination, and will be delivered to the laboratory in an iced-cooler. The following sample packaging requirements will be followed.

- Sample bottle/sleeve lids will not be mixed. All sample lids will stay with the original containers and have custody seals affixed to them.

- Samples will be secured in coolers to maintain custody, control temperature, and prevent breakage during transportation to the laboratory.

- A chain-of-custody form will be completed for all samples and accompany the sample cooler to the laboratory.

- Ice, blue ice, or dry ice (dry ice will be used for preserving soil samples collected for the Alameda County Water District) will be used to cool samples during transport to the laboratory.

- Each sample will be identified by affixing a pressure sensitive, gummed label, or standardized tag on the container(s). This label will contain the site identification, sample identification number, date and time of sample collection, and the collector's initials.

- Soil samples collected in brass tubes will be preserved by covering the ends with Teflon tape and capped with plastic end-caps. The tubes will be labeled, sealed in quart size bags, and placed in an iced-cooler for transport to the laboratory.

All groundwater sample containers will be precleaned and will be obtained from a State Department of Health Services certified analytical laboratory.

Sample Control/Chain-of-Custody: All field personnel will refer to this workplan to verify the methods to be employed during sample collection. All sample gathering activities will be recorded in the site file; all sample transfers will be documented in the chain-of-custody; samples are to be identified with labels and all sample bottles are to be custody-sealed. All information is to be recorded in waterproof ink. All TPE field personnel are personally responsible for sample collection and the care and custody of collected samples until the samples are transferred or properly dispatched.

The custody record will be completed by the field technician or professional who has been designated by the TPE project manager as being responsible for sample shipment to the appropriate laboratory. The custody record will include, among other things, the following information: site identification, name of person collecting the samples, date and time samples were collected, type of sampling conducted (composite/grab), location of sampling station, number and type of containers used, and signature of the TPE person relinquishing samples to a non-TPE person with the date and time of transfer noted. The relinquishing individual will also put all the specific shipping data on the custody record.

Records will be maintained by a designated TPE field employee for each sample, site identification, sampling locations, station numbers, dates, times, sampler's name, designation of the samples as a grab or composite, notation of the type of sample (e.g. groundwater, soil boring, etc.), preservatives used, on-site measurement data, and other observations or remarks.

APPENDIX G

LOG OF EXPLORATORY BORING AND WELL COMPLETION DETAIL

LOG OF EXPLORATORY BORING

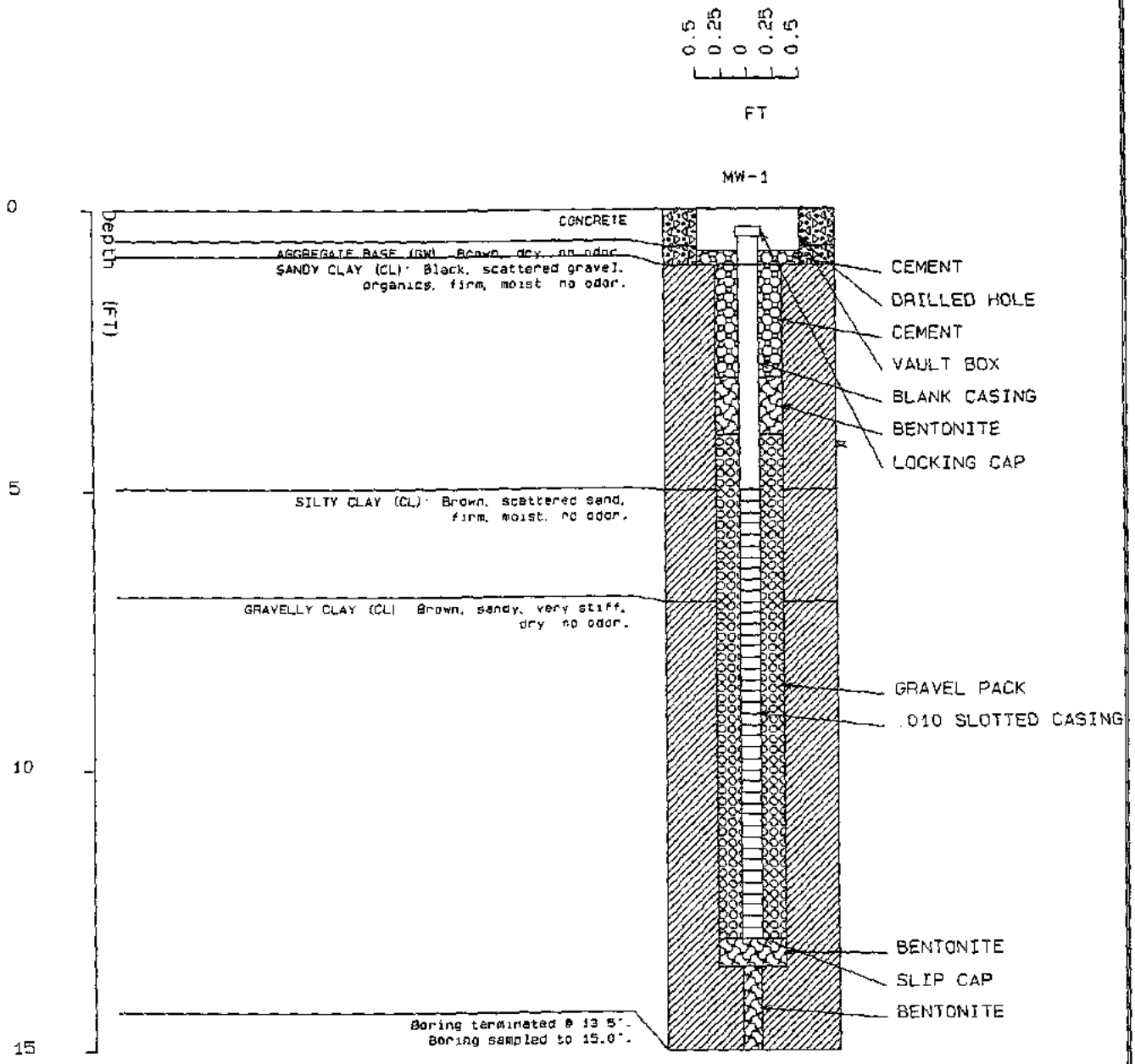
PROJECT NUMBER 294 BORING NO. MW-1

PROJECT NAME 1550 Park Avenue, Emeryville, CA

BY LNH DATE 6/22/94 SURFACE ELEV. 8 FT

RECOVERY (FT/FT)	OVA (PPM)	PENETRATION (BLOWS/FT)	GROUND WATER LEVELS	DEPTH IN FT	SAMPLES	LITHOGRAPHIC COLUMN	DESCRIPTION
				1			CONCRETE
							AGGREGATE BASE (GW): Brown, dry, no odor.
				2			SANDY CLAY (CL): Black, scattered gravel, organics, firm, moist, no odor.
				3			
				4			
1.5/1.5	16	6		5			SILTY CLAY (CL): Brown, scattered sand, firm, moist, wet at 5.5', no odor.
				6			
				7			GRAVELLY CLAY (CL) Brown, sandy, very stiff, dry, no odor
				8			
1.5/1.5	-	24		9			
				10			
				11			
				12			Boring terminated @ 13.5'. Boring sampled to 15.0'.
				13			
1.0/1.5	-	22		14			
				15			

REMARKS: Boring drilled with continuous-flight, hollow-stem, 8-inch O.D. augers. Samples collected in a 2.0-inch I.D. California sampler.



LEGEND ⧖ Static Water Level

GW CL

WELL ID : MW-1

1550 PARK AVENUE, EMERYVILLE, CA

TANK PROTECT ENGINEERING

Figure :

APPENDIX H

CERTIFIED ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY DOCUMENTATION

Trace Analysis Laboratory, Inc.
3423 Investment Boulevard, #8 • Hayward, California 94545
Telephone (510) 783-6960
Facsimile (510) 783-1512

TAL

LOG NUMBER: 4535
DATE SAMPLED: 06/22/94
DATE RECEIVED: 06/23/94
DATE EXTRACTED: 06/23/94
DATE ANALYZED: 06/24/94
DATE REPORTED: 06/27/94

CUSTOMER: Tank Protect Engineering

REQUESTER: Jeff Farhoomand

PROJECT: No. 294-062294, Pelligrini Refrigeration, 1550 Park Avenue

Sample Type: Soil

Method and Constituent:	Units	MW-1, 5.0-5.5 Concentration	MW-1, 5.0-5.5 Reporting Limit	Method Blank Concentration	Method Blank Reporting Limit
DHS Method:					
Total Petroleum Hydrocarbons as Gasoline	ug/kg	ND	500	ND	500
Modified EPA Method 8020 for:					
Benzene	ug/kg	ND	5.0	ND	5.0
Toluene	ug/kg	ND	5.0	ND	5.0
Ethylbenzene	ug/kg	ND	5.0	ND	5.0
Xylenes	ug/kg	ND	15	ND	15

QC Summary:

% Recovery: 120
% RPD: 3.7

Concentrations reported as ND were not detected at or above the reporting limit.

Louis W. DuPuis
Quality Assurance/Quality Control Manager

TANK PROTECT ENGINEERING

2821 WHIPPLE ROAD
UNION CITY, CA 94587
(415)429-8088
(800)523-8088
FAX(415)429-8089

4535

LAB: Trace
TURNAROUND: 5 day
P.O. #: 867

PAGE 1 OF 1

CHAIN OF CUSTODY

PROJECT NO.: 2940622.94
SITE NAME & ADDRESS: Pelligrini Refrigeration, 1570 Park Ave.
SAMPLER NAME, ADDRESS AND TELEPHONE NUMBER: Lee Huckins, 2821 WHIPPLE ROAD, UNION CITY, CA 94587 (415) 429-8088

ID NO.	DATE	TIME	SOIL	WATER	SAMPLING LOCATION	(1) TYPE OF CONTAINER	TOTAL LIGHT HC	AROMATIC HC (BTX)	TOTAL HEAVY HC	OIL & GREASE	VOC SCAN (624's)	OTHER	REMARKS
mw-1 5.0-5.5	6/22	944	X		5.0-5.5	Bags	X	X					

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Lee Huckins	6/23/94 8:00	[signature]	[signature]	6/23/94 3:00	
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	
		Scott T. [signature]	6/23/94 3:09 pm		

DATE: 6/23/94

P/4, soil, 1-BT. Y-4, 5. Day

PRIORITY ENVIRONMENTAL LABS

Precision Environmental Analytical Laboratory

June 29, 1994 PEL # 940613

TANK PROTECT ENGINEERING, INC.

Attn: Jeff
Re: Two rush water samples for Gasoline/BTEX analysis.

Project name: Pellegrini Refrigeration
Project location: 1550 Park Ave. - Emeryville
Project number: 294062894

Date sampled: Jun 28, 1994 Date submitted: Jun 29, 1994
Date extracted: Jun 29, 1994 Date analyzed: Jun 29, 1994

RESULTS:

SAMPLE I.D.	Gasoline (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl Benzene (ug/L)	Total Xylenes (ug/L)
MW-1	N.D.	N.D.	N.D.	N.D.	N.D.
MW-2	N.D.	N.D.	N.D.	N.D.	N.D.
Blank	N.D.	N.D.	N.D.	N.D.	N.D.
Spiked Recovery	86.2%	97.4%	99.4%	102.3%	106.5%
Detection limit	50	0.5	0.5	0.5	0.5
Method of Analysis	5030 / 8015	602	602	602	602

David Duong
Laboratory Director

1764 Houret Court Milpitas, CA. 95035 Tel: 408-946-9636 Fax: 408-946-9663

TANK PROTECT ENGINEERING

2021 WHIPPLE ROAD
UNION CITY, CA 94587
(415)429-8088
(800)523-8088
FAX(415)429-8089

PEL # 9406119

INV # 24951

LAB: ~~Fresno~~ Priority

TURNAROUND: ~~5 day~~ 24 hr

P.O. #: 870

PAGE 1 OF 1

CHAIN OF CUSTODY

PROJECT NO.	SITE NAME & ADDRESS
294062894	1550 Park Ave Emeryville Allegrini Refrigeration

SAMPLER NAME, ADDRESS AND TELEPHONE NUMBER
Rhett Arbuckle
2821 WHIPPLE ROAD, UNION CITY, CA 94587 (415) 429-8088

ID NO.	DATE	TIME	SOIL	WATER	SAMPLING LOCATION	(1) TYPE OF CONTAINER	ANALYTES REQUESTED: TOTAL LIGHT HC	AROMATIC HC (BTX)	TOTAL HEAVY HC	OIL & GREASE	VOC SCAN (624's)	OTHER	REMARKS
MW-1	6/28/94	12:38		X		2-40 ml VOAs	X	X					
MW-2	6/28/94	12:59		X		↓	X	X					

Relinquished by : (Signature)	Date / Time	Received by : (Signature)	Relinquished by : (Signature)	Date / Time	Received by : (Signature)
	6/28/94 14:00			6/29/94 9:35	
Relinquished by : (Signature)	Date / Time	Received by : (Signature)	Relinquished by : (Signature)	Date / Time	Received by : (Signature)
Relinquished by : (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	
			6/29/94 9:35		

DATE: 6/29/94

APPENDIX I

GROUNDWATER MONITORING WELL CONSTRUCTION PROCEDURES

APPENDIX I

GROUNDWATER MONITORING WELL CONSTRUCTION PROCEDURES

BOREHOLE DESIGN

Casing Diameter: The minimum diameter of well casings will be 2 inches (nominal).

Borehole Diameter: The diameter of the borehole will be a minimum of 4 inches and a maximum of 12 inches greater than the diameter of the well casing. The minimum annular space will be 2.5 inches as measured from the outside diameter of the casing to the drill hole wall.

Shallow (Unconfined Zone) Wells: When unconfined groundwater is encountered the borehole will be advanced through the aquifer to an underlying clay layer or aquitard or to a maximum depth of 15 feet into the saturated zone, or the maximum depths required by regulatory guidelines. The screened interval will begin a minimum of 5 feet above the saturated zone or above the anticipated seasonal high level of groundwater. The screen will extend the full thickness of the aquifer or no more than 15 feet (or 20 feet if required by regulatory guidelines) into the saturated zone, whichever is reached first. The well screen will not extend into the aquitard, nor will the screened interval exceed 20 feet in length (or 30 feet if required by regulatory guidelines).

Deep (Confined Zone) Wells: Any monitoring well to be screened below the upper aquifer will be installed as a double-cased well. A steel conductor casing will be placed through the upper water-bearing zone to prevent aquifer cross-contamination.

The conductor casing will be installed in the following manner: a large diameter borehole (typically 18 inches) will be drilled until it is determined that the first competent aquitard has been reached. A low carbon steel conductor casing will be placed in the borehole to the depth drilled. Centralizers will be used to center the casing in the borehole. The annular space between the conductor casing and the

formation will be cement-grouted from bottom to top by tremie pipe method. The grout will be allowed to set for a minimum of 72 hours.

Drilling will continue inside the conductor casing, with a drill bit of smaller diameter than the conductor casing. If additional known aquifers are to be fully penetrated, the procedure will be repeated with successively smaller diameter conductor casings.

The bottom of the well screen in a confined aquifer will be determined by presence or lack of a clay layer or aquitard as described above. The screened interval in a confined zone shall extend across the entire saturated zone of the aquifer or up to a length of 20 feet, whichever is less. The screened zone and filter pack will not cross-connect to another aquifer.

CONSTRUCTION MATERIALS

Casing and Screen Materials: Well casing and screen will be constructed of clean materials that have the least potential for affecting the quality of the sample. The most suitable material for a particular installation will depend upon the parameters to be monitored. Acceptable materials include PVC, stainless steel, or low carbon steel.

Casing Joints: Joints will be connected by flush threaded couplers. Organic bonding compounds and solvents will not be used on joints.

Well Screen Slots: Well screen will be factory slotted. The size of the slots will be selected to allow sufficient groundwater flow to the well for sampling, minimize the passage of formation materials into the well, and ensure sufficient structural integrity to prevent the collapse of the intake structure.

Casing Bottom Plug: The bottom of the well casing will be permanently plugged, either by flush threaded screw-on or friction cap. Friction caps will be secured with stainless steel set screws. No organic solvents or cements will be applied.

Filter Pack Material: Filter envelope materials will be durable, water worn, and washed clean of silt, dirt, and foreign matter. Sand size particles will be screened silica sand.

Particles will be well rounded and graded to an appropriate size for retention of aquifer materials.

Bentonite Seal Material: Bentonite will be pure and free of additives that may affect groundwater quality. Bentonite will be hydrated with potable or tap water.

Grout Seal Material: Neat cement grout or sand-cement grout will consist of a proper mixture of Type 1/11 Portland cement, hydrated with potable or tap water. Up to 3% bentonite may be added to the mixture to control shrinkage.

CONSTRUCTION PROCEDURES

Decontamination: All downhole tools, well casings, casing fittings, screens, and all other components that are installed in the well shall be thoroughly cleaned immediately before starting each well installation. When available, each component shall be cleaned with a high temperature, high pressure washer for a minimum of 5 minutes. When a washer is not available, components shall be cleaned with water and detergent, rinsed in potable or tap water, then rinsed in distilled water.

Soil and water sampling equipment and material used to construct the wells shall not donate to, capture, mask, nor alter the chemical composition of the soil and groundwater.

Drilling Methods: Acceptable drilling methods include solid and hollow-stem auger, percussion, direct circulation mud and air rotary, and reverse rotary. The best alternative is that which minimizes the introduction of foreign materials or fluids. If drilling fluid is employed, drilling fluid additives shall be limited to inorganic and non-hazardous compounds. Compressed air introduced into the borehole shall be adequately filtered to remove oil and particulates.

Casing Installation: The casing will be set under tension, when necessary, to ensure straightness. Centralizers will be used where necessary to prevent curvature or stress to the casing.

Sand Pack Installation: The sand pack will be installed so as to avoid bridging and the creation of void spaces. The tremie pipe method will be used where installation conditions or local regulations require. Drilling mud, when used, will be thinned prior to pack placement. The sand pack shall cover the entire screened interval and rise a minimum of 2 feet above the highest perforation.

Bentonite Seal Placement: A bentonite seal will be placed above the sand pack by a method that prevents bridging. Bentonite pellets can be placed by free fall if proper sinking through annular water can be assured. Bentonite slurry will be placed by the tremie pipe method from the bottom upward. The bentonite seal will not be less than 1 to 3-feet in thickness, depending on regulatory guidelines.

Grout Seal Placement: The cement grout mixture will be hydrated with potable or tap water and thoroughly mixed prior to placement. If substantial groundwater exists in the bore hole, the grout shall be placed by tremie pipe method from the bottom upward. In a dry borehole, the grout may be surface poured to a depth of 30 feet. Below a depth of 30 feet grout will be placed by tremie pipe. Grout will be placed in 1 continuous lift and will extend to the surface or to the well vault if the well head is completed below grade. A minimum of 5 feet of grout seal will be installed, unless impractical due to the shallow nature of the well.

Surface Completion: The well head will be protected from fluid entry, accidental damage, unauthorized access, and vandalism. A watertight, locking cap will be installed on the well casing. Access to the casing will be controlled by a keyed lock.

Well heads completed below grade will be completed in a concrete and/or steel vault, installed to drain surface runoff away from the vault.

Well Identification: Each well will be labeled to show well number, depth, hole and casing diameter, and screened interval.

APPENDIX J

GROUNDWATER MONITORING WELL DEVELOPMENT PROCEDURES

APPENDIX J

GROUNDWATER MONITORING WELL DEVELOPMENT PROCEDURES

INTRODUCTION

Newly installed groundwater monitoring wells will be developed to restore natural hydraulic conductivity of the formation, remove sediments from well casing and filter pack, stabilize the filter pack and aquifer material, and promote turbidity-free groundwater samples.

Wells may be developed by bailing, hand pumping, mechanical pumping, air lift pumping, surging, swabbing, or an effective combination of methods. Wells will be developed until the water is free of sand, silt, and minimum turbidity has stabilized.

In some cases where low permeability formations are involved or the drilling mud used fails to respond to cleanup, initial development pumping may immediately dewater the well casing and thereby inhibit development. When this occurs, clean, potable grade water may be introduced into the well, followed by surging of the introduced waters with a surge block. This operation will be followed by pumping or bailing. The procedure may be repeated as required to establish full development.

METHODOLOGY

Seal Stabilization: Cement and bentonite annular seals shall set and cure not less than 24 to 72 hours (according to local regulatory guidelines) prior to well development.

Decontamination: All well development tools and equipment shall be thoroughly cleaned immediately before starting each well installation. When available, each component shall be cleaned with a high temperature, high pressure washer for a minimum of 5 minutes. When a washer is not available, components shall be cleaned with potable or tap water, then rinsed with distilled water.

Development equipment shall not donate to, capture, mask, nor alter the chemical composition of the soil and groundwater.

Introduction of Water: Initial development of wells in low permeability formations may dewater the casing and filter pack. When this occurs, clean, potable or tap water will be introduced into the well to enhance development.

Bailing: Development will begin by bailing to remove heavy sediments from the well casing. Care will be taken to not damage the well bottom cap during lowering of the bailer.

Surging: Care will be exercised when using a surge block to avoid damaging the well screen and casing. When surging wells screened in coarse (sand/gravelly) aquifers, the rate of surge block lifting shall be slow and constant. When surging wells screened in fine (silty) aquifers, more vigorous lifting may be required. Between surging episodes, wells will be bailed to remove accumulated sediments.

Pumping: Development pumping rates shall be less than the recharge rate of the well in order to avoid dewatering.

Discharged Water Containment and Disposal: All water and sediment generated by well development shall be collected in labeled 55-gallon steel drums. Development water will be temporarily contained on site, pending sampling and laboratory analysis. No hazardous development water will be released to the environment. Disposal of development water will be the responsibility of the client

APPENDIX K

GROUNDWATER MONITORING WELL SAMPLING PROCEDURES

APPENDIX K

GROUNDWATER MONITORING WELL SAMPLING PROCEDURES

Groundwater monitoring wells will not be sampled until at least 24 to 72 hours (according to local regulatory guidelines) after well development. Groundwater samples will be obtained using either a bladder pump, clear Teflon bailer, or dedicated polyethylene bailer. Prior to collecting samples, the sampling equipment will be thoroughly decontaminated to prevent introduction of contaminants into the well and to avoid cross-contamination. Monitoring wells will be sampled after 3 to 10 wetted casing volumes of groundwater have been evacuated and pH, electrical conductivity, and temperature have stabilized as measured with a Hydac Digital Tester. If the well is emptied before 3 to 10 well volumes are removed, the sample will be taken when the water level in the well recovers to 80% of its initial water level or more.

When a water sample is collected, turbidity of the water will be measured and recorded with a digital turbidimeter. Degree of turbidity will be measured and recorded in nephelometric turbidity units (NTU).

TPE will also measure the thickness of any floating product in the monitoring wells using an interface or probe clear Teflon or polyethylene bailer. The floating product will be measured after well development but prior to the collection of groundwater samples. If floating product is present in the well, TPE will recommend to the client that product removal be commenced immediately and reported to the appropriate regulatory agency.

Unless specifically waived or changed by the local, prevailing regulatory agency, water samples shall be handled and preserved according to the latest EPA methods as described in the Federal Register (Volume 44, No. 233, Page 69544, Table II) for the type of analysis to be performed.

Development and/or purge water will be stored on site in labeled containers. The disposal of the containers and development and/or purge water is the responsibility of the client.

MEASUREMENTS

Purged Water Parameter: During purging, discharged water will be measured for the following parameters.

Parameter	Units of Measurement
pH	None
Electrical Conductivity	Micromhos
Temperature	Degrees F or C
Depth to Water	Feet/Hundredths
Volume of Water Discharged	Gallons
Turbidity	NTU

Documentation: All parameter measurements shall be documented in writing on TPE development logs.

APPENDIX L

QUALITY ASSURANCE AND QUALITY CONTROL PROCEDURES

APPENDIX L

QUALITY ASSURANCE AND QUALITY CONTROL PROCEDURES

The overall objectives of the field sampling program include generation of reliable data that will support development of a remedial action plan. Sample quality will be checked by the use of proper sampling, handling, and testing methods. Additional sample quality control methods may include the use of background samples, equipment rinsate samples, and trip and field blanks. Chain-of-custody forms, use of a qualified laboratory, acceptable detection limits, and proper sample preservation and holding times also provide assurance of accurate analytical data.

TPE will follow a QA/QC program in the field to ensure that all samples collected and field measurements taken are representative of actual field and environmental conditions and that data obtained are accurate and reproducible. These activities and laboratory QA/QC procedures are described below.

Field Samples: Additional samples may be taken in the field to evaluate both sampling and analytical methods. Three basic categories of QA/QC samples that may be collected are trip samples, field blanks, and duplicate samples.

Trip blanks are a check for cross-contamination during sample collection, shipment, and in the laboratory. Analytically confirmed organic-free water shall be used for organic parameters and deionized water for metal parameters. Blanks will be prepared by the laboratory supplying the sample containers. The blank shall be numbered, packaged, and sealed in the same manner as the other samples. One trip blank will be used for each sample set of less than 20 samples. At least 5% blanks will be used for sets greater than 20 samples. The trip blank is a water sample that remains with the collected samples during transportation and is analyzed along with the field samples to check for residual contamination. The trip blank is not to be opened by either the sample collectors or the handlers.

The field blank is a water sample that is taken into the field and is opened and exposed at the sampling point to detect contamination from air exposure. The water sample is poured into appropriate containers to simulate actual sampling conditions. Contamination for air exposure can vary considerably from site to site.

The laboratory will not be informed about the presence of field and trip blanks and a false identifying number will be put on the label. Full documentation of these collection and decoy procedure will be made in the site log book.

Duplicate samples are identical sample pairs (collected in the same place and at the same time), placed in identical containers. For soils, adjacent sample liners will be analyzed. For the purpose of data reporting, one is arbitrarily designated the sample, and the other is designated as a duplicate sample. Both sets of results are reported to give an indication of the precision of sampling and analytical methods.

The laboratory's precision will be assessed without the laboratory's knowledge by labeling one of the duplicates with false identifying information. Data quality will be evaluated on the basis of the duplicate results.

Laboratory QA/QC: Execution of a strict QA/QC program is an essential ingredient in high-quality analytical results. By using accredited laboratory techniques and analytical procedures, estimates of the experimental values can be very close to the actual value of the environmental sample. The experimental value is monitored for its precision and accuracy by performing QC test designed to measure the amount of random and systematic errors and to signal when correction of these errors is needed.

The QA/QC program describes methods for performing QC tests. These methods involve analyzing method blanks, calibration standards, check standards (both independent and EPA-certified standards), duplicates, replicates, and sample spikes. Internal QC also requires adherence to written methods, procedural documentation, and record keeping, and the observance of good laboratory practices.

APPENDIX M

RECORD OF WELL DEVELOPMENT AND RECORD OF WATER SAMPLING

RECORD OF WELL DEVELOPMENT

PROJECT NO.: 294 DATE: 6/23/94

WELL NO.: MW-1

PROJECT NAME: PELCO DISTRIBUTORS.

WELL DIAMETER: 2"

PROJECT LOCATION: 1550 PARK AVE. EMERYVILLE CA.

TOC ELEV:

DEVELOPER: ADRIAN ARDELEANO

LOCK NO.: P-605.

WELL DEPTH (from construction detail): 13' 5"

WELL DEPTH (measured): 12.5 SOFT BOTTOM?: Yes.

DEPTH TO WATER: 4'.6" TIME: 9:15 AM.

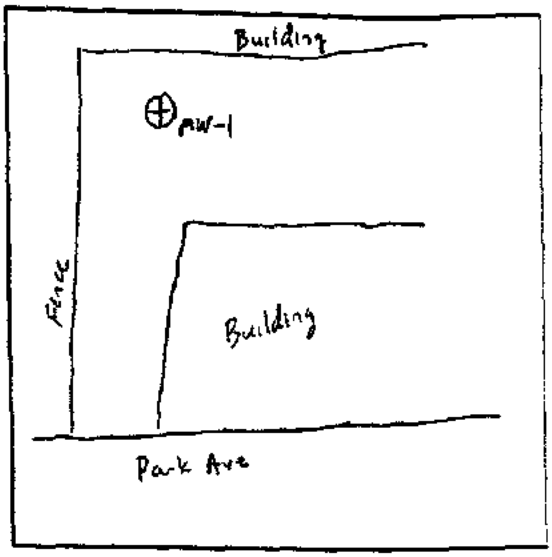
PRESSURE (circle one)?: YES OR (NO)

IF YES, WAS PRESSURE (circle one): POSITIVE OR NEGATIVE?

WATER VOLUME IN WELL:

[2-INCH CASING = 0.16 GAL/FT] [4-INCH CASING = 0.65 GAL/FT]

[6-INCH CASING = 1.47 GAL/FT] [1 GAL = 3.78L]



LOCATION MAP

DEVELOPMENT METHOD: HAND PUMP.

FLOATING PRODUCT PRESENT: YES ☐ NO ☒

SHEEN PRESENT: YES ☐ NO ☒

ODOR PRESENT: YES ☐ NO ☒

FIELD MEASUREMENTS

Time	Depth to Water (FT)	Vol (Gal)	Clarity (NTU'S)	Remarks
9:15 AM	4'. 6"	55		
				Clear...

TOTAL VOLUME DEVELOPED (GAL): 55 (L):

WATER VOL. IN DRUM: 55 galons.

SIGNATURE:

NEED NEW DRUM?: NO.

RECORD OF WATER SAMPLING

PROJECT NO.: 294 DATE: 6/28/94 WELL NO.: MW-1

PROJECT NAME: Pelligrini Refrigeration WELL DIAMETER: 2"

PROJECT LOCATION: 1550 Park Ave Emeryville TOC ELEV: _____

SAMPLER: RPA LOCK NO.: P605

ANALYSES: TPHG + BTEX

WELL DEPTH (from construction detail): _____

WELL DEPTH (measured): 12.38 SOFT BOTTOM?: NO

DEPTH TO WATER: 4.25' TIME: 12:06

PRESSURE (circle one)?: YES OR (NO)

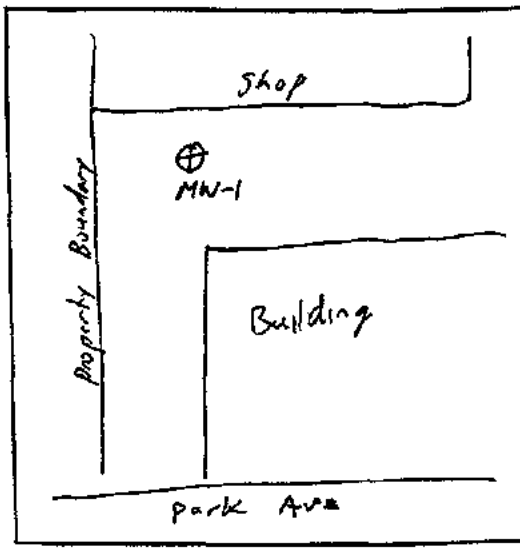
IF YES, WAS PRESSURE (circle one): POSITIVE OR NEGATIVE?

1st Bail — No Free product, no sheen, no odor.

WATER VOLUME IN WELL: 1.30

[2-INCH CASING = 0.16 GAL/FT] [4-INCH CASING = 0.65 GAL/FT]

[6-INCH CASING = 1.47 GAL/FT] [1 GAL = 3.78 L]



LOCATION MAP

CALCULATED PURGE VOL. (GAL): 3.90 (L): 14.75 ACTUAL PURGE VOL. (GAL): _____ (L): 19

PURGE METHOD: POLY SAMPLE METHOD: POLY

FIELD MEASUREMENTS

Time	Depth to Water (FT)	Vol (L)	Temp (Deg. F)	pH	EC x 100	Clarity	Turbidity (NTU)	Remarks
12:20		3	72.8	5.50	7.29	clear		no odor
12:23		6	69.8	6.25	7.43	light brown		"
12:25		9	69.0	7.55	7.46	"		"
12:26		11	68.2	7.26	7.40	"		"
12:28		13	67.8	6.96	7.70	"		"
12:29		15	67.5	7.10	7.84	"		"
12:31		17	67.2	6.78	8.02			"
12:32		19	67.0	6.70	8.09			"
12:38	Sampled	Well					>200	

WATER VOL. IN DRUM: 10%

SIGNATURE: _____ NEED NEW DRUM?: No

APPENDIX N

STATEMENT OF QUALIFICATIONS

APPENDIX N

STATEMENT OF QUALIFICATIONS
JOHN V. MRAKOVICH
REGISTERED GEOLOGIST

EXPERIENCE

- Managed the design, implementation, and reporting of chemical plume definition projects of major Silicon Valley corporations. Site hydrogeology was assessed using soil borings, cone penetration testing, HydroPunch sampling, and monitoring wells.

- Managed multiple groundwater contaminant plume projects for Aerojet Gencorp at the firm's 8,500-acre site near Sacramento, California. Responsibilities included supervision of environmental consultants and subcontractors, management of all drilling and mapping operations, and well installation projects. Also developed and tracked annual budgets.

- Managed tasks associated with modeling groundwater and contaminants to predict the effectiveness of groundwater wells for intercepting contaminant plumes and the effectiveness of recharge wells to contain plumes. The projects involved the interpretation of subsurface geology and formation hydrogeology using electrical and lithological logs and pump test results. Data was used as input to numerical and analytical groundwater flow models.

- Managed excavation and remediation of contaminated soil at many underground fuel tank leak sites. Tasks included characterization of soil and groundwater contaminant plumes, soil remediation by aeration, chemical oxidation, and bioremediation. Developed statistical soil sampling plans for remediated stockpiled soil.

- Mapped subsurface geologic stratigraphy for numerous oil companies, both onshore and offshore Gulf of Mexico. Project work was accomplished using geophysical techniques to determine geologic structures and locations of permeable formations. Specific tasks included determining locations and depths for test hole drilling and evaluating the data obtained.

- Conducted subsurface site investigations for Bechtel Professional Corporation at nuclear power facilities and earthen damns. Tasks included supervision of soil borings, surveying of drill site locations, construction of lithologic logs, and collection of soil samples.

WORK HISTORY

Tank Protect Engineering of Northern California, Inc. Union City, CA Project Manager	1990 - Present
EMCON Associates San Jose, CA Project Manager	1989 - 1990
Aerojet Gencorp (Superfund Site) Sacramento, CA Hydrogeologist	1987 - 1989
Meridian Oil, Inc. Houston, TX Exploration Geologist	1982 - 1987
MHP Exploration Company Houston, TX President	1981 - 1982

Home Petroleum Corporation — 1979 - 1981
Houston, TX
Exploration Geologist

Natural Gas Pipeline Co. of America — 1976 - 1979
Houston, TX
Reservoir Geologist

Bechtel Incorporated — 1974 - 1976
Houston, TX
Engineering Geologist

Gulf Oil Corporation — 1969 - 1971
New Orleans, LA
Development/Exploration Geologist

EDUCATION

Ph.D., Geology, Michigan State University, East Lansing, MI, 1974
M.S., Geology, Kent State University, Kent, OH, 1969
B.S., Geology, Kent State University, Kent, OH, 1967

PROFESSIONAL REGISTRATION

Registered Geologist, State of California, No. 4665

CERTIFICATES

Certified Professional Geologist
OSHA 40 Hour Training

AFFILIATIONS

Association of Groundwater Scientists and Engineers (NWWA)
Association of Professional Geological Scientists
American Association of Petroleum Geologists

PUBLICATIONS

"Sharon Conglomerate of Northeastern Ohio," 1969, Compass. v. 34, No. 3, pp. 150-158.

"Ancient Fluvial Deposits in Northeastern Ohio," 1969, Northern Ohio Geological Society *Field Trip Guidebook.*

"The Sharon Conglomerate," Coauthor, Guide to the Geology of Northeastern Ohio, 1970, Northern Ohio Geological Society.

"Sedimentary Environments of the Lower Pennsylvanian Sharon Conglomerate near Akron, Ohio," Coauthor, Selected Field Trips in Northeastern Ohio, 1974, Ohio State Geological Survey, Guidebook No. 2.

"Depositional Environment of the Sharon Conglomerate Member of the Pottsville Formation in Northeastern Ohio," 1974, Jour. Sed.
Petrology, v. 44 ,1186, 1199.

"Use of Fourier Shape Analysis in Zircon Petrogenetic Studies," Coauthor, 1975, Geol. Soc. America Bull., v.86, pp. 956-8.

"New Techniques for Stratigraphic Analysis and Correlation-Fourier Grain Shape Analysis, Louisiana Offshore Pliocene," 1976, Jour. Sed. Petrology, v. 46, pp. 226-233.

Interim Measures Completion Report
Former Technichem Site
4245 Halleck Street
Emeryville, California

May 2011

Project No. 2011-004

Prepared for:

California Environmental Protection Agency
Department of Toxic Substances Control
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Berkeley, California 94710

Prepared by:

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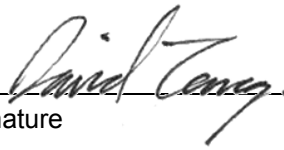
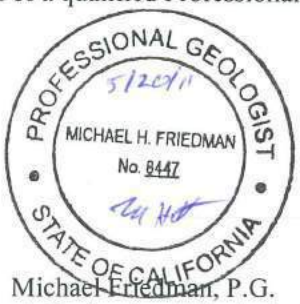
Interim Measures Completion Report
Former Technichem Site
4245 Halleck Street
Emeryville, California

Submitted by:
Engineering/Remediation Resources Group, Inc.

	May 19, 2011
Signature	Date
Michael Friedman	Project Manager/Professional Geologist
Name	Title
	May 19, 2011
Signature	Date
David Tang, P.E.	Professional Engineer
Name	Title

CERTIFICATION PAGE

This document was prepared under the direction and supervision of a qualified Professional Geologist



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This document was prepared under the direction and supervision of a qualified Professional Engineer

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California Professional Engineer

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Acronyms and Abbreviations

bgs	below ground surface
CAM	California Assessment Manual
CMT	Construction Materials Testing
DTSC	Department of Toxic Substances Control
EPA	U.S. Environmental Protection Agency
ERRG	Engineering/Remediation Resources Group, Inc.
ESLs	environmental screening levels
ISED	Imminent and Substantial Endangerment Determination
PCE	tetrachloroethene (aka perchloroethylene)
PES	PES Environmental, Inc.
PID	photoionization detector
PM_{10}	particulate matter less than 10 micrometers in diameter
PPE	personal protective equipment
ppm	parts per million
psi	pounds per square inch
RCRA	Resource Conservation and Recovery Act
SSHSP	Site-Specific Health and Safety Plan
TPH	total petroleum hydrocarbons
USA North	Underground Service Alert of Northern California
VOCs	volatile organic compounds
µg/kg	micrograms per kilogram

Section 1. Introduction

This Interim Measures Completion Report describes the specific project activities that were conducted at the Technichem site (the Site) at 4245 Halleck Street, Emeryville, California, in accordance with "Interim Measures Work Plan, Former Technichem, Inc. Facility, 4245 Halleck Street, Emeryville, California" (Work Plan) (Engineering/Remediation Resources Group, Inc. [ERRG], 2010a). The project activities were implemented by ERRG and overseen by representatives of the California Environmental Protection Agency's Department of Toxic Substances Control (DTSC). The Site activities performed are consistent with the scope of work defined under DTSC Work Order Agreement No. 001 of Contract No. 08-T3602, under Master Services Agreement No. 05-T2951.

Site activities involved collecting soil samples through the concrete floor of the building for waste profiling; excavating contaminated soil to the depth of groundwater, approximately 4 feet below ground surface (bgs); and site restoration. Impacted soil beneath or adjacent to foundation supports was not removed during this remediation effort.

1.1. REPORT ORGANIZATION

Section 2 provides background information on the Site. Section 3 summarizes deviation from the Work Plan. Section 4 summarizes field activities performed at the Site, and Section 5 summarizes the results of air monitoring during field activities. Section 6 summarizes the confirmation sample results. Section 7 provides a list of the documents and guidance used to prepare this report. Figures and tables are provided following Section 7. The following supplemental information is provided as appendices to this report:

- Appendix A. Permits
- Appendix B. Backfill Material – Laboratory Analytical Reports
- Appendix C. Backfill Compaction Results
- Appendix D. Concrete Test Results
- Appendix E. Waste Profiles, Manifest, and Weight Tickets
- Appendix F. Perimeter Air Monitoring Logs
- Appendix G. Confirmation Samples – Laboratory Analytical Reports
- Appendix H. Photographic Documentation

Section 2. Site Background

This section describes the Site, presents a brief history, and summaries previous investigations.

2.1. SITE DESCRIPTION

Technichem is a one-story concrete tilt-up building with a brick facade located at 4245 Halleck Street in Emeryville, California (Figure 1). The building is roughly 80 feet wide by 200 feet long and is divided into three separate areas: (1) Technichem offices in the southern portion of the building; (2) Technichem processing and storage areas in the central portion of the building; and (3) a northern portion of the building formerly occupied by the San Francisco Newspaper Agency. The area of contaminated soil removed during this remediation effort is beneath the central portion of the building and measures approximately 50 feet by 50 feet in size. The building has a concrete floor, and all access doors (including two roll-up "garage" doors) face to the east, toward Halleck Street.

Technichem is located in a mixed residential and commercial area. It is bordered to the north by a vacant industrial property (formerly a Sherwin William's paint manufacturing facility), to the east by Halleck Street, with multifamily residential located across the street, to the south by commercial/industrial property, and to the west by a Union Pacific Railroad right-of-way (DTSC, 2008).

2.2. SITE HISTORY

Technichem was historically owned by the Union Pacific Railroad Company (formerly the Southern Pacific Railroad Company). The facility remained vacant and undeveloped under the ownership of the Union Pacific Railroad Company. Pellegrini Refrigeration purchased the property in June 1978, and the property is currently owned by the Mario J. & Virginia E. Pellegrini Trust (DTSC, 2008). The current building was constructed on the property in 1985. While obtaining the required permits for the removal work, the City of Emeryville was unable to provide as-built diagrams or engineering drawings for the central or northern portions of the building. The only drawing available in the City of Emeryville files was a diagram from September 4, 1952, showing an "addition" building and 30-foot-wide by 40-foot-long "trailer slab" in the approximate location of the current facility. The Gazor furniture assembly plant occupied the facility from 1985 to 1987. Technichem leased and occupied the building from January 1987 through December 2003 (DTSC, 2008).

Technichem operated a tetrachloroethene (PCE) recycling facility, which received a DTSC Resource Recovery Facility Permit on January 22, 1987. Technichem reclaimed residual PCE from spent dry cleaning filter cartridges, degreasing processes, still oil, and wastewater (DTSC, 2008).

DTSC inspected the facility on several occasions and determined that Technichem was out of compliance with regulatory requirements, including but not limited to (1) failure to maintain adequate aisle space in the drum storage area; (2) failure to keep a container closed in the storage area; (3) stacking drums in a manner that may cause the drums to fall, rupture, or leak; (4) unlawfully disposing of hazardous waste (i.e., filter paper was contaminated with elevated concentrations of PCE) in a Class 3 landfill; (5) exceeding the discharge limits for total identifiable chlorinated hydrocarbons of 0.5 milligrams per liter; and (6) accepting, storing, or treating more than the allowed limit of 7,000 gallons of total hazardous waste or 2,000 gallons of PCE, whichever is less, per calendar month (DTSC, 2008).

2.3. PREVIOUS INVESTIGATIONS

In May 2006, PES Environmental, Inc. (PES) conducted a passive soil gas survey for volatile organic compounds (VOCs) as the initial step of a DTSC-required facility closure investigation. Soil gas samples were collected from 35 locations in the central portion of the building. Soil gas samples were collected from an additional 14 locations beneath the sidewalk immediately east of the building. PCE and other chlorinated compounds were found in 48 of the 49 soil gas samples, often at concentrations exceeding DTSC California Human Health Screening Levels. The highest concentrations of PCE were found in samples collected from areas coincident with Technichem's solvent recycling operations. The single soil gas sample, in which no chlorinated compounds were detected at concentrations equal to or greater than laboratory reporting limits, was collected below the sidewalk outside the northern portion of the building (PES, 2006).

In November 2006, PES collected additional samples at DTSC's request and analyzed them for VOCs. Passive soil gas samples were collected from 12 locations; 10 soil samples were collected from 5 soil borings at 2 feet and 6 feet bgs (the 6-foot bgs samples were below the water table), and 5 grab groundwater samples were collected from 5 soil borings. The soil gas, soil, and groundwater samples were all collected from areas in the central portion of the building, where Technichem operated the solvent recovery systems and stored recycled PCE, and where the previous PES investigation had found the most significant soil gas contamination. PCE and other chlorinated compounds and some nonchlorinated VOCs, such as benzene, toluene, ethylbenzene, and xylenes, were found in the samples (PES, 2007).

In August 2008, DTSC issued an Imminent and Substantial Endangerment Determination (ISED) regarding the Site. The ISED noted the health effects of hazardous substances found at the Site during previous sampling investigations and concluded that an actual or threatened release of hazardous

substances may present an imminent and substantial endangerment to the public health or welfare or to the environment. The ISED requires a response action to alleviate the hazard (DTSC, 2008).

In March 2009, DTSC contracted ERRG to conduct a hotspot removal for soil at Technichem, which is the subject of this report.

Section 3. Deviations from the Work Plan

Site conditions encountered during implementation of the interim measures caused the following deviations from the Work Plan. All unanticipated site conditions and subsequent deviations were communicated to DTSC prior to proceeding with the work.

- Permeation grouting at the Site was unsuccessful because of impermeable shallow soil under the perimeter walls and the support columns. Communicated to DTSC on November 1, 2010.
- Because permeation grouting failed, ERRG recalculated the minimum safe distance to be maintained from the excavation to the support columns. This distance was determined to be 10 feet as opposed to the original 5 feet. Communicated to and approved by DTSC on November 1, 2010.
- In addition, the "A" slot trenches were excavated in two events to allow the project engineers to determine if slot trenching without permeation grouting would be adequate to preserve the structural integrity of the concrete floor and wall. The "A" slot trenches were split into the "A1" and "A2" slot trenches (Figure 3). Communicated to DTSC on November 1, 2010.

Section 4. Field Activities

This section describes the specific activities and procedures involved during implementation of the Work Plan at the Site. The activities included:

- Permitting and notifications
- Pre-excavation sampling
- Mobilization and site preparation
- Interior wall and process equipment removal
- Permeation grouting
- Soil removal
  - Concrete cutting and removal
  - Excavation of contaminated soil
  - Backfill placement and compaction
- Confirmation soil sampling
- Site restoration
- Demobilization
- Waste disposal

4.1. PERMITTING AND NOTIFICATIONS

Water Resources Well Permit W2010-0229 was obtained on April 9, 2010, from the Alameda County Public Works Agency for pre-excavation soil borings at the Site.

Building Permit # 1002-056.B was obtained from the City Emeryville on September 27, 2010, for the excavation and restoration activities, which included a Waste Management Plan, Special Inspection Form, and Field Inspection Form. All permit documents are included in Appendix A.

4.2. UTILITY SURVEY

Underground Service Alert of Northern California (USA North) was notified prior to commencing any subsurface work (USA North # 0227035-001). None of the USA North utility members indicated that utilities were present within the excavation area. ERRG also subcontracted Bess Test Lab, Inc. to

conduct a utility survey of the excavation areas using ground-penetrating radar and standard radio detection utility locator on September 11, 2009. Best Test Lab, Inc. detected one subsurface utility trench running west to east in the north portion of the excavation area; however, the utility survey could not determine if utility lines were present in the trench. The utility trench was marked with orange paint.

4.3. PRE-EXCAVATION SAMPLING

Pre-excavation subsurface soil sampling was conducted on April 12, 16, and 29, 2010, to collect data for waste profiling, geotechnical analysis, and concrete evaluation in support of the proposed site remediation. Results of the pre-excavation sampling were previously reported to DTSC in the "Summary of Field Investigations, Technichem, 4245 Halleck Street, Emeryville, California" (ERRG, 2010b). Waste soil generated from soil borings was placed in U.S. Department of Transportation-approved drums, sealed, and secured inside the building for subsequent off-site transport to the disposal facility.

4.3.1. Waste Profile Sampling

Eleven soil samples were collected from locations within the Slot Trench Excavation Area and Excavation Area and were analyzed for the following analytes at Curtis & Tompkins, Ltd. in Berkeley, California:

- VOCs by U.S. Environmental Protection Agency (EPA) Method 8260B
- Semivolatile organic compounds by EPA Method 8270C
- Seventeen California Assessment Manual (CAM) 17 Metals by EPA Methods 6010B and 7471A
- Total petroleum hydrocarbons as gasoline, diesel, and motor oil by EPA Method 8015B

Based on the results of the chemical analyses, the waste soil from the Site was profiled as a Resource Conservation and Recovery Act (RCRA) hazardous waste for direct disposal to the landfill.

4.3.2. Geotechnical Sampling

Geotechnical data were obtained from soil borings to a maximum depth of 36.5 feet bgs and from bulk samples of the aggregate base beneath the concrete floor. Geotechnical samples were analyzed for the following parameters:

- Moisture Content (ASTM D22162) and Dry Density (ASTM D2937)
- Particle Size Analysis (ASTM D422)
- Atterberg Limits (ASTM D4318)
- Direct Shear Test (ASTM D3080)

- Undrained-Unconsolidated Triaxial Test (ASTM D-2850)
- Consolidation Test (ASTM D2435)

The concrete floor was evaluated through analysis of physical samples collected at the Site and field static plate load tests. The concrete core samples were analyzed for compressive strength (ASTM C42) and flexural strength (ASTM C78) at Smith-Emery Laboratories in San Francisco, California. The static plate load tests were conducted at the Site by a Smith-Emery Laboratories representative with oversight from the ERRG Project Engineer.

Based on the results of the geotechnical and concrete analyses, ERRG determined that the concrete floor would be susceptible to bending failure. To decrease the deflection in the concrete footings, ERRG recommended that the subgrade beneath the support columns and the perimeter footings be reinforced by grout injection, and that the area 10 feet from the perimeter load bearing walls be excavated via 3-foot-wide slot trenches. Additional details are provided in the "Summary of Field Investigations, Technichem, 4245 Halleck Street, Emeryville, California" (ERRG, 2010b).

4.4. MOBILIZATION AND SITE PREPARATION

ERRG mobilized equipment and personnel to the Site to begin soil removal on October 16, 2010. Traffic control, work zones, and site security were established prior to commencing the soil removal activities.

4.4.1. Traffic Control

Entrances to the building were restricted to prevent unauthorized entry to the Site during field activities. Traffic and pedestrian controls were implemented during loading and unloading of equipment and materials through-out the course of the project. Controls during unloading of soil and concrete consisted of field personnel, traffic signs, and traffic delineators at applicable entry and egress areas to the street.

4.4.2. Work Zones

Work zones were established during mobilization in accordance with the Work Plan (ERRG, 2010a); however, the contamination reduction zone, the decontamination station, and the support zone were modified as necessary to accommodate materials staged outside the exclusion zone. ERRG used visual delineators and barricades to mark the exclusion zone around active excavation areas. Entry and exit to the exclusion zone was directed through the decontamination station, such that personnel donned the proper personal protective equipment (PPE) before entering the exclusion zone and doffed PPE when exiting.

4.4.3. Security

Site security was maintained to reduce the potential for exposure to chemicals and potential for contact with other safety hazards.

Site-security measures included:

- Controlling building access by using existing structures and work zone barricades.
- Only the construction crew, ERRG staff, and authorized personnel were allowed on site from October 18 through December 16, 2010.
- No unauthorized personnel were allowed in the controlled areas of the Site.
- All visitors had prior approval from ERRG and DTSC before being admitted to the Site.
- All visitors read and acknowledged the Site-Specific Health and Safety Plan (SSHSP) and possessed documentation that they had the necessary training to enter the active work zone.

4.5. INTERIOR WALL AND FORMER PROCESS EQUIPMENT REMOVAL

Existing structures, including former processing equipment, wood-frame walls, floors, and concrete containment curbs, were removed from the excavation and bin staging areas on October 18 through 21, 2010.

Interior walls and platforms were removed with an excavator and a backhoe. Interior walls that connected to perimeter walls were separated from the adjoining wall with a powered reciprocating saw. Respirable dust generated during the removal activities was mitigated by applying mist to the walls before and during the removal. Samples of the wall from the construction debris were sent to Micro Analytical Laboratories, Inc. in Emeryville, California, on October 19, 2010, and analyzed for asbestos by polarized light microscopy and CAM 17 metals by EPA Method 6010B. No asbestos was detected in the samples, and metals were not detected at concentration greater than RCRA hazardous waste criteria. Waste was approved for disposal at Waste Management's Altamont Landfill. Details of waste disposal are provided in Section 4.11 of this report.

A photoionization detector (PID) detected organic vapors within the processing equipment on October 19, 2010. Draeger colorimetric tubes confirmed 0.35 micrograms per milligram of vinyl chloride within the former processing equipment. No liquids were found inside the equipment, and the container was triple-rinsed with BIOSOLVE and water. All cleaned former process equipment was recycled as metal waste, and rinse water was collected for subsequent disposal. Details of waste disposal are provided in Section 4.11 of this report.

4.6. PERMEATION GROUTING UNDER FOOTINGS

Soil beneath the support columns and the perimeter footings was to be reinforced by injecting grout into the base material to decrease the anticipated deflection in the concrete footings during excavation activities. The reinforcement was intended to increase the strength of the subgrade material, thus reducing the potential for cracking under bending stress.

Jordan & Graf Ground Improvement, Inc., ERRG's grouting subcontractor, was on site from October 27 through October 29, 2010, to perform permeation grouting. A percussion drill was used to bore through the concrete in numerous locations along the perimeter footing and around the columns to create 2-inch-diameter injection borings for the grout. Initial attempts to inject grout were unsuccessful. The subcontractor then used water to determine whether the subsurface soil would accept any fluids. The attempts to inject water were unsuccessful. According to these findings, subsurface soil beneath the perimeter footing and interior column footings consists of more fine-grained material than previously found underneath the concrete slab. Jordan & Graf Ground Improvement, Inc. demobilized from the site on October 29, 2010. ERRG performed additional engineering calculations and determined that work could proceed but the excavation boundary should be a minimum of 10 feet from the interior columns north of the excavation area and 2 feet from the south wall to minimize potential impacts. The support columns south of the excavation area terminate on a 4-foot-tall footing wall that distributes load evenly over the length of the wall, reducing the risk of deflection (Figure 2).

4.7. SOIL REMOVAL

ERRG conducted soil removal activities at the site from October 25 through December 16, 2010, which included cutting and removing sections of the concrete floor, excavating contaminated soil, backfilling and compacting excavated areas, and replacing the concrete floor. To preserve the structural integrity of the existing concrete slab floor, the excavation area was broken down into the Slot Trench Excavation Area and Excavation Area in accordance with the recommendations resulting from the pre-excavation sampling (Figure 3). In addition, the concrete replaced in each slot trench was allowed to cure for 3 days to attain a minimum strength of 3,000 pounds per square inch (psi) before cutting the concrete in an adjacent excavation area. To allow each area of new concrete to cure and complete the entire excavation in a timely manner, ERRG alternated excavation areas from slot trenches to larger excavation areas in the center of the site, as shown on Figure 3. The excavation area was extended laterally in all directions until contaminated soil was removed and DTSC-specified action levels were met, or until soil supporting loadbearing walls or other structures were encountered.

The following subsections describe the field activities associated with cutting and removing the concrete floor, excavating the soil, and backfilling excavated areas.

4.7.1. Concrete Cutting and Removal

The existing floor within the excavation boundaries was constructed of unreinforced concrete from 6 to 8 inches thick. The floor in each excavation area was saw-cut, broken into pieces with a hydraulic breaker, removed from the exaction area with a bobcat or backhoe, and staged for subsequent off-site transport. Saw-cuts were limited to the active slot trench or excavation area. Concrete debris was staged on site until a 10-yard dump truck could be fully loaded.

4.7.2. Excavation of Contaminated Soil

Slot trenches started 2 feet from the perimeter wall footings and were 10 feet long by 3 feet wide. The first two slot trenches were located in the northwest and southwest corners of the site and were excavated to 5.5 feet bgs to determine the depth to groundwater. Groundwater was first encountered at 5.0 and 5.5 feet bgs and equilibrated to 4.0 feet bgs. All subsequent trenches were excavated to equilibrated groundwater depth. Samples "TECH-A3-B-5.5" and "TECH-A1-B-5.0" were collected from the bottom of the first two trenches, and no contaminants were detected at concentrations exceeding laboratory reporting limits. During excavation of the slot trenches along the west wall, a second layer of concrete was encountered at approximately 2.5 feet bgs and extending to approximately 7 feet from the west wall. An ERRG engineer inspected the excavation and slab and determined it was safe to remove. An abandoned utility line was discovered running east to west across the excavation area approximately 5 feet from the north edge of the excavation (Figure 3). The utility line location corresponded to the utility trench located by Best Test Lab, Inc. during the pre-excavation utility survey. The utility line was discovered in a bed of utility sand but was not intact and was removed during the excavation.

The "A" slot trenches were excavated in two events to allow the project engineers to determine if slot trenching without permeation grouting would be adequate to preserve the structural integrity of the concrete floor and wall. The "A" slot trenches were split into the "A1" and "A2" slot trenches, as shown on Figure 3. The Project Engineer determined slot trenching alone with the originally planned dimensions (3 feet wide by 4 feet deep by 10 feet long) was adequate, and the excavation schedule proceeded as originally planned.

Contaminated soil was excavated with a mini-excavator or backhoe and placed in U.S. Department of Transportation-approved roll-off style soil bins lined with plastic sheeting. The lids of the bins were kept closed and secured at all times when not in use. Soil was transported in the roll-off bins to permitted disposal facilities as federally regulated waste requiring treatment (RCRA-stabilization).

4.7.3. Backfill Placement and Compaction

Prior to importing the virgin backfill material, samples of the import material were collected and analyzed in accordance with the DTSC "Information Advisory, Clean Imported Fill Material" (DTSC, 2001). Samples were analyzed for total petroleum hydrocarbons (TPH)-purgeables and TPH-extractables, VOCs, semivolatile organic compounds, metals, pH, and asbestos by EPA Methods 8015B, 8260B, 8270C, 7471A, 9045D, and Occupational Safety and Health Administration ID 191, respectively. Laboratory analytical reports for the import material were presented to DTSC for approval prior to delivery to the Site. Analytical results are presented in Table 1, and all laboratory backfill analytical reports are in Appendix B.

Each excavation was backfilled immediately after ERRG collected confirmation soil samples for the excavation. Backfill material consisted of 1½-inch drain rock and ¾-inch Class 2 aggregate base from Syar Quarry in Lake Herman, California. Up to 18 inches of the 1½-inch drain rock was placed on top of the native clay soil present in the base of the excavations to provide better stability and compaction. The remainder of the excavation was filled with ¾-inch Class 2 aggregate base to 6 inches below the surrounding grade. The ¾-inch Class 2 aggregate base was placed in 12-inch lifts and compacted to a minimum 90 percent of maximum dry density. Dust suppression and moisture conditioning of the import material was conducted during placement and compaction activities. Field compaction test reports are presented in Appendix C.

4.8. CONFIRMATION SOIL SAMPLING

In accordance with the Work Plan (ERRG, 2010a), confirmation soil samples were collected from the base of the excavation at a frequency of one sample per 20-foot by 20-foot grid (400 square feet) and from the sidewalls at a frequency of one sample for every 20 linear feet (Figure 4). Each sidewall sample was collected at the midpoint between the top and bottom of the sidewall. All samples were collected using EnCore samplers and analyzed for VOCs by EPA Method 8260B. Confirmation sample data are discussed in detail in Section 6.

4.9. SITE RESTORATION

Site restoration included replacing the concrete floor, repairing the north roll-up door, and cleaning the inside of the warehouse. The Work Plan required a minimum final compressive strength of 4,000 psi and 3,000 psi before beginning an adjacent concrete removal (ERRG, 2010a). The concrete floor installation included 6 inches of 6,000 psi concrete placed over #4 rebar set on an 18-inch grid pattern. The mix design for the installed concrete and the compressive strength tests are presented in Appendix D. Construction Materials Testing (CMT), an ERRG subcontractor, conducted field inspections and testing of the new concrete and collected samples for compressive strength tests. Field testing included visual observations of the concrete and field slump tests conducted according to ASTM C143, "Standard Test Method for Slump of Hydraulic-Cement Concrete." CMT collected six cylinders of concrete during each new concrete pour that were analyzed in the laboratory by ASTM C39 "Compressive Strength of Cylindrical Concrete Specimens." Compressive strength tests for the initial three concrete pours were conducted at 3, 5, 7, 10, and 28 days (Table 2). Because the minimum compressive strength of the 3-day tests for the first three concrete pours was 3,350 psi, exceeding the minimum requirement to work in adjacent areas, the remaining seven concrete pours were analyzed at 3, 7, and 28 days. If a compressive strength test was to occur on a Sunday or holiday then the test day was adjusted as appropriate. For example, the 3-day test for concrete poured on November 11, 2010, would have occurred on a Sunday, so the test was adjusted to Saturday, November 10, and a 2-day test was conducted. Analytical results of the compressive strength test are presented in Table 2, and laboratory reports are in Appendix D.

The rebar was set 6 inches into the existing concrete with epoxy. The use of continuous pieces of rebar was not possible across the excavated areas because the concrete for each excavation area was poured prior to removing the existing concrete for the adjacent area. Each excavation area had a 15-inch minimum overlap of rebar with the adjacent trenches. The overlap was accomplished by extending the rebar 15-inches beyond the excavation area and bending the ends of the rebar up for the concrete pour. Once the concrete in the adjacent area was removed, the vertical portion of the rebar was flattened down and tied to the new rebar in the adjacent area.

A post-tensioning system was installed to further connect the new concrete with the existing concrete. Post-tensioning rods were placed at 36 inches on center at the interface of the new and old concrete floor (Figure 5). Each post-tensioning rod was a minimum of 28 inches long, 0.75 inches in diameter, threaded, and corrosion-resistant metal. The post-tensioning rods were set 6 inches into the existing concrete with epoxy and 18 inches into the new concrete. A 6-inch box was placed at the end of the post-tensioning rod to accommodate a 3-inch by 8-inch by 0.75-inch corrosion-resistant metal plate secured with a locking washer and nut. The plate was separated from the new concrete by expansion joint material to help reduce potential cracking. Tension was applied to the rod by tightening the nut 6 hours, 12 hours, and 24 hours after the new concrete was poured. Once the rods were tightened, the 6-inch box was filled with concrete. As the slab was found not to connect to west load bearing wall during concrete removal, no post-tensioning rods were required on the west wall.

Additional Site Restoration Activities

The garage door in the northern portion of the Site was damaged during site work. The preexisting condition of the door caused it to come off the tracks when fully opened, which was required to allow the soil bins to be delivered into and removed from the building. A man-lift was used to safely operate the door until it was replaced by West Coast Overhead Door Corp. of Castro Valley, California, on December 16, 2010.

The floor surface and walls were pressure washed prior to demobilization to remove any dust or concrete residues that may have accumulating during the soil removal. The rinsate was collected with shop vacuums and added to the final bin.

4.10. DEMOBILIZATION

All equipment and supplies were removed from the Site following completion and acceptance of site conditions by DTSC representatives. DTSC conducted a final site walk and inspection on December 16, 2010, and no outstanding action items were noted.

4.11. WASTE DISPOSAL

Waste generated from site activities included the debris from the interior wall and curb removal; concrete debris from the floor removal; soil from the excavation; wastewater from the cleaning the former processing tank, cutting concrete, and pressure washing surface; and municipal waste from general site activities. Manifest and weight tickets for the various types of waste are provided in Appendix E.

The building interior walls and curbs were placed in three 20-yard open top bins and disposed of as nonhazardous construction waste debris to Waste Management's Altamont Landfill, in Livermore, California. The demolition and construction debris amounts are documented in the City of Emeryville Building Department's Waste Management Plan (Appendix A).

Approximately 45 yards of concrete were loaded and transported in 10-wheel dump trucks to the AMAN Environmental Construction, Inc. Concrete/Asphalt Recycling Facility in Oakland, California, on October 26, November 12, November 23, November 30, December 2, December 7, December 9, and December 10, 2010.

Based on pre-excavation sampling results, the soil was classified as RCRA F-Listed hazardous waste for direct disposal. Six soil bins (72.52 tons) were transported to U.S. Ecology's disposal facility in Beatty, Nevada, between October 26 and November 12, 2010. The remaining 46 loads (468.02 tons) were transported to Waste Management's Kettleman Hills Facility disposal between November 3 and December 14, 2010.

Seven drums of wastewater generated from cleaning the former process tank and saw cutting the concrete were transported by Filter Recycling Services, Inc to their permitted facility in Rialto, California, and disposed of as "Non-Hazardous Waste Liquid (Waste Water)."

Section 5. Air Monitoring

Air monitoring was conducted to measure the concentrations of VOCs and respirable dust (i.e., particulate matter less than 10 micrometers in diameter [PM_{10}]) generated during potential dust-generating site activities. Air monitoring consisted of on-site and perimeter monitoring for VOCs of concern and PM_{10}.

5.1. PERIMETER DUST MONITORING

Perimeter dust monitoring was performed using PM_{10} air monitoring instruments (PDR-1000 MiniRAM®) at of the entrances to the facility (Figure 3). The instrument readings were recorded periodically throughout the day, and the maximum particulate value was used to evaluate if appropriate engineering controls were being implemented. A daily air monitoring graph showing the particulate concentrations over time is provided in Appendix F. Dust monitoring results were less than the action level of 0.05 milligrams per cubic meter, except for concentrations recorded on October 27, 2010. The street in front of the Site was dusty from traffic from the Gioletti construction site located at Halleck and Sherwin Streets, north of the Site. Subsequent street sweeping removed the dust and reduced the particulate concentrations.

5.2. VOC MONITORING

Real-time air monitoring for VOCs was performed using a PID and chemical-specific colorimetric tubes. VOC concentrations were monitored with a PID on an hourly basis, or anytime conditions changed, such as when a new trench was opened and soil exposed. Chemical-specific monitoring tubes were used when elevated PID concentrations were encountered. If monitoring levels exceeded the action levels presented in the SSHSP (ERRG, 2010a), additional engineering control measures were implemented, such as dust suppression, applying vapor suppressant, and covering trenches and exposed soil with plastic (Section 5.3). Action levels established in the SSHSP were exceeded on 2 days during site activities. Vinyl chloride was detected in Sensidyne colorimetric tubes on October 19 and December 1, 2010, at concentrations of 0.35 parts per million (ppm) and 3.0 ppm, respectively. The October 19 reading was detected inside the processing tank prior to cleaning, and field personnel upgraded to Level C respiratory protection during tank cleaning activities. The December 1 reading was detected in the breathing zone during excavation of Area 3. The excavation area was covered with plastic, and work activities were suspended for the day. On December 2, 2010, the crew applied a vapor suppressant (BioSolve) to the Area 3 excavation, and kept drum fans trained on the excavation to disperse any remaining vapors. No vapor concentrations greater than the health and safety action levels were detected after applying the vapor suppressant. Copies of the air monitoring logs are presented in Appendix F.

5.3. LEL/O_2/CO MONITORING

Additional air monitoring for lower explosive limit vapors, oxygen deficient atmospheres, and carbon monoxide (CO) was conducted to protect workers while working inside the building with diesel and propane motor driven equipment. Air monitoring results often indicated elevated concentrations of CO inside the building. Large fans were added to the work site to provide adequate ventilation. CO limit were occasionally exceeded if several pieces of equipment were operating at one time. Workers would shutdown equipment and allow the building to ventilate prior to resuming work.

5.4. ENGINEERING CONTROLS FOR AIR EMISSIONS

Engineering controls were implemented, as needed, to minimize airborne contaminants as the trenches for the soil vapor extraction system were excavated. Engineering controls for dust and VOCs included the following:

- Lowering excavator and backhoe lift and drop heights to mitigate the generation of dust as soil was moved and loaded into roll-off bins.
- Covering soil and debris stockpiles.
- Applying mist or sufficient water to control dust but not create a runoff hazard. A vapor-suppressant compound was occasionally applied to the excavation areas to minimize VOCs released as soil was excavated.

Section 6. Confirmation Sample Data

Confirmation soil samples were collected from the excavation bottom and sidewalls to determine the concentration of VOCs in soil at the boundaries of the excavation (Figure 4). Each excavation bottom sample was collect at a frequency of one for every 20-foot by 20 foot grid. Each sidewall sample was collected at the midpoint between the top and bottom of the sidewall at a frequency of one for every 20 linear feet. All samples were collected using EnCore samplers and analyzed for VOCs by EPA Method 8260 (EPA, 2008). Analytical results were compared with the site cleanup goals, San Francisco Regional Water Quality Control Board environmental screening levels (ESLs) for shallow soil. Soil containing concentrations of PCE exceeding the cleanup goals was left in place at the excavations boundaries due to engineering constraints for the building support structures or due to the presence of groundwater. Confirmation sample data are presented in Table 3 and on Figure 4. Analytical laboratory reports are presented in Appendix G.

6.1. SUMMARY OF SOIL VOC ANALYTICAL DATA

Confirmation samples were successfully collected from the proposed locations during soil removal activities. PCE was the only analyte detected at concentrations greater than its ESL. PCE was detected in 16 samples at concentrations ranging from 7.4 to 410,000 micrograms per kilogram (µg/kg). Only six of the detections exceeded the ESL of 700 µg/kg. Samples "TECH-A2W-S-2.0" (180 µg/kg) and "TECH-A3W-S-2.0" (410,000 µg/kg) were located in the west sidewall. Samples "TECH-A6N-S-2.0" (9,900 µg/kg) and "TECH-A9N-S-2.0" (27,000 µg/kg) were located in the north sidewall. Sample "TECH-A7S-S-2.0" (120,000 µg/kg) was located in the south wall of the south east corner, and sample "TECH-A5-B-4.0" (1,600 µg/kg) was located in the base of the excavation in the approximate center of the Site. Laboratory analytical presented in Table 3, and laboratory reports are provided in Appendix G.

Other VOCs detected in soil samples included cis-1,2-dichloroethene, trichloroethylene, vinyl chloride, and acetone. None of these VOCs were detected at concentrations greater than their respective ESLs; however, the detections limit for some samples was greater than the ESL because of high concentrations of PCE, which caused the samples to be diluted.

6.2. ANALYTICAL DATA QUALITY

The data analyzed by EPA Method 8260 are compliant with project requirements and laboratory criteria.

All sample receiving and analytical requirements were met. The method detection limits met all of the relevant requirements for PCE, the VOC of concern. Laboratory control spike recoveries were within quality control limits, indicating that the laboratory procedures were acceptable. Five of the confirmation laboratory reports (223464, 224222, 224280, 224331, and 224352) indicated that matrix spikes and matrix spike duplicates were not prepared from the sample volumes because insufficient sample volume was available. All other data quality parameters were met and indicating the data was usable for its intended purpose.

Section 7. Recommendations

As stated previously, the excavation area was extended laterally in all directions until contaminated soil was removed and DTSC-specified action levels were met, until soil supporting loadbearing walls or other structures were encountered, or until groundwater were encountered. Soil with concentrations exceeding the cleanup goal for PCE were left in place along the west wall, the north wall, the east portion of the south wall, and the in the base of the excavation in the center of the site.

ERRG recommends removing the remaining contaminated soil from the site; however, the contamination is present under existing support structures and should be further delineated prior to conducting additional soil removal. Soil sampling along the west, north, and east sidewalls of the previous excavation should be conducted to determine the extent of contamination. In addition, ERRG recommends collecting soil samples for geotechnical analysis in the raised building unit south of the interior building wall. A minimum of three samples is recommended to determine moisture content, density, and particle size distribution; and one sample to be analyzed for Atterberg Limits, direct shear, undrained-unconsolidated triaxial strength, and consolidation.

Section 8. References

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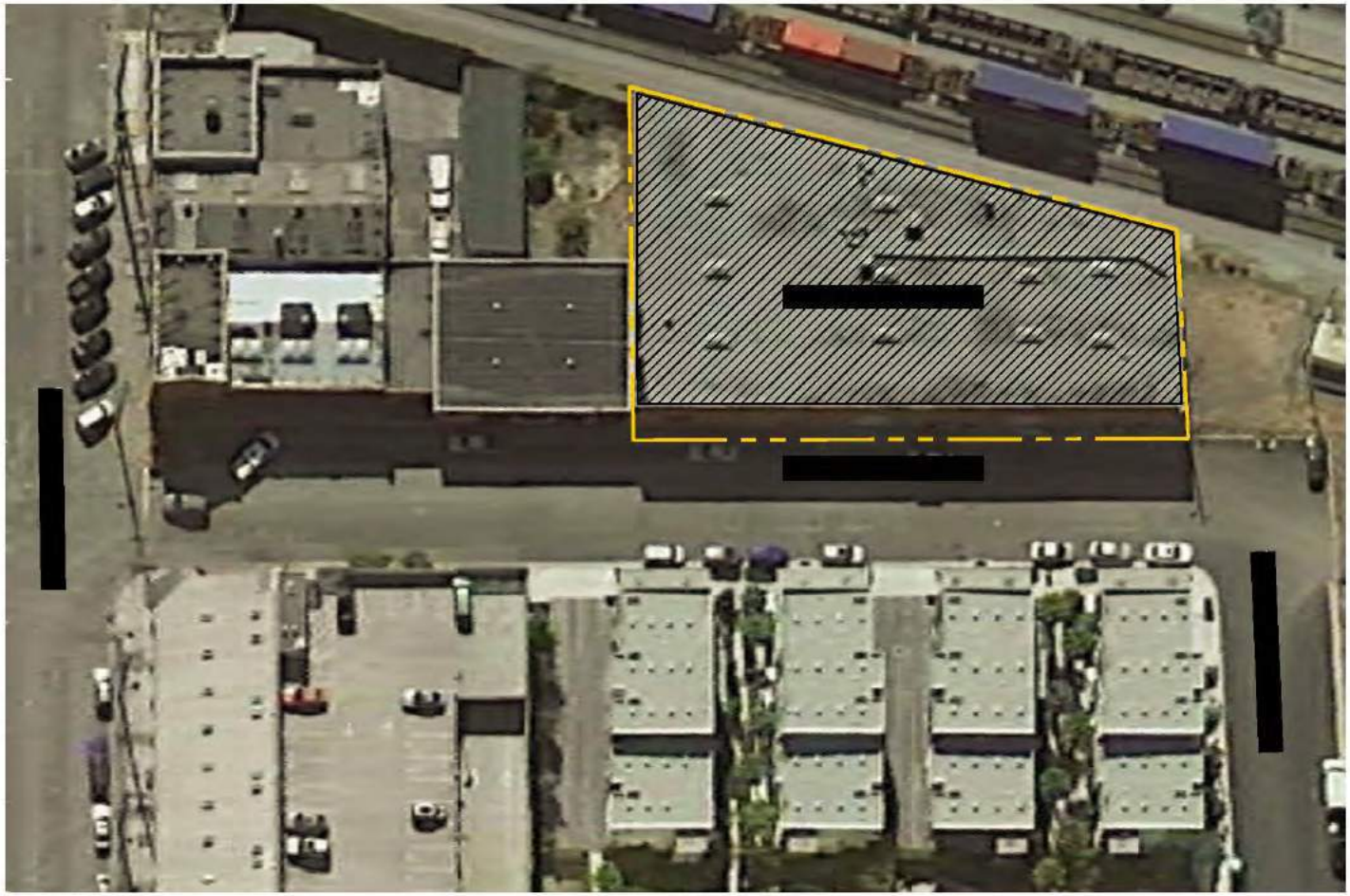
Figures

VICINITY MAP
N.T.S.



SOURCE: GOOGLE MAPS

SITE LOCATION

LEGEND:

APPROXIMATE PROPERTY LINE

BUILDING HATCH

N

0 40

APPROXIMATE SCALE IN FEET

ERRG Engineering/Remediation Resources Group, Inc.
4585 Pacheco Blvd., Suite 200
Martinez, California 94553
(925) 969-0750

CLIENT: DEPARTMENT OF TOXIC SUBSTANCES CONTROL

LOCATION: 4245 HALLECK STREET EMERYVILLE, CALIFORNIA

DESIGNED BY: CS 02/26/10

CHECKED BY: MHF 7/23/09

P.E./P.G.: –

SITE LOCATION & VICINITY MAP

ERRG PROJECT NO.	REVISION NO.	SHEET	OF	FIG NO.
29-057	0	1	1	1

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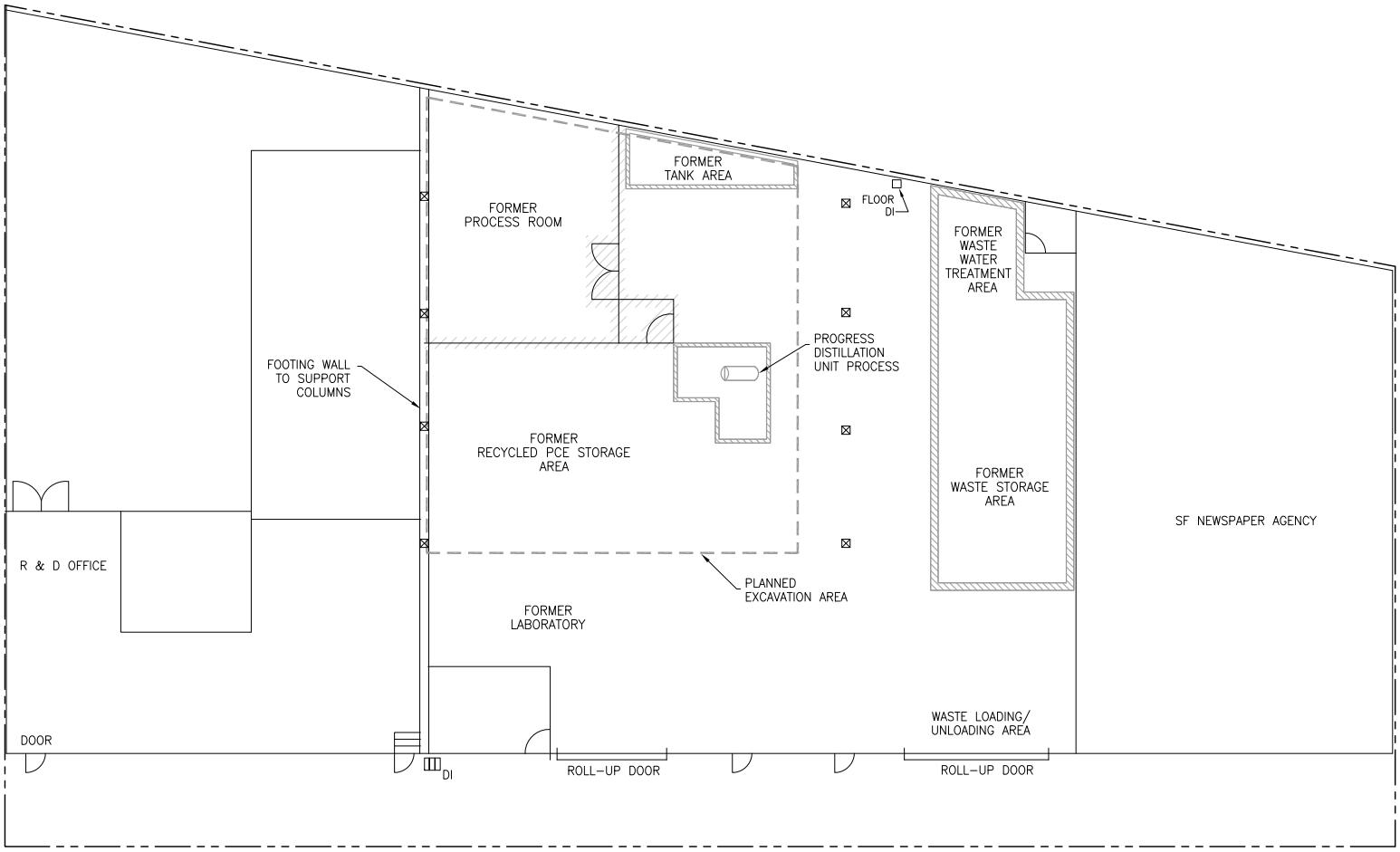

LEGEND:

- APPROXIMATE PROPERTY LINE
- INTERIOR SUPPORT COLUMN
- CONCRETE CONTAINMENT BERM

N

0' 15'

APPROXIMATE SCALE: 1"=15'

ERRG Engineering/Remediation Resources Group, Inc.
4585 Pacheco Blvd, Suite 200
Martinez, California 94553
(925) 969-0750

CLIENT: DEPARTMENT OF TOXIC SUBSTANCES CONTROL		SITE PLAN			
LOCATION: 4245 HALLECK ST. EMERYVILLE, CALIFORNIA	DRAWN BY: SC 03/21/11	CHECKED BY: MF 03/21/11	PROJECT NO. 2011-004	FIG NO. 2	

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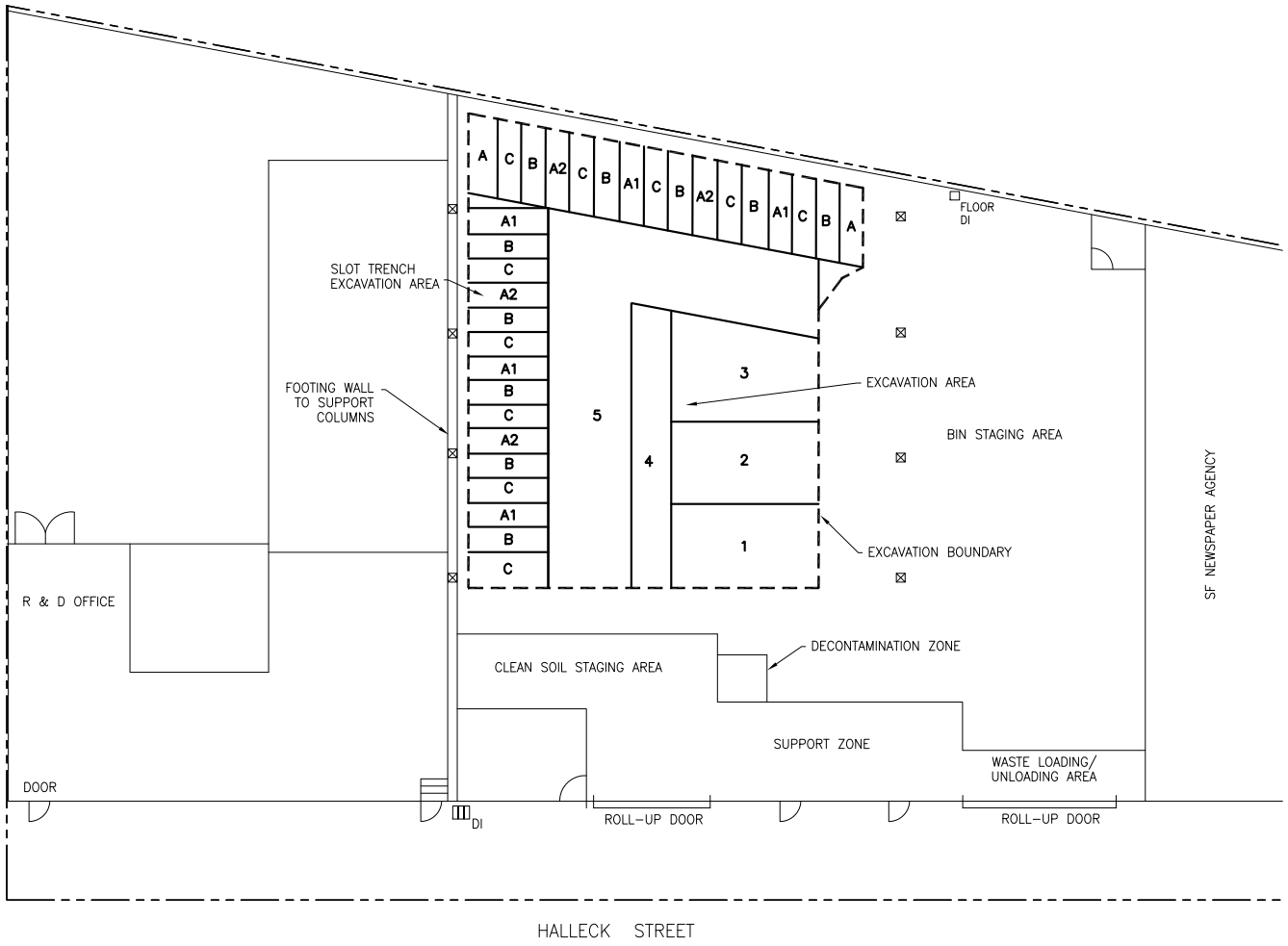


Description	Start_Date	Finish_Date	Soil Volume (Cubic/ Yards)
Interior Demo	10/19/2010	10/22/2010	
A Slot Trenches - Remove Floor and Soil	10/25/2010	10/26/2010	12
A Slot Trenches - Backfill and Compact	10/26/2010	10/26/2010	
A1 Slot Trenches - Remove Floor and Soil	11/2/2010	11/2/2010	22
A1 Slot Trenches - Backfill and Compact	11/2/2010	11/3/2010	
A & A1 Slot Trenches - Replace Concrete Floor	11/8/2010	11/8/2010	
Area 1 - Remove Floor and Soil	11/8/2010	11/9/2010	23
Area 1 - Backfill and Compact	11/9/2010	11/10/2010	
Area 1 - Replace Concrete Floor	11/11/2010	11/11/2010	
A2 Slot Trenches - Remove Floor and Soil	11/12/2010	11/15/2010	16
A2 Slot Trenches - Backfill and Compact	11/12/2010	11/15/2010	
A2 Slot Trenches - Replace Concrete Floor	11/15/2010	11/15/2010	
Area 2 - Remove Floor and Soil	11/15/2010	11/16/2010	23
Area 2 - Backfill and Compact	11/17/2010	11/17/2010	
Area 2 - Replace Concrete Floor	11/18/2010	11/18/2010	
B Slot Trenches - Remove Floor and Soil	11/22/2010	11/23/2010	40
B Slot Trenches - Backfill and Compact	11/22/2010	11/23/2010	
B Slot Trenches - Replace Concrete Floor	11/24/2010	11/24/2010	
C Slot Trenches - Remove Floor and Soil	11/29/2010	11/30/2010	42
C Slot Trenches - Backfill and Compact	11/29/2010	11/30/2010	
C Slot Trenches - Replace Concrete Floor	12/2/2010	12/2/2010	
Area 3 - Remove Floor and Soil	11/30/2010	12/1/2010	30
Area 3 - Backfill and Compact	12/2/2010	12/2/2010	
Area 3 - Replace Concrete Floor	12/3/2010	12/3/2010	
Areas 4 & 5 - Remove Floor and Soil	12/6/2010	12/10/2010	125
Areas 4 & 5 - Backfill and Compact	12/8/2010	12/13/2010	
Areas 4 & 5 - Replace Concrete Floor	12/14/2010	12/16/2010	

LEGEND:

- APPROXIMATE PROPERTY LINE
- INTERIOR SUPPORT COLUMN
- EXCAVATION BOUNDARY

0' 15'

APPROXIMATE SCALE: 1"=15'

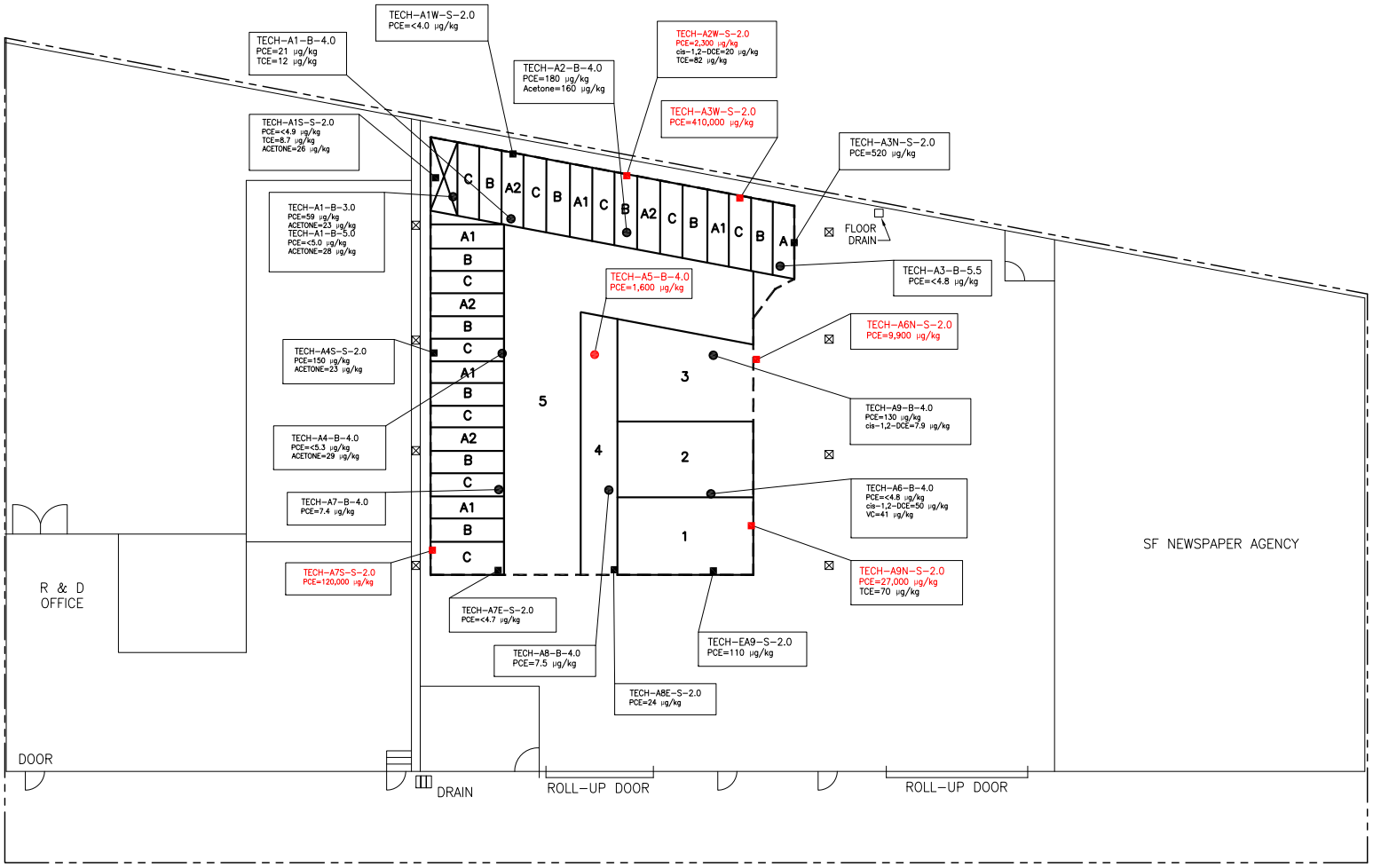
ERRG Engineering/Remediation Resources Group, Inc.
4585 Pacheco Blvd, Suite 200
Martinez, California 94553
(925) 969-0750

CLIENT: DEPARTMENT OF TOXIC SUBSTANCES CONTROL

LOCATION: 4245 HALLECK ST. EMERYVILLE, CALIFORNIA

EXCAVATION AREAS AND SEQUENCE

DRAWN BY:	CHECKED BY:	PROJECT NO.	FIG NO.
SC 03/21/11	MF 03/21/11	2011-004	3



LEGEND:

- APPROXIMATE PROPERTY LINE
- INTERIOR SUPPORT COLUMN
- EXCAVATION BOUNDARY
- CONFIRMATION SAMPLE (BOTTOM)
- CONFIRMATION SAMPLE (SIDEWALL)

NOTES:

SAMPLES LOCATIONS AND CONCENTRATIONS SHOWN IN RED EXCEEDED THE PROJECT ACTION LEVEL.

SFRWQCB ESLs:

PCE = 700 µg/kg
TCE = 460 µg/kg
cis-1,2 DCE = 190 µg/kg
Acetone = 500 µg/kg
Vinyl Chloride (VC) = 47 µg/kg

0' 15'

APPROXIMATE SCALE: 1"=15'

ERRG Engineering/Remediation Resources Group, Inc.
4585 Pacheco Blvd, Suite 200
Martinez, California 94553
(925) 969-0750

CLIENT: DEPARTMENT OF TOXIC SUBSTANCES CONTROL	CONFIRMATION SAMPLE LOCATIONS AND CONCENTRATIONS			
LOCATION: 4245 HALLECK ST. EMERYVILLE, CALIFORNIA	DRAWN BY: SC 03/21/11	CHECKED BY: MF 03/21/11	PROJECT NO. 2011-004	FIG NO. 4

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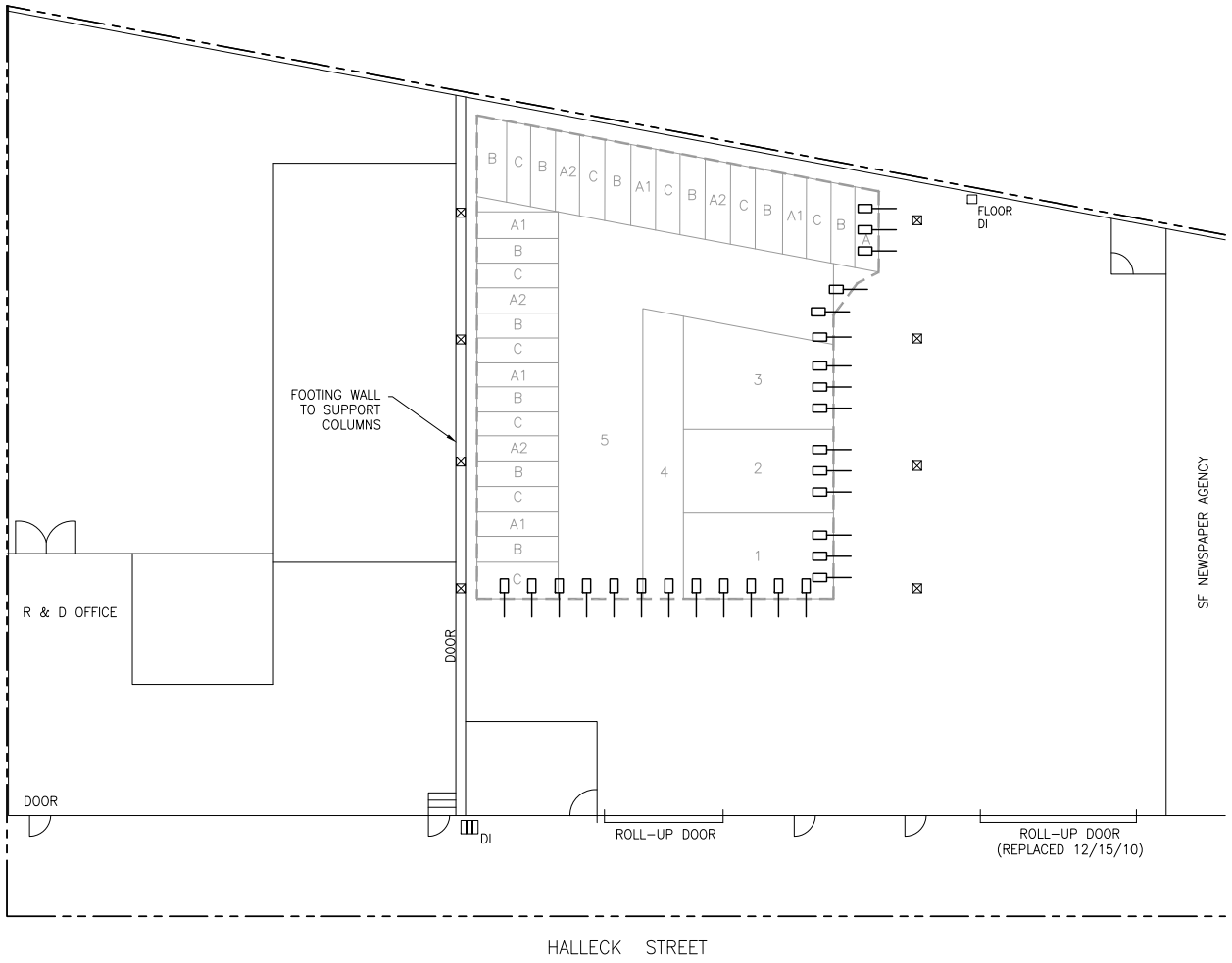
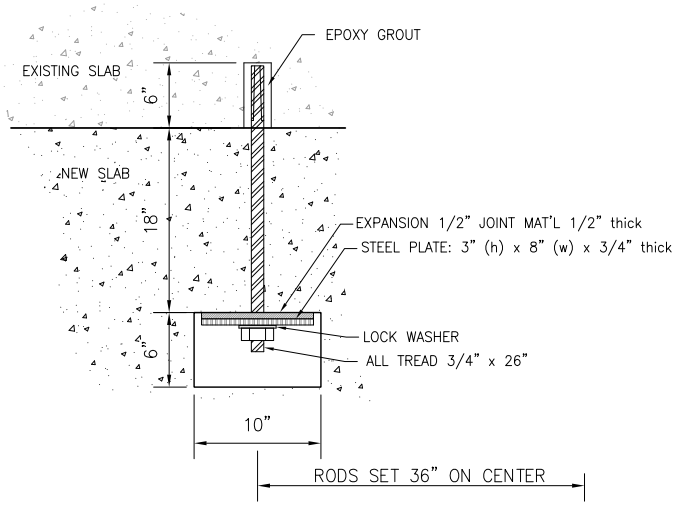




POST-TENSION ROD DETAIL
PLAN VIEW

NOT TO SCALE

LEGEND:

- APPROXIMATE PROPERTY LINE
- INTERIOR SUPPORT COLUMN
- EXCAVATION BOUNDARY
- POST-TENSION ROD

0' 15'

APPROXIMATE SCALE: 1"=15'

Engineering/Remediation Resources Group, Inc. 4585 Pacheco Blvd, Suite 200 Martinez, California 94553 (925) 969-0750 ERRG	CLIENT: DEPARTMENT OF TOXIC SUBSTANCES CONTROL	POST-TENSION ROD LOCATIONS AND DETAIL			
	LOCATION: 4245 HALLECK ST. EMERYVILLE, CALIFORNIA	DRAWN BY: SC 03/21/11	CHECKED BY: MF 03/21/11	PROJECT NO. 2011-004	FIG NO. 5

Tables

Table 1. Backfill Material Sample Results

Analyte Group	Analyte	Method	Lake Herman Result	Unit
Metals	Antimony	EPA Method 6010B	<0.5	mg/kg
	Arsenic	EPA Method 6010B	<0.25	mg/kg
	Barium	EPA Method 6010B	28	mg/kg
	Beryllium	EPA Method 6010B	0.2	mg/kg
	Cadmium	EPA Method 6010B	<0.25	mg/kg
	Chromium	EPA Method 6010B	10	mg/kg
	Cobalt	EPA Method 6010B	18	mg/kg
	Copper	EPA Method 6010B	40	mg/kg
	Lead	EPA Method 6010B	<0.25	mg/kg
	Mercury	EPA Method 7471A	1.6	mg/kg
	Molybdenum	EPA Method 6010B	<0.25	mg/kg
	Nickel	EPA Method 6010B	16	mg/kg
	Selenium	EPA Method 6010B	<0.5	mg/kg
	Silver	EPA Method 6010B	0.61	mg/kg
	Thallium	EPA Method 6010B	<0.5	mg/kg
	Vanadium	EPA Method 6010B	120	mg/kg
	Zinc	EPA Method 6010B	49	mg/kg
VOCs	VOCs	EPA Method 8260B	ND	µg/kg
SVOCs	SVOCs	EPA Method 8270C	ND	µg/kg
TPH	TPH-gasoline	EPA Method 8015B	<0.95	mg/kg
	TPH-diesel (C10-C24)	EPA Method 8015B	<0.99	mg/kg
	TPH (C24-C36)	EPA Method 8015B	6.6	mg/kg
Miscellaneous	pH-soluble	EPA Method 9045D	8.4	SU
	Asbestos	OSHA ID 191	<1	%

Notes
EPA = U.S. Environmental Protection Agency
mg/kg = milligrams per kilogram
ND = no analytes in the group were detected at concentrations greater than the laboratory reporting limits
OSHA = Occupational Safety and Health Administration
SVOCs = semivolatile organic compounds
TPH = total petroleum hydrocarbons
VOCs = volatile organic compounds
µg/kg = micrograms per kilogram
<0.5 = analyte was not detected at a concentration greater than the laboratory reporting limit 0.5

Table 2. Concrete Testing Results

Grid Area	Date Molded	Slump Test	Compressive Strength Test Result (psi)										
			2-day	3-day	4-day	5-day	6-day	7-day	9-day	10-day	13-day	28-day	28-day
A1	11/8/10	2.5		5,200		6,340		7,310		8,510		9,100	9,160
Area 1/A1	11/11/10	4	3,350			4,590		5,360	6,340			8,430	8,160
A2	11/16/10	0.75		4,350	4,790			5,850			6,660	7,900	7,720
Area 2	11/18/10	5.5	3,720				5,260					7,860	8,550
B	11/24/10	3.5				4,410		4,930				8,060	8,200
C	12/2/10	4			4,750			6,270				8,790	8,900
Area 3	12/3/10	3		4,080				5,940				8,550	8,650
Area 4/5 westa	12/10/10	4.375		3,920				5,870				8,410	8,790
Area 4/5 east	12/15/10	3.75	3,600					6,140				8,900	8,710
Area 4/5 westb	12/16/10	5			5,040			6,040				9,110	9,240

Notes

Compressive strength tests were requested for 3, 5, 7, 10, and 28 days; however, the laboratory was required to adjust the analyses day because of Sundays and holidays.

Compressive strength tests analyzed per ASTM C39.

Slump tests analyzed per ASTM C143.

psi = pounds per square inch

Table 3. Confirmation Sample Results

Sample ID No.	Grid Area	Date Collected	Location	Depth (feet bgs)	PCE	Acetone	cis-1,2-DCE	TCE	Naph-thalene	Vinyl Chloride	sec-Butyl-benzene	tert-Butyl-benzene
TECH-A1-B-3.0	A1	10/25/10	Bottom	3.0	59	23	<4.6	<4.6	<4.6	<9.2	<4.6	<4.6
TECH-A1-B-4.0	A1	11/12/10	Bottom	4.0	21	<26	<6.5	12	<6.5	<13	<6.5	<6.5
TECH-A1-B-5.0	A1	10/25/10	Bottom	5.0	<5.0	28	<5.0	<5.0	<5.0	<10	<5.0	<5.0
TECH-A1S-S-2.0	A1	11/3/10	Side Wall	2.0	<4.9	26	<4.9	8.7	<4.9	<9.9	<4.9	<4.9
TECH-A1W-S-2.0	A1	11/12/10	Side Wall	2.0	<4.0	<16	<4.0	<4.0	<4.0	<7.9	<4.0	<4.0
TECH-A2-B-4.0	A2	12/6/10	Bottom	4.0	180	160	<250	<250	<250	<500	<250	<250
TECH-A2W-S-2.0	A2	11/23/10	Side Wall	2.0	2,300	<21	20	82	<5.3	<11	<5.3	<5.3
TECH-A3-B-5.5	A3	10/25/10	Bottom	5.5	<4.8	<19	<4.8	<4.8	<4.8	<9.5	<4.8	<4.8
TECH-A3N-S-2.0	A3	10/28/10	Side Wall	2.0	520	<14	<3.5	<3.5	<3.5	<7.0	<3.5	<3.5
TECH-A3W-S-2.0	A3	12/1/10	Side Wall	2.0	410,000	<67,000	<17,000	<17,000	<17,000	<33,000	<17,000	<17,000
TECH-A4-B-4.0	A4	11/30/10	Bottom	4.0	<5..3	29	<5.3	<5.3	<5.3	<11	<5.3	<5.3
TECH-A4S-S-2.0	A4	11/30/10	Side Wall	2.0	150	23	<4.6	<4.6	<4.6	<9.2	<4.6	<4.6
TECH-A5-B-4.0	A5	12/2/10	Bottom	4.0	1,600	<1000	<250	<250	<250	<500	<250	<250
TECH-A6-B-4.0	A9	11/17/10	Bottom	4.0	<4.8	<19	50	<4.8	<4.8	41	<4.8	<4.8
TECH-A6N-S-2.0	A6	12/2/10	Side Wall	2.0	9,900	<1000	<250	<250	<250	<500	<250	<250
TECH-A7-B-4.0	A7	11/29/10	Bottom	4.0	7.4	<26	<6.4	<6.4	<6.4	<13	<6.4	<6.4
TECH-A7E-S-2.0	A7	11/29/10	Side Wall	2.0	<4.7	<19	<4.7	<4.7	<4.7	<9.3	<4.7	<4.7
TECH-A7S-S-2.0	A7	11/29/10	Side Wall	2.0	120,000	<14	<3.5	30	<3.5	<7.0	<3.5	<3.5
TECH-A8-B-4.0	A8	12/9/10	Bottom	4.0	7.5	<18	<4.5	<4.5	<4.5	<9.0	<4.5	<4.5
TECH-A8E-S-2.0	A8	12/8/10	Side Wall	2.0	24	<14	<3.5	<3.5	<3.5	<7.0	<3.5	<3.5
TECH-A9E-S-2.0	A9	11/9/10	Side Wall	2.0	110	<16	<4.0	<4.0	<4.0	<8.0	<4.0	<4.0

Table 3. Confirmation Sample Results *(continued)*

Sample ID No.	Grid Area	Date Collected	Location	Depth (feet bgs)	PCE	Acetone	cis-1,2-DCE	TCE	Naph-thalene	Vinyl Chloride	sec-Butyl-benzene	tert-Butyl-benzene
TECH-A9N-S-2.0	A9	11/8/10	Side Wall	2.0	27,000	<17	<4.3	70	<4.3	<8.7	<4.3	<4.3
TECH-A9-B-4.0	A6	12/2/10	Bottom	4.0	130	<24	7.9	<6.1	<6.1	<12	<6.1	<6.1
				Site cleanup goal:	700	500	1,800	4,100	2,800	47	NE	NE

Notes

All concentrations are reported in micrograms per kilogram (µg/kg).

Shaded concentrations are greater than the respective site cleanup goal.

bgs = below ground surface

DCE = dichloroethene

NE = not established

PCE = tetrachloroethene

TCE = trichloroethylene

<4.6 = analyte was not detected at a concentration greater than the laboratory reporting limit

Appendix A. Permits

Alameda County Public Works Agency - Water Resources Well Permit

399 Elmhurst Street
Hayward, CA 94544-1395
Telephone: (510)670-6633 Fax:(510)782-1939

Application Approved on: 04/09/2010 By priest

Permit Numbers: W2010-0229
Permits Valid from 04/21/2010 to 04/21/2010

Application Id: 1270745927125
City of Project Site: Emeryville
Site Location: 4245 Halleck Street
Project Start Date: 04/21/2010
Completion Date: 04/21/2010

Assigned Inspector: Contact John Shouldice at (510) 670-5424 or johns@acpwa.org

Applicant: ERRG, Inc - Michael Friedman
4585 Pacheco Blvd., Suite 200, martinez, CA 94553
Phone: 925-969-0750

Property Owner: California Dept. of Toxic Substances Control
700 Hienz Avenue, Suite 200, Berkeley, CA 94710
Phone: 510-540-3817

Client: ** same as Property Owner **

Contact: Michael Friedman
Phone: 415-395-9974
Cell: 510-459-8298

Total Due: $265.00
Receipt Number: WR2010-0110 **Total Amount Paid:** $265.00
Payer Name : Michael H Friedman Paid By: MC **PAID IN FULL**

Works Requesting Permits:

Borehole(s) for Investigation-Geotechnical Study/CPT's - 2 Boreholes
Driller: RSI Drilling - Lic #: 802334 - Method: other **Work Total: $265.00**

Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2010-0229	04/09/2010	07/20/2010	2	6.00 in.	50.00 ft

Specific Work Permit Conditions

1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site.

2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.

3. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.

4. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County an Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

5. Applicant shall contact John Shouldice for an inspection time at 510-670-5424 at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

6. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of $500.00.

7. Permit is valid only for the purpose specified herein. No changes in construction procedures, as described on this permit application. Boreholes shall not be converted to monitoring wells, without a permit application process.

JOHN VALS 925 580 4899

11/8/10 JRV - LOCATIONS A1 OK TO POUR (6 LOCATIONS)

11/11/10 JRV - NLY A1 SLOT TRENCH OK - AREA 1 SLOT OK.

11/16/10 JRV - ALL AREA A-2 OK TO POUR -

11/17/10 JRV - HOLE #2 OK TO POUR.

11/23/10 JRV - THE AREA B's OK TO POUR.

12/1/10 JRV - THE SOUTH WALL AREA 'C' OK TO POUR

12/2/10 JRV - WEST WALL IN AREA 'C' OK TO POUR -

12/3/10 JRV - HOLE 3 OK TO POUR -

12/8/10 JRV - AREA 5 OK TO POUR.

12/14/10 JRV - AREA 4-5 OK TO POUR

RECD SEP 28 2010

BUILDING DIVISION

CITY OF EMERYVILLE

Date 9.29.10 Permit #: 1002-0606

Address 4245 Hollis St.

Work removal of impacted soil - remove 3,000 s.f. of concrete floor & excavation

Owner Dept. of Toxic Sub

Contractor ERRG

By _____ Building Staff

DO NOT CONCEAL OR COVER ANY WORK UNTIL INSPECTED AND APPROVED BY THE CITY BUILDING INSPECTOR.

	DATE	INSPTR.
Piers & Setbacks		
Forms		
Foundation		
Slab ALL SLABS OK TO POUR	12/14/10	JRV
Sub-Floor		
Ground Plumbing		
Ground Electrical		
Sub-Floor Insulation		
Shear Nailing		
Sewer		
Water		
Roof Sheathing		
Rough Electrical		
Rough Plumbing		
Rough Mechanical		
T-Bar		
Frame		
Exterior Lathe		
Insulation		
Drywall (Fire Resistive Assembly)		
Gas Test		
Temporary Certificate of Occupancy		
Final Mechanical		
Final Electrical		
Final Plumbing		
Final Building	3/2/11	JRV
Fire Sprinkler		
Fire (Other)		
PUBLIC WORKS (510) 596-4334:		
Const. site erosion control measures		
Final Permanent treatment erosion control measures		
Sanitary sewer pipe placement		
Final Sanitary sewer		
Storm drain pipe placement		
Final Storm drain		
☆ **Waste Manage Plan (510)596-3795**		

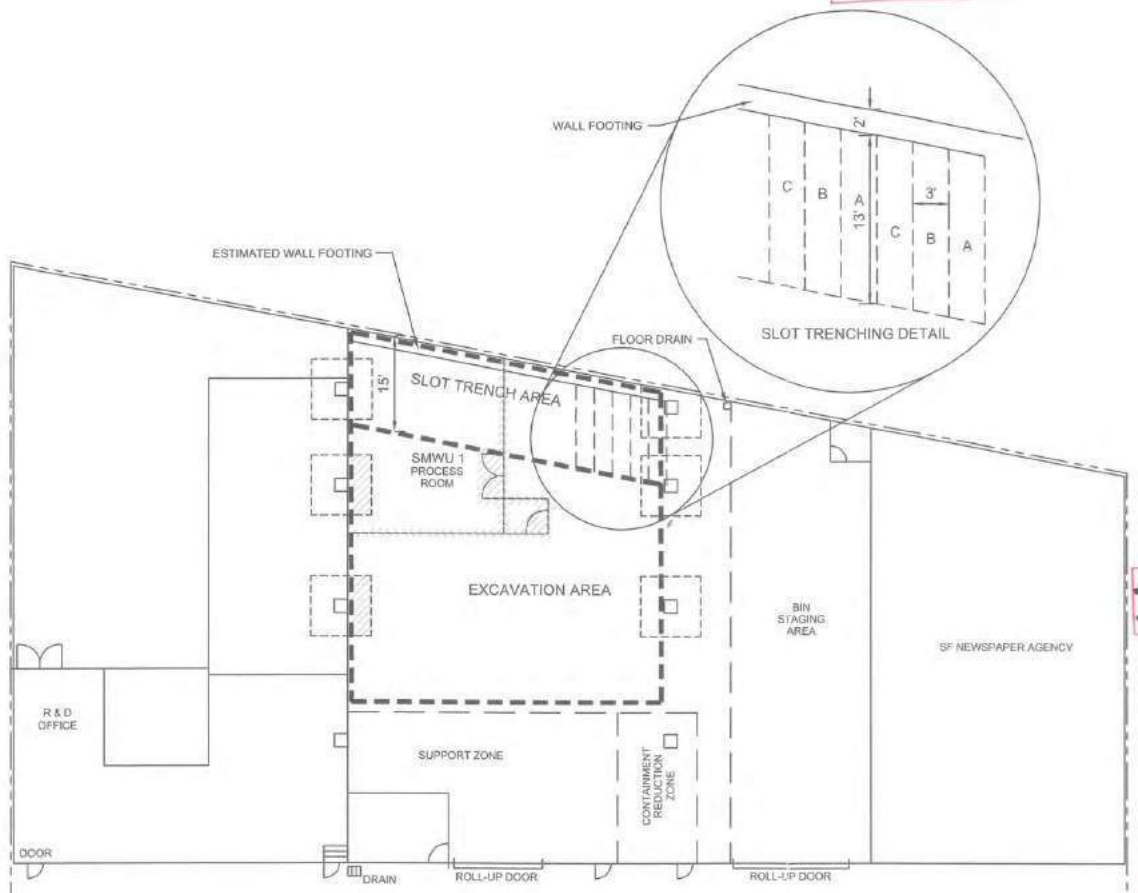
BUILDING INSPECTION REQUEST (510) 596-4315
CALL 24 ~~HRS PRIOR TO~~ INSPECTION
OFFICE – (510) 596-4310
FOR FIRE INSPECTION CALL (510) 596-3759

SPECIAL INSPECTIONS AND TESTS REQUIRED PER UBC CHAPTER 17

CONSTRUCTION HOURS
7:00am to 6pm Monday through Friday

APPLICANT COPY

#10002-036



EXCAVATION AND BACKFILL PROCEDURES:

1) INTERIOR WALL AND EQUIPMENT REMOVAL.

2) CONCRETE REMOVAL: SLOT TRENCHING AREA. THE MAXIMUM SIZE OF ANY SINGLE TRENCH WILL BE 3.0 FEET WIDE AND 13 FEET LONG. "A" SLOT TRENCHES WILL BE EXCAVATED, BACKFILLED AND CONCRETE RESTORED BEFORE PROCEEDING TO "B" SLOT TRENCHES OR "C" SLOT TRENCHES.

3) EXCAVATE "EXCAVATION AREA" TO A DEPTH OF APPROXIMATELY 3.0 FEET.

4) IMPORT CLEAN CLASS II AGGREGATE BASE.

5) COMPACT TO 90% RELATIVE DENSITY.

6) RESTORATION OF CONCRETE IN EXCAVATION.

CITY OF EMERYVILLE
GRADING PERMIT APPROVAL
PUBLIC WORKS
PLANNING DEPARTMENT
BUILDING DIVISION

2.25.10
1002-036 B

RECEIVED
FEB 19 2010
WEST COAST CODE CONSULTANTS

~~SPECIAL INSPECTIONS AND TESTS REQUIRED PER UBC CHAPTER 17~~

LEGEND:

- APPROXIMATE PROPERTY LINE
- EXCAVATION AREAS
- PORTION OF WALL TO BE REMOVED
- INTERIOR SUPPORT COLUMN
- WORK ZONES
- AREA TO REMAIN AROUND SUPPORT COLUMN

JOB SITE
This set of plans shall remain on job site at all times while work is in progress.

RECEIVED
FEB 18 2010
CITY OF EMERYVILLE
BUILDING DIVISION

These plans have NOT been reviewed for ADA Compliance

REGISTERED PROFESSIONAL ENGINEER
MICHAEL H. TANG
No. 46268
Exp. 12/31/10
CIVIL
STATE OF CALIFORNIA

0 20
APPROXIMATE SCALE IN FEET

SOURCE: CLAYTON GROUP SERVICES, PREVIOUS INVESTIGATION, 70-05387.00, 2/18/05

ERRG Engineering/Remediation Resources Group, Inc.
4585 Pacheco Blvd., Suite 200
Martinez, California 94553
(925) 969-0750

CLIENT:	DESIGNED BY:	EXCAVATION AREAS AND WORK ZONES
DEPARTMENT OF TOXIC SUBSTANCES CONTROL	VZC 2-5-10	
LOCATION: 4245 HALLECK STREET EMERYVILLE, CALIFORNIA	CHECKED BY: MHF 2-5-10	
	P.E./P.G.: MHF 2-5-10	

ERRG PROJECT NO.	REVISION NO.	SHEET	OF	FIG NO.
29-057	0	1	1	2

CONTRACTOR SHALL BE PRESENT FOR ALL INSPECTIONS

SPECIAL INSPECTIONS AND TESTS REQUIRED PER UBC CHAPTER 17

FILE NAME: N:\projects\2009_Projects\29-057_DTSC Technichem Excavation\N. Maps & Drawings\Excavation Areas and Work Zones.dwg LAYOUT NAME: Layout1 PLOTTED: Wednesday, February 17, 2010 - 12:01pm

City of Emeryville

WASTE MANAGEMENT PLAN - PRE-Demolition/Construction -Required to get your Permit- PRE (1)

City Contacts: Marcy Greenhut 510-596-3795 mgreenhut@emeryville.org, fax: 510-596-4389
Peter Schultze-Allen 510-596-3728 pschultze-allen@emeryville.org

- One Plan Per Permit # Please -

For City Use Only: WMPApproved: 8/23/10 Denied: _____
Reasons for Denial:
Insufficient Diversion: ___ Form incomplete: ___ Illegible: ___
Info needed: _____
Infeasibility Exemption Approved: APPROVED Reasons: ___
_____
COE Staff: MS

Site Address: 4245 Halleck Street, Emeryville, CA Today's Date: 08/23/10 Permit #: 1002-056

Site business name: Former Technichem Incorporated Project Size: 3,600 sq. ft. Valuation: ~~$195,969.12~~ $234,439

Description of work: Removal of 3,000 sq. ft. concrete floor & excavation of 280 cu. yd. soil

Contractor (Company): ERRG, Inc. Contact person/Title: Michael Friedman

Phone: (415) 395-9974 Email: michael.friedman@errg.com

Anticipated Start Date: 06 /14 / 10 **Building Type:** Single Family Residential ___ Multi-family___ Non-residential X

Are you using a fixed body truck? Where applicable

Anticipated Completion Date: 07 /30/ 10 **Project Type:** New Construction _____ Remodel___ Demolition___ T.I.___X

Are you subcontracting materials hauling? Yes

NOTE – If you are only using a Waste Management of Alameda County (WMAC) Roll-off debris container, check here: _____ and skip rest of form (compliance is automatic).

Specify whether materials will be reused, recycled or disposed by completing the table below. You must recycle 100% of concrete, asphalt and dirt, and at least 50% of all other waste generated. Per City Solid Waste Ordinance sub-contracting of hauling of solid waste is not permitted, unless in fixed body truck. Re-use includes salvaging, chipping of wood waste on-site; provide details under "Facility" or "Additional Info" column.

[For each material, check one box:] **[Complete columns below for each material checked as reuse, recycle or dispose:]**

Material	Reuse	Recycle	Dispose	Facility/Service Provider to be used*	Location of Facility (City)	Additional Info/Infeasibility Request
Asphalt/Concrete		X	Not Allowed	Dutra Material	Richmond, CA	
Brick, Masonry, Tile						
Cardboard						
Carpet and/or Padding						
Ceiling tile			Not Allowed			
Dirt/Clean Fill						
Dry Wall		X		Waste Management	San Leandro, CA	
Metal (list all types)		X		Custom Alloy Scrap	Oakland, CA	
Mixed Debris						
Pallets						
Plant Debris						
Plastics						
Roofing – asphalt composition shingle, tile, wood shake, tar or gravel						
Siding (exterior)						
Wood - clean						
Wood - treated, painted		X		Waste Management	San Leandro, CA	
Other: _____						

* Materials Recovery information in "Builders Guide to Reuse and Recycling": www.stopwaste.org/docs/buildersguide-05.pdf or call 1-877-StopWaste or Ask an Expert: 510-845-0472 x2 or www.BuildItGreen.org 1/26/10

City of Emeryville

WASTE MANAGEMENT PLAN - POST – Demolition/Construction

-Required for City "sign-off" after your job- POST (2)

- One Plan Per Permit # Please -

City Contacts: Marcy Greenhut 510-596-3795 mgreenhut@emeryville.org, fax: 510-596-4389
Peter Schultze-Allen 510-596-3728 pschultze-allen@emeryville.org

For City Use Only: Approved:_____ Denied_____
Full Compliance:_____ Good Faith Effort:_____
Non-Compliance:_____ Reasons for above:_____
More Info needed:_____
Infeasibility/Reason:_____
COE staff:_____

Project Address: 4245 Halleck Street, Emeryville, CA Today's Date: ____/____/____

Project Completion Date: ____/____/____ Contractor: ERRG, Inc.

Contact: Michael Friedman Title: Project Manager **Permit #:**_____

Phone: (415) 395-9974 Email: michael.friedman@errg.com

Please identify which materials were reused, recycled or disposed by completing the table below. Check the designated box and provide the name of each facility or service provider and weight of materials. If the materials were reused on site, describe the reuse application under the "Facility/Service Provider" column. Salvaged materials from deconstruction should be designated as reuse.

-Attach copies of all gate tags, with volume or weight indicated -

If you used WMAC, check here _____ and skip below; compliance is automatic.

[For each material, check one box:] **[Complete columns below for each material checked as reuse, recycle or dispose:]**

Material	Reuse	Recycle	Dispose	Facility/Service Provider	Facility Location (City)	Weight (tons)	Infeasibility/Comments
Asphalt/Concrete		X		Aman Environmental Construction, Inc.	8300 Baldwin St, Oakland, CA	75	payment per load regardless of tons;tons est from vol removed (60'x40'x5"=38yrd^3)
Brick, masonry, tile							
Cardboard							
Carpet and/or padding							
Ceiling Tile							
Dirt/Clean Fill							
Dry Wall			X	WM – Altamont Landfill	Livermore, CA	6.8	Disposal because of lead containing paint.
Metal (list types)		X		Alco Iron & Metal Co.	San Leandro, CA	1.6	
Mixed Debris							
Pallets							
Plant Debris							
Plastics							
Roofing - asphalt composition shingle, tile, wood shake, tar or gravel							
Siding (exterior)							
Wood - clean							
Wood – treated, painted			X	WM – Altamont Landfill	Livermore, CA	4	Disposal because of lead containing paint.
Other: _____							

Complete: If not using WMAC, please complete MATERIAL GENERATION SUMMARY (using receipt from hauler or facility):

A. Total tons of materials generated by the project: 87.4
B. Total tons of materials disposed (not recycled): 10.8
C. Total tons of materials salvaged, reused, or recycled: 75.6
D. Percentage of materials recycled/reused (divide C by A): 87.6 %

Appendix B. Backfill Material – Laboratory Analytical Reports