Nowell, Keith, Env. Health

From: PDKing0000@aol.com
Sent: Thursday, September 17, 2015 7:01 PM
To: Roe, Dilan, Env. Health
Cc: Nowell, Keith, Env. Health; Gary_Bates@efiglobal.com; ron_holt@efiglobal.com; patrick@ellwoodcommercial.com; ronpatelvidge@gmail.com
Subject: Re: RO2981 - Red Hanger Kleeners - Proposed Mitigation Measures and Timeline

Hi Dilan,

In response to your request for proposed mitigation measures and timeline for TCE in air at the subject site, the following activities will be scheduled and performed.

o Modify five of the six HVAC units on the roof to allow atmospheric air to be added to the building for ventilation. One of the six units has already been modified to allow atmospheric air to be added to the building. The modifications will include cutting the HVAC units, and adding sheet metal.

o Adjusting dampers in all of the HVAC units to result in increased atmospheric air flow into the building.

o Installation of one air filtration unit on each of the second and third floors in the hallway near the elevator, and also one air filtration unit in each of the front and back stairwells on the second floor.

o Installation of one air filtration unit in each of the Symmetry Health Center (Suite 201) and the Kumon Learning Center (Suite 301).

All of the air filtration units will be properly sized for the spaces, and will use Granular Activated Carbon for filtration.

o Interim post-mitigation air sampling in the hallways on the second and third floors near the elevator using 24-hour flow controllers and SIM-certified 6-liter Summa canisters with TO-15 analysis of the samples.

The HVAC system modifications and adjustments will be performed during the week of 9/21/15, with the specific dates during the week of 9/21/15 still not yet provided by the HVAC company that maintains the HVAC systems for the building.

The air filtration units will be delivered and installed during the week of 9/21/15, with the specific dates during the week of 9/21/15 still not yet available based on pending verification of shipping dates by equipment suppliers.

The interim post-mitigation air sampling in the hallways on the second and third floors near the elevator will occur approximately 36 hours after completion of HVAC ventilation adjustment and air filtration equipment installation, with analysis of the samples on an expedited basis.

Following receipt of satisfactory interim post-mitigation air sample results and review of the results with Alameda County Environmental Health, comprehensive post-mitigation air sampling that includes tenant spaces will be performed.

Please let me know if you have any questions or need any additional information.

Thank you!

Paul

Paul H. King
Professional Geologist

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

(510) 658-6916 telephone
(510) 834-0152 facsimile
(510) 387-6834 cellular
Paul.King@pdenviro.com

In a message dated 9/15/2015 18:34:13 Pacific Daylight Time, Dilan.Roe@acgov.org writes:

Gentleman:

Keith and I phoned Paul King this afternoon to get a status update on the implementation of mitigation measures at the subject site due to the exceedances of the Accelerated Response Action Level (ARAL) for trichloroethylene (TCE) of 8.0 micrograms per cubic meter in indoor air samples collected on September 3 and 4.

Paul indicated that he sent the lab results from this most recent sampling event to you on September 9, and recommendations for mitigation measures including increasing the ventilation in the tenant spaces and installing air filtration units in suites where ventilation cannot be adjusted.

Although some mitigation measures have been implemented (sealing the annular space in the elevator shaft, foundation, and pipe, shampooing the carpet, etc.), the recent indoor air sampling results indicate the need for additional measures to mitigate air quality.

Additional measures should be implemented immediately. Therefore, please provide Alameda County Environmental Health (ACEH) with a scope and timeline providing details with the proposed mitigation measures by the **close of business on Thursday September 17**.

Additionally, as previously requested in an email correspondence on August 21, please also submit a draft Fact Sheet to ACEH by the **close of business on Thursday September 17**.notifying tenants of the TCE exceedances in indoor air and proposed mitigation measures, and the next steps in the ongoing investigation of the tetrachloroethylene (PCE) release from the former Red Hanger Cleaners. The fact sheet should be prepared in accordance with the Department of Toxic Substances Control (DTSC) Vapor Intrusion Public Participation Advisory (March 2012) including but not limited to Appendix C – Indoor Air Sampling and the San Francisco Bay Regional Water Quality Control Board's draft document entitled Interim Framework for Assessment of Vapor Intrusion at TCE-Contaminated Sites in the San Francisco Bay Region, dated October 16, 2014.

The last formal report received by ACEH for the subject site on September 1, 2015 was the Phase II Environmental Site Assessment Soil Gas Investigation prepared by Youngdahl Consulting Group Inc. dated August 25, 2015 and submitted on behalf of EFI Global Inc and Mr. Ron Elvidge. A review of GeoTracker indicates that no GEO_MAPS or EDF data was uploaded in conjunction with this report. Therefore you are currently out of compliance with the State Water Resources Control Board GeoTracker submittal requirements.

Since the submittal of the Phase II Site Assessment in which exceedances of the Urgent Response Action Level (URAL) for TCE were reported, ACEH has worked with Paul King and Gary Bates to assess the risk to building occupants, collect additional indoor air samples, and implement mitigations measures. Although this data has been submitted to ACEH via email correspondence, an interim remedial action report has not been formally submitted. Therefore, please submit an Interim Remedial Action Report to ACEH by October 2, 2015.

Lastly, please submit a work plan for additional assessment of the PCE release from the former dry cleaner by October 16, 2015.

Thank you for your cooperation.

Dilan Roe, P.E.

Program Manager - Land Use & Local Oversight Program

Alameda County Environmental Health

1131 Harbor Bay Parkway

Alameda, CA 94502

510.567.6767; Ext. 36767

QIC: 30440

dilan.roe@acgov.org

PDF copies of case files can be reviewed/downloaded at:

http://www.acgov.org/aceh/lop/ust.htm

From: Nowell, Keith, Env. Health
Sent: Friday, September 11, 2015 4:46 PM
To: Roe, Dilan, Env. Health <Dilan.Roe@acgov.org>
Subject: RO2981 - Red Hanger Kleeners

Dilan,

I just spoke (very) briefly with Paul King and Gary Bates. Results of an interim sampling of the common areas still show ARAL exceedances. The samples were collected in the 3rd floor men's room and 2nd floor hallway. The next steps will include increasing the ventilation.

They will get back to us early next week.

Keith

Keith Nowell PG, CHG

Hazardous Materials Specialist

Alameda County Environmental Health

1131 Harbor Bay Parkway

Alameda , CA 94502-6540

phone: 510 / 567 - 6764

fax: 510 / 337 - 9335

email: keith.nowell@acgov.org

PDF copies of case files can be reviewed/downloaded at:

http://www.acgov.org/aceh/lop/ust.htm

=

Nowell, Keith, Env. Health

From: PDKing0000@aol.com
Sent: Thursday, September 17, 2015 7:08 PM
To: Roe, Dilan, Env. Health
Cc: Nowell, Keith, Env. Health; Gary_Bates@efiglobal.com; ron_holt@efiglobal.com; patrick@ellwoodcommercial.com; ronpatelvidge@gmail.com
Subject: Re: RO2981 - Red Hanger Kleeners - Fact Sheet Status

Hi Dilan,

We are still working on preparing the draft Fact Sheet for your review and will follow up with you on Friday 9/18/15. Getting the next step of mitigation rapidly into place is taking some effort and is the primary focus of our effort, followed by the requested tenant notification. Sorry for the delay!

Paul

Paul H. King
Professional Geologist

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

(510) 658-6916 telephone
(510) 834-0152 facsimile
(510) 387-6834 cellular
Paul.King@pdenviro.com

In a message dated 9/15/2015 18:34:13 Pacific Daylight Time, Dilan.Roe@acgov.org writes:

> Gentleman:
>
> Keith and I phoned Paul King this afternoon to get a status update on the implementation of mitigation measures at the subject site due to the exceedances of the Accelerated Response Action Level (ARAL) for trichloroethylene (TCE) of 8.0 micrograms per cubic meter in indoor air samples collected on September 3 and 4.
>
> Paul indicated that he sent the lab results from this most recent sampling event to you on September 9, and recommendations for mitigation measures including increasing the ventilation in the tenant spaces and installing air filtration units in suites where ventilation cannot be adjusted.
>
> Although some mitigation measures have been implemented (sealing the annular space in the elevator shaft, foundation, and pipe, shampooing the carpet, etc.), the recent indoor air sampling results indicate the need for additional measures to mitigate air quality.
>
> Additional measures should be implemented immediately. Therefore, please provide Alameda County Environmental Health (ACEH) with a scope and timeline providing details with the proposed mitigation measures by the **close of business on Thursday September 17**.
>
> Additionally, as previously requested in an email correspondence on August 21, please also submit a draft Fact Sheet to ACEH by the **close of business on Thursday September 17**.notifying tenants of the TCE exceedances in indoor air and proposed mitigation measures, and the next steps in the ongoing

investigation of the tetrachloroethylene (PCE) release from the former Red Hanger Cleaners. The fact sheet should be prepared in accordance with the Department of Toxic Substances Control (DTSC) Vapor Intrusion Public Participation Advisory (March 2012) including but not limited to Appendix C – Indoor Air Sampling and the San Francisco Bay Regional Water Quality Control Board's draft document entitled Interim Framework for Assessment of Vapor Intrusion at TCE-Contaminated Sites in the San Francisco Bay Region, dated October 16, 2014.

The last formal report received by ACEH for the subject site on September 1, 2015 was the Phase II Environmental Site Assessment Soil Gas Investigation prepared by Youngdahl Consulting Group Inc. dated August 25, 2015 and submitted on behalf of EFI Global Inc and Mr. Ron Elvidge. A review of GeoTracker indicates that no GEO_MAPS or EDF data was uploaded in conjunction with this report. Therefore you are currently out of compliance with the State Water Resources Control Board GeoTracker submittal requirements.

Since the submittal of the Phase II Site Assessment in which exceedances of the Urgent Response Action Level (URAL) for TCE were reported, ACEH has worked with Paul King and Gary Bates to assess the risk to building occupants, collect additional indoor air samples, and implement mitigations measures. Although this data has been submitted to ACEH via email correspondence, an interim remedial action report has not been formally submitted. Therefore, please submit an Interim Remedial Action Report to ACEH by October 2, 2015.

Lastly, please submit a work plan for additional assessment of the PCE release from the former dry cleaner by October 16, 2015.

Thank you for your cooperation.

Dilan Roe, P.E.

Program Manager - Land Use & Local Oversight Program

Alameda County Environmental Health

1131 Harbor Bay Parkway

Alameda, CA 94502

510.567.6767; Ext. 36767

QIC: 30440

dilan.roe@acgov.org

PDF copies of case files can be reviewed/downloaded at:

http://www.acgov.org/aceh/lop/ust.htm

From: Nowell, Keith, Env. Health
Sent: Friday, September 11, 2015 4:46 PM
To: Roe, Dilan, Env. Health <Dilan.Roe@acgov.org>
Subject: RO2981 - Red Hanger Kleeners

Dilan,

I just spoke (very) briefly with Paul King and Gary Bates. Results of an interim sampling of the common areas still show ARAL exceedances. The samples were collected in the 3rd floor men's room and 2nd floor hallway. The next steps will include increasing the ventilation.

They will get back to us early next week.

Keith

Keith Nowell PG, CHG

Hazardous Materials Specialist

Alameda County Environmental Health

1131 Harbor Bay Parkway

Alameda , CA 94502-6540

phone: 510 / 567 - 6764

fax: 510 / 337 - 9335

email: keith.nowell@acgov.org

PDF copies of case files can be reviewed/downloaded at:

http://www.acgov.org/aceh/lop/ust.htm

=

0461.M10 DRAFT 1

9/18/2015

Dear Tenant,

This notification is written as a follow-up to our 8/20/15 notification regarding detectable concentrations of the chemical trichloroethene (TCE) and tetrachloroethene (also called perchloroethene, or PCE) that have been identified in air in the building at 6239 College Avenue in Oakland. The source of the TCE is still presently unknown. The source of the PCE is associated with a dry cleaner that was formerly located on the first floor of the building.

Mitigation measures performed to date include carpet cleaning in the hallways on the second and third floors on August 22, 2015 and the sealing of cracks in the floor on the ground floor and the sealing of any visible gaps in the elevator pit, in addition to identification and sealing of sewer pipe system leaks throughout the building on August 26, 2015. The results of air testing on September 4, 2015 show that TCE air concentrations in the hallway on the second floor and in a bathroom located on the third floor still marginally exceed concentrations which require reduction. Testing within the tenant suites at the property in August did not identify TCE concentrations in air exceeding levels requiring action to reduce the TCE air concentrations at this time.

We are providing you with this notification as a precaution and to continue to advise you that women who are pregnant or who suspect that they might be pregnant are advised to not enter the premises until TCE air concentrations in the building are reduced.

Our next step is to modify the ventilation system for tenant spaces so that we can increase outside air being introduced into the building, and to install air filtration units in portions of the building where outside air cannot be circulated into the building through the ventilation system. These next activities will be performed during the week of September 21, 2015. We will then perform confirmation air sampling and let you know the results.

We are also preparing a work plan for subsurface investigation to complete the evaluation of the extent of dry cleaning chemicals in the ground. We will let you know once the work plan is completed and approved for implementation.

This work is being performed with supervision by the Alameda County Department of Environmental Health (ACDEH).

If you have any questions or need any additional information, please do not hesitate to contact the following:

- Dilan Roe at the ACEHD at 510-567-6767 or
- Patrick Ellwood at 510-238-9111 or
- Paul King of P&D Environmental, Inc. at 510-658-6916.

Nowell, Keith, Env. Health

From: PDKing0000@aol.com
Sent: Friday, September 18, 2015 5:57 PM
To: Roe, Dilan, Env. Health
Cc: Nowell, Keith, Env. Health; Gary_Bates@efiglobal.com; ron_holt@efiglobal.com; patrick@ellwoodcommercial.com; dave@bblandlaw.com; ronpatelvidge@gmail.com
Subject: Re: RO2981 - Red Hanger Kleeners - Draft Tenant Notification/Fact Sheet
Attachments: 0461.M10 DRAFT 2.doc

Hi Dilan,

You will find attached a DRAFT Tenant Notification for the subject site (document 0461.M10 DRAFT 2.doc). I have also copied and pasted the DRAFT notification into this e-mail below.

Gary Bates and I called Keith and then you near the end of today to discuss the document, and left you voicemails regarding our progress.

Although some of the air filtration equipment that we intended to purchase is not available, we successfully ordered air filtration equipment today for all spaces where the air will be filtered, with some of the equipment being more robust in capacity than we had originally intended. The equipment is presently scheduled to arrive some time on Tuesday 9/22/15. We also were able to arrange for an electrician to provide the necessary conduit and electrical receptacles for the air filtration units so that they can be plugged in for operation upon their arrival.

We also were able to get the HVAC company to commit to next Friday 9/25/15 for the proposed HVAC system modification, and expect to hear from them on Monday to see if they are able move us up on their schedule to Wednesday 9/23/15.

Because we are presently scheduled to be installing the air filtration equipment possibly as soon as Tuesday afternoon 9/22/15, we want to provide a notification to the tenants of what we are doing and the status of our progress. The attached Tenant Notification does not fulfill all of the elements of the requested Fact Sheet because we do not yet have an approved work plan for subsurface investigation, and we do not yet know what remedial action will be appropriate to move the case to closure. Additionally, the focus of our efforts has been on making sure that we have all equipment and contractors lined up to implement the next step of mitigation.

We will continue to work on a Fact Sheet that satisfies the requirements identified in your Fact Sheet request. I recommend that we consider providing the more comprehensive Fact Sheet once we have resolved indoor air quality and the subsurface investigation work plan has been approved.

Please let me know if you have any comments regarding the DRAFT Tenant Notification.

Thank you!

Paul

Paul H. King
Professional Geologist

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

(510) 658-6916 telephone
(510) 834-0152 facsimile
(510) 387-6834 cellular
Paul.King@pdenviro.com
****

9/18/2015
Dear Tenant,
This notification is written as a follow-up to our 8/20/15 notification regarding detectable concentrations of the chemical trichloroethene (TCE) and tetrachloroethene (also called perchloroethene, or PCE) that have been identified in air in the building at 6239 College Avenue in Oakland. The source of the TCE is still presently unknown. The source of the PCE is associated with a dry cleaner that was formerly located on the first floor of the building.

Mitigation measures performed to date include carpet cleaning in the hallways on the second and third floors on August 22, 2015 and the sealing of cracks in the floor on the ground floor and the sealing of any visible gaps in the elevator pit, in addition to identification and sealing of sewer pipe system leaks throughout the building on August 26, 2015. The results of air testing on September 4, 2015 show that TCE air concentrations in the hallway on the second floor and in a bathroom located on the third floor still marginally exceed concentrations which require reduction. Testing within the tenant suites at the property in August did not identify TCE concentrations in air exceeding levels requiring action to reduce the TCE air concentrations at this time.

We are providing you with this notification as a precaution and to continue to advise you that women who are pregnant or who suspect that they might be pregnant are advised to not enter the premises until TCE air concentrations in the building are reduced.
Our next step is to modify the ventilation system for tenant spaces so that we can increase outside air being introduced into the building, and to install air filtration units in portions of the building where outside air cannot be circulated into the building through the ventilation system. These next activities will be performed during the week of September 21, 2015. We will then perform confirmation air sampling and let you know the results.

We are also preparing a work plan for subsurface investigation to complete the evaluation of the extent of dry cleaning chemicals in the ground. We will let you know once the work plan is completed and approved for implementation.

This work is being performed with supervision by the Alameda County Department of Environmental Health (ACDEH).

If you have any questions or need any additional information, please do not hesitate to contact the following:

- Dilan Roe at the ACEHD at 510-567-6767 or
- Patrick Ellwood at 510-238-9111 or
- Paul King of P&D Environmental, Inc. at 510-658-6916.

****

In a message dated 9/15/2015 18:34:13 Pacific Daylight Time, Dilan.Roe@acgov.org writes:

> Gentleman:
>
> Keith and I phoned Paul King this afternoon to get a status update on the implementation of mitigation measures at the subject site due to the exceedances of the Accelerated Response Action Level (ARAL)

for trichloroethylene (TCE) of 8.0 micrograms per cubic meter in indoor air samples collected on September 3 and 4.

Paul indicated that he sent the lab results from this most recent sampling event to you on September 9, and recommendations for mitigation measures including increasing the ventilation in the tenant spaces and installing air filtration units in suites where ventilation cannot be adjusted.

Although some mitigation measures have been implemented (sealing the annular space in the elevator shaft, foundation, and pipe, shampooing the carpet, etc.), the recent indoor air sampling results indicate the need for additional measures to mitigate air quality.

Additional measures should be implemented immediately. Therefore, please provide Alameda County Environmental Health (ACEH) with a scope and timeline providing details with the proposed mitigation measures by the **close of business on Thursday September 17**.

Additionally, as previously requested in an email correspondence on August 21, please also submit a draft Fact Sheet to ACEH by the **close of business on Thursday September 17**.notifying tenants of the TCE exceedances in indoor air and proposed mitigation measures, and the next steps in the ongoing investigation of the tetrachloroethylene (PCE) release from the former Red Hanger Cleaners. The fact sheet should be prepared in accordance with the Department of Toxic Substances Control (DTSC) Vapor Intrusion Public Participation Advisory (March 2012) including but not limited to Appendix C – Indoor Air Sampling and the San Francisco Bay Regional Water Quality Control Board's draft document entitled Interim Framework for Assessment of Vapor Intrusion at TCE-Contaminated Sites in the San Francisco Bay Region, dated October 16, 2014.

The last formal report received by ACEH for the subject site on September 1, 2015 was the Phase II Environmental Site Assessment Soil Gas Investigation prepared by Youngdahl Consulting Group Inc. dated August 25, 2015 and submitted on behalf of EFI Global Inc and Mr. Ron Elvidge. A review of GeoTracker indicates that no GEO_MAPS or EDF data was uploaded in conjunction with this report. Therefore you are currently out of compliance with the State Water Resources Control Board GeoTracker submittal requirements.

Since the submittal of the Phase II Site Assessment in which exceedances of the Urgent Response Action Level (URAL) for TCE were reported, ACEH has worked with Paul King and Gary Bates to assess the risk to building occupants, collect additional indoor air samples, and implement mitigations measures. Although this data has been submitted to ACEH via email correspondence, an interim remedial action report has not been formally submitted. Therefore, please submit an Interim Remedial Action Report to ACEH by October 2, 2015.

Lastly, please submit a work plan for additional assessment of the PCE release from the former dry cleaner by October 16, 2015.

Thank you for your cooperation.

Dilan Roe, P.E.

Program Manager - Land Use & Local Oversight Program

Alameda County Environmental Health

1131 Harbor Bay Parkway

Alameda, CA 94502

510.567.6767; Ext. 36767

QIC: 30440

dilan.roe@acgov.org

PDF copies of case files can be reviewed/downloaded at:

http://www.acgov.org/aceh/lop/ust.htm

From: Nowell, Keith, Env. Health
Sent: Friday, September 11, 2015 4:46 PM
To: Roe, Dilan, Env. Health <Dilan.Roe@acgov.org>
Subject: RO2981 - Red Hanger Kleeners

Dilan,

I just spoke (very) briefly with Paul King and Gary Bates. Results of an interim sampling of the common areas still show ARAL exceedances. The samples were collected in the 3rd floor men's room and 2nd floor hallway. The next steps will include increasing the ventilation.

They will get back to us early next week.

Keith

Keith Nowell PG, CHG

Hazardous Materials Specialist

Alameda County Environmental Health

1131 Harbor Bay Parkway

Alameda , CA 94502-6540

phone: 510 / 567 - 6764

fax: 510 / 337 - 9335

email: keith.nowell@acgov.org

PDF copies of case files can be reviewed/downloaded at:

http://www.acgov.org/aceh/lop/ust.htm

=

Nowell, Keith, Env. Health

From: PDKing0000@aol.com
Sent: Wednesday, October 14, 2015 4:06 PM
To: Nowell, Keith, Env. Health
Cc: Roe, Dilan, Env. Health; Gary_Bates@efiglobal.com; ron_holt@efiglobal.com; patrick@ellwoodcommercial.com; ronpatelvidge@gmail.com; dave@bblandlaw.com
Subject: RO2981 Red Hanger Kleaners 10/13/15 air results - mitigation is working
Attachments: 1510220_d.pdf; 1510220COC.pdf

Hi Keith,

Attached are the lab report and chain of custody document for interim post-mitigation air samples collected 10/13/15 at Red Hanger Kleaners with results as follows:

- IA4 Hallway (on the second floor): TCE = 0.34 ug/m3, PCE = 0.24 ug/m3
- IA5 Mens Rm (third floor): TCE = 0.27 ug/m3, PCE = 0.80 ug/m3
- BG 2 Ambient: TCE = ND, PCE = ND.

It appears that the mitigation efforts are effectively reducing air concentrations to below commercial environmental screening levels for PCE and TCE and to below trigger levels for TCE.

I look forward to discussing these results and the next steps for the project at our upcoming 4:30 PM conference call with Dilan.

Thank you!

Paul

Paul H. King
Professional Geologist

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

(510) 658-6916 telephone
(510) 834-0152 facsimile
(510) 387-6834 cellular
Paul.King@pdenviro.com

eurofins | Air Toxics

10/14/2015
Mr. Paul King
P & D Environmental
55 Santa Clara
Suite 240
Oakland CA 94610

Project Name: RED HANGER KLEANERS 6239 COLLEGE AVE
Project #: 0461
Workorder #: 1510220

Dear Mr. Paul King

The following report includes the data for the above referenced project for sample(s) received on 10/13/2015 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 SIM are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to the Project Manager: Kyle Vagadori at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Kyle Vagadori
Project Manager

eurofins | Air Toxics

WORK ORDER #: 1510220

Work Order Summary

CLIENT:	Mr. Paul King P & D Environmental 55 Santa Clara Suite 240 Oakland, CA 94610	**BILL TO:**	Mr. Paul King P & D Environmental 55 Santa Clara Suite 240 Oakland, CA 94610
PHONE:	510-658-6916	**P.O. #**	
FAX:	510-834-0772	**PROJECT #**	0461 RED HANGER KLEANERS 6239 COLLEGE AVE
DATE RECEIVED:	10/13/2015	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	10/14/2015		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	IA 4 HALLWAY	Modified TO-15 SIM	7.0 "Hg	5 psi
02A	IA 5 MENS RM (3RD FL)	Modified TO-15 SIM	7.0 "Hg	5 psi
03A	BG 2 AMBIENT	Modified TO-15 SIM	3.0 "Hg	5 psi
04A	Lab Blank	Modified TO-15 SIM	NA	NA
05A	CCV	Modified TO-15 SIM	NA	NA
06A	LCS	Modified TO-15 SIM	NA	NA
06AA	LCSD	Modified TO-15 SIM	NA	NA

CERTIFIED BY: Heidi Hayes DATE: 10/14/15

Technical Director

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
TX NELAP - T104704343-14-7, UT NELAP CA009332014-5, VA NELAP - 460197, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2014, Expiration date: 10/17/2015.
Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 956
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified TO-15 SIM
P & D Environmental
Workorder# 1510220

Three 6 Liter Summa Canister (SIM Certified) samples were received on October 13, 2015. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	*TO-15*	*ATL Modifications*
ICAL %RSD acceptance criteria	</=30% RSD with 2 compounds allowed out to < 40% RSD	Project specific; default criteria is </=30% RSD with 10% of compounds allowed out to < 40% RSD
Daily Calibration	+- 30% Difference	Project specific; default criteria is </= 30% Difference with 10% of compounds allowed out up to </=40%.; flag and narrate outliers
Blank and standards	Zero air	Nitrogen
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV
N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:
a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

eurofins | Air Toxics

Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: IA 4 HALLWAY

Lab ID#: 1510220-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.035	0.48	0.17	2.4
Chloromethane	0.088	0.55	0.18	1.1
Chloroform	0.035	0.14	0.17	0.70
Trichloroethene	0.035	0.064	0.19	0.34
Toluene	0.035	0.14	0.13	0.52
Tetrachloroethene	0.035	0.036	0.24	0.24
m,p-Xylene	0.070	0.076	0.30	0.33

Client Sample ID: IA 5 MENS RM (3RD FL)

Lab ID#: 1510220-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.035	0.47	0.17	2.3
Chloromethane	0.088	0.57	0.18	1.2
Chloroform	0.035	0.40	0.17	2.0
Benzene	0.088	0.10	0.28	0.32
Trichloroethene	0.035	0.050	0.19	0.27
Toluene	0.035	0.30	0.13	1.1
Tetrachloroethene	0.035	0.12	0.24	0.80
Ethyl Benzene	0.035	0.055	0.15	0.24
m,p-Xylene	0.070	0.15	0.30	0.67
o-Xylene	0.035	0.060	0.15	0.26

Client Sample ID: BG 2 AMBIENT

Lab ID#: 1510220-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.030	0.47	0.15	2.3
Chloromethane	0.074	0.53	0.15	1.1
Chloroform	0.030	0.055	0.14	0.27
Carbon Tetrachloride	0.030	0.062	0.19	0.39
Benzene	0.074	0.31	0.24	0.98
Toluene	0.030	0.79	0.11	3.0

eurofins | Air Toxics

Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: BG 2 AMBIENT

Lab ID#: 1510220-03A

Ethyl Benzene	0.030	0.14	0.13	0.59
m,p-Xylene	0.060	0.45	0.26	2.0
o-Xylene	0.030	0.17	0.13	0.72
1,4-Dichlorobenzene	0.030	0.034	0.18	0.20

eurofins | Air Toxics

Client Sample ID: IA 4 HALLWAY

Lab ID#: 1510220-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	**v101315sim**	**Date of Collection: 10/13/15 9:00:00 AM**	
Dil. Factor:	**1.75**	**Date of Analysis: 10/13/15 08:24 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.035	0.48	0.17	2.4
Freon 114	0.035	Not Detected	0.24	Not Detected
Chloromethane	0.088	0.55	0.18	1.1
Vinyl Chloride	0.018	Not Detected	0.045	Not Detected
Chloroethane	0.088	Not Detected	0.23	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.069	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.69	Not Detected
Methyl tert-butyl ether	0.18	Not Detected	0.63	Not Detected
1,1-Dichloroethane	0.035	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.035	Not Detected	0.14	Not Detected
Chloroform	0.035	0.14	0.17	0.70
1,1,1-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Carbon Tetrachloride	0.035	Not Detected	0.22	Not Detected
Benzene	0.088	Not Detected	0.28	Not Detected
1,2-Dichloroethane	0.035	Not Detected	0.14	Not Detected
Trichloroethene	0.035	0.064	0.19	0.34
Toluene	0.035	0.14	0.13	0.52
1,1,2-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Tetrachloroethene	0.035	0.036	0.24	0.24
1,2-Dibromoethane (EDB)	0.035	Not Detected	0.27	Not Detected
Ethyl Benzene	0.035	Not Detected	0.15	Not Detected
m,p-Xylene	0.070	0.076	0.30	0.33
o-Xylene	0.035	Not Detected	0.15	Not Detected
1,1,2,2-Tetrachloroethane	0.035	Not Detected	0.24	Not Detected
1,4-Dichlorobenzene	0.035	Not Detected	0.21	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	99	70-130

eurofins | Air Toxics

Client Sample ID: IA 5 MENS RM (3RD FL)

Lab ID#: 1510220-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	**v101316sim**	**Date of Collection:**	**10/13/15 9:05:00 AM**
Dil. Factor:	**1.75**	**Date of Analysis:**	**10/13/15 09:02 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.035	0.47	0.17	2.3
Freon 114	0.035	Not Detected	0.24	Not Detected
Chloromethane	0.088	0.57	0.18	1.2
Vinyl Chloride	0.018	Not Detected	0.045	Not Detected
Chloroethane	0.088	Not Detected	0.23	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.069	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.69	Not Detected
Methyl tert-butyl ether	0.18	Not Detected	0.63	Not Detected
1,1-Dichloroethane	0.035	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.035	Not Detected	0.14	Not Detected
Chloroform	0.035	0.40	0.17	2.0
1,1,1-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Carbon Tetrachloride	0.035	Not Detected	0.22	Not Detected
Benzene	0.088	0.10	0.28	0.32
1,2-Dichloroethane	0.035	Not Detected	0.14	Not Detected
Trichloroethene	0.035	0.050	0.19	0.27
Toluene	0.035	0.30	0.13	1.1
1,1,2-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Tetrachloroethene	0.035	0.12	0.24	0.80
1,2-Dibromoethane (EDB)	0.035	Not Detected	0.27	Not Detected
Ethyl Benzene	0.035	0.055	0.15	0.24
m,p-Xylene	0.070	0.15	0.30	0.67
o-Xylene	0.035	0.060	0.15	0.26
1,1,2,2-Tetrachloroethane	0.035	Not Detected	0.24	Not Detected
1,4-Dichlorobenzene	0.035	Not Detected	0.21	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	100	70-130

eurofins | Air Toxics

Client Sample ID: BG 2 AMBIENT

Lab ID#: 1510220-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	**v101317sim**	**Date of Collection: 10/13/15 9:07:00 AM**	
Dil. Factor:	**1.49**	**Date of Analysis: 10/13/15 09:46 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.030	0.47	0.15	2.3
Freon 114	0.030	Not Detected	0.21	Not Detected
Chloromethane	0.074	0.53	0.15	1.1
Vinyl Chloride	0.015	Not Detected	0.038	Not Detected
Chloroethane	0.074	Not Detected	0.20	Not Detected
1,1-Dichloroethene	0.015	Not Detected	0.059	Not Detected
trans-1,2-Dichloroethene	0.15	Not Detected	0.59	Not Detected
Methyl tert-butyl ether	0.15	Not Detected	0.54	Not Detected
1,1-Dichloroethane	0.030	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.030	Not Detected	0.12	Not Detected
Chloroform	0.030	0.055	0.14	0.27
1,1,1-Trichloroethane	0.030	Not Detected	0.16	Not Detected
Carbon Tetrachloride	0.030	0.062	0.19	0.39
Benzene	0.074	0.31	0.24	0.98
1,2-Dichloroethane	0.030	Not Detected	0.12	Not Detected
Trichloroethene	0.030	Not Detected	0.16	Not Detected
Toluene	0.030	0.79	0.11	3.0
1,1,2-Trichloroethane	0.030	Not Detected	0.16	Not Detected
Tetrachloroethene	0.030	Not Detected	0.20	Not Detected
1,2-Dibromoethane (EDB)	0.030	Not Detected	0.23	Not Detected
Ethyl Benzene	0.030	0.14	0.13	0.59
m,p-Xylene	0.060	0.45	0.26	2.0
o-Xylene	0.030	0.17	0.13	0.72
1,1,2,2-Tetrachloroethane	0.030	Not Detected	0.20	Not Detected
1,4-Dichlorobenzene	0.030	0.034	0.18	0.20

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	99	70-130

eurofins | Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1510220-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	**v101306sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 10/13/15 11:57 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.020	Not Detected	0.099	Not Detected
Freon 114	0.020	Not Detected	0.14	Not Detected
Chloromethane	0.050	Not Detected	0.10	Not Detected
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
Chloroethane	0.050	Not Detected	0.13	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected	0.36	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
Chloroform	0.020	Not Detected	0.098	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Carbon Tetrachloride	0.020	Not Detected	0.12	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
1,2-Dibromoethane (EDB)	0.020	Not Detected	0.15	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
1,4-Dichlorobenzene	0.020	Not Detected	0.12	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	98	70-130

eurofins | Air Toxics

Client Sample ID: CCV

Lab ID#: 1510220-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	**v101302sim**	**Date of Collection: NA**
Dil. Factor:	**1.00**	**Date of Analysis: 10/13/15 08:54 AM**

Compound	%Recovery
Freon 12	99
Freon 114	99
Chloromethane	85
Vinyl Chloride	98
Chloroethane	114
1,1-Dichloroethene	90
trans-1,2-Dichloroethene	96
Methyl tert-butyl ether	104
1,1-Dichloroethane	102
cis-1,2-Dichloroethene	95
Chloroform	98
1,1,1-Trichloroethane	98
Carbon Tetrachloride	115
Benzene	99
1,2-Dichloroethane	100
Trichloroethene	98
Toluene	102
1,1,2-Trichloroethane	104
Tetrachloroethene	97
1,2-Dibromoethane (EDB)	104
Ethyl Benzene	99
m,p-Xylene	97
o-Xylene	95
1,1,2,2-Tetrachloroethane	94
1,4-Dichlorobenzene	77

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	94	70-130

eurofins | Air Toxics

Client Sample ID: LCS

Lab ID#: 1510220-06A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	**v101303sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 10/13/15 09:42 AM**	

Compound	%Recovery	Method Limits
Freon 12	111	70-130
Freon 114	111	70-130
Chloromethane	94	70-130
Vinyl Chloride	110	70-130
Chloroethane	121	70-130
1,1-Dichloroethene	95	70-130
trans-1,2-Dichloroethene	88	70-130
Methyl tert-butyl ether	110	70-130
1,1-Dichloroethane	109	70-130
cis-1,2-Dichloroethene	112	70-130
Chloroform	103	70-130
1,1,1-Trichloroethane	104	70-130
Carbon Tetrachloride	112	60-140
Benzene	103	70-130
1,2-Dichloroethane	104	70-130
Trichloroethene	102	70-130
Toluene	108	70-130
1,1,2-Trichloroethane	111	70-130
Tetrachloroethene	103	70-130
1,2-Dibromoethane (EDB)	111	70-130
Ethyl Benzene	110	70-130
m,p-Xylene	110	70-130
o-Xylene	112	70-130
1,1,2,2-Tetrachloroethane	106	70-130
1,4-Dichlorobenzene	94	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	97	70-130

eurofins | Air Toxics

Client Sample ID: LCSD

Lab ID#: 1510220-06AA

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	**v101304sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 10/13/15 10:20 AM**	

Compound	%Recovery	Method Limits
Freon 12	109	70-130
Freon 114	112	70-130
Chloromethane	94	70-130
Vinyl Chloride	108	70-130
Chloroethane	123	70-130
1,1-Dichloroethene	96	70-130
trans-1,2-Dichloroethene	90	70-130
Methyl tert-butyl ether	111	70-130
1,1-Dichloroethane	110	70-130
cis-1,2-Dichloroethene	114	70-130
Chloroform	105	70-130
1,1,1-Trichloroethane	104	70-130
Carbon Tetrachloride	114	60-140
Benzene	106	70-130
1,2-Dichloroethane	107	70-130
Trichloroethene	105	70-130
Toluene	108	70-130
1,1,2-Trichloroethane	115	70-130
Tetrachloroethene	106	70-130
1,2-Dibromoethane (EDB)	114	70-130
Ethyl Benzene	110	70-130
m,p-Xylene	109	70-130
o-Xylene	110	70-130
1,1,2,2-Tetrachloroethane	108	70-130
1,4-Dichlorobenzene	92	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	97	70-130

CHAIN OF CUSTODY RECORD

1510220

PAGE 1 OF 1

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

PROJECT NUMBER: 0401

PROJECT NAME: 2ND HAND KLEANERS, 6239 COLLEGE AVE, OAKLAND, CA

SAMPLED BY: (PRINTED & SIGNATURE) JAY MILLER

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION (START PSIG / FINAL PSIG / CANISTER #)	NUMBER OF CONTAINERS	ANALYSIS(ES): TO-15	PRESERVATIVE	REMARKS
01 EA-4 HALLWAY	10/13/15	[illegible]	AIR	-30 / -7 / 9960	1	X	NONE	24 HR RUSH
02 EA-5 MENS RM(?)	10/13/15	[illegible]	"	-30 / -5 / 6L1269	1	X	"	"
03 EA-2 AMBIENT	10/13/15	[illegible]	↓	-30 / -5 / 34245	1	X	↓	↓

(Sample Labels)

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	Total No. of Samples (This Shipment): 3 / Total No. of Containers (This Shipment): 3	LABORATORY: EUROFINS/AIR TOXICS INC.
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	LABORATORY CONTACT: KYLE VASADERE	LABORATORY PHONE NUMBER: (916) 985-1589
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)	SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( ) YES (X) NO	

Results and billing to:
P&D Environmental, Inc.
[illegible]@pdenviro.com

REMARKS: 6 LITER SUMMA, FLOW CONTROLLER 24HR (DTSC CERTIFIED)

Nowell, Keith, Env. Health

From: PDKing0000@aol.com
Sent: Wednesday, October 14, 2015 6:55 PM
To: Roe, Dilan, Env. Health; Nowell, Keith, Env. Health
Cc: Gary_Bates@efiglobal.com; patrick@ellwoodcommercial.com; ronpatelvidge@gmail.com
Subject: RO2981 Red Hanger Kleaners, 10/14/15 calls to tenants

Hi Dilan and Keith,

Following our discussion with Gary Bates on the telephone at the end of today 10/14/15, I called and left a voicemail for the building tenants Esther Lerman (510-548-6241, she and I spoke 9/24/15) and Ellen Becker (510-658-5879, she left a voicemail for Dilan 10/13/15).

In the voicemail I said that we got preliminary air results that indicate that air concentrations have been reduced, that we will be performing comprehensive air testing in the suites in the near future, and that they will receive a notice to let them know when that testing will happen. After we get those next test results from the suites we will be able to comment about pregnant women entering the building.

I also left an additional message for Ellen saying that Dilan and I had spoken today, that I told Dilan that I would provide the most recent air results to Ellen, and that if Ellen still wanted to speak with Dilan she could call Dilan at 510-567-6767.

I also sent an e-mail to Kim Gettmann at DTSC and also to Uta Hellmann-Blumberg with the most recent air sample results and a request that they comment regarding notification related to pregnant women entering the building or women of child-bearing age consulting their physicians about entering the building.

I will let you know when I hear back from any of the parties above.

Thank you!

Paul

Paul H. King
Professional Geologist

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

(510) 658-6916 telephone
(510) 834-0152 facsimile
(510) 387-6834 cellular
Paul.King@pdenviro.com

Nowell, Keith, Env. Health

From: PDKing0000@aol.com
Sent: Thursday, October 15, 2015 7:54 AM
To: Roe, Dilan, Env. Health; Nowell, Keith, Env. Health
Cc: Gary_Bates@efiglobal.com; ron_holt@efiglobal.com; patrick@ellwoodcommercial.com; ronpatelvidge@gmail.com
Subject: Re: RO2981 Red Hanger Kleaners, 10/15/15 call from Ellen Becker

Hi Dilan and Keith,

I received a telephone call this morning 10/15/15 from 6:45 to 6:50 AM from Ellen Becker (tenant at 6239 College Ave). We discussed that we will collect air samples in the waiting room to her offices because the HVAC circulates the same air to all of the offices in the suite, and we made arrangements for access for the sampling once the sampling is scheduled.

Ellen also confirmed that she understands that the most recent air results are preliminary, and that we will wait for the upcoming air sample results from the suites before discussing any changes to the current procedure of not having pregnant women enter the building.

Ellen concluded that we are very reachable, very responsive, and that she is very appreciative.

Paul

Paul H. King
Professional Geologist

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

(510) 658-6916 telephone
(510) 834-0152 facsimile
(510) 387-6834 cellular
Paul.King@pdenviro.com

In a message dated 10/14/2015 18:55:09 Pacific Daylight Time, PDKing0000@aol.com writes:

> Hi Dilan and Keith,
>
> Following our discussion with Gary Bates on the telephone at the end of today 10/14/15, I called and left a voicemail for the building tenants Esther Lerman (510-548-6241, she and I spoke 9/24/15) and Ellen Becker (510-658-5879, she left a voicemail for Dilan 10/13/15).
>
> In the voicemail I said that we got preliminary air results that indicate that air concentrations have been reduced, that we will be performing comprehensive air testing in the suites in the near future, and that they will receive a notice to let them know when that testing will happen. After we get those next test results from the suites we will be able to comment about pregnant women entering the building.
>
> I also left an additional message for Ellen saying that Dilan and I had spoken today, that I told Dilan that I would provide the most recent air results to Ellen, and that if Ellen still wanted to speak with Dilan she could call Dilan at 510-567-6767.
>
> I also sent an e-mail to Kim Gettmann at DTSC and also to Uta Hellmann-Blumberg with the most recent air sample results and a request that they comment regarding notification related to pregnant women entering the building or women of child-bearing age consulting their physicians about entering the building.
>
> I will let you know when I hear back from any of the parties above.

Thank you!

Paul

Paul H. King
Professional Geologist

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

(510) 658-6916 telephone
(510) 834-0152 facsimile
(510) 387-6834 cellular
Paul.King@pdenviro.com

Nowell, Keith, Env. Health

From: Bates, Gary <Gary_Bates@efiglobal.com>
Sent: Monday, October 26, 2015 2:46 PM
To: Nowell, Keith, Env. Health; 'Ron Elvidge'
Cc: Patrick Ellwood (patrick@ellwoodcommercial.com); dcs@youngdahl.net; Paul King (PDKing0000@aol.com); Roe, Dilan, Env. Health
Subject: RE: Red Hanger Kleaners, ACEH case file RO2981 and GeoTracker Global ID T10000000416, 6235-6239 College Ave., Oakland

Keith thanks for taking my phone call. As we discuss the most recent work plan, dated October 16, 2015 prepared by P&D Environmental, Inc. is pending in the State Water Resources Control Board's (SWRCBs) GeoTracker website, however, you indicated it was not present in the ACEH FTP. The P&D plan will be reloaded to the ACEH FTP by tomorrow. We will start working on preparing a data package that will include the indoor lab results and sample location maps for your review.

Gary L. Bates P. G.
Director, Environmental Remediation Services
EFI Global, Inc.
Address: 11000 Richmond Avenue, Suite 250 Houston,TX 77042
Phone: 832-518-5145 I **TF:** 866-464-2127 I **fax:** 832-518-5147 I **mob:** 713-562-6773
Email: gary_bates@efiglobal.com I **web:** www.efiglobal.com
Engineering I Fire Investigations I Environmental I Specialty & Consulting Services

From: Nowell, Keith, Env. Health [mailto:Keith.Nowell@acgov.org]
Sent: Monday, October 26, 2015 3:59 PM
To: 'Ron Elvidge'
Cc: Bates, Gary; Patrick Ellwood (patrick@ellwoodcommercial.com); dcs@youngdahl.net; Paul King (PDKing0000@aol.com); Roe, Dilan, Env. Health
Subject: Red Hanger Kleaners, ACEH case file RO2981 and GeoTracker Global ID T10000000416, 6235-6239 College Ave., Oakland

Dear Mr. Elvidge,

Alameda County Environmental Health (ACEH) staff has reviewed the case file and determined the case is out of compliance with the ACEH correspondence dated September 21, 2015. On September 21, 2015, ACEH requested all correspondences to ACEH after 6:35 PM, September 15, 2015 be uploaded to the ACEH ftp and the State Water Resources Control Board's (SWRCBs) GeoTracker websites. No correspondences have been uploaded since ACEH's September 15th request, and the most recent work plan, dated October 16, 2015 and prepared by P&D Environmental, Inc. for the subject case, does not appear to have been uploaded to the ACEH ftp website.

Therefore at this time, ACEH requests the upload of all documents since 6:35 PM, September 15, 2015 by the date specified below. Attached is a PDF of the correspondences.

Additionally, several rounds of indoor air sampling have been conducted at the site. However, the electronic data format (EDF) files of laboratory analytical results of the sampling have not been uploaded to GeoTracker. ACEH requests the upload of the EDFs by the date specified below. Please include GEO_MAPs showing the sample locations.

Technical Report Request

Please upload technical reports to the ACEH ftp site (Attention: Keith Nowell), and to the State Water Resources Control Board's Geotracker website, in accordance with the following schedule:

- **November 13, 2015 – Electronic Submittal of Information**

Thank you for your cooperation. ACEH looks forward to working with you and your consultants to advance the case toward closure. Should you have any questions regarding this correspondence or your case, please call me at (510) 567-6764 or send an electronic mail message at keith.nowell@acgov.org.

Respectfully,
Keith Nowell

Keith Nowell PG, CHG
Hazardous Materials Specialist
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda , CA 94502-6540
phone: 510 / 567 - 6764
fax: 510 / 337 - 9335
email: keith.nowell@acgov.org

PDF copies of case files can be reviewed/downloaded at:

http://www.acgov.org/aceh/lop/ust.htm

Nowell, Keith, Env. Health

From: Dave Sederquist <dcs@youngdahl.net>
Sent: Tuesday, October 27, 2015 3:19 PM
To: Nowell, Keith, Env. Health
Cc: Bates, Gary
Subject: Red Hanger Kleaners, ACEH case file RO2981 and GeoTracker Global ID T10000000416, 6235-6239 College Ave., Oakland

Keith:

On October 16th we uploaded RO0002981_WorkPlan_2015-10-16.pdf to the Alameda County FTP site. This is the workplan for additional site assessment at Red Hanger Kleaners.

David C. Sederquist, C.E.G., C.HG.
Senior Engineering Geologist / Hydrogeologist

Youngdahl Consulting Group, Inc.
1234 Glenhaven Court, El Dorado Hills, CA 95762
Office: (916) 933.0633 Fax: (916) 933.6482

Nowell, Keith, Env. Health

From: Bates, Gary <Gary_Bates@efiglobal.com>
Sent: Tuesday, November 03, 2015 6:37 AM
To: Nowell, Keith, Env. Health; Paul King (PDKing0000@aol.com)
Cc: Roe, Dilan, Env. Health
Subject: RE: Conference call, Red Hanger Kleaners, ACEH case file RO2981 and GeoTracker Global ID T10000000416, 6235-6239 College Ave., Oakland

Keith, I will be available on either Wednesday or Tuesday at 1:30 pm PST.

Gary L. Bates P. G.
Director, Environmental Remediation Services
EFI Global, Inc.
Address: 11000 Richmond Avenue, Suite 250 Houston,TX 77042
Phone: 832-518-5145 I **TF:** 866-464-2127 I **fax:** 832-518-5147 I **mob:** 713-562-6773
Email: gary_bates@efiglobal.com I **web:** www.efiglobal.com
Engineering I Fire Investigations I Environmental I Specialty & Consulting Services

From: Nowell, Keith, Env. Health [mailto:Keith.Nowell@acgov.org]
Sent: Monday, November 02, 2015 6:23 PM
To: Bates, Gary; Paul King (PDKing0000@aol.com)
Cc: Roe, Dilan, Env. Health
Subject: Conference call, Red Hanger Kleaners, ACEH case file RO2981 and GeoTracker Global ID T10000000416, 6235-6239 College Ave., Oakland

ACEH would like to have a conference call in the afternoon, say after 1:30 PM west coast time, on Tuesday, 11/3, or Wednesday 11/4. Please let Dilan and I know the best times for the call.

Thank you,
Keith Nowell

Keith Nowell PG, CHG
Hazardous Materials Specialist
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda , CA 94502-6540
phone: 510 / 567 - 6764
fax: 510 / 337 - 9335
email: keith.nowell@acgov.org

PDF copies of case files can be reviewed/downloaded at:

http://www.acgov.org/aceh/lop/ust.htm

Fact Sheet on Environmental Assessment

Former Red Hanger Kleaners Site

6239 College Avenue

Oakland, California

Alameda County

ACEH File No. RO0002981

October 2015

This fact sheet is being provided to describe site background, past work to investigate site contamination, next steps, the oversight process for the site, and how you can obtain more information.

Fall, 2015

The Alameda County Environmental Health Department (ACEH) is issuing this fact sheet to inform you of ongoing investigation work at the former Red Hanger Kleaners (site), located at 6239 College Avenue in Oakland, California (Figure 1).

Base Map From: U.S. Geologic Survey, 7.5 Minute Quadrangles Oakland East, and Oakland West, both maps edited 1996

Figure 1
Site Location Map
Red Hanger Kleaners
6239 College Avenue
Oakland, California

0 1,000 2,000
Approximate Scale in Feet

N

The purpose of the investigation work is to gather more information on the nature and extent of soil gas contamination in the vicinity of the former dry cleaning suite. This fact sheet contains information concerning site background, results of recent investigations, mitigation activities, and information contacts. A glossary of certain terms also is included.

Site Background - The former Red Hanger Kleaners site currently is situated within a commercial portion of College Avenue just north of Claremont Avenue near the corner of 63rd Street. The subject site is a three-story building on a 0.17-acre lot with several operating businesses within suites at the building. The former Red Hanger Kleaners store occupied the ground floor of the building from 1987 until 2015 (approximately 28 years). The adjacent store to the north at 6251-6255 College Avenue was reported to have been occupied by dry cleaner stores from 1953 to 1987 (approximately 34 years) with Red Hanger Kleaners identified at this location from 1982 to 1987. It is unknown when the dry cleaning operation utilized tetrachloroethene (PCE) as the dry cleaning solvent. Volatile Organic Compounds (VOCs) such as PCE are able to move in the environment, from soil to groundwater, from groundwater to soil, and from groundwater or soil to air. Of particular interest is the potential for movement of VOCs into the inside of buildings where people could be exposed to contaminated air. This process is called soil-vapor intrusion into indoor air.

Glossary of Terms

Soil Gas—Soil gas refers to the air that is present in the open spaces between soil particles between the ground surface and the water table. It includes air (primarily oxygen and nitrogen, like above ground), water vapor, and occasionally pollutants.

Volatile organic compounds (VOCs)—VOCs are organic liquids, including many common solvents that readily evaporate at temperatures normally found at ground surface and at shallow depths. Many VOCs are known human carcinogens. Examples of VOC usage include dry cleaning solvent, carburetor cleaner, brake cleaner, and paint solvents.

Recent Investigation Activities - Environmental investigations have been performed at the site beginning in March 2005; these investigations have included sampling and analysis of soil, soil-vapor, groundwater and indoor air to assess the type and extent of contamination at the site. In total, laboratory analysis has been conducted on 69 samples collected from 48 borings and indoor air sampling containers.

Investigations performed at the site have identified that VOCs, specifically PCE, leaked into the subsurface beneath the subject building. Soil, groundwater, and soil vapor samples have been collected to date beneath and in the vicinity of the dry cleaning suite; however, work is planned to collect additional soil vapor samples in the vicinity of the site building in order to define the lateral and vertical extent of the PCE contamination.

Concentrations of PCE reported in soil-vapor and indoor air samples were found at concentrations greater than

applicable regulatory agency screening levels requiring additional investigation. In addition, trichloroethene (TCE) has been detected in indoor air samples at concentrations greater than applicable regulatory agency screening levels requiring additional investigation and mitigation. The presence of these chemicals at concentrations exceeding regulatory screening levels does not indicate that adverse impacts to human health or the environment are necessarily occurring, but rather indicates that a potential for adverse risk may exist and that additional evaluation is warranted. Based on recent government information regarding the effects of TCE with pregnant women, we are providing you with this notification as a precaution and to advise you that women who are of child-bearing age or who suspect that they might be pregnant are advised to not enter the premises until TCE air concentrations in the building are reduced.

The highest concentrations of VOCs in indoor air are located in the hallway and a bathroom on the second and third floors of the building. Lower concentrations of PCE were detected in tenant suites on the second and third floors.

Because the screening levels were exceeded and indoor air samples indicated vapor intrusion of PCE into a number of suites at the site, EFI Global Inc. (EFI) was recently requested to evaluate health risks associated with the contamination and the analysis indicated that there does not appear to be an imminent risk, but these concentrations still require clean-up.

Cleanup of Environmental Impacts – As discussed, VOCs have been detected in soil, groundwater, soil-vapor and indoor air samples at the site. In general, soil and groundwater concentrations reported during the investigations performed at the site are near or below regulatory screening levels. However, soil-vapor concentrations reported during investigative activities are above regulatory screening levels and are likely the cause of PCE vapors intruding into the subject facility. PCE vapor concentrations reported in soil-vapor and indoor air require remediation (clean-up) at this time to mitigate the potential for health risks by reducing subsurface VOC concentrations.

Soil-Vapor and Indoor Air Mitigation and Remediation – EFI has been working with ACEH to plan and implement corrective action at the site in conjunction with site use. EFI will be preparing a work plan for subsurface investigation to determine the appropriate remedial measures for removal of residual soil-vapor impact from the subsurface at the site.

Initial mitigation measures that have been implemented include sealing cracks and holes in the floor of the former dry cleaner store and the elevator pit, and performing a smoke test to identify where sewer pipes could be leaking vapors from the subsurface into the building, and sealing any detected pipe leaks. Most recently mitigation measures that are being implemented currently include the installation of fresh air filtration systems in the second and third floor hallways, the stairwells, and in suites where outside air is not circulated into the building with the existing Heating, Ventilation and Air Conditioning (HVAC) system. In addition, the HVAC systems for suites where air can be introduced to the suite from outside of the building were recently modified to allow the additional air to be circulated into the building to increase fresh air intake into the suites. This will aid in reducing the overall residual impacts to indoor air.

Next Steps – Based on results of the upcoming subsurface investigation remedial solutions will be evaluated to reduce subsurface PCE concentrations.

The entire case file can be viewed over the internet on the ACEH at http://www.acgov.org/aceh/lop/ust.htm or at the State of California Water Resources Control Board website at http://geotracker.swrcb.ca.gov.

Please send written comments regarding the investigation and proposed actions to Keith Nowell at the address below.

For More Information

Please contact any of the following individuals with questions or concerns you may have:

Keith Nowell
Alameda County Environmental Health Case Manager
510-567-6764
keith.nowell@acgov.org

Paul King
P&D Environmental Inc.; Consultant
510-658-6916
Paul.King@pdenviro.com

mailto:

Nowell, Keith, Env. Health

From: PDKing0000@aol.com
Sent: Friday, October 02, 2015 8:11 AM
To: Nowell, Keith, Env. Health
Cc: Roe, Dilan, Env. Health; Gary_Bates@efiglobal.com; ron_holt@efiglobal.com; patrick@ellwoodcommercial.com; ronpatelvidge@gmail.com; dave@bblandlaw.com
Subject: RO2981 Red Hanger Kleaners Fact Sheet DRAFT 3
Attachments: RO2981_FactSheet_IndoorAirMitigation_DRAFT 3.docx

Hi Keith,

You will find attached the RO2981 Red Hanger Kleaners Fact Sheet DRAFT 3 for your review and comment (document RO2981_FactSheet_IndoorAirMitigation_DRAFT 3.docx).

Please let me know if you have any questions or comments.

Thank you!

Paul

Paul H. King
Professional Geologist

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

(510) 658-6916 telephone
(510) 834-0152 facsimile
(510) 387-6834 cellular
Paul.King@pdenviro.com

Nowell, Keith, Env. Health

From: Roe, Dilan, Env. Health
Sent: Friday, October 02, 2015 12:10 PM
To: Nowell, Keith, Env. Health
Cc: Paul King
Subject: Re: Red Hanger Kleaners, ACEH case file RO2981 and GeoTracker Global ID T10000000416, 6235-6239 College Ave., Oakland

Hi Keith and Paul - I have briefly read emails regarding this site but am on vacation and trying not to work.

Two points - with respect to the Fact Sheet I think all women of child bearing age should be instructed to not be in the building as a woman does not always know if she is pregnant.

Secondly, with regards to a response times on a work plan for the soil gas investigation please allow for three weeks. We will try to review in a shorter time period but cannot commit to less than three weeks which is already an accelerated response time.

Dilan

Sent from my iPhone

On Oct 2, 2015, at 12:44 PM, Nowell, Keith, Env. Health <Keith.Nowell@acgov.org> wrote:

> 10/02/2015 **Phone Log**- RO2981 Red Hanger Kleaners Call duration: 33 minutes
>
> Phone conversation with Paul King and Gary Bates. Paul gave an update of the case, and had sent a draft fact sheet this morning following the DTSC format ACEH requested him to follow.
>
> 1. Fact sheet- appears to focus on PCE as associated with the former DC and has indoor air issues in 1st floor, but the FS does discuss the trichloroethene (TCE) issue and says "TCE has been detected in indoor air samples at concentrations greater than applicable regulatory agency screening levels requiring additional investigation and mitigation.... Based on recent government information regarding the effects of TCE with pregnant women, we are providing you with this notification as a precaution and to advise you that women who are of child-bearing age or who suspect that they might be pregnant are advised to not enter the premises until TCE air concentrations in the building are reduced.
>
>   Paul presented the question regarding the notification of all women of child bearing years *vs.* potentially pregnant women. All women of child bearing will be notified; however, only pregnant or potentially pregnant women will be advised to stay out of the building. They want to know if all women of child bearing years out should be advised to stay out of the building. I'm thinking all. **They're waiting for our response**.

The San Francisco Bay Regional Water Quality Control Board October 16, 2014 D R A F T document entitled *Interim Framework for Assessment of Vapor Intrusion at TCE-Contaminated Sites in the San Francisco Bay Region* has a bullet item on page 21:

- Expedite Public Notification if TCE Trigger Levels or Action Levels Are Exceeded – If TCE has been detected at concentrations exceeding the trigger levels or action levels; a notification regarding TCE should be made promptly so that women of child-bearing age are informed of the potential concerns, actions that are being taken to evaluate and remediate the site, and actions they can take to reduce potential exposure.

2. Mitigation status- Duct work modifications completed last Friday (1 week ago). Air filter units installed; however, 1 unit defective and the replacement unit scheduled to be installed today. Each suite thermostat includes a setting for "fan only". As the fans should always be on, there was some discussion if there needs to be a lock out cover so the tenant won't turn off the fan, or if the tenant could just be instructed to keep the fan on. Just discussion, no decision.

   Next round of indoor air samplers will be deployed next Wednesday, recovered Thursday, with lab results anticipated Monday.

3. Soil gas evaluation – The work plan is in progress, **might be submitted next week**. WP will address on-site and adjacent off-site distribution thru 14 permanent soil gas ports. I said give us a week for review then lets discuss. Paul and Gary wanted to know Dilan's availability two weeks out. I replied even Dilan doesn't know her schedule two weeks out. Paul indicated there is a potential tenant for the former DC suite and the owner does not want to lose the tenant. Paul pointed out the past performance of ACEH response times. I said we're committed to fast track this project.

Keith Nowell PG, CHG
Hazardous Materials Specialist
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda , CA 94502-6540
phone: 510 / 567 - 6764
fax: 510 / 337 - 9335
email: keith.nowell@acgov.org

PDF copies of case files can be reviewed/downloaded at:

http://www.acgov.org/aceh/lop/ust.htm

Nowell, Keith, Env. Health

From: PDKing0000@aol.com
Sent: Tuesday, October 13, 2015 5:05 PM
To: Nowell, Keith, Env. Health
Cc: Roe, Dilan, Env. Health; Gary_Bates@efiglobal.com; ron_holt@efiglobal.com; patrick@ellwoodcommercial.com; ronpatelvidge@gmail.com; dave@bblandlaw.com
Subject: RO2981 Interim Framework TCE - toxicologist discussions - addendum and update

Hi Keith,

As a follow up to my e-mail earlier today regarding my recent conversations with toxicologists regarding TCE in indoor air at RO 2981 - Red Hanger Kleaners at 6239 College Avenue, I forgot to mention that Uta also said that we are doing everything that we should be doing, that we are being prudent and reasonable, and that it seems that we are getting things done in a reasonable time frame.

We also successfully retrieved the interim post-mitigation air sampling media today and the samples were confirmed as received at the lab today. We expect to have the results by Thursday mid-day, if not sooner. I will let you know once we get the sample results.

Please let me know if you need additional information. Thank you!

Paul

Paul H. King
Professional Geologist

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

(510) 658-6916 telephone
(510) 834-0152 facsimile
(510) 387-6834 cellular
Paul.King@pdenviro.com

In a message dated 10/13/2015 08:07:35 Pacific Daylight Time, PDKing0000@aol.com writes:

> Hi Keith,
>
> Items discussed during our 10/8/15 conference call with Gary Bates included:
>
> - Status of communicating with lender where note came due.
> - Status of communicating with ground floor tenant that might go away.
> - Defective air filter replaced last week.
> - HVAC modification to allow atmospheric air ventilation was completed.
> - HVAC thermostat being enclosed 100815 and fans switched on for continuous ventilation
> - Post-mitigation interim air confirmation sampling to occur 36 hours after HVAC adjustment, presently scheduled for sampling at 2 locations where ARAL was exceeded on Monday 10/12/14 with SIM-certified 24 hour flow controllers and 6-liter Summa canisters.
> - Work plan is being reviewed by Gary Bates for subsurface investigation.

- We might not need to have a sit down meeting for the next step of site investigation.
- Paul King spoke with Cheryl Prowell, Kimberly Gettmann, and Uta Helmann-Blumberg regarding recommendations for women of child-bearing age being removed from the building, and discussion with Uta about not causing tenants unnecessary stress with excessive communications.

I called Kim Gettmann Monday 10/5/15 after having sent her an e-mail that summarized our indoor air results and mitigative measures taken to date. Kim is a DTSC toxicologist and one of the two people identified to contact regarding HERO HHRA Note Number 5. We discussed the following.

- Kim said that it was very good that we have gotten out notification promptly and that we have had two notifications of status and progress to date.
- Our language in our notifications of recommending that pregnant women not enter the building until TCE air concentrations are reduced is more robust/ stronger than the wording of HHRA Note Number 5.
- We are doing everything that we should be doing (testing to verify conditions, testing tenant suites, shampooing the carpet, sealing the floor cracks, smoke testing the sewer piping, confirmation testing, air filtration, HVAC adjustment for ventilation) and everything that we are doing is consistent with recommendations in HHRA Note Number 5.
- The two week recommendation for response is a suggestion, and HHRA Note Number 5 is purposefully vague to allow flexibility for caseworkers to accommodate unique site-specific conditions. Based on our marginal ARAL conditions and site conditions, the timeframe for our response is reasonable and prudent.
- We do not have URAL conditions, and we are marginally at ARAL conditions. If we were at URAL conditions we would be talking about recommending that women of child-bearing age leave the building. We are taking prudent measures with our recommendations and actions.
- Based on the near-ARAL concentrations and the notifications that we have provided we do not need to have women of child-bearing age leave the building. However, if our interim post-mitigation measures show no reduction in TCE concentrations we should include in our next notification those results and the recommendation that women who are of child-bearing age and are considering having children consult their physician regarding the effects of TCE on pregnant women and how it can affect the pregnancy. At that point we have provided recommendations and it is a risk-based decision that is up to the woman to decide.

I spoke with Uta Hellmann-Blumberg on 10/7/15 and reviewed indoor air quality and mitigation measures to date. I also told her of my 10/5/15 conversation with Kim Gettmann. Uta is a DTSC toxicologist and the primary author of the 10/16/14 draft SFRWQCB Interim Framework TCE vapor intrusion guidance. We discussed the following.

- The idea of telling women of child-bearing age to not be in the building requires a balanced approach to the site conditions and indoor air concentrations. If there is a great concern that women of child-bearing age are being exposed to TCE at concentrations above acceptable levels, the number of hours of those women in the building should be reduced. As an example, reducing the amount of time in the building from 40 hours per week to 20 hours per week would effectively reduce the average weekly exposure to one half.
- Indoor air quality is a very emotional issue, and we need to make sure that we provide notification in a way that does not scare people. There is not a lot of information right now about how TCE could impact a pregnancy. The precautions related to heart valve defects in developing human fetuses are based on a single rat study.

- We want to make sure that the guidance is consistent with USEPA, DTSC and SFRWQCB policy.
- HHRA Note Number 5 provides CARB state-wide ambient TCE concentrations, and we should check for BAAQMD air station data to see how much TCE is in ambient air in the vicinity of the building.
- Women of child-bearing age need to be aware of potential effects of TCE on fetus during the first trimester.
- Stressors are not limited to environmental contaminants. Uta recently attended a conference where sleep deprivation is a stressor to be considered when evaluating stress, and communications and Fact Sheets regarding the project should be at a frequency and with content that does not result in unnecessary stress.
- Regarding women of child-bearing age being removed from the building, Uta commented "who better to comment on pregnant women being in the building than one of the HERO contact people for HHRA Note Number 5, who is 9 months pregnant". She went on to conclude that we do not have URAL conditions in the building, that we have marginal ARAL conditions in the building, and that the conclusions of Kim that women of child-bearing age be notified of the conditions and be advised to consult their physician if they are considering getting pregnant was reasonable.

After you and I spoke on 10/12/15 I called Kim Gettmann on 10/12/15 to verify that my recollection of our conversation was correct. We reviewed the notes above and Kim said that I recalled the conversation perfectly, and that furthermore following her and my conversation on 10/5/15 she had reviewed our discussion with her supervisor Mike Wade, who is the other HERO contact person identified on HHRA Note Number 5, and Mike said that he agreed with everything that we had discussed and concluded. Kim said that she was leaving on maternity leave at the end of the day, but that she would be checking voicemails for the next week and would be responding to e-mails, and would be available to arrange for a telephone call if requested via e-mail or voicemail. In her absence we can contact Mike Wade. She emphasized that they are a resource, and we discussed that these conversations are helping to clarify policy because of the lack of conditions where these criteria have yet been applied.

Kim and I also discussed on 10/12/15 Uta's comments that stressors are not limited to environmental contaminants, and that excessive communications can result in confusion and stress. Kim said that had we not already provided two notifications she would urge us to get a Fact Sheet distributed quickly. But because we have already provided the two notifications she would be concerned that we will be bombarding and overwhelming building occupants with too much information, and they won't know what to believe and will get confused and distressed. Kim said that she believed that providing information at project milestones associated with mitigation and site investigation is a logically sound approach, and that releasing additional information following completion of this next mitigation step makes sense. She said that if our upcoming air testing results show that our mitigation measures have been successful, it would make good sense to then focus communications on upcoming subsurface work. Kim stated that not overwhelming people is part of risk communication.

Please let me know if you need any additional information.

Thank you!

Paul

Paul H. King
Professional Geologist

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

(510) 658-6916 telephone
(510) 834-0152 facsimile
(510) 387-6834 cellular
Paul.King@pdenviro.com

In a message dated 10/9/2015 09:47:50 Pacific Daylight Time, Keith.Nowell@acgov.org writes:

Paul,

Please review my notes below regarding the discussion of the Fact Sheet in yesterday's phone conversation. Make edits and add comments to address this issue.

Fact sheet- Paul expressed concern that a premature Fact Sheet distribution would cause unnecessary alarm to the public. Based on conversations between Paul King and SF-RWQCB Cheryl Prowell, and DTSC toxicologists Kimberly Gettmann and Uta Hellmann-Blumberg, all the appropriate step regarding the investigation, confirmation & follow up sampling, mitigation and notification measures have been performed. Paul states that Uta is of the opinion that results of the next round of sampling- scheduled to be conducted next week- should be reviewed prior to distributing the factsheet, and that it should be left up to the woman whether or not to enter the building.

> Kimberly and Uta are in agreement that if ARALs are still exceeded, language should be added that states "women considering becoming pregnant should consult with their physician" if confirmation samples continue to exceed the ARALs.

Thanks,

Keith Nowell

From: PDKing0000@aol.com [mailto:PDKing0000@aol.com]
Sent: Friday, October 02, 2015 8:25 AM
To: Nowell, Keith, Env. Health <Keith.Nowell@acgov.org>
Cc: Gary_Bates@efiglobal.com
Subject: Interim Framework TCE

Paul H. King
Professional Geologist

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

(510) 658-6916 telephone
(510) 834-0152 facsimile
(510) 387-6834 cellular
Paul.King@pdenviro.com

=

Nowell, Keith, Env. Health

From: PDKing0000@aol.com
Sent: Tuesday, November 03, 2015 3:50 PM
To: Roe, Dilan, Env. Health; Nowell, Keith, Env. Health
Cc: Gary_Bates@efiglobal.com; ron_holt@efiglobal.com; patrick@ellwoodcommercial.com; ronpatelvidge@gmail.com; dave@bblandlaw.com
Subject: RO 2981 Red Hanger Kleaners - Draft Tenant Notification and Draft Fact Sheet
Attachments: 0461.M15 DRAFT 1.doc; RO2981_FactSheet_IndoorAirMitigation_DRAFT 4.docx

Hi Dilan and Keith,

As we discussed this afternoon on the telephone with Gary Bates, you will find attached the following draft documents.

- DRAFT Tenant Notification of the most recent air results (document 0461.M15 DRAFT 1.doc).
- DRAFT Fact Sheet (document RO2981 FactSheet IndoorAirMitigation DRAFT 4.docx).

Please let me know if you have any comments.

Thank you!

Paul

Paul H. King
Professional Geologist

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

(510) 658-6916 telephone
(510) 834-0152 facsimile
(510) 387-6834 cellular
Paul.King@pdenviro.com

10/30/2015

Dear Tenant,

This notification is written as a follow-up to our 10/16/15 notification regarding detectable concentrations of the chemical trichloroethene (TCE) and tetrachloroethene (also called perchloroethene, or PCE) that have been identified in air in the building at 6239 College Avenue in Oakland.

The results of comprehensive air testing conducted in the building during the week of October 19, 2015 showed that TCE and PCE concentrations were either not detectable or were present at substantially reduced concentrations. None of the detected concentrations require further notification or building access restriction for women who are pregnant or who suspect that they might be pregnant. We request that the air filtration and air ventilation methods that have been used to reduce indoor air TCE and PCE air concentrations not be altered.

Our next step is to perform a subsurface investigation to evaluate the extent of subsurface dry cleaning chemicals in the vicinity of the building. A Fact Sheet will be provided that summarizes our mitigation efforts to reduce indoor air TCE and PCE concentrations, and will also include information regarding the subsurface investigation.

This work is being performed with supervision by the Alameda County Department of Environmental Health (ACDEH).

If you have any questions or need any additional information, please do not hesitate to contact the following:

- Dilan Roe at the ACDEH at 510-567-6767 or
- Patrick Ellwood at 510-238-9111 or
- Paul King of P&D Environmental, Inc. at 510-658-6916.

0461.M15

Fact Sheet on Environmental Assessment

Former Red Hanger Kleaners Site

6239 College Avenue

Oakland, California

Alameda County

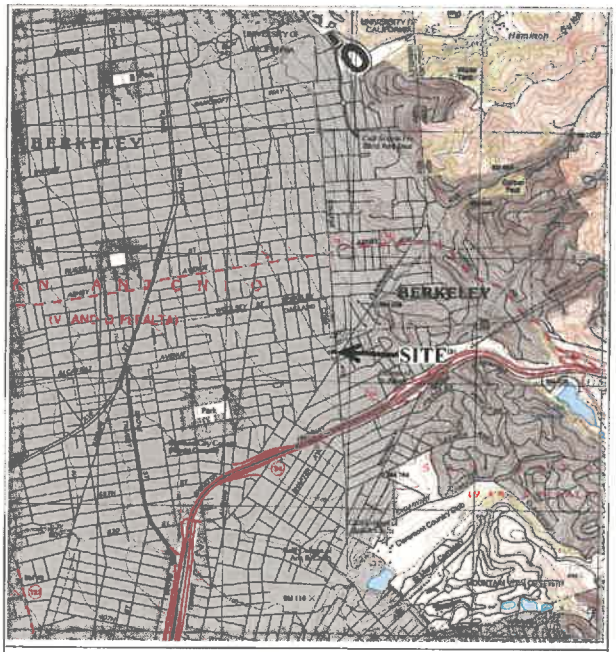
ACEH File No. RO0002981

November 2015

This fact sheet is being provided to describe site background, past work to investigate site contamination, next steps, the oversight process for the site, and how you can obtain more information.

Fall, 2015

The Alameda County Environmental Health Department (ACEH) is issuing this fact sheet to inform you of ongoing investigation work at the former Red Hanger Kleaners (site), located at 6239 College Avenue in Oakland, California (Figure 1).



Base Map From: U.S. Geologic Survey 7.5 Minute Quadrangles Oakland East, and Oakland West, both maps edited 1996

Figure 1
Site Location Map
Red Hanger Kleaners
6239 College Avenue
Oakland, California

0 1,000 2,000
Approximate Scale in Feet

N

The purpose of the investigation work is to gather more information on the nature and extent of soil gas contamination in the vicinity of the former dry cleaning suite. This fact sheet contains information concerning site background, results of recent investigations, mitigation activities, and information contacts. A glossary of certain terms also is included.

Site Background - The former Red Hanger Kleaners site currently is situated within a commercial portion of College Avenue just north of Claremont Avenue near the corner of 63rd Street. The subject site is a three-story building on a 0.17-acre lot with several operating businesses within suites at the building. The former Red Hanger Kleaners store occupied the ground floor of the building from 1987 until 2015 (approximately 28 years). The adjacent store to the north at 6251-6255 College Avenue was reported to have been occupied by dry cleaner stores from 1953 to 1987 (approximately 34 years) with Red Hanger Kleaners identified at this location from 1982 to 1987. It is unknown when the dry cleaning operation utilized tetrachloroethene (PCE) as the dry cleaning solvent. Volatile Organic Compounds (VOCs) such as PCE are able to move in the environment, from soil to groundwater, from groundwater to soil, and from groundwater or soil to air. Of particular interest is the potential for movement of VOCs into the inside of buildings where people could be exposed to contaminated air. This process is called soil-vapor intrusion into indoor air.

Glossary of Terms

Soil Gas—Soil gas refers to the air that is present in the open spaces between soil particles between the ground surface and the water table. It includes air (primarily oxygen and nitrogen, like above ground), water vapor, and occasionally pollutants.

Volatile organic compounds (VOCs)—VOCs are organic liquids, including many common solvents that readily evaporate at temperatures normally found at ground surface and at shallow depths. Many VOCs are known human carcinogens. Examples of VOC usage include dry cleaning solvent, carburetor cleaner, brake cleaner, and paint solvents.

Recent Investigation Activities - Environmental investigations have been performed at the site beginning in March 2005; these investigations have included sampling and analysis of soil, soil-vapor, groundwater and indoor air to assess the type and extent of contamination at the site. In total, laboratory analysis has been conducted on 80 samples collected from 48 borings and indoor air sampling containers.

Investigations performed at the site have identified that VOCs, specifically PCE, leaked into the subsurface beneath the subject building. Soil, groundwater, and soil vapor samples have been collected to date beneath and in the vicinity of the dry cleaning suite; however, work is planned to collect additional soil vapor samples in the vicinity of the site building in order to define the lateral and vertical extent of the PCE contamination.

Concentrations of PCE reported in soil-vapor and indoor air samples were found at concentrations greater than applicable regulatory agency screening levels requiring

additional investigation. In addition, trichloroethene (TCE) was detected in indoor air samples at concentrations greater than applicable regulatory agency screening levels requiring additional investigation and mitigation. The presence of these chemicals at concentrations exceeding regulatory screening levels does not indicate that adverse impacts to human health or the environment are necessarily occurring, but rather indicates that a potential for adverse risk may exist and that additional evaluation is warranted. The highest concentrations of VOCs in indoor air were located in the hallway and a bathroom on the second and third floors of the building. Lower concentrations of PCE were detected in tenant suites on the second and third floors.

Because regulatory screening levels were exceeded and indoor air samples indicated vapor intrusion of PCE into the building, EFI Global Inc. (EFI) was requested to evaluate health risks associated with the detected VOCs. Following discussions with California Department of Toxic Substances Control toxicologists, the analysis indicated that there did not appear to be an imminent health risk, but that the VOC concentrations should be reduced. Based on recent government information regarding the effects of TCE with pregnant women, notification was provided as a precaution and to advise that women of child-bearing age or women who suspect that they might be pregnant not enter the premises until TCE air concentrations in the building were reduced. Tenant notifications regarding site conditions including efforts to reduce indoor air VOC concentrations and sample results were provided on August 20, September 22, October 16, and November 2, 2015.

Soil-Vapor and Indoor Air Mitigation and Remediation – EFI has been working with ACEH to plan and implement corrective action at the site in conjunction with site use. Following sealing of cracks in the floor slab of the ground floor of the building and the elevator pit, smoke testing to identify sewer pipes where subsurface vapors might enter the building, and shampooing the hallway and stairwell carpets, air filtration equipment was placed in the building in September 2015 and air ventilation was increased for portions of the building in October 2015 to reduce PCE and TCE air concentrations in the building. The laboratory analytical results of air samples collected on October 13 and October 21, 2015 confirmed that the air filtration and ventilation mitigation measures effectively reduced PCE and TCE air concentrations in the building to below detectable concentrations or to below actionable regulatory agency trigger and screening concentrations.

Cleanup of Environmental Impacts – As discussed, VOCs have been detected in soil, groundwater, soil-vapor and indoor air samples at the site. In general, soil and groundwater concentrations reported during the investigations performed at the site are near or below regulatory screening levels. However, soil-vapor concentrations reported during investigative activities exceed regulatory screening levels and are likely the cause of PCE vapors intruding into the subject site building. PCE vapor concentrations reported in soil-vapor require remediation (clean-up) at this time to mitigate the potential for health risks by reducing subsurface VOC concentrations.

Soil-Vapor Investigation and Remediation –EFI prepared a work plan for ACEH review for subsurface investigation to determine the appropriate remedial measures for removal of residual soil-vapor impact from the subsurface at the site.

Next Steps – Based on results of the subsurface investigation remedial solutions will be evaluated to reduce subsurface PCE concentrations.

The entire case file can be viewed over the internet on the ACEH at http://www.acgov.org/aceh/lop/ust.htm or at the State of California Water Resources Control Board website at http://geotracker.swrcb.ca.gov.

Please send written comments regarding the investigation and proposed actions to Keith Nowell at the address below.

For More Information

Please contact any of the following individuals with questions or concerns you may have:

Keith Nowell
Alameda County Environmental Health Case Manager
510-567-6764
keith.nowell@acgov.org

Paul King
P&D Environmental Inc.; Consultant
510-658-6916
Paul.King@pdenviro.com

Nowell, Keith, Env. Health

From:	PDKing0000@aol.com
Sent:	Monday, November 09, 2015 12:34 PM
To:	Nowell, Keith, Env. Health; ronpatelvidge@gmail.com
Cc:	gary_bates@efiglobal.com; ron_holt@efiglobal.com; patrick@ellwoodcommercial.com; dave@bblandlaw.com; dcs@youngdahl.net; Roe, Dilan, Env. Health
Subject:	Re: Work Plan Review, ACEH case file RO2981 - Response to Technical Comments

Hi Keith,

Thank you for the work plan approval!

As we just discussed on the telephone, it sounds like we are very much on the same page.

I have the following comments in response to your 11/6/15 technical comments. My comments are provided in the order in which your technical comments occur.

1. The proposed soil gas wells will be constructed in accordance with the DTSC July 2015 Advisory for active soil Gas Investigations Appendix D, which calls for a larger diameter borehole to allow a larger volume of filter pack for the soil gas well. It has been our direct experience on multiple sites with similar clayey materials that construction of soil gas wells using conventional Geoprobe borehole drilling methods often results in low flow conditions. We have used the Appendix D soil gas well construction methods at multiple sites overseen by the RWQCB as an alternate method to the conventional Geoprobe borehole drilling methods in similar fine-grained materials with great success, and it is for this reason that the proposed soil gas wells will be constructed in accordance with Appendix D methods. It has also been our experience that placement of a 2-foot thick filter pack in a 6-inch diameter borehole with the 1/4-inch diameter tube in the center to a depth of 15 to 20 feet has not presented difficulties for bridging without a tremie pipe because of the larger borehole diameter, however for the soil gas well installation we will use a tremie pipe for the placement of the filter pack.

2. The absence of dry granular bentonite on top of the filter pack is consistent with DTSC July 2015 Advisory Appendix D soil gas well construction methods. In anticipation of the soil gas wells being potentially in use for greater than one year, the soil gas well annular seals will be constructed with neat cement. Because of the lower viscosity of the neat cement relative to hydrated bentonite, a layer measuring approximately one foot thick of hydrated bentonite will be placed above the filter pack for the soil gas wells that are constructed to a depth of 17 feet, and approximately 0.5-feet thick above the filter pack for the soil gas wells that are constructed to a depth of 7 feet to prevent the neat cement grout from getting into the filter pack. Above the hydrated bentonite the annular seal will consist of neat cement.

3. Borehole SG9-17 will be the first borehole drilled for the soil gas well installation work. If evidence of free water is encountered in the borehole during drilling the drilling will be stopped at the depth that the water is encountered. If free water is not encountered during drilling the borehole will be drilled to a depth of 17 feet bgs and will then be left open to determine if water accumulates in the borehole. If water accumulates in the borehole the borehole will be filled with hydrated bentonite to a height of 2 feet above the static water level in the borehole and the soil gas well will then be constructed as proposed.

4. Any necessary surveying at the site will be completed following receipt of the soil gas well results and the determination if any additional wells need to be constructed at the site.

Please let me know if you have any questions or need any additional information.

Thank you!

Paul

Paul H. King
Professional Geologist

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

(510) 658-6916 telephone
(510) 834-0152 facsimile
(510) 387-6834 cellular
Paul.King@pdenviro.com

In a message dated 11/6/2015 15:22:07 Pacific Standard Time, Keith.Nowell@acgov.org writes:

> Dear Mr. Elvidge,
>
> Alameda County Environmental Health (ACEH) staff has reviewed the case file for the above-referenced site and the recently submitted document entitled *Soil Gas Investigation Work Plan* (WP) prepared by P&D Environmental, Inc. The WP is dated October 16, 2015 and was received by our office on October 28, 2015. The WP recommends the installation of eight permanent soil gas wells to a depth of seven feet below the ground surface (bgs), six permanent soil gas wells to a depth of 17 feet bgs, and one sub-slab vapor pin. Thank you for the work plan and the continuing work at the site.
>
> Based on ACEH staff review of the referenced document and of the case file, we generally concur with the proposed scope of work. The proposed scope of work may be implemented provided that the modifications requested in the technical comments below are addressed and incorporated during the field implementation. Submittal of a revised Work Plan is not required unless an alternate scope of work outside that described in the Work Plan and technical comments below is proposed.
>
> **TECHNICAL COMMENTS**
>
> 1. **Sand Pack-** The Department of Toxic Substances Control (DTSC) July 2015 document entitled *Advisory- Active Soil Gas Investigations* (Advisory) states for soil gas wells deeper than 15 feet, a tremie pipe should be used to avoid bridging or segregation during placement of the sand pack and annular seal. The WP does indicate a tremie pipe will be used for the constructing the deeper, 17 feet, soil gas wells. Therefore, ACEH requests incorporating a tremie pipe for sand and seal placement in accordance with the Advisory.
>
> 2. **Well Seal-** The description of the well seal, consisting of a hydrated bentonite slurry, is not in agreement with the Advisory, which calls for emplacing at least six inches of dry granular bentonite on top of each sand pack. ACEH requests placement of at least six inches of dry granular bentonite on top of each sand pack in accordance with the Advisory.
>
> The proposed soil gas wells are described as permanent wells. However, the WP does not discuss the length of time the soil gas wells are anticipated to be in service. Bentonite-only annular seals are discouraged for long-term use as bentonite annular seals in the vadose zone desiccate readily and will not rehydrate once damaged . The Advisory states that, for wells that will be sampled for less than one year, the annular seal can be hydrated bentonite or other materials, as appropriate. However, for wells that will be used for longer than one year, the annular seal should be neat cement with bentonite. If the service life of the soil gas wells is not known, ACEH requests that an annular seal consisting of neat cement with bentonite be used.

3. **Well Depth-** As stated above, six permanent soil gas wells are proposed to be advanced to a depth of 17 feet bgs. Previous investigations conducted at the site have document depths to water in the 21-foot bgs range for soil bores located outside the building footprint. However, groundwater in soil bores SB1 and SB6, advanced within the building footprint, was reported at approximately 16 feet bgs. The deepest soil gas samples should be collected near the capillary fringe, not in or below the capillary fringe. Soil gas wells or probes should not be installed too close to the water table as low flow conditions might be encountered due to the high moisture content in the capillary fringe. The proposed soil bore SG9-17 is located within the building footprint. ACEH requests the depth to water be evaluated in each soil bore prior to soil gas well installation, and that the depth of each well be adjusted to a shallower depth if it is determined to be warranted.

4. **Geotracker Compliance-** The permanent soil gas wells and the sub-slab vapor pin meet the definition of permanent sampling points as defined in Title 23, California Code of Regulations (CCRs). A permanent sampling point is defined as a point that is sampled for more than a 30-day period. Hence, in addition to the submittal of the bore logs and laboratory analysis data, the locations of the permanent soil gas wells and the sub-slab vapor pin are required to be surveyed and the X, Y and Z coordinates uploaded to the State Water Resources Control Board (SWRCB) GeoTracker website.

TECHNICAL REPORT REQUEST

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

- **January 5, 2016- Soil Gas Investigation Report** (file name: RO0002981_SWI_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.

Online case files are available for review at the following website: http://www.acgov.org/aceh/index.htm. If your email address does not appear on the cover page of this notification, ACEH is requesting you provide your email address so that we can correspond with you quickly and efficiently regarding your case.

Thank you for your cooperation. ACEH looks forward to working with you and your consultants to advance the case toward closure. Should you have any questions regarding this correspondence or your case, please call me at (510) 567-6764 or send an electronic mail message at keith.nowell@acgov.org

Regards,

Keith Nowell

Keith Nowell PG, CHG

Hazardous Materials Specialist

Alameda County Environmental Health

1131 Harbor Bay Parkway

Alameda , CA 94502-6540

phone: 510 / 567 - 6764

fax: 510 / 337 - 9335

email: keith.nowell@acgov.org

PDF copies of case files can be reviewed/downloaded at:

http://www.acgov.org/aceh/lop/ust.htm

=

P&D ENVIRONMENTAL, INC.

55 Santa Clara Ave, Suite 240
Oakland, CA 94610
(510) 658-6916

November 9, 2015
Work Plan 0461.W2

Mr. Keith Nowell
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

SUBJECT: SUB-SLAB DEPRESSURIZATION FEASIBILITY TEST WORK PLAN
ACEH Case # RO2981 and GeoTracker Global ID T10000000416
Red Hanger Kleaners
6235-6239 College Avenue
Oakland, CA

Dear Mr. Nowell:

P&D Environmental, Inc. (P&D) has prepared this work plan for a sub-slab depressurization feasibility testing at the subject site on behalf of the property owner Ronald Elvidge and EFI Global, Inc. (EFI). The feasibility test objective is to determine if sub-slab depressurization is feasible as a mitigation measure for vapor intrusion of the dry cleaning chemical tetrachloroethene (PCE) at the site. The work scope includes extracting sub-slab vapors at three different locations in the former dry cleaner space, monitoring vacuum at surrounding locations, and collection of soil gas samples from the blower exhaust at the conclusion of extraction at each of the three locations. All work will be performed under the direct supervision of a professional geologist.

A Site Location Map is attached as Figure 1 and a Site Plan showing proposed sub-slab extraction locations SSE1 through SSE3 and vacuum observation locations VP1 through VP8 at the site is attached as Figure 2.

BACKGROUND

A discussion of the historical site use as a drycleaner and historical subsurface and indoor air investigations is provided in P&D's October 16, 2015 Soil Gas Investigation Work Plan (document 0461.W1), and P&D's November 3, 2015 Indoor Air Investigation and Mitigation Report. Historical soil gas PCE concentrations at a depth of five feet below the ground surface (bgs) and sub-slab PCE soil gas concentrations are shown on Figure 2. Proposed soil gas wells shown on Figure 2 are associated with a different work scope set forth in P&D's October 16, 2015 work plan.

SCOPE OF WORK

P&D will perform the following tasks for installation sub-slab depressurization pilot testing at the subject site.

- Health and safety plan preparation.
- Floor slab coring at three locations (SSE1 through SSE3) for extraction and installation of vacuum observation Vapor Pins VP2 through VP8. Vapor Pin VP1 will be installed associated with soil gas well installation which is addressed in a different work plan.
- Sub-slab depressurization pilot test flow, vacuum, radius of influence, and extracted vapor sample collection.
- Arrange for laboratory analysis of one air sample collected from each well where vacuum is applied.
- Report preparation.

Each of these is discussed below in detail.

Health and Safety Plan Preparation

A health and safety plan will be prepared for the scope of work identified in this work plan. Prior to the beginning of field work, the drilling location will be marked with white paint and Underground Service Alert will be notified for underground utility location.

Sub-Slab Vapor Extraction Location and Vapor Pin Installation

Three holes measuring 5-inches in diameter and designated as SSE1 through SSE3 will be cored through the building floor slab and seven Vapor Pins designated as VP2 through VP8 will be installed at locations shown on Figure 2. Vapor Pin VP1 will be installed associated with soil gas well installation which is addressed in a different work plan. The cored holes will be fitted with 4-inch diameter PVC pipe that will be caulked in place and fitted with PVC caps, and the Vapor Pins will be installed as recessed Vapor Pins with flush-mounted secured stainless steel covers. Temporary valves with barbs will be installed at each Vapor Pin and in the PVC cap at each concrete cored location for vacuum monitoring during the feasibility test.

Sub-Slab Depressurization Pilot Test

Prior to the application of vacuum to the first extraction location, baseline vacuum values will be measured using a digital manometer and/or Magnehelic gages at each vapor extraction well and at each sub-slab monitoring port to establish baseline vacuum conditions.

During the sub-slab depressurization pilot test, vacuum will be applied sequentially to each of the extraction locations and vacuum will be simultaneously monitored at all Vapor Pin locations (VP1 through VP8) and at extraction locations where extraction is not being performed. Vacuum will be applied for up to 2 hours at each extraction location with a 1 horsepower regenerative blower capable of generating a maximum air flow of 92 cubic feet per minute (cfm) and a maximum

vacuum of 48 inches of water column. Air flow will be monitored with a hot wire anemometer, and vacuum will be monitored with digital monometers and/or Magnehelic gages. Organic vapor concentrations of extracted air will be monitored using a portable Photoionization Detector that will be calibrated with a 100 ppm isobutylene standard. Emissions from the blower will be abated using one 55-gallon drum containing granular activated carbon. Vacuum, flow, and PID values will be recorded on field forms.

One air sample will be collected from the inlet to the blower into a 1-liter Summa canister at the conclusion of vapor extraction for each of the three extraction locations. Each sample will be collected using an unused manifold equipped with a nominal 150 cubic centimeter flow controller until the canister vacuum is approximately 5 inches of Mercury. Each canister will be labeled and stored in a box pending shipment to the laboratory. Chain of custody procedures will be observed for all sample handling.

The drum containing granular activated carbon will be labeled and stored at the site pending appropriate disposal.

Arrange for Sample Analysis

All three of the air samples collected from sub-slab extraction locations SSE1 through SSE3 will be analyzed at Eurofins-Air Toxics Ltd. of Folsom, California for Volatile Organic Compounds (VOCs) using EPA Method TO-15.

Report Preparation

Upon receipt of the laboratory analytical results, a report will be prepared. The report will document the pilot test procedures and results and will include a site map showing the sub-slab extraction locations, copies of field data sheets generated during the pilot test, a copy of the laboratory report, tables summarizing the sample results (including air flow, vacuum, radius of influence, and extracted vapor concentrations), recommendations based on the sample results, and the stamp of a professional geologist. A copy of the report and associated laboratory information (including EDFs) will be uploaded to the County ftp site and to GeoTracker.

November 9, 2015
Work Plan 0461.W2

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

Sincerely,

P&D Environmental, Inc.

Paul H. King

Paul H. King
California Professional Geologist #5901
Expires: 12/31/15

Attachments:

Figure 1 – Site Location Map
Figure 2 – Site Plan Showing PCE Concentrations in Soil Gas and Sub-Slab Soil Gas

PHK/ sjc
0461.W2

FIGURES

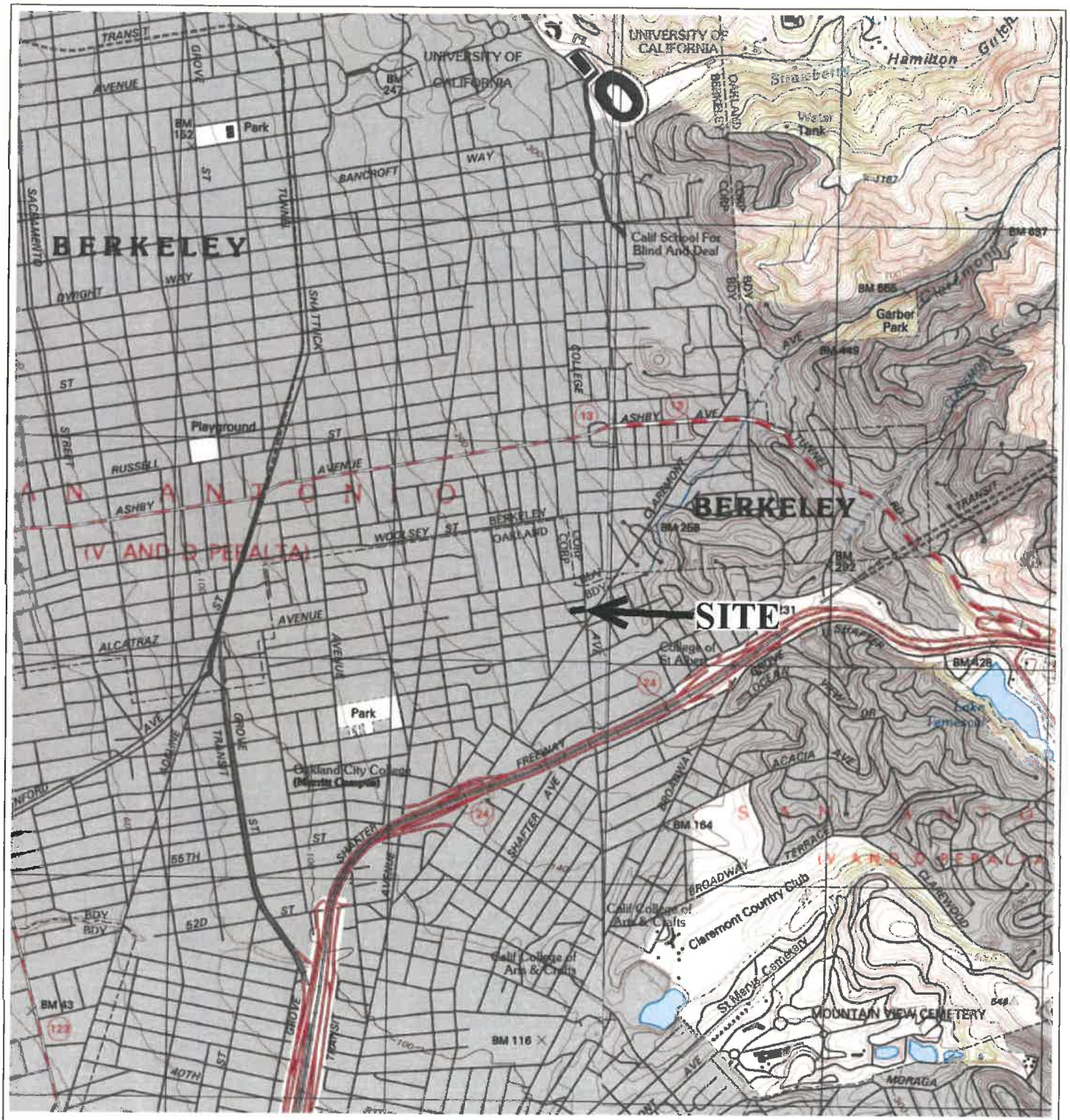
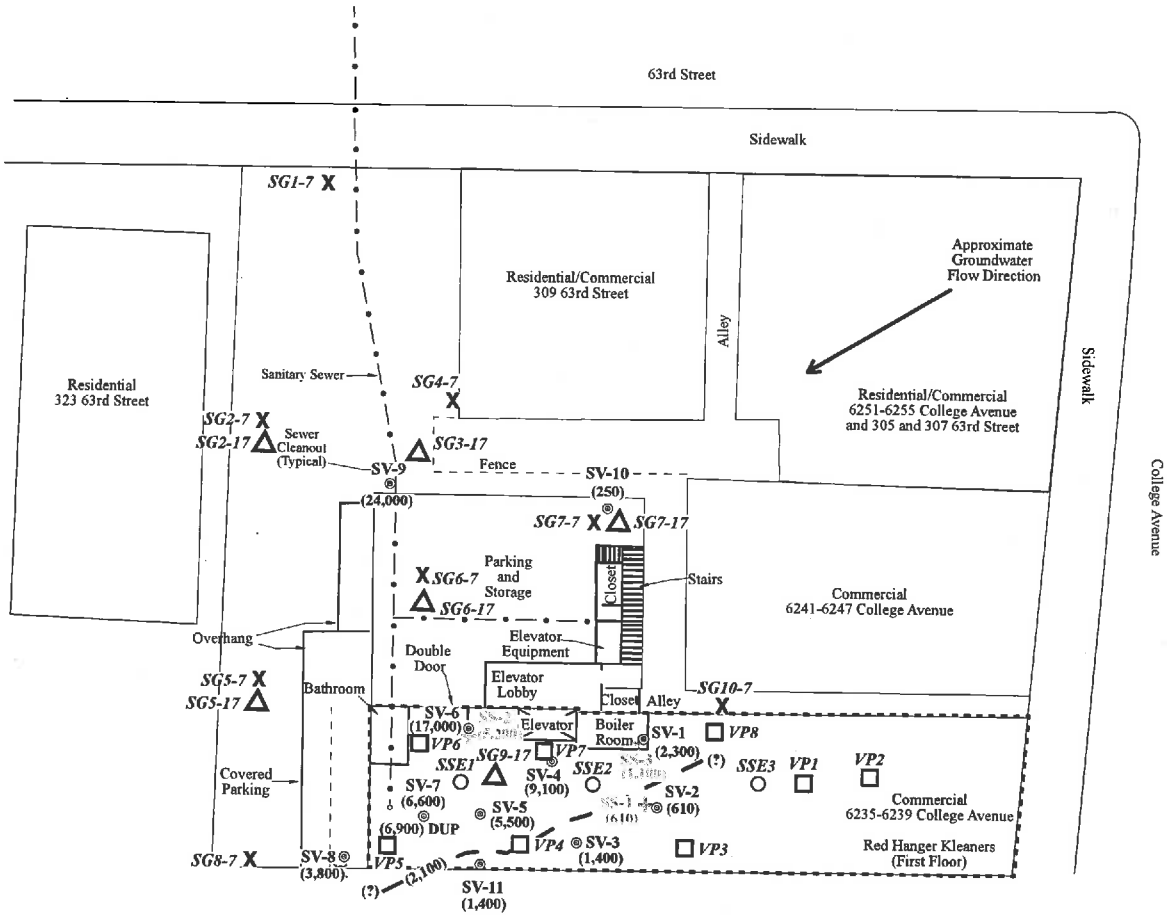


Figure 1
Site Location Map
Red Hanger Kleaners
6239 College Avenue
Oakland, California

Base Map From:
U.S. Geologic Survey 7.5 Minute Quadrangles Oakland East, and Oakland West, both maps edited 1996.

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



NOTE: No 7-Foot Soil Gas Well Proposed at Locations SG3 and SG9, and No 17-Foot Soil Gas Well Proposed at Locations SG1, SG4, SG8, and SG10.

Figure 2
Site Plan Showing PCE Concentrations in Soil Gas and Sub-Slab Soil Gas
Red Hanger Kleaners
6239 College Avenue
Oakland, California

Base Map from:
Gordon Building, July 30, 2007, Alameda County Assessor's Map, Revised June 15,1989, and Google Earth, 2015

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

0 15 30
Approximate Scale in Feet

N

Nowell, Keith, Env. Health

From: PDKing0000@aol.com
Sent: Monday, November 09, 2015 1:18 PM
To: Nowell, Keith, Env. Health
Cc: Gary_Bates@efiglobal.com; ronpatelvidge@gmail.com; Roe, Dilan, Env. Health
Subject: Red Hanger Kleaners RO2981 - Sub-Slab Depressurization Work Plan
Attachments: 0461.W2.pdf

Hi Keith,

You will find attached a pdf copy of the Red Hanger Kleaners RO2981 - Sub-Slab Depressurization Feasibility Test Work Plan (document 0461.W2.pdf) for the subject site.

As we discussed on the telephone a little while ago, we are presently scheduled to perform the feasibility test this coming Thursday 11/12/15 based on the prospective tenant needing to decide about moving forward with use of the space and the upcoming holidays.

We will upload a pdf copy of the work plan with a certification letter later today.

Please let me know if you have any questions or need any additional information.

Thank you!
Paul

Paul H. King
Professional Geologist

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

(510) 658-6916 telephone
(510) 834-0152 facsimile
(510) 387-6834 cellular
Paul.King@pdenviro.com

Nowell, Keith, Env. Health

From: PDKing0000@aol.com
Sent: Sunday, November 22, 2015 12:43 PM
To: Nowell, Keith, Env. Health
Cc: gary_bates@efiglobal.com; ron_holt@efiglobal.com; patrick@ellwoodcommercial.com; peet@prodigy.net; ronpatelvidge@gmail.com; dcs@youngdahl.net; Roe, Dilan, Env. Health
Subject: College Ave RO2981 Red Hanger Kleaners - 11/20/15 Status and Sampling Schedule

Hi Keith,

The status of environmental work at the subject site as of 11/20/15 is as follows:

All of the soil gas wells were successfully installed as of 11/12/15. The boreholes to a depth of 17 feet at locations SG5, SG6, and SG9 were left open for approximately 1 to 2 days before constructing the soil gas wells and no water accumulated in any of the boreholes.

We are presently scheduled to collect soil gas samples from the soil gas wells on December 2 and 3, 2015.

The sub-slab depressurization feasibility test was successfully completed 11/16/15 and the sub-slab air samples were received at the lab 11/17/15. We expect the results back from the lab by the end of the first week of December. We encountered a grade beam at extraction location SSE2, while coring the extraction locations in the floor slab and ended up installing an extra extraction location between location SSE2 and College Avenue in addition to successfully coring SSE2, for a total of 4 extraction locations evaluated during the feasibility test. Approximately 9 inches of coarse-grained material consisting mostly of gravel was encountered beneath the slab at all cored locations. The test results showed excellent vacuum communication beneath the slab, with vacuum communication also documented between the extraction locations and soil gas wells SG9-17 and SG10-7. I will let you know once we get the sub-slab extraction feasibility test soil gas results.

All of the air filtration units in the building and the building HVAC fans are continuing to operate on a full-time basis.

Please let me know if you have any questions or need any additional information.

Thank you!

Paul

Paul H. King
Professional Geologist

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

(510) 658-6916 telephone
(510) 834-0152 facsimile
(510) 387-6834 cellular
Paul.King@pdenviro.com

Nowell, Keith, Env. Health

From: PDKing0000@aol.com
Sent: Friday, February 19, 2016 5:46 PM
To: Nowell, Keith, Env. Health
Cc: Gary_Bates@efiglobal.com
Subject: Re: Request for access to 323 63rd St, Oakland - RO2981

Hi Keith,

Here is the response that I received via e-mail for site access authorization.

I spoke briefly with Menna near the end of Friday 2/19/16 and he said that if he received a letter addressed to the owner c/o of Menna at Lapham, he would consider the request for access. He said that the two 4-plexes are identified as 323 and 321 63rd Street.

It is my understanding that the property owner is

Martin Hohensee
541-848-7091

Can you send a letter to the property owner requesting that P&D be provided access? I will forward to you the request that I provided to Menna on 2/1/16 for access.

I have received access authorization from the property owner for proposed soil gas wells at 6251-6255 College Avenue.

Thank you!

Paul

Paul H. King
Professional Geologist

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

(510) 658-6916 telephone
(510) 834-0152 facsimile
(510) 387-6834 cellular
Paul.King@pdenviro.com

In a message dated 2/19/2016 14:51:51 Pacific Standard Time, menna@laphamcompany.com writes:

> Hello Paul,
>
> I have spoken with the owner and he has denied your request. Please do not go on the property or perform any of the exploratory tests you requested.
>
> Thank you.

Menna

Menna Tesfatsion

The Lapham Company, Inc.
4844 Telegraph Ave. | Oakland, CA 94609
Phone: 510.594.7600 Ext. 109 | Fax: 510.594.7611
menna@laphamcompany.com | www.laphamcompany.com

From: PDKing0000@aol.com [mailto:PDKing0000@aol.com]
Sent: Friday, February 19, 2016 12:59 PM
To: menna@laphamcompany.com
Subject: Request for access to 323 63rd St, Oakland

Hi Menna,

I am following up regarding my request for access to the property at 323 63rd Street in Oakland.

Please let me know at your earliest convenience.

Thank you!

Paul

Paul H. King
Professional Geologist

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

(510) 658-6916 telephone
(510) 834-0152 facsimile
(510) 387-6834 cellular
Paul.King@pdenviro.com

Nowell, Keith, Env. Health

From: PDKing0000@aol.com
Sent: Friday, February 19, 2016 5:48 PM
To: Nowell, Keith, Env. Health
Cc: Gary_Bates@efiglobal.com; Roe, Dilan, Env. Health
Subject: Fwd: Request for site access at 323 63rd Street, Oakland - RO2981
Attachments: 0461.R5FigureshowingProposedSG13-SG18.pdf

Hi Keith,

FYI.

Paul

From: paul.king@pdenviro.com
To: menna@laphamcompany.com
Sent: 2/1/2016 15:58:07 Pacific Standard Time
Subj: Request for site access at 323 63rd Street, Oakland

Hi Menna,

It was very nice speaking with you on Friday 1/29/16.

As we discussed, I am performing a subsurface investigation of dry cleaner chemical at the property next door (to the east) of the 323 63rd Street property associated with former dry cleaner operations at 6239 College Avenue. I am requesting permission to install some soil gas wells in the landscaped portions of the 323 63rd Street property so that we can determine if dry cleaning chemicals are present in the soil gas at the 323 63rd Street property, and if yes, where they are located. A map showing the locations of the proposed soil gas wells is attached.

All of the proposed soil gas wells will be installed in boreholes that are 6-inches in diameter. A small diameter tube will be placed into each borehole, sand will be poured into the borehole so that the lowermost two feet of the borehole is filled with sand and the lower end of the tube is surrounded by the sand. The remaining portion of the boreholes will be filled with cement and the top of the soil gas wells will be covered with a utility vault measuring approximately 10 inches in diameter. Proposed soil gas wells SG13, SG14 and SG15 will be 7 feet deep, and proposed soil gas wells SG16, SG17 and SG18 will be 17 feet deep.

Installation of the soil gas wells will be completed in approximately one day. All soil generated during soil gas well installation will be removed from the site on the day that it is removed from the ground. We will return to the site approximately two weeks after the wells are installed to collect an air sample from the wells. All activities will be performed in a manner such that access to the property is not obstructed and tenants are not inconvenienced. The wells will be removed at some time in the future which has not yet been determined. All activities will be performed at no cost to you or the property owner.

As we also discussed, our investigation is being overseen by Mr. Keith Nowell of the Alameda County Department of Environmental Health. Mr. Nowell can be contacted at 510-567-6764 or by e-mail at keith.nowell@acgov.org .

As we also discussed, the information regarding our investigation is available on-line at the following link:

http://geotracker.waterboards.ca.gov/

Enter the desired address (6239 College Avenue, Oakland), and then click on the Search button.

Hover the cursor over the green box that is visible on the map at the location of the site until the cursor turns into a hand with a pointing finger, then left click once and a window will pop up.

Left click once on the blue hyperlink name of the site that is in the window that popped up (Red Hanger Kleaners).

On the second row of tabs left click once on Site Maps/Documents

Scroll down to see the most recent reports and communications.

Your providing us site access will be greatly appreciated so that we can assess if dry cleaner chemical is present at your property and complete our investigation.

Please let me know if you have any questions or need any additional information.

Thank you!

Paul

Paul H. King
Professional Geologist

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

(510) 658-6916 telephone
(510) 834-0152 facsimile
(510) 387-6834 cellular
Paul.King@pdenviro.com

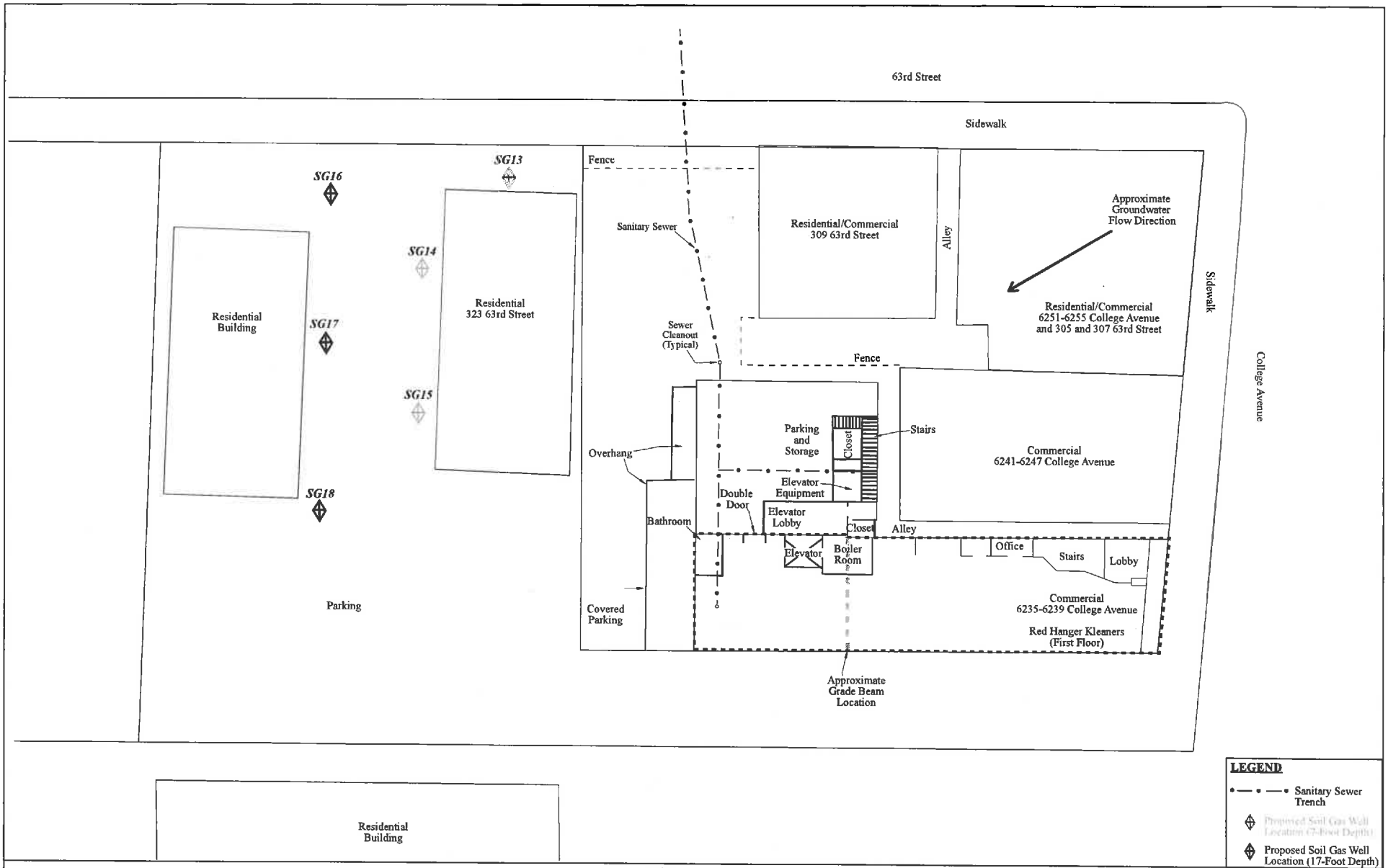


Figure
Site Plan Showing Proposed Soil Gas Well Locations
Red Hanger Kleaners
6239 College Avenue
Oakland, California

Base Map from:
Gordon Building, July 30, 2007, Alameda County Assessor's Map, Revised June 15,1989, and Google Earth, 2015

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

0 15 30
Approximate Scale in Feet

N

Nowell, Keith, Env. Health

From: PDKing0000@aol.com
Sent: Friday, March 04, 2016 10:15 AM
To: Nowell, Keith, Env. Health
Cc: gary_bates@efiglobal.com; Roe, Dilan, Env. Health
Subject: ACEH case file RO2981 - Red Hanger Kleaners - Offsite Property Access Denial

Hi Keith,

As we discussed at the end of yesterday 3/3/16 on the telephone, review of the January 21, 2016 P&D Environmental, Inc. Soil Gas Investigation Report shows that soil gas wells SG2-7 and SG2-17 are located adjacent to the 4-plex structure identified on the figure as 323 63rd Street (see Figure 2). Review of the figure shows that the estimated horizontal distance of the wells from the property line of approximately 5 feet. The highest PCE soil gas concentration detected at the site was in well SG2-17 (120,000 ug/m3), suggesting that even higher elevations could be present to the west of well SG2-17 (see Figure 4).

Review of the calculated risk and hazard associated with vapor intrusion using the DTSC screening level spreadsheet version of the Johnson-Ettinger vapor intrusion model shows that the calculated incremental increased cancer risk posed by vapor intrusion of PCE from a depth of 7 feet at soil gas well SG2-7 is 78 in a million, and that the hazard index is 1.0. Similarly, the calculated incremental increased cancer risk posed by vapor intrusion of PCE from a depth of 17 feet at soil gas well SG2-17 is 68 in a million (see Table 2B of the report).

DTSC vapor intrusion guidance indicates that incremental increased cancer risk greater than 100 in a million recommends that a response action is needed of vapor intrusion mitigation or source removal. Incremental increased carcinogenic risk values between 1 in a million and 100 in a million require evaluating the need for action, including investigation, mitigation and source removal as possible responses (see Table 2B of the report). Similarly, a hazard quotient of 1.0 or greater indicates that further action is required, including investigation, mitigation and source removal as possible responses.

I believe that it is very important that both the property owner who today rejected the request for access to his property for PCE soil gas investigation and his property manager be clearly informed and aware regarding the following:

o the calculated incremental increased cancer risk and hazard associated with vapor intrusion of PCE at a location immediately adjacent to their building,

o the potential health risks posed to the tenants by potential vapor intrusion of PCE that has been detected at their upgradient property boundary and that appears to be present beneath at least one of their buildings,

o their potential liability associated with allowing potential exposure conditions for tenants to persist,

o their responsibilities as a property owner and property manager to inform their tenants regarding the presence of chemicals such as PCE and potential exposure, and

o the ACEH concern regarding the potential for vapor intrusion exposure to the public at this property.

Please let me know if you have any questions or need any additional information.

Thank you!

Paul

Paul H. King
Professional Geologist

P&D Environmental, Inc.
55 Santa Clara Avenue, Suite 240

Oakland, CA 94610

(510) 658-6916 telephone
(510) 834-0152 facsimile
(510) 387-6834 cellular
Paul.King@pdenviro.com

STATE WATER RESOURCES CONTROL BOARD

GEOTRACKER ESI

UPLOADING A GEO_REPORT FILE

SUCCESS

Your GEO_REPORT file has been successfully submitted!

Submittal Type:	GEO_REPORT
Report Title:	Site Investigation and Soil Vapor Extraction Feasibility Test Work Plan
Report Type:	Pilot Study / Treatability Workplan
Report Date:	3/15/2016
Facility Global ID:	T10000000416
Facility Name:	RED HANGER KLEANERS
File Name:	RO2981_WP_R_2016-03-15.pdf
Organization Name:	RGA Environmental
Username:	PHKINGRGA
IP Address:	45.19.218.124
Submittal Date/Time:	3/15/2016 4:09:55 PM
Confirmation Number:	3794389724

PERJURY STATEMENT

Subject: Fuel Lake Case No. Ro0002981 and Geotracker Clobal ID T1000000416, Red Hanger Cleaners, 6335-6339 College Ave., Oakland, CA 94618

" 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."

Ted Cleveland
Vice President – Eastern Region
EFI Global, Inc.

P&D ENVIRONMENTAL, INC.

55 Santa Clara Ave, Suite 240
Oakland, CA 94610
(510) 658-6916

March 15, 2016
Work Plan 0461.W3

Mr. Keith Nowell
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

SUBJECT: SITE INVESTIGATION AND SOIL VAPOR EXTRACTION FEASIBILITY TEST WORK PLAN
Spills Leaks, Investigation and Cleanup Leak Case No RO0002981
Geotracker Global ID T10000000416
Red Hanger Kleaners
6235-6239 College Avenue
Oakland, CA

Dear Mr. Nowell:

P&D Environmental, Inc. (P&D) has prepared this work plan for site investigation and a soil vapor extraction (SVE) feasibility test at the subject site on behalf of the property owner Ronald Elvidge and EFI Global, Inc. (EFI). This work plan is prepared following receipt of site access denial for additional soil gas investigation for the property located to the west of the subject site and conditions for access that we cannot satisfy for access to the property located to the northeast of the subject site, and to augment available information regarding the subsurface presence of tetrachloroethene (PCE) at the subject site.

The work scope includes the following activities:

- Drilling of six onsite boreholes designated as B9 through B14 to collect groundwater samples,
- Installation of two onsite soil gas wells designated as SG4-17 (17-foot depth) and SG11-17 (17-foot depth) for soil gas sample collection,
- Video camera visual evaluation of the site sanitary sewer pipe interior and exploratory excavation along the length of a portion of the onsite sanitary sewer to evaluate sanitary sewer trench construction materials and to evaluate the presence of PCE in the trench materials, with installation of horizontal SVE piping in the portion of the onsite sanitary sewer trench where exploratory excavation is performed,
- Installation of three SVE wells designated as SVE1, SVE2 and SVE3 for SVE feasibility testing,
- Perform a SVE feasibility test using existing soil gas wells and Vapor Pins at the site to monitor for vacuum in the vicinity of the locations where soil vapor is extracted.

All work will be performed under the direct supervision of a California professional geologist. A Site Location Map is attached as Figure 1, a Site Plan showing historical and proposed groundwater sample collection borehole locations is attached as Figure 2, and proposed soil gas wells and proposed SVE wells are shown on Figures 5 and 6.

BACKGROUND

A detailed discussion of the historical site use as a drycleaner from 1987 to 2015 (approximately 28 years) and of all known historical subsurface investigations is provided in P&D's Soil Gas Investigation Work Plan dated October 16, 2015 (document 0461.W1). The work plan includes all known available soil, groundwater, soil gas, and indoor air sample results (through October 13, 2015) for the subject site and also discusses the available known historical dry cleaner operations from 1953 to 1987 (approximately 34 years) at the nearby former Kay's Cleaners located at 6251-6255 College Avenue. Review of the available data shows that trichloroethene (TCE) has not been detected in any soil, groundwater, or soil gas samples. All known historical water quality results for the site are summarized in Table 1 and the groundwater sample collection locations are shown in Figure 2 attached with this Site Investigation and Soil Vapor Extraction Feasibility Test Work Plan.

Documentation of the evaluation and mitigation of indoor air quality at the subject site (including post-mitigation air sample results for samples collected on October 21, 2015) are provided in P&D's November 3, 2015 Indoor Air Investigation Report (document 0461.R2). The report concluded that indoor air mitigation measures had successfully mitigated indoor air PCE and TCE concentrations to below commercial trigger and Environmental Screening Level concentrations for common areas and tenant spaces.

Documentation of a sub-slab depressurization feasibility test that was performed on November 16, 2015 in the former Red Hanger Kleaners dry cleaner store at the subject site is provided in P&D's December 14, 2015 Sub-Slab Depressurization Feasibility Test Report (document 0461.R4). During the sub-slab depressurization feasibility test a vacuum of between 12 and 13 inches of water column was applied under the building slab and the highest recorded vacuum at soil gas well SG9-17 (located within the footprint of the subject site former dry cleaner store) was approximately 0.1 inches of water column, and the highest recorded vacuum at soil gas well SG10-7 (located within the footprint of the subject site former dry cleaner store) was approximately 0.09 inches of water column. The information obtained during the feasibility test demonstrated that although a sub-slab grade beam appeared to function as a barrier to the eastward migration of PCE vapors beneath the floor slab, vacuum was readily observed at all observation locations beneath the floor slab. The readily observed vacuum is attributed to the uniform presence of approximately 8 to 9.5 inches of coarse-grained material consisting primarily of gravel located beneath the floor slab.

Documentation of soil gas well installation during November 2015 and associated soil gas sample collection on December 2, 2015 at the subject site is provided in P&D's January 21, 2016 Soil Gas

Investigation Report (document 0461.R3). The sample results for shallow (approximately 7 foot depth) and deeper (approximately 17 foot depth) soil gas samples collected on December 2, 2015 are shown as Figures 3 and 4 attached with this Site Investigation and Soil Vapor Extraction Feasibility Test Work Plan. A detailed discussion of the site geology and hydrogeology based upon available historical boring logs, in addition to a summary of the depth to groundwater during historical site investigations is provided in the January 21, 2016 report.

SCOPE OF WORK

P&D will perform the following tasks for site investigation and SVE feasibility evaluation at the subject site.

- Permitting, mark drilling locations for Underground Service Alert notification and prepare a health and safety plan.
- Drilling six onsite boreholes designated as B9 through B14 to collect groundwater samples,
- Installation of two soil gas wells designated as SG4-17 (17-foot depth) and SG11-17 (17-foot depth) for soil gas sample collection,
- Video camera visual evaluation of the site sanitary sewer pipe interior and exploratory excavation along the length of a portion of the onsite sanitary sewer to evaluate sanitary sewer trench construction materials and to evaluate the presence of PCE in the trench materials, with installation of horizontal SVE piping in the portion of the onsite sanitary sewer trench where exploratory excavation is performed,
- Installation of three SVE wells designated as SVE1, SVE2 and SVE3 for SVE feasibility testing,
- Perform a SVE feasibility test using existing soil gas wells and Vapor Pins at the site to monitor for vacuum in the vicinity of the locations where soil vapor is extracted.
- Arrange for laboratory analysis of soil, water, soil gas, and air samples.
- Report preparation.

Each of these is discussed below in detail.

Permitting, Mark Drilling Locations, and Health and Safety Plan Preparation

Following oversight agency approval of this work plan, permits will be obtained for drilling and well installation from the Alameda County Public Works Agency (ACPWA), notification of the SVE feasibility test will be provided to the Bay Area Air Quality Management District, and site access will be scheduled with the property manager. The drilling locations will be marked with white paint and Underground Service Alert will be notified for underground utility location. A health and safety plan will be prepared for the scope of work identified in this work plan. Notification will be provided to the ACPWA inspector for the drilling dates, and notification will

be provided to the Alameda County Department of Environmental Health (ACDEH) of the scheduled dates of drilling, sampling, and SVE feasibility testing.

Borehole Drilling for Groundwater Grab Sample Collection

Groundwater grab samples will be collected from first-encountered groundwater in the boreholes to further evaluate the extent of PCE in first-encountered groundwater. Boreholes will be continuously cored to a depth of 25 feet below the ground surface (bgs) at locations designated as B9 through B14 (see Figure 2) using Geoprobe direct-push technology to drive a 2.5-inch outside diameter Geoprobe macrocore sampler lined with transparent PVC sleeves. The soil from the borings will be logged in the field in accordance with standard geologic field techniques and the Unified Soil Classification System. All soil from the boreholes will be evaluated with a Photoionization Detector (PID) equipped with a 10.6 eV bulb and calibrated using a 100 ppm isobutylene standard.

A soil sample will be collected from borehole B9 (located adjacent to the sanitary sewer trench) at a depth of approximately 3 feet bgs (the sanitary sewer pipe invert depth is approximately 2.5 feet bgs at the adjacent sanitary sewer cleanout). In addition, soil samples will be collected from all of the continuously cored boreholes at a depth immediately above the water table by selecting a 6-inch long portion of the transparent PVC sleeve corresponding to the desired depth, sequentially covering the ends of the selected portion of sleeve with aluminum foil and plastic endcaps, and then labeling and storing the sample in a cooler with ice pending delivery to the laboratory. Chain of custody procedures will be observed for all sample handling. With the exception of the soil sample collected from borehole B9 adjacent to the sanitary sewer cleanout at a depth of 3 feet bgs, all of the soil samples will be placed on hold pending receipt of the groundwater sample results.

Once groundwater is encountered during drilling, a 1-inch diameter temporary slotted PVC pipe will be placed in each borehole and a groundwater sample will be collected from each borehole by inserting a ¼-inch diameter polyethelene tube to the bottom of the borehole and using a peristaltic pump to retrieve the sample. The samples will be collected directly from the discharge tubing at each location into 40-milliliter Volatile Organic Analysis (VOA) vials that will be sealed with Teflon-lined screw caps. The VOA vials will be overturned and tapped to ensure that no air bubbles are present, and then will be labeled and transferred to a cooler with ice until they are transported to the laboratory. Chain of custody documentation procedures will be observed for all sample handling.

All drilling and sampling equipment will be cleaned by steam cleaning or with an Alconox solution followed by a clean water rinse prior to use in each borehole. Following completion of logging and sample collection activities, the boreholes will be filled with neat cement grout. All soil and water generated during subsurface investigation will be stored in 55-gallon labeled drums at the site pending characterization and proper disposal.

Soil Gas Well Construction and Sample Collection

Permanent soil gas wells will be constructed at proposed locations SG4-17 and SG11-17 (see Figures 5 and 6) to evaluate the extent and presence of HVOCs in soil gas. The soil gas wells will be constructed and the soil gas samples will be collected in accordance with procedures recommended in the February 2016 San Francisco Bay Regional Water Quality Control Board User's Guide: Derivation and Application of Environmental Screening Levels, and the following Department of Toxic Substances Control (DTSC) guidance documents:

- July 2015 Advisory - Active Soil Gas Investigations,
- March 2013 – FAQ for the 2012 Active Soil Gas Investigations Advisory,
- October 2011 – Vapor Intrusion Guidance,
- October 2011 – Vapor Intrusion Mitigation Advisory.

Based on low flow condition concerns associated with clay at the site, to remain consistent with construction methods for the soil gas wells previously constructed at the site, and based on access limitations, the permanent soil gas wells will be constructed in boreholes that will be drilled using a 6-inch outside diameter hand auger.

The soil from the borings will be logged in the field in accordance with standard geologic field techniques and the Unified Soil Classification System. All soil from the boreholes will be evaluated with a PID equipped with a 10.6 eV bulb and calibrated using a 100 ppm isobutylene standard. No soil samples will be retained for laboratory analysis.

The soil gas wells will be constructed by pouring #2/16 Lonestar sack sand into the borehole to fill the lowermost one foot of the borehole with sand. A ¾ inch diameter PVC pipe will then be used to place a 0.250-inch outside diameter (0.187-inch inside diameter) Teflon tube with a High Density Polyethylene (HDPE) filter at the bottom of the tube to the top of the one-foot thick sand layer (a depth of 1 foot above the bottom of the borehole), and additional #2/16 Lonestar sack sand will be poured into the borehole to two feet above the bottom of the borehole (the lowermost two feet of the borehole will be filled with sand with the filter at the end of the tube in the middle of the sand interval). The ¾-inch diameter PVC pipe will be withdrawn from the borehole as the sand is poured into the borehole while making sure that the HDPE filter stays in the center of the sand interval. Hydrated bentonite slurry will then be placed in the annular space above the sand to a depth of 1 foot bgs.

Each tubing length in the borehole will extend 2 feet above the ground surface, with total tubing lengths being 18 feet for each soil gas well. The top of each soil gas well will be enclosed in a well box with a lid that is secured with bolts. Following construction, the soil gas wells will not be sampled for a minimum of 2 weeks. Soil gas samples will not be collected if more than ½ inch of precipitation has occurred during the five days prior to the scheduled sampling date.

Soil gas samples will be collected from the two new soil gas wells in the following manner. A soil gas sampling manifold with a 1-liter Summa canister as the sampling canister for each location (see Figure 8) will be assembled in a shroud consisting of a 35-gallon Rubbermaid bin that has been modified by cutting viewing ports into the sides of the shroud and covering the viewing ports with transparent polycarbonate sheets. A hole measuring approximately two inches square in the bottom of the shroud allows the shroud to cover the soil gas well while still allowing access to the temporary well through the bottom of the bin. At the time that the sampling manifold is assembled, the vacuum for the sample canister will be verified with a vacuum gauge and recorded.

Prior to sampling the soil gas well, a 10 minute shut-in test of the sampling manifold will be performed by closing the valve located between the filter and the pressure gauge, opening the purge canister valve, and recording the manifold system vacuum (see Figure 8). No purge testing for purge volume determination will be performed in accordance with recommendations in the DTSC July 2015 Advisory for Active Soil Gas Investigations. Following successful verification of the manifold shut-in test, a total of 200 milliliters plus the tubing volume will be extracted prior to sample collection. The purge time will be calculated using a nominal flow rate provided by the flow controller of 150 cubic centimeters per minute.

Following completion of the purging, a lid will be placed onto the shroud and a tracer gas Difluoroethane (DFA) will be sprayed into the shroud interior for one second through a tube connected to a hole in the side of the shroud. Gloves in the lid of the shroud will be used to open the sample canister valve. After verifying that low flow conditions are not present associated with the soil gas sample, an air sample will be collected from the shroud atmosphere to quantify the shroud tracer gas concentration while the soil gas sample is being collected. The shroud atmosphere sample will be collected into a Tedlar bag that is placed into a vacuum chamber with the Tedlar bag inlet connected to a new piece of Teflon or polyethylene tubing that is inserted into the shroud atmosphere through a hole in the side of the shroud.

Once the vacuum for the sample canister valve has decreased to 5 inches of mercury, the gloves in the lid of the bin will be used to close the sample canister valve. The pressure gage on the inlet side of the flow controller (see Figure 8) will be monitored during sample collection to ensure that the vacuum applied to the soil gas well does not exceed 100 inches of water.

One duplicate soil gas sample will be collected into a Summa canister from one of the soil gas wells using a stainless steel sampling tee for the Summa canisters using methods described above. Following soil gas sample collection, a PID will be connected to the soil gas well Teflon tubing to obtain a preliminary field value for the sample collection location. The soil gas Summa canisters will be stored in a box and promptly shipped to the laboratory for extraction and analysis.

Chain of custody procedures will be observed for all sample handling. Measurements of vacuums, purging and equilibration time intervals, and PID readings will be recorded on Soil Gas Sampling Data Sheets.

All soil gas well construction equipment will be cleaned with an Alconox solution wash followed by a clean water rinse prior to use at each location. New Teflon tubing and filters and clean, unused vacuum gages and stainless steel sampling manifolds will be used at each sample collection location. All soil and water generated during soil gas well construction will be stored in 55-gallon labeled drums at the site pending characterization and proper disposal.

Sanitary Sewer Pipe and Trench Evaluation

A video camera will be used to visually evaluate the site sanitary sewer pipe interior between the bathroom located at the west end of the former Red Hanger Kleaner's store to 63rd Street for evidence of conditions that could result in releases from the sewer pipe (see Figure 5).

In addition, an exploratory trench measuring approximately 8 feet in length will be excavated along the length of a portion of the onsite sanitary sewer pipe at the location shown on Figure 5 to evaluate sanitary sewer trench construction materials and to evaluate the presence of PCE in the trench materials. The excavated trench materials will be evaluated using a PID as described above, and one soil sample will be collected from each end of the exploratory trench at a depth of approximately 6-inches below the sanitary sewer pipe if no trench bedding material is present, or at a depth of approximately 6-inches below any trench bedding material if trench bedding material is present. The soil samples will be collected at each location into a 2-inch diameter, 6-inch long stainless steel tube in a steel sampler that is driven into undisturbed soil by a slide hammer. Following sample collection each stainless steel tube will be removed from the sampler and the ends of the tube will be sequentially covered with aluminum foil and plastic endcaps. The tubes will be labeled and stored in a cooler with ice pending delivery to the laboratory. Chain of custody procedures will be observed for all sample handling.

Unused stainless steel tubes will be used at each sampling location for sample collection, and all sampling equipment will be cleaned with an Alconox solution followed by a clean water rinse prior to use at each location.

Prior to backfilling the trench a 5-foot long section of 4-inch diameter slotted PVC pipe will be placed horizontally in the bottom of the trench adjacent to the sanitary sewer pipe. The screened interval of the pipe will be constructed using 0.020-inch factory slot screen and the pipe will be surrounded with #2/12 Lonestar washed sack sand for a distance of approximately 3 inches from the pipe. An unslotted vertical section of 4-inch diameter schedule 40 PVC pipe will be connected to the south end of the horizontal pipe with a PVC elbow and the vertical section of pipe will extend upwards to approximately one foot bgs. The trench will then be backfilled and compacted using soil that had been excavated from the trench. Any excess soil will be stored in 55-gallon labeled drums at the site pending characterization and proper disposal. The top of the vertical pipe will be covered with a traffic-rated locking well vault, and the remaining portion of the trench will be resurfaced with concrete.

Soil Vapor Extraction Well Installation

A total of three soil vapor extraction wells designated as SVE1 through SVE3 will be installed at the subject site at locations shown on Figures 5 and 6. The boreholes for the wells will each be drilled to a total depth of 17 feet bgs using 12-inch outside diameter hollow stem augers and a truck-mounted drill rig. At locations SVE1 and SVE2 soil samples will be collected at five-foot intervals using a California-modified split spoon sampler lined with stainless steel or brass tubes driven by a 140 pound hammer falling 30 inches. Blow counts will be recorded every six inches. The soil from the boreholes will be logged in the field in accordance with standard geologic field techniques and the Unified Soil Classification System, and will also be evaluated with a PID using methods described above. Based on limited access at location SVE3, the borehole will be logged using visual observations of cuttings obtained by hand augering to a depth of 5 feet bgs and drilling to the total borehole depth with hollow stem augers, and driller's observations when coarse-grained materials are encountered.

No soil samples will be retained for laboratory analysis. The wells will be constructed using 4-inch diameter Schedule 40 PVC pipe to an approximate total depth of 17 feet bgs with a screen length of 10 feet between the depths of 7 and 17 feet bgs. The screened intervals of the wells will be constructed using 0.020-inch factory slot screen and the well screen will be surrounded with #2/12 Lonestar washed sack sand to a height of one foot above the top of the screen. Bentonite pellets will be placed in the borehole above the filter sand to a height of one foot above the sand. The remaining annular space will be filled with neat cement grout to approximately one foot bgs. The tops of the wells will be covered with traffic-rated locking well vaults.

All drilling and sampling equipment will be cleaned by steam cleaning or with an Alconox solution followed by a clean water rinse or prior to use in each borehole. Any soil or water generated during drilling will be stored in 55-gallon labeled drums at the site pending characterization and disposal.

Soil Vapor Extraction Feasibility Test

A trailer-mounted liquid ring blower capable of generating 12 inches of Mercury vacuum and a flow rate of 250 cubic feet per minute will be used to evaluate vapor extraction feasibility at the site at locations SVE1, SVE2, SVE3, and the riser to the slotted horizontal pipe located in the sanitary sewer trench. Carbon will be used as the air pollution control device.

Monitoring ports with valves will be installed at the top of each existing soil gas well, at each Vapor Pin that is located inside of the building (see Figure 7), at each SVE well where extraction is not performed, and in the top of the riser for the slotted horizontal pipe that is located in the sanitary sewer trench for evaluation of vacuum during SVE. Vacuum will be measured and recorded at vacuum monitoring locations surrounding each location where vacuum is applied to evaluate the radius of vacuum influence for the location where extraction is being performed.

Prior to the beginning of the application of vacuum at each SVE location for the SVE feasibility test, baseline vacuum conditions will be measured at the observation locations. A step test with two different vacuums will be performed at each extraction location, with the second vacuum applied being greater than the initial vacuum applied. Each SVE vacuum step will be performed for approximately 2 to 4 hours. During each SVE vacuum step, the following information and associated time of measurement will be periodically recorded for the blower.

- Air flow rate. Air flow rates will be measured using a hot wire anemometer.
- Air temperature. Ambient air temperature and air temperature at the blower inlet will be monitored at the beginning and end of each step.
- PID value. A field PID will be used to evaluate organic vapor concentrations at the beginning and end of each step at the blower inlet.
- Vacuum at the blower. The vacuum at the blower will be recorded at the beginning and end of each step using a vacuum gage.

During each SVE vacuum step, the following information and associated time of measurement will be periodically recorded at vacuum monitoring locations in the vicinity of the well or pipe riser where SVE is being performed.

- Vacuum will be measured using digital monometers or Magnehelic gages.

One air sample will be collected from a sampling port located at the inlet to the blower at the end of vapor extraction feasibility testing at each extraction location using a 1-liter Summa canister. The air flow rate during sample collection for each sample will be regulated using a new flow regulator that will result in a nominal air flow of 150 cubic centimeters per minute. Following air sample collection each Summa canister will be stored in a box pending delivery to the laboratory. Chain of custody procedures will be observed for all sample handling.

Once the two vacuum steps are completed at an extraction location, the application of vacuum will be removed from the extraction location and vacuum will be monitored at nearby vacuum monitoring locations in an effort to record the rate of vacuum decay.

Arrange for Sample Analysis

All of the soil and groundwater samples collected during site investigation will be analyzed at McCampbell Analytical, Inc. in Pittsburg, California for VOCs, including PCE and associated decomposition products, using EPA Method 8260B. All of the soil gas well samples, the soil gas well shroud air samples, and the SVE feasibility test air samples will be analyzed at Eurofins Air Toxics, Inc. for VOCs, including PCE and associated decomposition products, using EPA Method TO-15. The soil gas sample detection limits will be equal to or less than San Francisco Bay Regional Water Quality Control Board (SFRWQCB) February 2016 Table SG-1 Subslab/Soil Gas Vapor Intrusion Human Health Risk Screening Levels.

Report Preparation

Upon receipt of the laboratory analytical results, a report will be prepared. The report will document the soil gas well installation and sample collection procedures, the groundwater sample collection procedures, the sanitary sewer video observations and exploratory excavation observations, and the soil gas, groundwater and soil sample results. The report will include a map showing the sample collection locations, boring logs, well construction diagrams, copies of the laboratory analytical reports, and tables summarizing the sample results. The report will also include copies of field data sheets generated during the SVE feasibility test, (including air flow, vacuum, radius of influence, and extracted vapor concentrations) recommendations based on the sample results, and the stamp of a professional geologist.

Upon receipt of an approved SVE permit from the BAAQMD, SVE remediation will be initiated at the subject site. Based on the SVE feasibility test results, additional extraction locations may be installed as part of the SVE remediation system.

March 15, 2016
Work Plan 0461.W3

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

Sincerely,

P&D Environmental, Inc.

Paul H. King

Paul H. King
California Professional Geologist #5901
Expires: 12/31/17

Attachments:

Table 1 - Summary of Groundwater Sample Laboratory Analytical Results

Figure 1 - Site Location Map
Figure 2 - Site Plan Showing PCE Concentrations in Groundwater
Figure 3 - Site Plan Showing PCE Concentrations in Shallow Soil Gas
Figure 4 - Site Plan Showing PCE Concentrations in Deep Soil Gas
Figure 5 - Site Plan Showing PCE Concentrations in Shallow Soil Gas and Proposed Soil Gas and Soil Vapor Extraction Wells
Figure 6 - Site Plan Showing PCE Concentrations in Deep Soil Gas and Proposed Soil Gas and Soil Vapor Extraction Wells
Figure 7 - Site Plan Showing Sub-Slab Soil Gas Extraction Feasibility Test Monitoring Locations
Figure 8 - Typical Soil Gas Sampling Manifold

PHK/ sjc
0461.W3

TABLES

Table 1

Summary of Groundwater Sample Laboratory Analytical Results

Sample Location/ID	Sample Date	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Vinyl Chloride	Chloroform	Other VOCs by EPA 8260B
SB1-W	5/3/2005	48	ND<0.005	ND<0.005	ND<0.005	ND<0.005	0.83	All ND
SB-6	6/28/2005	15	ND<0.005	ND<0.005	ND<0.005	ND<0.005	0.83	All ND
B7-W	8/14/2008	12	ND<0.005	ND<0.005	ND<0.005	ND<0.005	1.6	All ND
B8-W	8/14/2008	7	ND<0.010	ND<0.010	ND<0.010	ND<0.010	0.98	All ND
A-1	10/11/2009	0.91	ND<0.005	ND<0.005	ND<0.005	ND<0.005	1.7	All ND
AD-1	10/11/2009	1.9	ND<0.005	ND<0.005	ND<0.005	ND<0.005	1.9	All ND
AUST-6	10/11/2009	NA	NA	NA	NA	NA	NA	All ND*
Tier 1 ESL		3.0	5.0	6.0	10	0.61	2.3	

NOTES:

PCE = Tetrachloroethene

TCE = Trichloroethene

cis-1,2-DCE = cis-1,2-Dichloroethene

trans-1,2-DCE = trans-1,2-Dichloroethene

VOCs = Volatile Organic Compounds

ND = Not Detected.

NA = Not Analyzed.

* = Groundwater sample AUST-6 was only analyzed for petroleum related VOCs using EPA Method 8260B.

Tier 1 ESL = Tier 1 Environmental Screening Level, by San Francisco Bay-Regional Water Quality Control Board updated February 2016, from Groundwater Levels Summary Table.

Results and ESLs in micrograms per Liter (ug/L), unless otherwise noted.

FIGURES

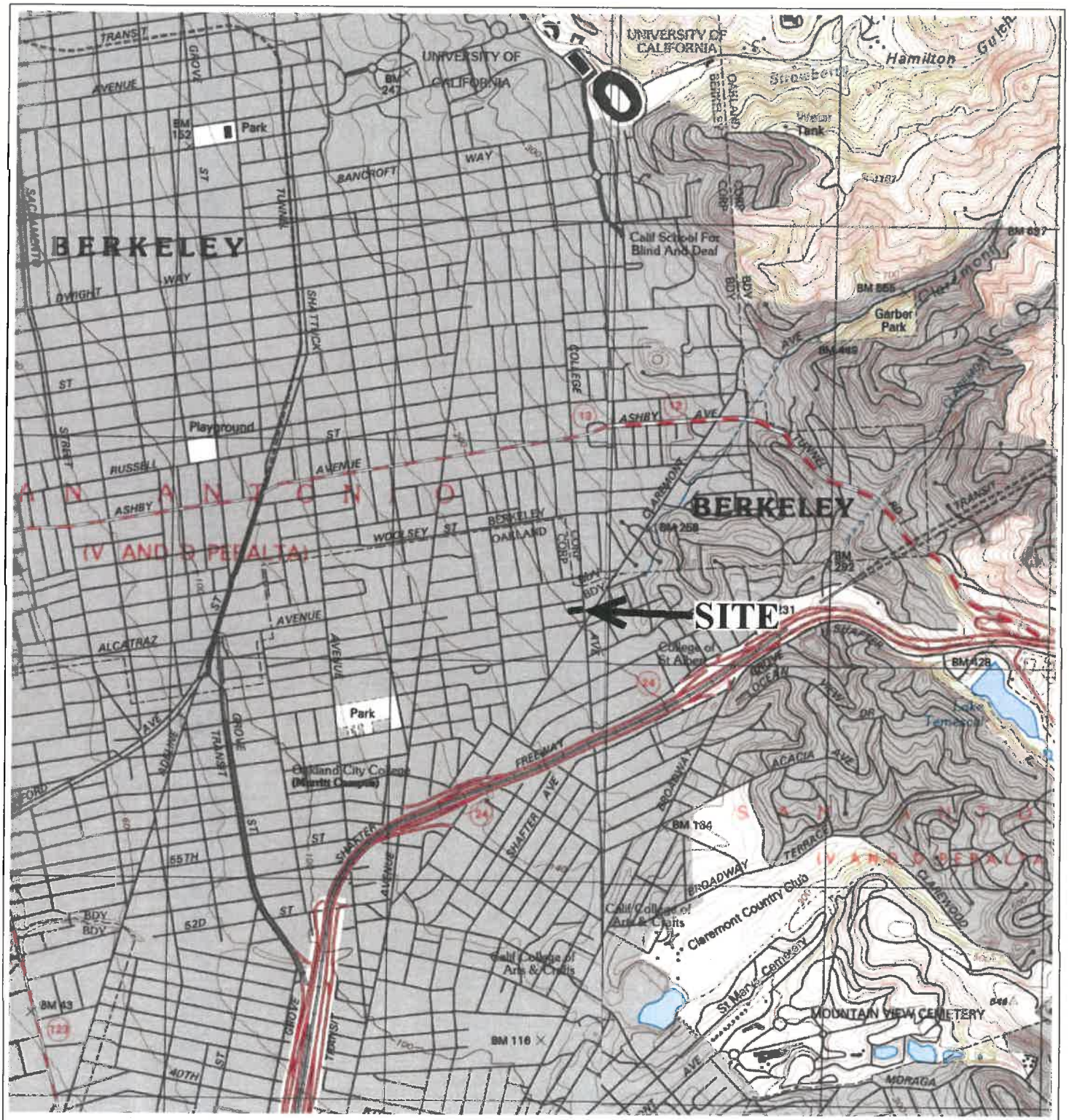


Figure 1
Site Location Map
Red Hanger Kleaners
6239 College Avenue
Oakland, California

Base Map From:
U.S. Geologic Survey 7.5 Minute Quadrangles Oakland East, and Oakland West, both maps edited 1996.

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

0 1,000 2,000
Approximate Scale in Feet

N

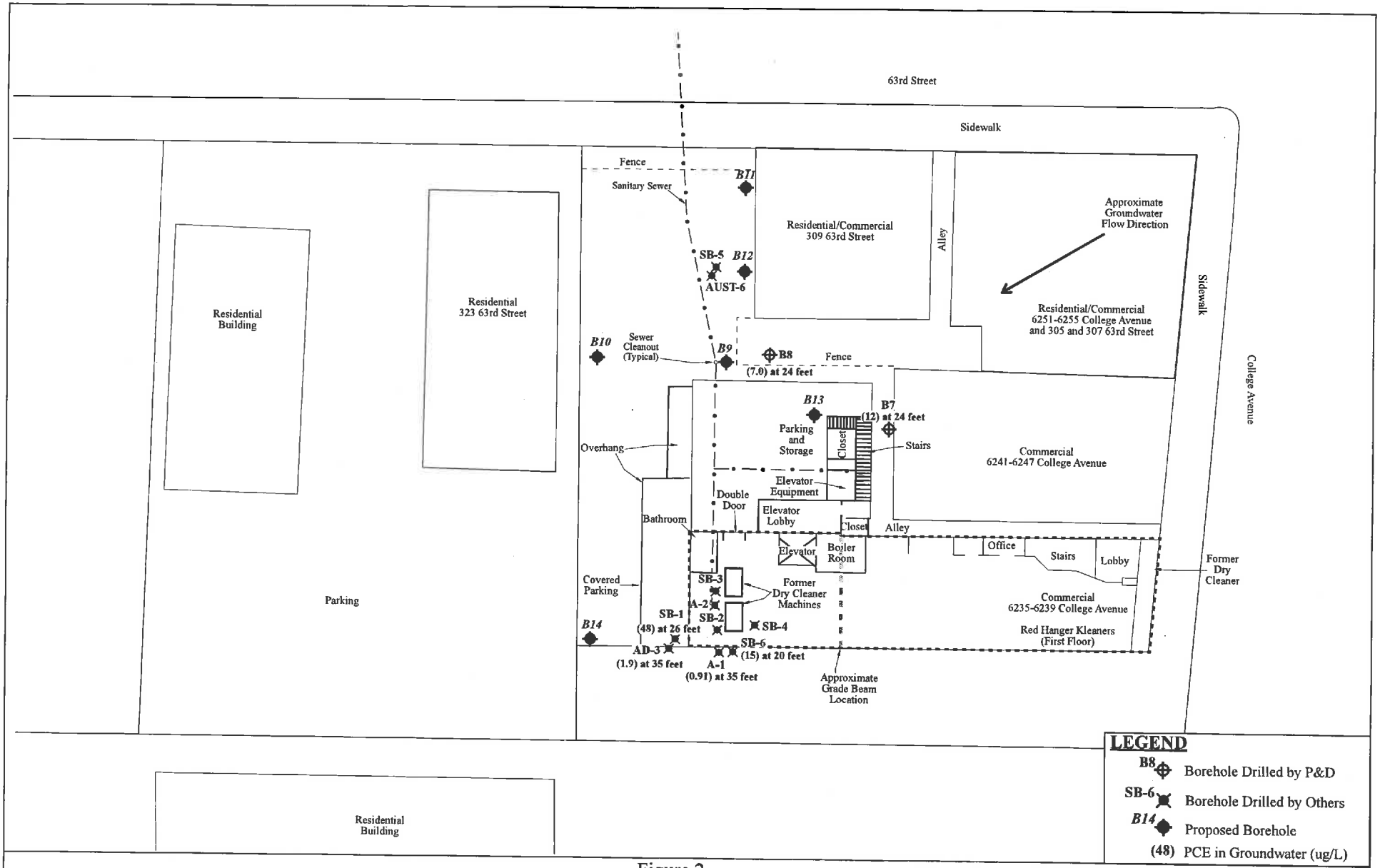


Figure 2
Site Plan Showing PCE Concentrations in Groundwater
Red Hanger Kleaners
6239 College Avenue
Oakland, California

Base Map from:
Gordon Building, July 30, 2007, Alameda County Assessor's Map, Revised June 15,1989, and Google Earth, 2015

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

0 15 30
Approximate Scale in Feet

N

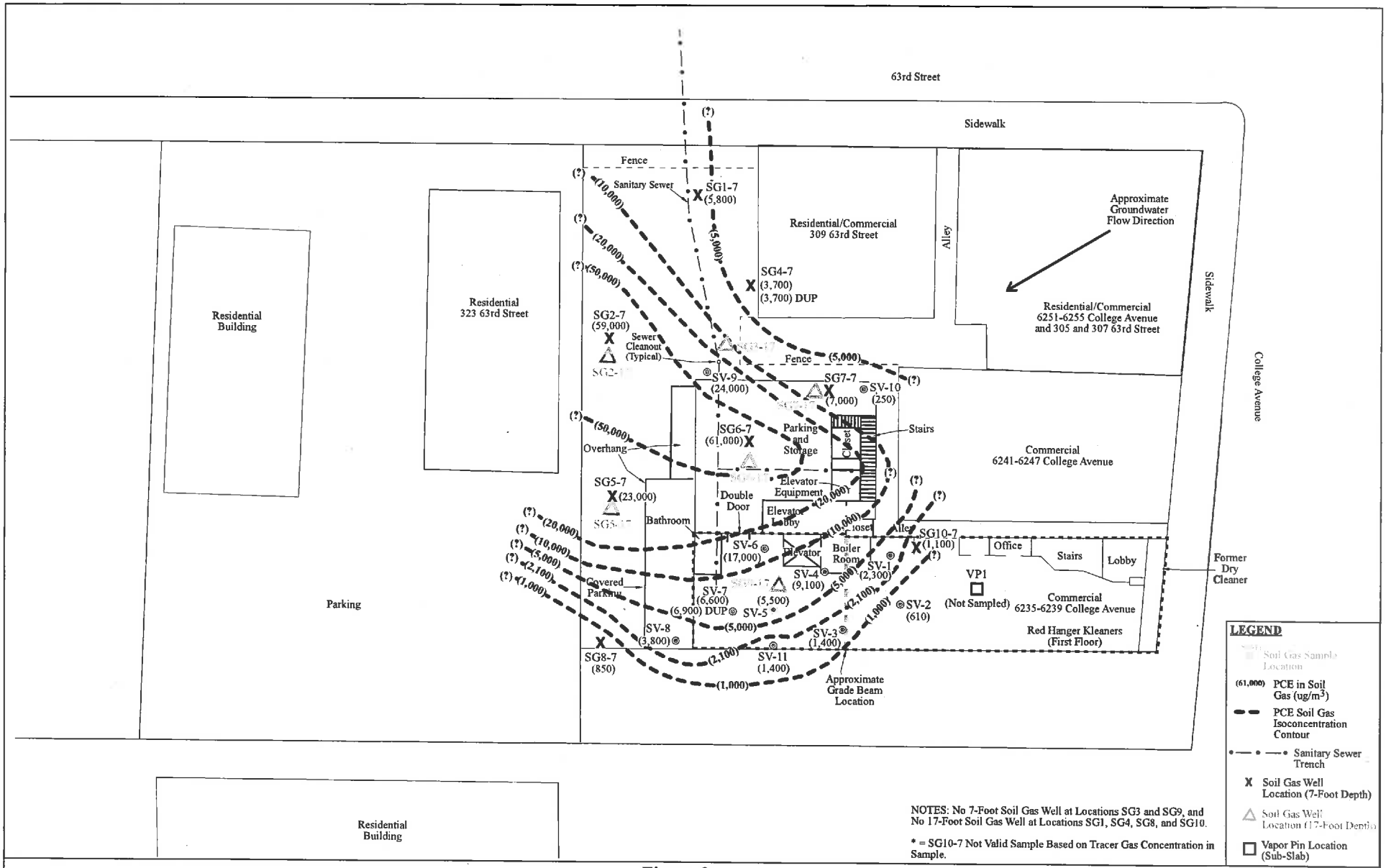


Figure 3
Site Plan Showing PCE Concentrations in Shallow Soil Gas
Red Hanger Kleaners
6239 College Avenue
Oakland, California

Base Map from:
Gordon Building, July 30, 2007, Alameda County Assessor's Map, Revised June 15,1989, and Google Earth, 2015

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

0 15 30
Approximate Scale in Feet

N

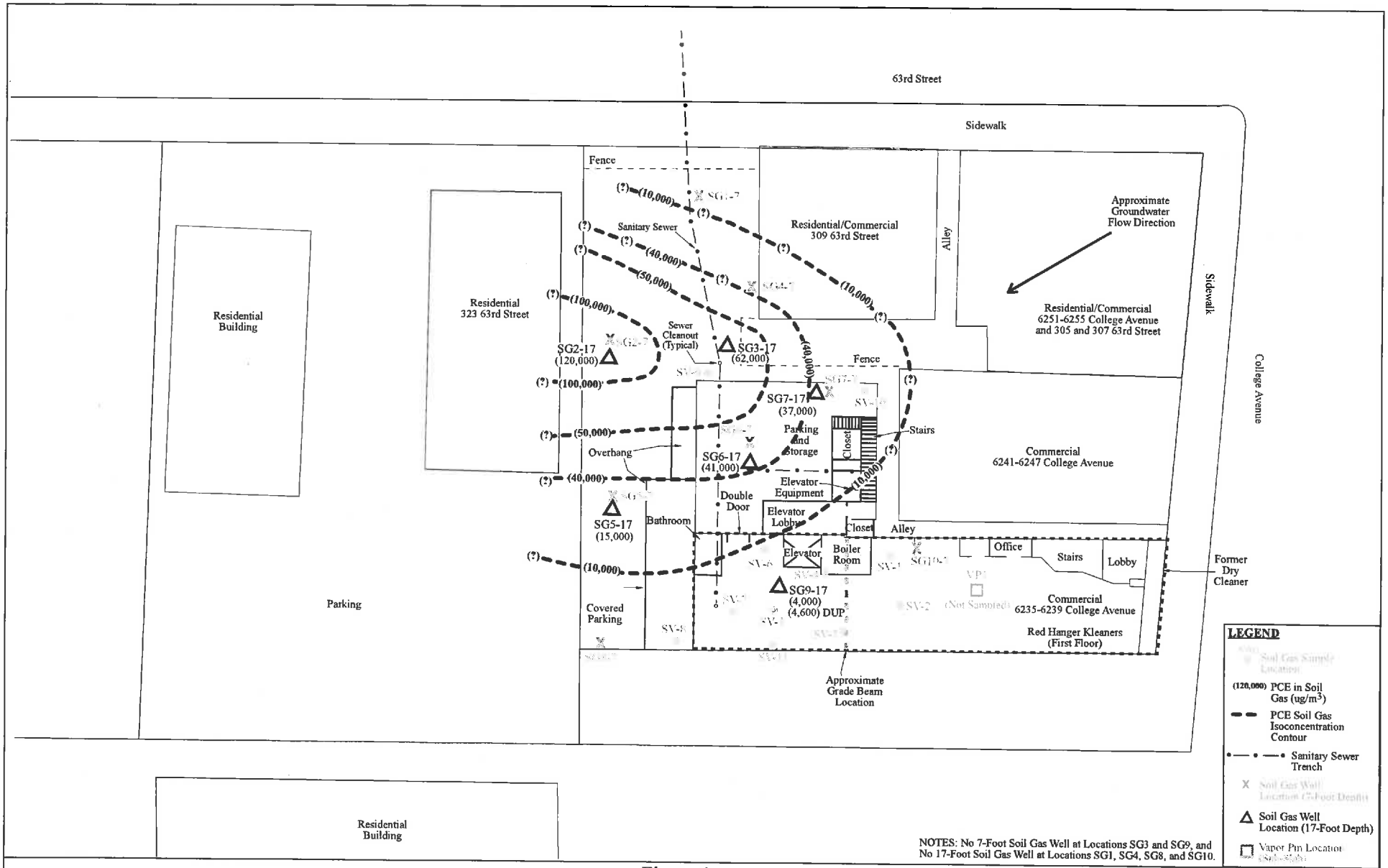


Figure 4
Site Plan Showing PCE Concentrations in Deep Soil Gas
Red Hanger Kleaners
6239 College Avenue
Oakland, California

Base Map from: Gordon Building, July 30, 2007, Alameda County Assessor's Map, Revised June 15,1989, and Google Earth, 2015	P&D Environmental, Inc. 55 Santa Clara Ave., Suite 240 Oakland, CA 94610	0 15 30 Approximate Scale in Feet N

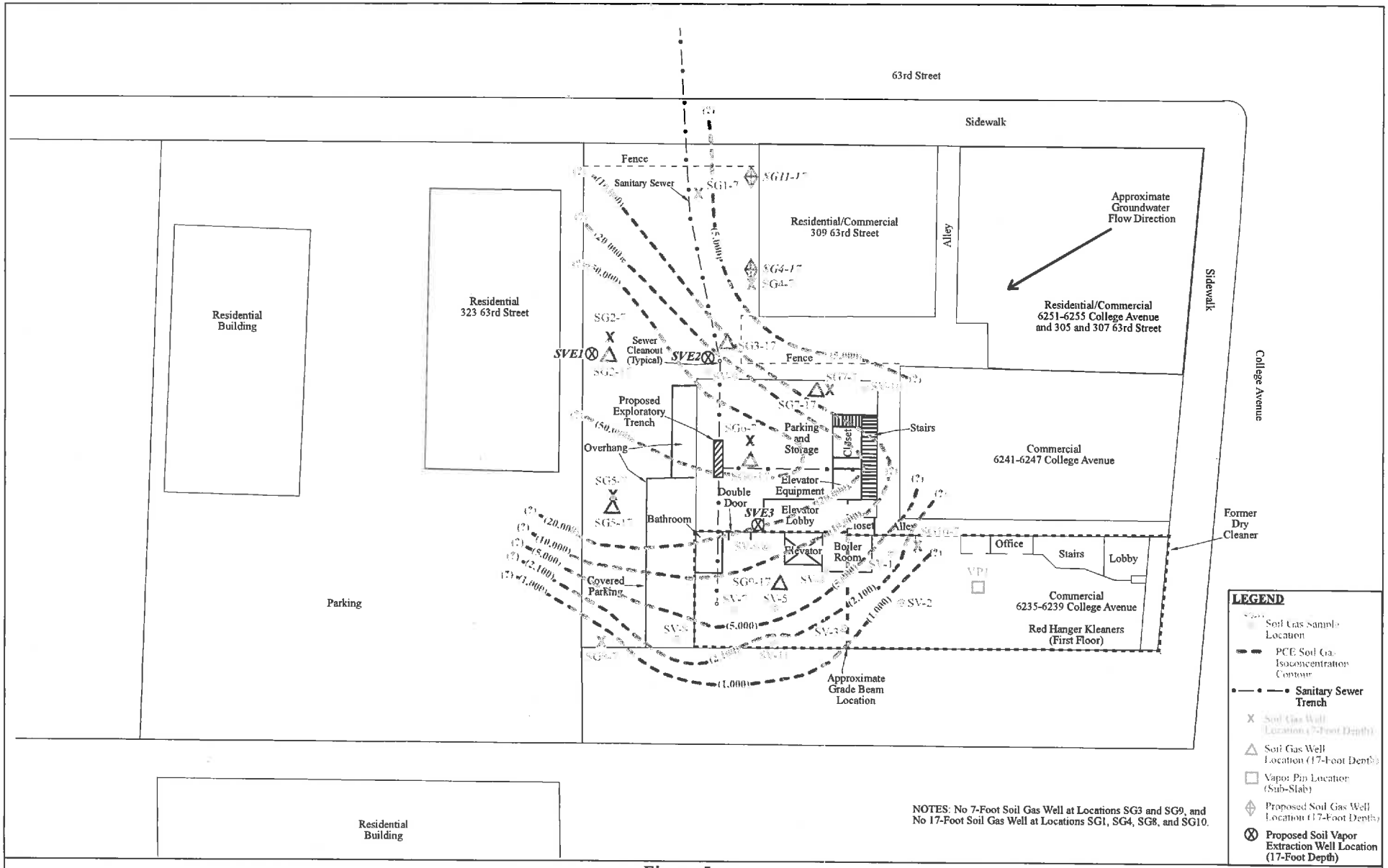


Figure 5
Site Plan Showing PCE Concentrations in Shallow Soil Gas and Proposed Soil Gas and Soil Vapor Extraction Wells
Red Hanger Kleaners
6239 College Avenue
Oakland, California

Base Map from: Gordon Building, July 30, 2007, Alameda County Assessor's Map, Revised June 15,1989, and Google Earth, 2015	P&D Environmental, Inc. 55 Santa Clara Ave., Suite 240 Oakland, CA 94610	0 15 30 Approximate Scale in Feet N

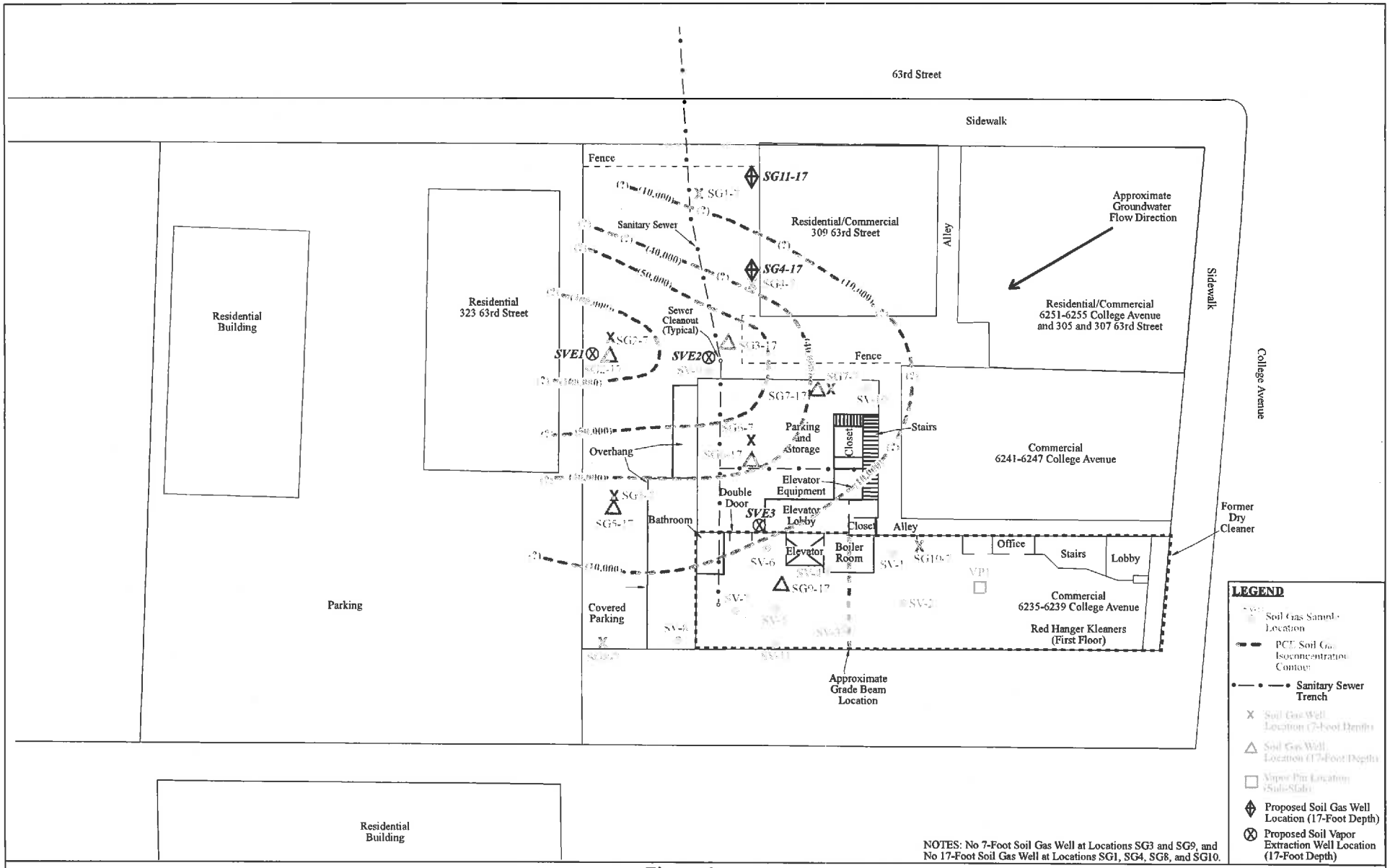


Figure 6
Site Plan Showing PCE Concentrations in Deep Soil Gas and Proposed Soil Gas and Soil Vapor Extraction Wells
Red Hanger Kleaners
6239 College Avenue
Oakland, California

Base Map from: Gordon Building, July 30, 2007, Alameda County Assessor's Map, Revised June 15,1989, and Google Earth, 2015	P&D Environmental, Inc. 55 Santa Clara Ave., Suite 240 Oakland, CA 94610	0 15 30 Approximate Scale in Feet N

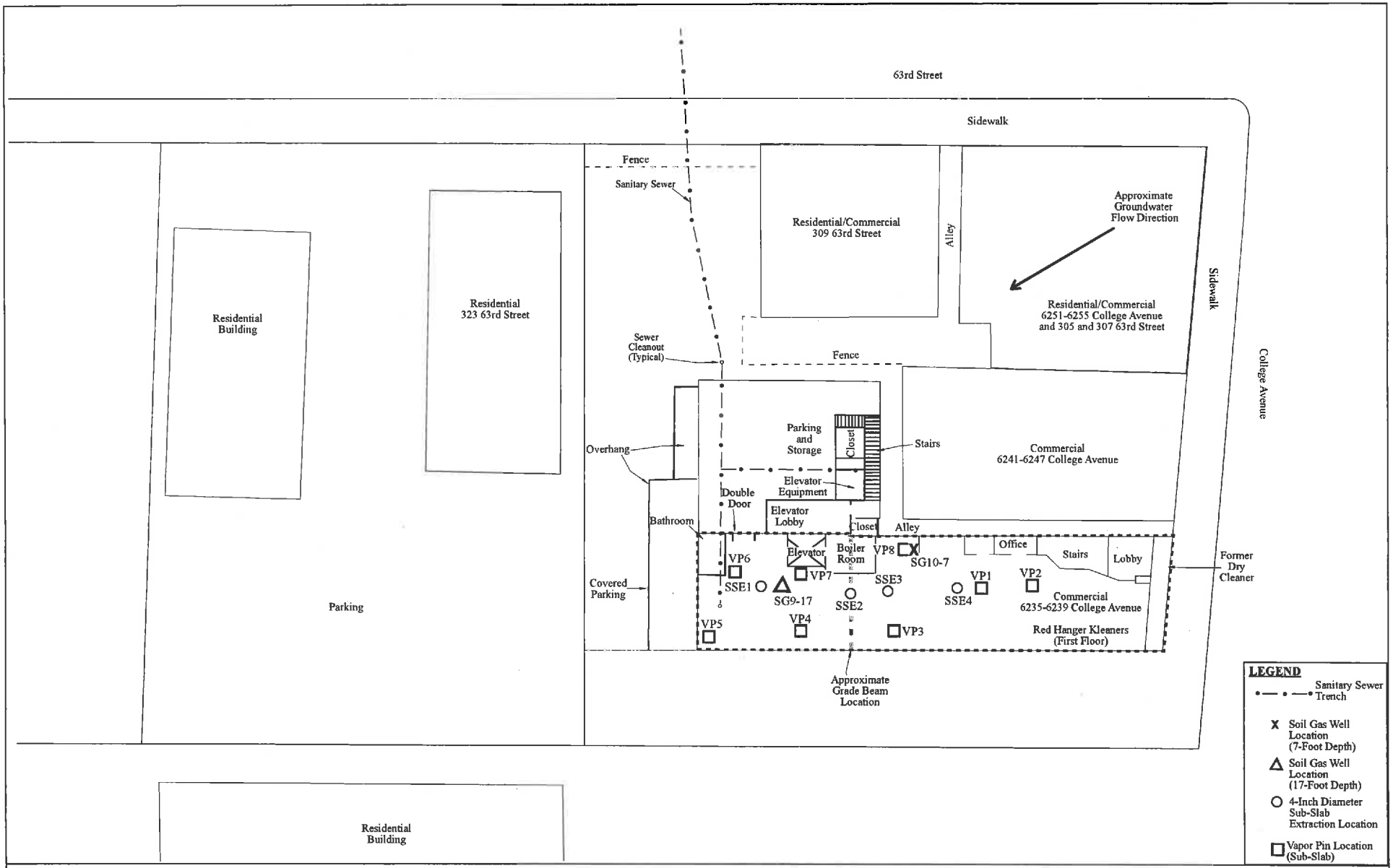


Figure 7
Site Plan Showing Sub-Slab Soil Gas Extraction Feasibility Test Monitoring Locations
Red Hanger Kleaners
6239 College Avenue
Oakland, California

Base Map from: Gordon Building, July 30, 2007, Alameda County Assessor's Map, Revised June 15,1989, and Google Earth, 2015	P&D Environmental, Inc. 55 Santa Clara Ave., Suite 240 Oakland, CA 94610	0 15 30 Approximate Scale in Feet N

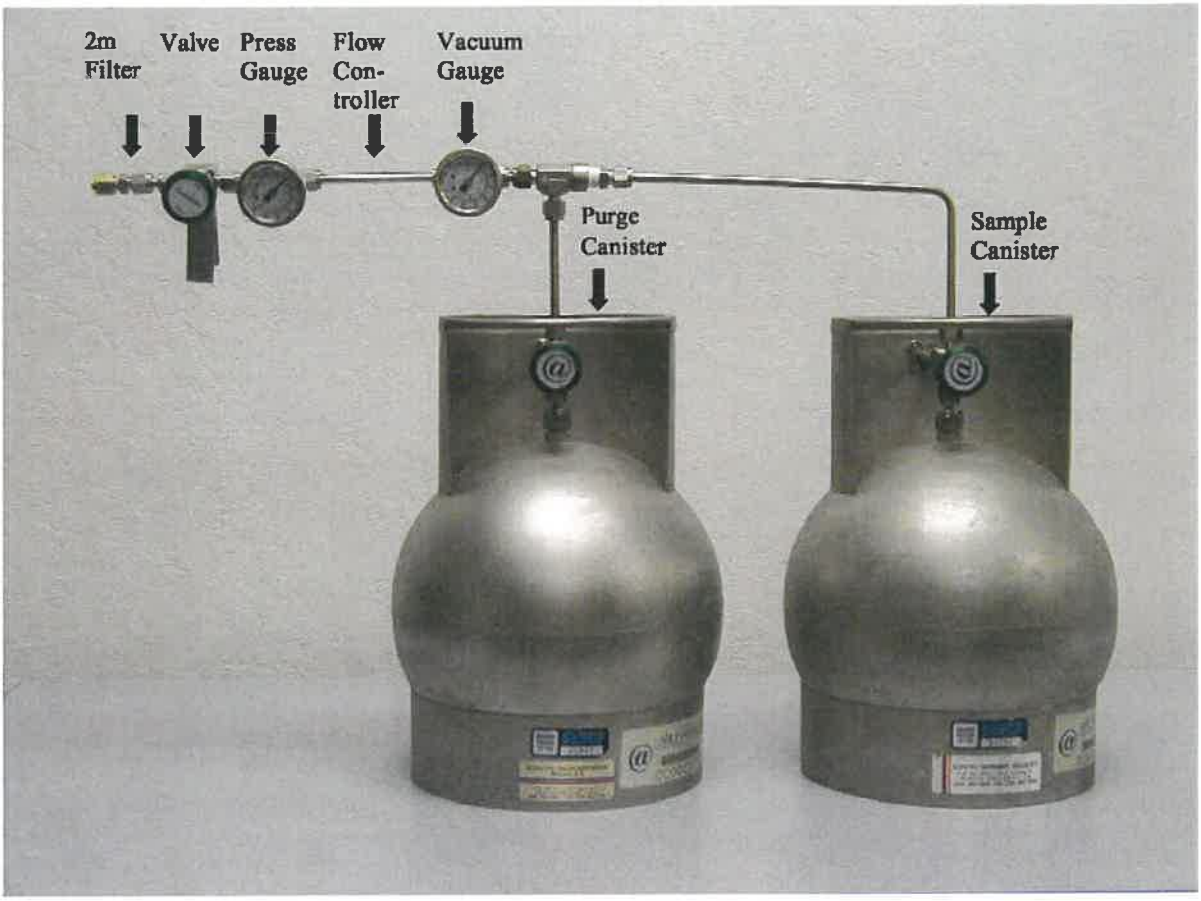


Figure 8
Typical Soil Gas Sampling Manifold
Red Hanger Kleaners
6239 College Avenue
Oakland, California

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

Nowell, Keith, Env. Health

From: steven.carmack@pdenviro.com
Sent: Tuesday, March 15, 2016 4:51 PM
To: Nowell, Keith, Env. Health
Cc: Paul King
Subject: RO#2981/Red Hanger Kleaners - Feasibility Test Work Plan
Attachments: RO2981_WP_R_2016-03-15.pdf; 0461.W3 Geotracker Upload Confirmation.pdf

Hi Keith,

Paul asked me to send you the attached pdf copy of P&D Environmental, Inc.'s Site Investigation and Soil Vapor Extraction Feasibility Test Work Plan dated March 15, 2016 (document 0461.W3) for your review and files. Also attached is a pdf copy of the Geotracker upload confirmation for uploading the document.

Please let us know if you need a hard copy mailed to you.

Best regards,

Steve Carmack
Project Scientist
P&D Environmental, Inc.
55 Santa Clara Avenue, Suite 240
Oakland, CA 94610

(510) 658-6916 telephone
(510) 834-0152 facsimile
steven.carmack@pdenviro.com

Nowell, Keith, Env. Health

From: PDKing0000@aol.com
Sent: Wednesday, March 16, 2016 9:59 AM
To: Nowell, Keith, Env. Health
Cc: steven.carmack@pdenviro.com; Roe, Dilan, Env. Health
Subject: Re: ACCEPTED DOCUMENT ON FTP SITE RO2981
Attachments: 0461.W3 Geotracker Upload Confirmation.pdf

Hi Keith,

I am forwarding to you the e-mail that we received from AACDEH accepting the document.

I have also attached confirmation of our upload to GeoTracker of the document yesterday.

Paul

In a message dated 3/16/2016 07:29:13 Pacific Daylight Time, deh.loptoxic@acgov.org writes:

> ACCEPTED DOCUMENT ON FTP SITE
>
> CASE: RO2981: 6235-6239 COLLEGE
>
> Your recently submitted document was successfully uploaded to the Alameda County Environmental Health Toxics Program ftp site. The document will appear in the case file within the next 2 to 3 business days. Your case worker has been notified of the document submittal. If the document requires a response from this agency and you have not heard from your case worker within 60 days from the date your submittal was accepted, please contact the case worker.
>
> Online case files can be reviewed at http://www.acgov.org/aceh/lop/ust.htm
>
>

From: steven.carmack@pdenviro.com [mailto:steven.carmack@pdenviro.com]
Sent: Tuesday, March 15, 2016 4:24 PM
To: dehloptoxic, Env. Health <deh.loptoxic@acgov.org>
Cc: Nowell, Keith, Env. Health <Keith.Nowell@acgov.org>; Paul King <PDKing0000@aol.com>
Subject: RO#2981_Report Upload

Good afternoon,

This email is being sent to notify you that P&D Environmental, Inc.'s Site Investigation and Soil Vapor Extraction Feasibility Test Work Plan dated March 15, 2016 (document 0461.W3) has been uploaded to the SWRCB's Geotracker and ACDEH LOP's ftp websites today.

Best regards,

Steve Carmack
Project Scientist
P&D Environmental, Inc.
55 Santa Clara Avenue, Suite 240
Oakland, CA 94610

(510) 658-6916 telephone
(510) 834-0152 facsimile
steven.carmack@pdenviro.com

Nowell, Keith, Env. Health

From: PDKing0000@aol.com
Sent: Thursday, March 17, 2016 1:54 PM
To: Nowell, Keith, Env. Health
Subject: Fwd: Work Plan Review, ACEH case file RO2981 - Response to Technical Comments

Hi Keith,

I believe that we previously addressed the hydrated bentonite above the sand pack in item 2. below.

Please let me know your thoughts.

Thank you!

Paul

From: PDKing0000@aol.com
To: Keith.Nowell@acgov.org, ronpatelvidge@gmail.com
CC: gary_bates@efiglobal.com, ron_holt@efiglobal.com, patrick@ellwoodcommercial.com, dave@bblandlaw.com, dcs@youngdahl.net, Dilan.Roe@acgov.org
Sent: 11/9/2015 13:34:09 Pacific Daylight Time
Subj: Re: Work Plan Review, ACEH case file RO2981 - Response to Technical Comments

Hi Keith,

Thank you for the work plan approval!

As we just discussed on the telephone, it sounds like we are very much on the same page.

I have the following comments in response to your 11/6/15 technical comments. My comments are provided in the order in which your technical comments occur.

1. The proposed soil gas wells will be constructed in accordance with the DTSC July 2015 Advisory for active soil Gas Investigations Appendix D, which calls for a larger diameter borehole to allow a larger volume of filter pack for the soil gas well. It has been our direct experience on multiple sites with similar clayey materials that construction of soil gas wells using conventional Geoprobe borehole drilling methods often results in low flow conditions. We have used the Appendix D soil gas well construction methods at multiple sites overseen by the RWQCB as an alternate method to the conventional Geoprobe borehole drilling methods in similar fine-grained materials with great success, and it is for this reason that the proposed soil gas wells will be constructed in accordance with Appendix D methods. It has also been our experience that placement of a 2-foot thick filter pack in a 6-inch diameter borehole with the 1/4-inch diameter tube in the center to a depth of 15 to 20 feet has not presented difficulties for bridging without a tremie pipe because of the larger borehole diameter, however for the soil gas well installation we will use a tremie pipe for the placement of the filter pack.

2. The absence of dry granular bentonite on top of the filter pack is consistent with DTSC July 2015 Advisory Appendix D soil gas well construction methods. In anticipation of the soil gas wells being potentially in use for greater than one year, the soil gas well annular seals will be constructed with neat cement. Because of the lower viscosity of the neat cement relative to hydrated bentonite, a layer measuring approximately one foot thick of hydrated bentonite will be placed above the filter pack

for the soil gas wells that are constructed to a depth of 17 feet, and approximately 0.5-feet thick above the filter pack for the soil gas wells that are constructed to a depth of 7 feet to prevent the neat cement grout from getting into the filter pack. Above the hydrated bentonite the annular seal will consist of neat cement.

3. Borehole SG9-17 will be the first borehole drilled for the soil gas well installation work. If evidence of free water is encountered in the borehole during drilling the drilling will be stopped at the depth that the water is encountered. If free water is not encountered during drilling the borehole will be drilled to a depth of 17 feet bgs and will then be left open to determine if water accumulates in the borehole. If water accumulates in the borehole the borehole will be filled with hydrated bentonite to a height of 2 feet above the static water level in the borehole and the soil gas well will then be constructed as proposed.

4. Any necessary surveying at the site will be completed following receipt of the soil gas well results and the determination if any additional wells need to be constructed at the site.

Please let me know if you have any questions or need any additional information.

Thank you!

Paul

Paul H. King
Professional Geologist

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

(510) 658-6916 telephone
(510) 834-0152 facsimile
(510) 387-6834 cellular
Paul.King@pdenviro.com

In a message dated 11/6/2015 15:22:07 Pacific Standard Time, Keith.Nowell@acgov.org writes:

Dear Mr. Elvidge,

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the above-referenced site and the recently submitted document entitled *Soil Gas Investigation Work Plan* (WP) prepared by P&D Environmental, Inc. The WP is dated October 16, 2015 and was received by our office on October 28, 2015. The WP recommends the installation of eight permanent soil gas wells to a depth of seven feet below the ground surface (bgs), six permanent soil gas wells to a depth of 17 feet bgs, and one sub-slab vapor pin. Thank you for the work plan and the continuing work at the site.

Based on ACEH staff review of the referenced document and of the case file, we generally concur with the proposed scope of work. The proposed scope of work may be implemented provided that the modifications requested in the technical comments below are addressed and incorporated during the field implementation. Submittal of a revised Work Plan is not required unless an alternate scope of work outside that described in the Work Plan and technical comments below is proposed.

TECHNICAL COMMENTS

1 **Sand Pack**- The Department of Toxic Substances Control (DTSC) July 2015 document entitled *Advisory-Active Soil Gas Investigations* (Advisory) states for soil gas wells deeper than 15 feet, a tremie pipe should be used to avoid bridging or segregation during placement of the sand pack and annular seal. The WP does indicate a tremie pipe will be used for the constructing the deeper, 17 feet, soil gas wells. Therefore, ACEH requests incorporating a tremie pipe for sand and seal placement in accordance with the Advisory.

2 **Well Seal-** The description of the well seal, consisting of a hydrated bentonite slurry, is not in agreement with the Advisory, which calls for emplacing at least six inches of dry granular bentonite on top of each sand pack. ACEH requests placement of at least six inches of dry granular bentonite on top of each sand pack in accordance with the Advisory.

The proposed soil gas wells are described as permanent wells. However, the WP does not discuss the length of time the soil gas wells are anticipated to be in service. Bentonite-only annular seals are discouraged for long-term use as bentonite annular seals in the vadose zone desiccate readily and will not rehydrate once damaged . The Advisory states that, for wells that will be sampled for less than one year, the annular seal can be hydrated bentonite or other materials, as appropriate. However, for wells that will be used for longer than one year, the annular seal should be neat cement with bentonite. If the service life of the soil gas wells is not known, ACEH requests that an annular seal consisting of neat cement with bentonite be used.

3 **Well Depth-** As stated above, six permanent soil gas wells are proposed to be advanced to a depth of 17 feet bgs. Previous investigations conducted at the site have document depths to water in the 21-foot bgs range for soil bores located outside the building footprint. However, groundwater in soil bores SB1 and SB6, advanced within the building footprint, was reported at approximately 16 feet bgs. The deepest soil gas samples should be collected near the capillary fringe, not in or below the capillary fringe. Soil gas wells or probes should not be installed too close to the water table as low flow conditions might be encountered due to the high moisture content in the capillary fringe. The proposed soil bore SG9-17 is located within the building footprint. ACEH requests the depth to water be evaluated in each soil bore prior to soil gas well installation, and that the depth of each well be adjusted to a shallower depth if it is determined to be warranted.

4 **Geotracker Compliance-** The permanent soil gas wells and the sub-slab vapor pin meet the definition of permanent sampling points as defined in Title 23, California Code of Regulations (CCRs). A permanent sampling point is defined as a point that is sampled for more than a 30-day period. Hence, in addition to the submittal of the bore logs and laboratory analysis data, the locations of the permanent soil gas wells and the sub-slab vapor pin are required to be surveyed and the X, Y and Z coordinates uploaded to the State Water Resources Control Board (SWRCB) GeoTracker website.

TECHNICAL REPORT REQUEST

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

- **January 5, 2016- Soil Gas Investigation Report** (file name: RO0002981_SWI_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.

Online case files are available for review at the following website: http://www.acgov.org/aceh/index.htm. If your email address does not appear on the cover page of this notification, ACEH is requesting you provide your email address so that we can correspond with you quickly and efficiently regarding your case.

Thank you for your cooperation. ACEH looks forward to working with you and your consultants to advance the case toward closure. Should you have any questions regarding this correspondence or your case, please call me at (510) 567-6764 or send an electronic mail message at keith.nowell@acgov.org

Regards,

Keith Nowell

Keith Nowell PG, CHG

Hazardous Materials Specialist

Alameda County Environmental Health

1131 Harbor Bay Parkway

Alameda , CA 94502-6540

phone: 510 / 567 - 6764

fax: 510 / 337 - 9335

email: keith.nowell@acgov.org

PDF copies of case files can be reviewed/downloaded at:

http://www.acgov.org/aceh/lop/ust.htm

=

TABLES

Table 1

Summary of Soil Sample Laboratory Analytical Results

Sample Location/ID	Sample Date	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Vinyl Chloride	Chloroform	Other VOCs by EPA 8260B
B9-3.0	3/29/2016	0.019	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND
Tier 1 ESL		0.42	0.46	0.19	0.67	0.01	0.068	Various

NOTES:

PCE = Tetrachloroethene

TCE = Trichloroethene

cis-1,2-DCE = cis-1,2-Dichloroethene

trans-1,2-DCE = trans-1,2-Dichloroethene

VOCs = Volatile Organic Compounds

ND = Not Detected.

Tier 1 ESL = Tier 1 Environmental Screening Level, by San Francisco Bay-Regional Water Quality Control Board updated February 2016, from Summary of Soil ESLs table.

Results and ESLs in milligrams per kilogram (mg/kg), unless otherwise noted.

Table 2
Summary of Groundwater Sample Laboratory Analytical Results

Sample Location/ID	Sample Date	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Vinyl Chloride	Chloroform	Other VOCs by EPA 8260B
SB1-W	5/3/2005	48	ND<0.005	ND<0.005	ND<0.005	ND<0.005	0.83	All ND
SB-6	6/28/2005	15	ND<0.005	ND<0.005	ND<0.005	ND<0.005	0.83	All ND
B7-W	8/14/2008	12	ND<0.005	ND<0.005	ND<0.005	ND<0.005	1.6	All ND
B8-W	8/14/2008	7	ND<0.010	ND<0.010	ND<0.010	ND<0.010	0.98	All ND
A-1	10/11/2009	0.91	ND<0.005	ND<0.005	ND<0.005	ND<0.005	1.7	All ND
AD-3	10/11/2009	1.9	ND<0.005	ND<0.005	ND<0.005	ND<0.005	1.9	All ND
AUST-6	10/11/2009	NA	NA	NA	NA	NA	NA	All ND*
B9-W	3/28/2016	38	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	All ND
B10-W	3/28/2016	56	ND<2.5	ND<2.5	ND<2.5	ND<2.5	3.0	All ND
B11-W	3/28/2016	18	ND<0.50	ND<0.50	ND<0.50	ND<0.50	0.68	All ND
B12-W	3/28/2016	3.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	0.74	All ND
B13-W	3/28/2016	18	ND<0.50	ND<0.50	ND<0.50	ND<0.50	0.56	All ND
B14-W	3/29/2016	2.1	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	All ND, except Acetone = 10
Tier 1 ESL		3.0	5.0	6.0	10	0.61	2.3	Acetone = 1,500

NOTES:
PCE = Tetrachloroethene
TCE = Trichloroethene
cis-1,2-DCE = cis-1,2-Dichloroethene
trans-1,2-DCE = trans-1,2-Dichloroethene
VOCs = Volatile Organic Compounds
ND = Not Detected.
NA = Not Analyzed.
* = Groundwater sample AUST-6 was only analyzed for petroleum related VOCs using EPA Method 8260B.
Tier 1 ESL = Tier 1 Environmental Screening Level, by San Francisco Bay-Regional Water Quality Control Board updated February 2016, from Groundwater Levels Summary Table.
Results and ESLs in micrograms per Liter (ug/L), unless otherwise noted.

FIGURES

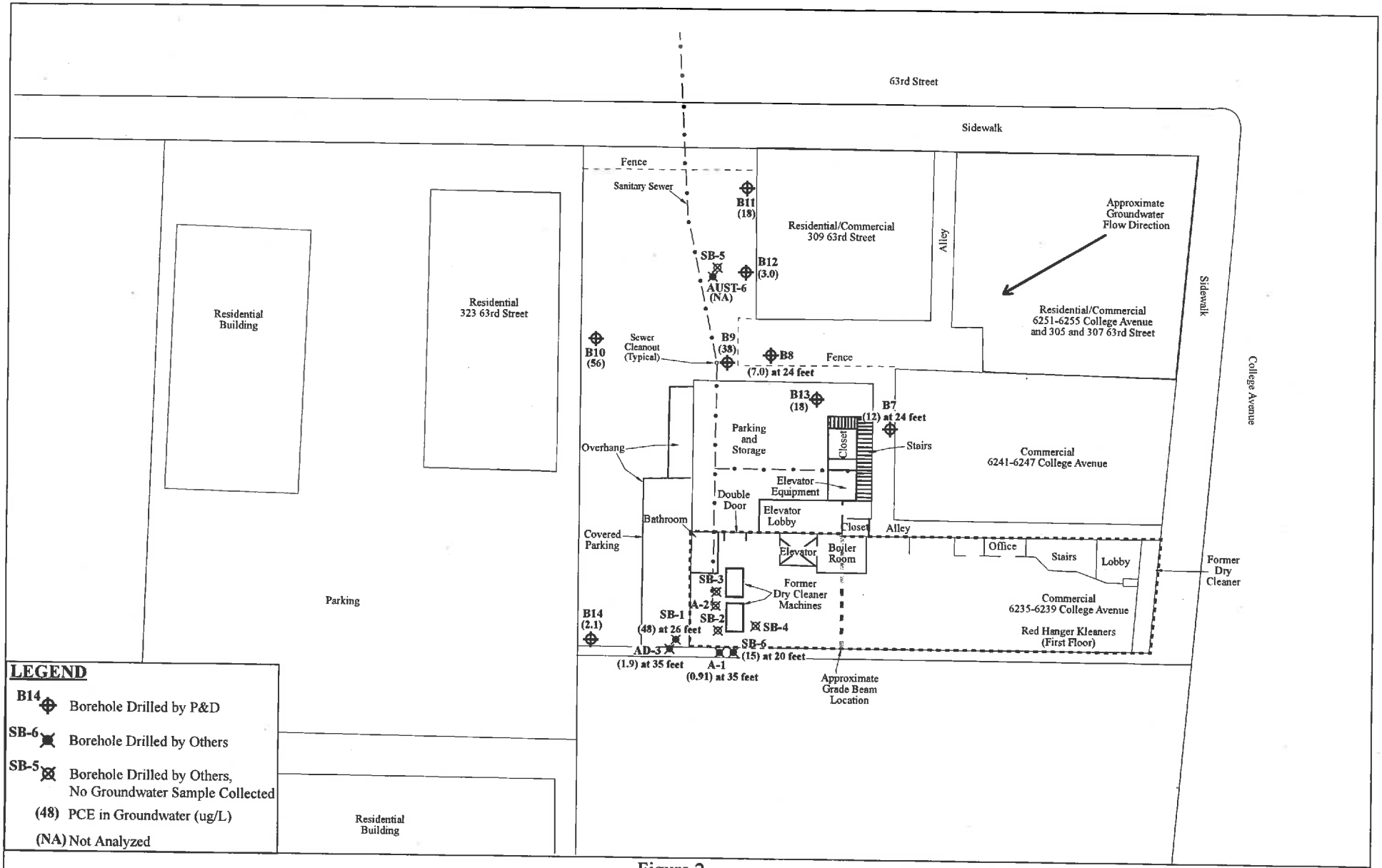


Figure 2
Site Plan Showing PCE Concentrations in Groundwater
Red Hanger Kleaners
6239 College Avenue
Oakland, California

Base Map from:
Gordon Building, July 30, 2007, Alameda County Assessor's Map, Revised June 15,1989, and Google Earth, 2015

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

0 15 30
Approximate Scale in Feet

N

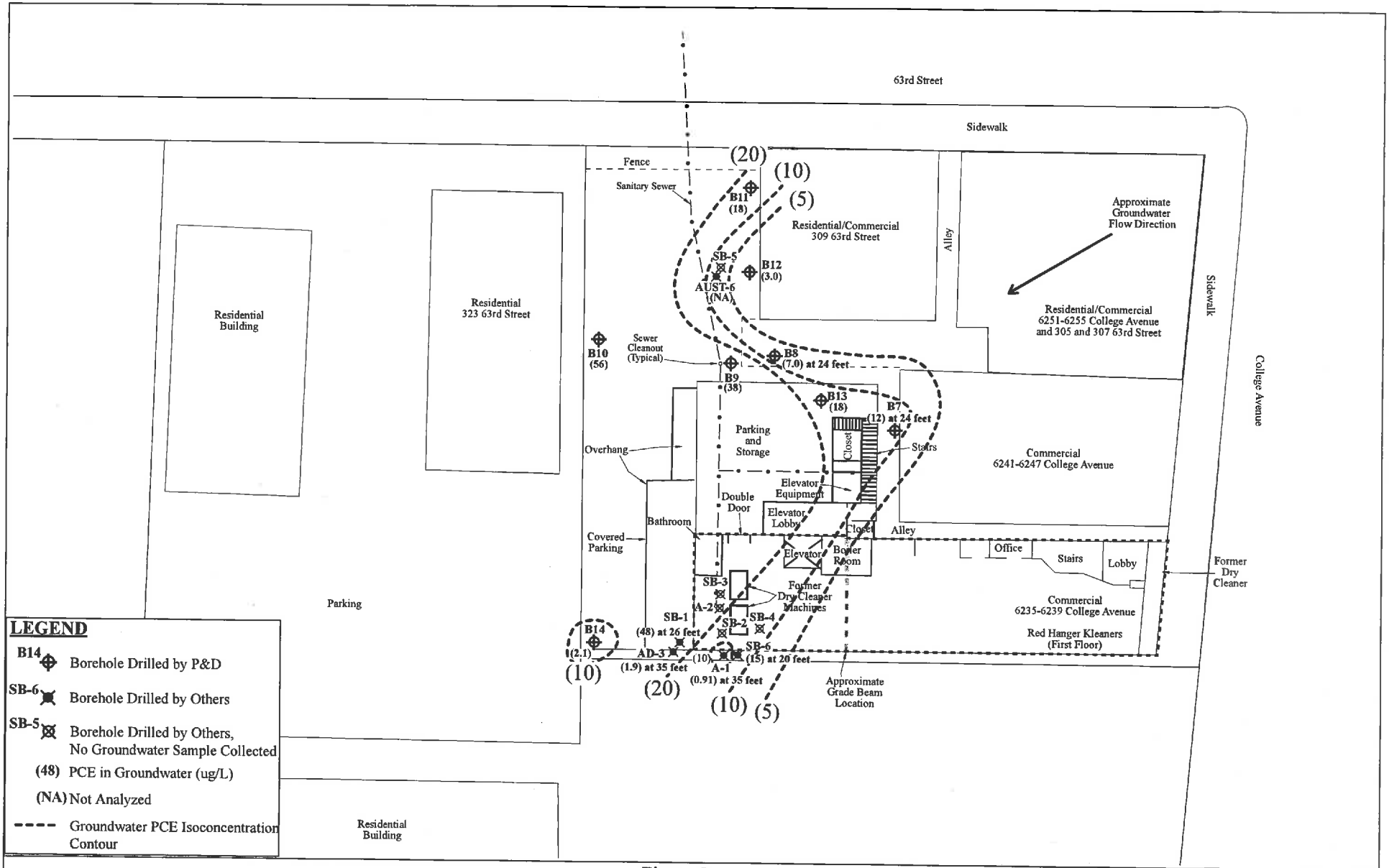


Figure 2
Site Plan Showing PCE Concentrations in Groundwater
Red Hanger Kleaners
6239 College Avenue
Oakland, California

Base Map from:
Gordon Building, July 30, 2007, Alameda County Assessor's Map, Revised June 15,1989, and Google Earth, 2015

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

0 15 30
Approximate Scale in Feet

N

LABORATORY ANALYTICAL REPORTS AND CHAIN OF CUSTODY DOCUMENTATION

SOIL

- McCampbell Work Order # 1603E69 - B9-3.0

GROUNDWATER

- McCampbell Work Order # 1603E70 - B9-W Through B14-W

McCampbell Analytical, Inc.
"When Quality Counts"

Analytical Report

WorkOrder: 1603E69

Report Created for: P & D Environmental

55 Santa Clara, Ste.240
Oakland, CA 94610

Project Contact: Paul King
Project P.O.:
Project Name: 0461; Red Hanger Kleaners

Project Received: 03/29/2016

Analytical Report reviewed & approved for release on 04/05/2016 by:

Angela Rydelius,
Laboratory Manager

1534 Willow Pass Rd. Pittsburg, CA 94565 ♦ TEL: (877) 252-9262 ♦ FAX: (925) 252-9269 ♦ www.mccampbell.com
CDPH ELAP 1644 ♦ NELAP 4033ORELAP

McCampbell Analytical, Inc.
"When Quality Counts"
1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Glossary of Terms & Qualifier Definitions

Client: P & D Environmental
Project: 0461; Red Hanger Kleaners
WorkOrder: 1603E69

Glossary Abbreviation

% D	Percent Difference
95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DLT	Dilution Test
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PDS	Post Digestion Spike
PDSD	Post Digestion Spike Duplicate
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
ST	Sorbent Tube
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)

Quality Control Qualifiers

F1	MS/MSD recovery and/or RPD is out of acceptance criteria; LCS validated the prep batch.
F3	the surrogate standard recovery and/or RPD is outside of acceptance limits.

McCampbell Analytical, Inc.
"When Quality Counts"
1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client: P & D Environmental
Date Received: 3/29/16 20:34
Date Prepared: 3/29/16
Project: 0461; Red Hanger Kleaners

WorkOrder: 1603E69
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B9-3.0	1603E69-001A	Soil	03/28/2016 09:25	GC16	118759

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	04/05/2016 12:25
tert-Amyl methyl ether (TAME)	ND	0.0050	1	04/05/2016 12:25
Benzene	ND	0.0050	1	04/05/2016 12:25
Bromobenzene	ND	0.0050	1	04/05/2016 12:25
Bromochloromethane	ND	0.0050	1	04/05/2016 12:25
Bromodichloromethane	ND	0.0050	1	04/05/2016 12:25
Bromoform	ND	0.0050	1	04/05/2016 12:25
Bromomethane	ND	0.0050	1	04/05/2016 12:25
2-Butanone (MEK)	ND	0.020	1	04/05/2016 12:25
t-Butyl alcohol (TBA)	ND	0.050	1	04/05/2016 12:25
n-Butyl benzene	ND	0.0050	1	04/05/2016 12:25
sec-Butyl benzene	ND	0.0050	1	04/05/2016 12:25
tert-Butyl benzene	ND	0.0050	1	04/05/2016 12:25
Carbon Disulfide	ND	0.0050	1	04/05/2016 12:25
Carbon Tetrachloride	ND	0.0050	1	04/05/2016 12:25
Chlorobenzene	ND	0.0050	1	04/05/2016 12:25
Chloroethane	ND	0.0050	1	04/05/2016 12:25
Chloroform	ND	0.0050	1	04/05/2016 12:25
Chloromethane	ND	0.0050	1	04/05/2016 12:25
2-Chlorotoluene	ND	0.0050	1	04/05/2016 12:25
4-Chlorotoluene	ND	0.0050	1	04/05/2016 12:25
Dibromochloromethane	ND	0.0050	1	04/05/2016 12:25
1,2-Dibromo-3-chloropropane	ND	0.0040	1	04/05/2016 12:25
1,2-Dibromoethane (EDB)	ND	0.0040	1	04/05/2016 12:25
Dibromomethane	ND	0.0050	1	04/05/2016 12:25
1,2-Dichlorobenzene	ND	0.0050	1	04/05/2016 12:25
1,3-Dichlorobenzene	ND	0.0050	1	04/05/2016 12:25
1,4-Dichlorobenzene	ND	0.0050	1	04/05/2016 12:25
Dichlorodifluoromethane	ND	0.0050	1	04/05/2016 12:25
1,1-Dichloroethane	ND	0.0050	1	04/05/2016 12:25
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	04/05/2016 12:25
1,1-Dichloroethene	ND	0.0050	1	04/05/2016 12:25
cis-1,2-Dichloroethene	ND	0.0050	1	04/05/2016 12:25
trans-1,2-Dichloroethene	ND	0.0050	1	04/05/2016 12:25
1,2-Dichloropropane	ND	0.0050	1	04/05/2016 12:25
1,3-Dichloropropane	ND	0.0050	1	04/05/2016 12:25
2,2-Dichloropropane	ND	0.0050	1	04/05/2016 12:25

(Cont.)

NELAP 4033ORELAP

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"
1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1603E69
Date Received:	3/29/16 20:34	**Extraction Method:**	SW5030B
Date Prepared:	3/29/16	**Analytical Method:**	SW8260B
Project:	0461; Red Hanger Kleaners	**Unit:**	mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B9-3.0	1603E69-001A	Soil	03/28/2016 09:25	GC16	118759

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	04/05/2016 12:25
cis-1,3-Dichloropropene	ND	0.0050	1	04/05/2016 12:25
trans-1,3-Dichloropropene	ND	0.0050	1	04/05/2016 12:25
Diisopropyl ether (DIPE)	ND	0.0050	1	04/05/2016 12:25
Ethylbenzene	ND	0.0050	1	04/05/2016 12:25
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	04/05/2016 12:25
Freon 113	ND	0.0050	1	04/05/2016 12:25
Hexachlorobutadiene	ND	0.0050	1	04/05/2016 12:25
Hexachloroethane	ND	0.0050	1	04/05/2016 12:25
2-Hexanone	ND	0.0050	1	04/05/2016 12:25
Isopropylbenzene	ND	0.0050	1	04/05/2016 12:25
4-Isopropyl toluene	ND	0.0050	1	04/05/2016 12:25
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	04/05/2016 12:25
Methylene chloride	ND	0.0050	1	04/05/2016 12:25
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	04/05/2016 12:25
Naphthalene	ND	0.0050	1	04/05/2016 12:25
n-Propyl benzene	ND	0.0050	1	04/05/2016 12:25
Styrene	ND	0.0050	1	04/05/2016 12:25
1,1,1,2-Tetrachloroethane	ND	0.0050	1	04/05/2016 12:25
1,1,2,2-Tetrachloroethane	ND	0.0050	1	04/05/2016 12:25
Tetrachloroethene	0.019	0.0050	1	04/05/2016 12:25
Toluene	ND	0.0050	1	04/05/2016 12:25
1,2,3-Trichlorobenzene	ND	0.0050	1	04/05/2016 12:25
1,2,4-Trichlorobenzene	ND	0.0050	1	04/05/2016 12:25
1,1,1-Trichloroethane	ND	0.0050	1	04/05/2016 12:25
1,1,2-Trichloroethane	ND	0.0050	1	04/05/2016 12:25
Trichloroethene	ND	0.0050	1	04/05/2016 12:25
Trichlorofluoromethane	ND	0.0050	1	04/05/2016 12:25
1,2,3-Trichloropropane	ND	0.0050	1	04/05/2016 12:25
1,2,4-Trimethylbenzene	ND	0.0050	1	04/05/2016 12:25
1,3,5-Trimethylbenzene	ND	0.0050	1	04/05/2016 12:25
Vinyl Chloride	ND	0.0050	1	04/05/2016 12:25
Xylenes, Total	ND	0.0050	1	04/05/2016 12:25

(Cont.)

NELAP 4033ORELAP

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1603E69
Date Received:	3/29/16 20:34	**Extraction Method:**	SW5030B
Date Prepared:	3/29/16	**Analytical Method:**	SW8260B
Project:	0461; Red Hanger Kleaners	**Unit:**	mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B9-3.0	1603E69-001A	Soil	03/28/2016 09:25	GC16	118759

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
Dibromofluoromethane	85	70-130		04/05/2016 12:25
Toluene-d8	105	70-130		04/05/2016 12:25
4-BFB	89	70-130		04/05/2016 12:25
Benzene-d6	74	60-140		04/05/2016 12:25
Ethylbenzene-d10	81	60-140		04/05/2016 12:25
1,2-DCB-d4	60	60-140		04/05/2016 12:25

Analyst(s): HK

McCampbell Analytical, Inc.
"When Quality Counts"
1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1603E69
Date Prepared:	3/29/16	**BatchID:**	118759
Date Analyzed:	3/30/16	**Extraction Method:**	SW5030B
Instrument:	GC16, GC18	**Analytical Method:**	SW8260B
Matrix:	Soil	**Unit:**	mg/kg
Project:	0461; Red Hanger Kleaners	**Sample ID:**	MB/LCS-118759 1603E46-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	0.10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	0.0358	0.0050	0.050	-	72	53-116
Benzene	ND	0.0425	0.0050	0.050	-	85	63-137
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	0.173	0.050	0.20	-	87	41-135
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.0407	0.0050	0.050	-	81	77-121
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.0399	0.0040	0.050	-	80	67-119
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.0419	0.0040	0.050	-	84	58-135
1,1-Dichloroethene	ND	0.0358	0.0050	0.050	-	72	42-145
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	-	-	-

(Cont.)

NELAP 4033ORELAP

QA/QC Officer

McCampbell Analytical, Inc.
"When Quality Counts"
1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Quality Control Report

Client: P & D Environmental
Date Prepared: 3/29/16
Date Analyzed: 3/30/16
Instrument: GC16, GC18
Matrix: Soil
Project: 0461; Red Hanger Kleaners

WorkOrder: 1603E69
BatchID: 118759
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-118759
1603E46-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
Diisopropyl ether (DIPE)	ND	0.0393	0.0050	0.050	-	79	52-129
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.0399	0.0050	0.050	-	80	53-125
Freon 113	ND	-	0.0050	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.0391	0.0050	0.050	-	78	58-122
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	0.0443	0.0050	0.050	-	89	76-130
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	0.0385	0.0050	0.050	-	77	72-132
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Xylenes, Total	ND	-	0.0050	-	-	-	-

(Cont.)

NELAP 4033ORELAP

QA/QC Officer

McCampbell Analytical, Inc.
"When Quality Counts"
1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1603E69
Date Prepared:	3/29/16	**BatchID:**	118759
Date Analyzed:	3/30/16	**Extraction Method:**	SW5030B
Instrument:	GC16, GC18	**Analytical Method:**	SW8260B
Matrix:	Soil	**Unit:**	mg/kg
Project:	0461; Red Hanger Kleaners	**Sample ID:**	MB/LCS-118759 1603E46-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Surrogate Recovery							
Dibromofluoromethane	0.122	0.110		0.12	98	88	70-130
Toluene-d8	0.132	0.129		0.12	106	103	70-130
4-BFB	0.0158	0.0122		0.012	126	98	70-130
Benzene-d6	0.107	0.0976		0.10	107	98	60-140
Ethylbenzene-d10	0.119	0.123		0.10	119	123	60-140
1,2-DCB-d4	0.121	0.0862		0.10	121	86	60-140

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	0.0518	0.0533	0.050	ND	104,F1	107,F1	56-94	2.95	20
Benzene	0.0441	0.0441	0.050	ND	88	88	60-106	0	20
t-Butyl alcohol (TBA)	0.186	0.202	0.20	ND	93	101	56-140	8.01	20
Chlorobenzene	0.0467	0.0485	0.050	ND	93	97	61-108	3.66	20
1,2-Dibromoethane (EDB)	0.0514	0.0532	0.050	ND	103	106	54-119	3.37	20
1,2-Dichloroethane (1,2-DCA)	0.0484	0.0502	0.050	ND	97	101	48-115	3.80	20
1,1-Dichloroethene	0.0394	0.0378	0.050	ND	79	76	46-111	4.02	20
Diisopropyl ether (DIPE)	0.0487	0.0490	0.050	ND	97	98	53-111	0.576	20
Ethyl tert-butyl ether (ETBE)	0.0482	0.0489	0.050	ND	96	98	61-104	1.50	20
Methyl-t-butyl ether (MTBE)	0.0472	0.0484	0.050	ND	94	97	58-107	2.41	20
Toluene	0.0429	0.0439	0.050	ND	86	88	64-114	2.33	20
Trichloroethene	0.0460	0.0464	0.050	ND	92	93	60-116	0.762	20
Surrogate Recovery									
Dibromofluoromethane	0.129	0.130	0.12		103	104	70-130	0.895	20
Toluene-d8	0.127	0.126	0.12		101	101	70-130	0	20
4-BFB	0.0156	0.0154	0.012		125,F3	123,F3	88-121	1.30	20
Benzene-d6	0.0956	0.0974	0.10		96	97	60-140	1.84	20
Ethylbenzene-d10	0.106	0.108	0.10		106	108	60-140	2.23	20
1,2-DCB-d4	0.115	0.118	0.10		115	118	60-140	2.28	20

NELAP 4033ORELAP

QA/QC Officer

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1603E69 **ClientCode: PDEO**

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ EQuIS ☑ 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; Paul.King@pdenviro.c
cc/3rd Party:
PO:
ProjectNo: 0461; Red Hanger Kleaners

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

Requested TAT: 5 days;
Date Received: 03/29/2016
Date Logged: 03/29/2016

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
1603E69-001	B9-3.0	Soil	3/28/2016 9:25	☐	A											

Test Legend:

1	8260B_S	2		3		4	
5		6		7		8	
9		10		11		12	

Prepared by: Jena Alfaro

Comments: Always send reports to: lab@pdenviro.com; Paul.King@pdenviro.com; pdking0000@aol.com

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
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

WORK ORDER SUMMARY

Client Name: P & D ENVIRONMENTAL
Project: 0461; Red Hanger Kleaners
Comments: Always send reports to: lab@pdenviro.com; Paul.King@pdenviro.com; pdking0000@aol.com

QC Level: LEVEL 2
Client Contact: Paul King
Contact's Email: lab@pdenviro.com; Paul.King@pdenviro.com; pdking0000@aol.com

Work Order: 1603E69
Date Logged: 3/29/2016

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

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1603E69-001A	B9-3.0	Soil	SW8260B (VOCs)	1	Acetate Liner	☐	3/28/2016 9:25	5 days		☐	
1603E69-002A	B9-17.5	Soil		1	Acetate Liner	☐	3/28/2016 13:06			☑	
1603E69-003A	B10-17.0	Soil		1	Acetate Liner	☐	3/28/2016 13:25			☑	
1603E69-004A	B11-17.5	Soil		1	Acetate Liner	☐	3/28/2016 11:05			☑	
1603E69-005A	B12-17.0	Soil		1	Acetate Liner	☐	3/28/2016 9:20			☑	
1603E69-006A	B13-19.0	Soil		1	Acetate Liner	☐	3/28/2016 13:35			☑	
1603E69-007A	B14-17.5	Soil		1	Acetate Liner	☐	3/28/2016 14:00			☑	

NOTES: **- STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).**

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

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

1603E69

PROJECT NUMBER: 0461

PROJECT NAME: RED HANGER KLEANERS 6239 COLLEGE AVE. OAKLAND, CA

SAMPLED BY: (PRINTED & SIGNATURE) MICHAEL BASS-DESCHENES

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	ANALYSIS(ES): VOCs, INCLUDING TCE AND ASSOCIATED DECHLORINATION PRODUCTS BY EPA 8260B.	PRESERVATIVE	REMARKS
B9 - 3.0	3/28/16	0925	SOIL		1	X		NORMAL TAT
B9 - 17.5	"	1306	"		1	X		HOLD
B10 - 17.0	"	1325	"		1	X		HOLD
B11 - 17.5	"	1105	"		1	X		HOLD
B12 - 17.0	"	0920	"		1	X		HOLD
B13 - 19.0	"	1335	"		1	X		HOLD
B14 - 17.5	"	1400	"		1	X		HOLD

	DATE	TIME			
RELINQUISHED BY: (SIGNATURE) Michael Bass-Deschenes	3-29-16	1350	RECEIVED BY: (SIGNATURE)	Total No. of Samples (This Shipment)	7
				Total No. of Containers (This Shipment)	7
RELINQUISHED BY: (SIGNATURE)	3-29-16	1620	RECEIVED BY: (SIGNATURE)	LABORATORY: MC CAMPBELL ANALYTICAL, INC.	
				LABORATORY CONTACT: ANGELA RYDELIUS	LABORATORY PHONE NUMBER: (877) 252-9262
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)	SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( ) YES (X) NO	

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

REMARKS:

McCampbell Analytical, Inc.
"When Quality Counts"
1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Sample Receipt Checklist

Client Name:	**P & D Environmental**	Date and Time Received:	**3/29/2016 16:20**
Project Name:	**0461; Red Hanger Kleaners**	Date Logged:	**3/29/2016**
WorkOrder №:	**1603E69** Matrix: Soil	Received by:	Jena Alfaro
Carrier:	Bernie Cummins (MAI Courier)	Logged by:	Jena Alfaro

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 ☐	
Sample/Temp Blank temperature	Temp: 2.4°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☐	No ☐	NA ☑
Sample labels checked for correct preservation?	Yes ☑	No ☐	
pH acceptable upon receipt (Metal: <2; 522: <4; 218.7: >8)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	
	(Ice Type: WET ICE)		

UCMR3 Samples:

Total Chlorine tested and acceptable upon receipt for EPA 522?	Yes ☐	No ☐	NA ☑
Free Chlorine tested and acceptable upon receipt for EPA 218.7, 300.1, 537, 539?	Yes ☐	No ☐	NA ☑

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

Comments:

McCampbell Analytical, Inc.
"When Quality Counts"

Analytical Report

WorkOrder: 1603E70

Report Created for: P & D Environmental

55 Santa Clara, Ste.240
Oakland, CA 94610

Project Contact: Paul King
Project P.O.:
Project Name: 0461; Red Hanger Kleaners

Project Received: 03/29/2016

Analytical Report reviewed & approved for release on 04/05/2016 by:

Angela Rydelius,
Laboratory Manager

1534 Willow Pass Rd. Pittsburg, CA 94565 ♦ TEL: (877) 252-9262 ♦ FAX: (925) 252-9269 ♦ www.mccampbell.com
CDPH ELAP 1644 ♦ NELAP 4033ORELAP

McCampbell Analytical, Inc.
"When Quality Counts"
1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Glossary of Terms & Qualifier Definitions

Client: P & D Environmental
Project: 0461; Red Hanger Kleaners
WorkOrder: 1603E70

Glossary Abbreviation

% D	Percent Difference
95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DLT	Dilution Test
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PDS	Post Digestion Spike
PDSD	Post Digestion Spike Duplicate
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
ST	Sorbent Tube
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)

McCampbell Analytical, Inc.
"When Quality Counts"
1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client: P & D Environmental
Date Received: 3/29/16 20:42
Date Prepared: 4/3/16-4/4/16
Project: 0461; Red Hanger Kleaners

WorkOrder: 1603E70
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B9-W	1603E70-001A	Water	03/28/2016 14:05	GC16	118968

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	10	1	04/03/2016 01:42
tert-Amyl methyl ether (TAME)	ND	0.50	1	04/03/2016 01:42
Benzene	ND	0.50	1	04/03/2016 01:42
Bromobenzene	ND	0.50	1	04/03/2016 01:42
Bromochloromethane	ND	0.50	1	04/03/2016 01:42
Bromodichloromethane	ND	0.50	1	04/03/2016 01:42
Bromoform	ND	0.50	1	04/03/2016 01:42
Bromomethane	ND	0.50	1	04/03/2016 01:42
2-Butanone (MEK)	ND	2.0	1	04/03/2016 01:42
t-Butyl alcohol (TBA)	ND	2.0	1	04/03/2016 01:42
n-Butyl benzene	ND	0.50	1	04/03/2016 01:42
sec-Butyl benzene	ND	0.50	1	04/03/2016 01:42
tert-Butyl benzene	ND	0.50	1	04/03/2016 01:42
Carbon Disulfide	ND	0.50	1	04/03/2016 01:42
Carbon Tetrachloride	ND	0.50	1	04/03/2016 01:42
Chlorobenzene	ND	0.50	1	04/03/2016 01:42
Chloroethane	ND	0.50	1	04/03/2016 01:42
Chloroform	ND	0.50	1	04/03/2016 01:42
Chloromethane	ND	0.50	1	04/03/2016 01:42
2-Chlorotoluene	ND	0.50	1	04/03/2016 01:42
4-Chlorotoluene	ND	0.50	1	04/03/2016 01:42
Dibromochloromethane	ND	0.50	1	04/03/2016 01:42
1,2-Dibromo-3-chloropropane	ND	0.20	1	04/03/2016 01:42
1,2-Dibromoethane (EDB)	ND	0.50	1	04/03/2016 01:42
Dibromomethane	ND	0.50	1	04/03/2016 01:42
1,2-Dichlorobenzene	ND	0.50	1	04/03/2016 01:42
1,3-Dichlorobenzene	ND	0.50	1	04/03/2016 01:42
1,4-Dichlorobenzene	ND	0.50	1	04/03/2016 01:42
Dichlorodifluoromethane	ND	0.50	1	04/03/2016 01:42
1,1-Dichloroethane	ND	0.50	1	04/03/2016 01:42
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	04/03/2016 01:42
1,1-Dichloroethene	ND	0.50	1	04/03/2016 01:42
cis-1,2-Dichloroethene	ND	0.50	1	04/03/2016 01:42
trans-1,2-Dichloroethene	ND	0.50	1	04/03/2016 01:42
1,2-Dichloropropane	ND	0.50	1	04/03/2016 01:42
1,3-Dichloropropane	ND	0.50	1	04/03/2016 01:42
2,2-Dichloropropane	ND	0.50	1	04/03/2016 01:42

(Cont.)

NELAP 4033ORELAP

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"
1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1603E70
Date Received:	3/29/16 20:42	**Extraction Method:**	SW5030B
Date Prepared:	4/3/16-4/4/16	**Analytical Method:**	SW8260B
Project:	0461; Red Hanger Kleaners	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B9-W	1603E70-001A	Water	03/28/2016 14:05	GC16	118968

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.50	1	04/03/2016 01:42
cis-1,3-Dichloropropene	ND	0.50	1	04/03/2016 01:42
trans-1,3-Dichloropropene	ND	0.50	1	04/03/2016 01:42
Diisopropyl ether (DIPE)	ND	0.50	1	04/03/2016 01:42
Ethylbenzene	ND	0.50	1	04/03/2016 01:42
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	04/03/2016 01:42
Freon 113	ND	0.50	1	04/03/2016 01:42
Hexachlorobutadiene	ND	0.50	1	04/03/2016 01:42
Hexachloroethane	ND	0.50	1	04/03/2016 01:42
2-Hexanone	ND	0.50	1	04/03/2016 01:42
Isopropylbenzene	ND	0.50	1	04/03/2016 01:42
4-Isopropyl toluene	ND	0.50	1	04/03/2016 01:42
Methyl-t-butyl ether (MTBE)	ND	0.50	1	04/03/2016 01:42
Methylene chloride	ND	0.50	1	04/03/2016 01:42
4-Methyl-2-pentanone (MIBK)	ND	0.50	1	04/03/2016 01:42
Naphthalene	ND	0.50	1	04/03/2016 01:42
n-Propyl benzene	ND	0.50	1	04/03/2016 01:42
Styrene	ND	0.50	1	04/03/2016 01:42
1,1,1,2-Tetrachloroethane	ND	0.50	1	04/03/2016 01:42
1,1,2,2-Tetrachloroethane	ND	0.50	1	04/03/2016 01:42
Tetrachloroethene	38	0.50	1	04/03/2016 01:42
Toluene	ND	0.50	1	04/03/2016 01:42
1,2,3-Trichlorobenzene	ND	0.50	1	04/03/2016 01:42
1,2,4-Trichlorobenzene	ND	0.50	1	04/03/2016 01:42
1,1,1-Trichloroethane	ND	0.50	1	04/03/2016 01:42
1,1,2-Trichloroethane	ND	0.50	1	04/03/2016 01:42
Trichloroethene	ND	0.50	1	04/03/2016 01:42
Trichlorofluoromethane	ND	0.50	1	04/03/2016 01:42
1,2,3-Trichloropropane	ND	0.50	1	04/03/2016 01:42
1,2,4-Trimethylbenzene	ND	0.50	1	04/03/2016 01:42
1,3,5-Trimethylbenzene	ND	0.50	1	04/03/2016 01:42
Vinyl Chloride	ND	0.50	1	04/03/2016 01:42
Xylenes, Total	ND	0.50	1	04/03/2016 01:42

(Cont.)

NELAP 4033ORELAP

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"
1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1603E70
Date Received:	3/29/16 20:42	**Extraction Method:**	SW5030B
Date Prepared:	4/3/16-4/4/16	**Analytical Method:**	SW8260B
Project:	0461; Red Hanger Kleaners	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B9-W	1603E70-001A	Water	03/28/2016 14:05	GC16	118968

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
Dibromofluoromethane	90	70-130		04/03/2016 01:42
Toluene-d8	95	70-130		04/03/2016 01:42
4-BFB	83	70-130		04/03/2016 01:42

Analyst(s): HK

(Cont.)

NELAP 4033ORELAP

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"
1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client: P & D Environmental
Date Received: 3/29/16 20:42
Date Prepared: 4/3/16-4/4/16
Project: 0461; Red Hanger Kleaners

WorkOrder: 1603E70
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B10-W	1603E70-002A	Water	03/28/2016 14:20	GC28	118968

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	50	5	04/04/2016 23:16
tert-Amyl methyl ether (TAME)	ND	2.5	5	04/04/2016 23:16
Benzene	ND	2.5	5	04/04/2016 23:16
Bromobenzene	ND	2.5	5	04/04/2016 23:16
Bromochloromethane	ND	2.5	5	04/04/2016 23:16
Bromodichloromethane	ND	2.5	5	04/04/2016 23:16
Bromoform	ND	2.5	5	04/04/2016 23:16
Bromomethane	ND	2.5	5	04/04/2016 23:16
2-Butanone (MEK)	ND	10	5	04/04/2016 23:16
t-Butyl alcohol (TBA)	ND	10	5	04/04/2016 23:16
n-Butyl benzene	ND	2.5	5	04/04/2016 23:16
sec-Butyl benzene	ND	2.5	5	04/04/2016 23:16
tert-Butyl benzene	ND	2.5	5	04/04/2016 23:16
Carbon Disulfide	ND	2.5	5	04/04/2016 23:16
Carbon Tetrachloride	ND	2.5	5	04/04/2016 23:16
Chlorobenzene	ND	2.5	5	04/04/2016 23:16
Chloroethane	ND	2.5	5	04/04/2016 23:16
Chloroform	3.0	2.5	5	04/04/2016 23:16
Chloromethane	ND	2.5	5	04/04/2016 23:16
2-Chlorotoluene	ND	2.5	5	04/04/2016 23:16
4-Chlorotoluene	ND	2.5	5	04/04/2016 23:16
Dibromochloromethane	ND	2.5	5	04/04/2016 23:16
1,2-Dibromo-3-chloropropane	ND	1.0	5	04/04/2016 23:16
1,2-Dibromoethane (EDB)	ND	2.5	5	04/04/2016 23:16
Dibromomethane	ND	2.5	5	04/04/2016 23:16
1,2-Dichlorobenzene	ND	2.5	5	04/04/2016 23:16
1,3-Dichlorobenzene	ND	2.5	5	04/04/2016 23:16
1,4-Dichlorobenzene	ND	2.5	5	04/04/2016 23:16
Dichlorodifluoromethane	ND	2.5	5	04/04/2016 23:16
1,1-Dichloroethane	ND	2.5	5	04/04/2016 23:16
1,2-Dichloroethane (1,2-DCA)	ND	2.5	5	04/04/2016 23:16
1,1-Dichloroethene	ND	2.5	5	04/04/2016 23:16
cis-1,2-Dichloroethene	ND	2.5	5	04/04/2016 23:16
trans-1,2-Dichloroethene	ND	2.5	5	04/04/2016 23:16
1,2-Dichloropropane	ND	2.5	5	04/04/2016 23:16
1,3-Dichloropropane	ND	2.5	5	04/04/2016 23:16
2,2-Dichloropropane	ND	2.5	5	04/04/2016 23:16

(Cont.)

NELAP 4033ORELAP

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"
1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client: P & D Environmental
Date Received: 3/29/16 20:42
Date Prepared: 4/3/16-4/4/16
Project: 0461; Red Hanger Kleaners

WorkOrder: 1603E70
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B10-W	1603E70-002A	Water	03/28/2016 14:20	GC28	118968

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	2.5	5	04/04/2016 23:16
cis-1,3-Dichloropropene	ND	2.5	5	04/04/2016 23:16
trans-1,3-Dichloropropene	ND	2.5	5	04/04/2016 23:16
Diisopropyl ether (DIPE)	ND	2.5	5	04/04/2016 23:16
Ethylbenzene	ND	2.5	5	04/04/2016 23:16
Ethyl tert-butyl ether (ETBE)	ND	2.5	5	04/04/2016 23:16
Freon 113	ND	2.5	5	04/04/2016 23:16
Hexachlorobutadiene	ND	2.5	5	04/04/2016 23:16
Hexachloroethane	ND	2.5	5	04/04/2016 23:16
2-Hexanone	ND	2.5	5	04/04/2016 23:16
Isopropylbenzene	ND	2.5	5	04/04/2016 23:16
4-Isopropyl toluene	ND	2.5	5	04/04/2016 23:16
Methyl-t-butyl ether (MTBE)	ND	2.5	5	04/04/2016 23:16
Methylene chloride	ND	2.5	5	04/04/2016 23:16
4-Methyl-2-pentanone (MIBK)	ND	2.5	5	04/04/2016 23:16
Naphthalene	ND	2.5	5	04/04/2016 23:16
n-Propyl benzene	ND	2.5	5	04/04/2016 23:16
Styrene	ND	2.5	5	04/04/2016 23:16
1,1,1,2-Tetrachloroethane	ND	2.5	5	04/04/2016 23:16
1,1,2,2-Tetrachloroethane	ND	2.5	5	04/04/2016 23:16
Tetrachloroethene	56	2.5	5	04/04/2016 23:16
Toluene	ND	2.5	5	04/04/2016 23:16
1,2,3-Trichlorobenzene	ND	2.5	5	04/04/2016 23:16
1,2,4-Trichlorobenzene	ND	2.5	5	04/04/2016 23:16
1,1,1-Trichloroethane	ND	2.5	5	04/04/2016 23:16
1,1,2-Trichloroethane	ND	2.5	5	04/04/2016 23:16
Trichloroethene	ND	2.5	5	04/04/2016 23:16
Trichlorofluoromethane	ND	2.5	5	04/04/2016 23:16
1,2,3-Trichloropropane	ND	2.5	5	04/04/2016 23:16
1,2,4-Trimethylbenzene	ND	2.5	5	04/04/2016 23:16
1,3,5-Trimethylbenzene	ND	2.5	5	04/04/2016 23:16
Vinyl Chloride	ND	2.5	5	04/04/2016 23:16
Xylenes, Total	ND	2.5	5	04/04/2016 23:16

(Cont.)

NELAP 4033ORELAP

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"
1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1603E70
Date Received:	3/29/16 20:42	**Extraction Method:**	SW5030B
Date Prepared:	4/3/16-4/4/16	**Analytical Method:**	SW8260B
Project:	0461; Red Hanger Kleaners	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B10-W	1603E70-002A	Water	03/28/2016 14:20	GC28	118968

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
Dibromofluoromethane	116	70-130		04/04/2016 23:16
Toluene-d8	125	70-130		04/04/2016 23:16
4-BFB	75	70-130		04/04/2016 23:16

Analyst(s): HK

(Cont.)

NELAP 4033ORELAP

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"
1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client: P & D Environmental
Date Received: 3/29/16 20:42
Date Prepared: 4/3/16-4/4/16
Project: 0461; Red Hanger Kleaners

WorkOrder: 1603E70
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B11-W	1603E70-003A	Water	03/28/2016 16:15	GC16	118968

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	10	1	04/03/2016 03:01
tert-Amyl methyl ether (TAME)	ND	0.50	1	04/03/2016 03:01
Benzene	ND	0.50	1	04/03/2016 03:01
Bromobenzene	ND	0.50	1	04/03/2016 03:01
Bromochloromethane	ND	0.50	1	04/03/2016 03:01
Bromodichloromethane	ND	0.50	1	04/03/2016 03:01
Bromoform	ND	0.50	1	04/03/2016 03:01
Bromomethane	ND	0.50	1	04/03/2016 03:01
2-Butanone (MEK)	ND	2.0	1	04/03/2016 03:01
t-Butyl alcohol (TBA)	ND	2.0	1	04/03/2016 03:01
n-Butyl benzene	ND	0.50	1	04/03/2016 03:01
sec-Butyl benzene	ND	0.50	1	04/03/2016 03:01
tert-Butyl benzene	ND	0.50	1	04/03/2016 03:01
Carbon Disulfide	ND	0.50	1	04/03/2016 03:01
Carbon Tetrachloride	ND	0.50	1	04/03/2016 03:01
Chlorobenzene	ND	0.50	1	04/03/2016 03:01
Chloroethane	ND	0.50	1	04/03/2016 03:01
Chloroform	0.68	0.50	1	04/03/2016 03:01
Chloromethane	ND	0.50	1	04/03/2016 03:01
2-Chlorotoluene	ND	0.50	1	04/03/2016 03:01
4-Chlorotoluene	ND	0.50	1	04/03/2016 03:01
Dibromochloromethane	ND	0.50	1	04/03/2016 03:01
1,2-Dibromo-3-chloropropane	ND	0.20	1	04/03/2016 03:01
1,2-Dibromoethane (EDB)	ND	0.50	1	04/03/2016 03:01
Dibromomethane	ND	0.50	1	04/03/2016 03:01
1,2-Dichlorobenzene	ND	0.50	1	04/03/2016 03:01
1,3-Dichlorobenzene	ND	0.50	1	04/03/2016 03:01
1,4-Dichlorobenzene	ND	0.50	1	04/03/2016 03:01
Dichlorodifluoromethane	ND	0.50	1	04/03/2016 03:01
1,1-Dichloroethane	ND	0.50	1	04/03/2016 03:01
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	04/03/2016 03:01
1,1-Dichloroethene	ND	0.50	1	04/03/2016 03:01
cis-1,2-Dichloroethene	ND	0.50	1	04/03/2016 03:01
trans-1,2-Dichloroethene	ND	0.50	1	04/03/2016 03:01
1,2-Dichloropropane	ND	0.50	1	04/03/2016 03:01
1,3-Dichloropropane	ND	0.50	1	04/03/2016 03:01
2,2-Dichloropropane	ND	0.50	1	04/03/2016 03:01

(Cont.)

NELAP 4033ORELAP

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"
1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1603E70
Date Received:	3/29/16 20:42	**Extraction Method:**	SW5030B
Date Prepared:	4/3/16-4/4/16	**Analytical Method:**	SW8260B
Project:	0461; Red Hanger Kleaners	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B11-W	1603E70-003A	Water	03/28/2016 16:15	GC16	118968

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.50	1	04/03/2016 03:01
cis-1,3-Dichloropropene	ND	0.50	1	04/03/2016 03:01
trans-1,3-Dichloropropene	ND	0.50	1	04/03/2016 03:01
Diisopropyl ether (DIPE)	ND	0.50	1	04/03/2016 03:01
Ethylbenzene	ND	0.50	1	04/03/2016 03:01
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	04/03/2016 03:01
Freon 113	ND	0.50	1	04/03/2016 03:01
Hexachlorobutadiene	ND	0.50	1	04/03/2016 03:01
Hexachloroethane	ND	0.50	1	04/03/2016 03:01
2-Hexanone	ND	0.50	1	04/03/2016 03:01
Isopropylbenzene	ND	0.50	1	04/03/2016 03:01
4-Isopropyl toluene	ND	0.50	1	04/03/2016 03:01
Methyl-t-butyl ether (MTBE)	ND	0.50	1	04/03/2016 03:01
Methylene chloride	ND	0.50	1	04/03/2016 03:01
4-Methyl-2-pentanone (MIBK)	ND	0.50	1	04/03/2016 03:01
Naphthalene	ND	0.50	1	04/03/2016 03:01
n-Propyl benzene	ND	0.50	1	04/03/2016 03:01
Styrene	ND	0.50	1	04/03/2016 03:01
1,1,1,2-Tetrachloroethane	ND	0.50	1	04/03/2016 03:01
1,1,2,2-Tetrachloroethane	ND	0.50	1	04/03/2016 03:01
Tetrachloroethene	18	0.50	1	04/03/2016 03:01
Toluene	ND	0.50	1	04/03/2016 03:01
1,2,3-Trichlorobenzene	ND	0.50	1	04/03/2016 03:01
1,2,4-Trichlorobenzene	ND	0.50	1	04/03/2016 03:01
1,1,1-Trichloroethane	ND	0.50	1	04/03/2016 03:01
1,1,2-Trichloroethane	ND	0.50	1	04/03/2016 03:01
Trichloroethene	ND	0.50	1	04/03/2016 03:01
Trichlorofluoromethane	ND	0.50	1	04/03/2016 03:01
1,2,3-Trichloropropane	ND	0.50	1	04/03/2016 03:01
1,2,4-Trimethylbenzene	ND	0.50	1	04/03/2016 03:01
1,3,5-Trimethylbenzene	ND	0.50	1	04/03/2016 03:01
Vinyl Chloride	ND	0.50	1	04/03/2016 03:01
Xylenes, Total	ND	0.50	1	04/03/2016 03:01

(Cont.)

NELAP 4033ORELAP

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"
1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1603E70
Date Received:	3/29/16 20:42	**Extraction Method:**	SW5030B
Date Prepared:	4/3/16-4/4/16	**Analytical Method:**	SW8260B
Project:	0461; Red Hanger Kleaners	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B11-W	1603E70-003A	Water	03/28/2016 16:15	GC16	118968

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
Dibromofluoromethane	90	70-130		04/03/2016 03:01
Toluene-d8	95	70-130		04/03/2016 03:01
4-BFB	79	70-130		04/03/2016 03:01

Analyst(s): HK

(Cont.)

NELAP 4033ORELAP

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"
1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client: P & D Environmental
Date Received: 3/29/16 20:42
Date Prepared: 4/3/16-4/4/16
Project: 0461; Red Hanger Kleaners

WorkOrder: 1603E70
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B12-W	1603E70-004A	Water	03/28/2016 12:15	GC16	118968

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	10	1	04/03/2016 03:41
tert-Amyl methyl ether (TAME)	ND	0.50	1	04/03/2016 03:41
Benzene	ND	0.50	1	04/03/2016 03:41
Bromobenzene	ND	0.50	1	04/03/2016 03:41
Bromochloromethane	ND	0.50	1	04/03/2016 03:41
Bromodichloromethane	ND	0.50	1	04/03/2016 03:41
Bromoform	ND	0.50	1	04/03/2016 03:41
Bromomethane	ND	0.50	1	04/03/2016 03:41
2-Butanone (MEK)	ND	2.0	1	04/03/2016 03:41
t-Butyl alcohol (TBA)	ND	2.0	1	04/03/2016 03:41
n-Butyl benzene	ND	0.50	1	04/03/2016 03:41
sec-Butyl benzene	ND	0.50	1	04/03/2016 03:41
tert-Butyl benzene	ND	0.50	1	04/03/2016 03:41
Carbon Disulfide	ND	0.50	1	04/03/2016 03:41
Carbon Tetrachloride	ND	0.50	1	04/03/2016 03:41
Chlorobenzene	ND	0.50	1	04/03/2016 03:41
Chloroethane	ND	0.50	1	04/03/2016 03:41
Chloroform	0.74	0.50	1	04/03/2016 03:41
Chloromethane	ND	0.50	1	04/03/2016 03:41
2-Chlorotoluene	ND	0.50	1	04/03/2016 03:41
4-Chlorotoluene	ND	0.50	1	04/03/2016 03:41
Dibromochloromethane	ND	0.50	1	04/03/2016 03:41
1,2-Dibromo-3-chloropropane	ND	0.20	1	04/03/2016 03:41
1,2-Dibromoethane (EDB)	ND	0.50	1	04/03/2016 03:41
Dibromomethane	ND	0.50	1	04/03/2016 03:41
1,2-Dichlorobenzene	ND	0.50	1	04/03/2016 03:41
1,3-Dichlorobenzene	ND	0.50	1	04/03/2016 03:41
1,4-Dichlorobenzene	ND	0.50	1	04/03/2016 03:41
Dichlorodifluoromethane	ND	0.50	1	04/03/2016 03:41
1,1-Dichloroethane	ND	0.50	1	04/03/2016 03:41
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	04/03/2016 03:41
1,1-Dichloroethene	ND	0.50	1	04/03/2016 03:41
cis-1,2-Dichloroethene	ND	0.50	1	04/03/2016 03:41
trans-1,2-Dichloroethene	ND	0.50	1	04/03/2016 03:41
1,2-Dichloropropane	ND	0.50	1	04/03/2016 03:41
1,3-Dichloropropane	ND	0.50	1	04/03/2016 03:41
2,2-Dichloropropane	ND	0.50	1	04/03/2016 03:41

(Cont.)

NELAP 4033ORELAP

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"
1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1603E70
Date Received:	3/29/16 20:42	**Extraction Method:**	SW5030B
Date Prepared:	4/3/16-4/4/16	**Analytical Method:**	SW8260B
Project:	0461; Red Hanger Kleaners	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B12-W	1603E70-004A	Water	03/28/2016 12:15	GC16	118968

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.50	1	04/03/2016 03:41
cis-1,3-Dichloropropene	ND	0.50	1	04/03/2016 03:41
trans-1,3-Dichloropropene	ND	0.50	1	04/03/2016 03:41
Diisopropyl ether (DIPE)	ND	0.50	1	04/03/2016 03:41
Ethylbenzene	ND	0.50	1	04/03/2016 03:41
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	04/03/2016 03:41
Freon 113	ND	0.50	1	04/03/2016 03:41
Hexachlorobutadiene	ND	0.50	1	04/03/2016 03:41
Hexachloroethane	ND	0.50	1	04/03/2016 03:41
2-Hexanone	ND	0.50	1	04/03/2016 03:41
Isopropylbenzene	ND	0.50	1	04/03/2016 03:41
4-Isopropyl toluene	ND	0.50	1	04/03/2016 03:41
Methyl-t-butyl ether (MTBE)	ND	0.50	1	04/03/2016 03:41
Methylene chloride	ND	0.50	1	04/03/2016 03:41
4-Methyl-2-pentanone (MIBK)	ND	0.50	1	04/03/2016 03:41
Naphthalene	ND	0.50	1	04/03/2016 03:41
n-Propyl benzene	ND	0.50	1	04/03/2016 03:41
Styrene	ND	0.50	1	04/03/2016 03:41
1,1,1,2-Tetrachloroethane	ND	0.50	1	04/03/2016 03:41
1,1,2,2-Tetrachloroethane	ND	0.50	1	04/03/2016 03:41
Tetrachloroethene	3.0	0.50	1	04/03/2016 03:41
Toluene	ND	0.50	1	04/03/2016 03:41
1,2,3-Trichlorobenzene	ND	0.50	1	04/03/2016 03:41
1,2,4-Trichlorobenzene	ND	0.50	1	04/03/2016 03:41
1,1,1-Trichloroethane	ND	0.50	1	04/03/2016 03:41
1,1,2-Trichloroethane	ND	0.50	1	04/03/2016 03:41
Trichloroethene	ND	0.50	1	04/03/2016 03:41
Trichlorofluoromethane	ND	0.50	1	04/03/2016 03:41
1,2,3-Trichloropropane	ND	0.50	1	04/03/2016 03:41
1,2,4-Trimethylbenzene	ND	0.50	1	04/03/2016 03:41
1,3,5-Trimethylbenzene	ND	0.50	1	04/03/2016 03:41
Vinyl Chloride	ND	0.50	1	04/03/2016 03:41
Xylenes, Total	ND	0.50	1	04/03/2016 03:41

(Cont.)

NELAP 4033ORELAP

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"
1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client: P & D Environmental
Date Received: 3/29/16 20:42
Date Prepared: 4/3/16-4/4/16
Project: 0461; Red Hanger Kleaners

WorkOrder: 1603E70
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B12-W	1603E70-004A	Water	03/28/2016 12:15	GC16	118968

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
Dibromofluoromethane	89	70-130		04/03/2016 03:41
Toluene-d8	97	70-130		04/03/2016 03:41
4-BFB	81	70-130		04/03/2016 03:41

Analyst(s): HK

(Cont.)

NELAP 4033ORELAP

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"
1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client: P & D Environmental
Date Received: 3/29/16 20:42
Date Prepared: 4/3/16-4/4/16
Project: 0461; Red Hanger Kleaners

WorkOrder: 1603E70
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B13-W	1603E70-005A	Water	03/28/2016 14:30	GC16	118968

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	10	1	04/03/2016 04:21
tert-Amyl methyl ether (TAME)	ND	0.50	1	04/03/2016 04:21
Benzene	ND	0.50	1	04/03/2016 04:21
Bromobenzene	ND	0.50	1	04/03/2016 04:21
Bromochloromethane	ND	0.50	1	04/03/2016 04:21
Bromodichloromethane	ND	0.50	1	04/03/2016 04:21
Bromoform	ND	0.50	1	04/03/2016 04:21
Bromomethane	ND	0.50	1	04/03/2016 04:21
2-Butanone (MEK)	ND	2.0	1	04/03/2016 04:21
t-Butyl alcohol (TBA)	ND	2.0	1	04/03/2016 04:21
n-Butyl benzene	ND	0.50	1	04/03/2016 04:21
sec-Butyl benzene	ND	0.50	1	04/03/2016 04:21
tert-Butyl benzene	ND	0.50	1	04/03/2016 04:21
Carbon Disulfide	ND	0.50	1	04/03/2016 04:21
Carbon Tetrachloride	ND	0.50	1	04/03/2016 04:21
Chlorobenzene	ND	0.50	1	04/03/2016 04:21
Chloroethane	ND	0.50	1	04/03/2016 04:21
Chloroform	0.56	0.50	1	04/03/2016 04:21
Chloromethane	ND	0.50	1	04/03/2016 04:21
2-Chlorotoluene	ND	0.50	1	04/03/2016 04:21
4-Chlorotoluene	ND	0.50	1	04/03/2016 04:21
Dibromochloromethane	ND	0.50	1	04/03/2016 04:21
1,2-Dibromo-3-chloropropane	ND	0.20	1	04/03/2016 04:21
1,2-Dibromoethane (EDB)	ND	0.50	1	04/03/2016 04:21
Dibromomethane	ND	0.50	1	04/03/2016 04:21
1,2-Dichlorobenzene	ND	0.50	1	04/03/2016 04:21
1,3-Dichlorobenzene	ND	0.50	1	04/03/2016 04:21
1,4-Dichlorobenzene	ND	0.50	1	04/03/2016 04:21
Dichlorodifluoromethane	ND	0.50	1	04/03/2016 04:21
1,1-Dichloroethane	ND	0.50	1	04/03/2016 04:21
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	04/03/2016 04:21
1,1-Dichloroethene	ND	0.50	1	04/03/2016 04:21
cis-1,2-Dichloroethene	ND	0.50	1	04/03/2016 04:21
trans-1,2-Dichloroethene	ND	0.50	1	04/03/2016 04:21
1,2-Dichloropropane	ND	0.50	1	04/03/2016 04:21
1,3-Dichloropropane	ND	0.50	1	04/03/2016 04:21
2,2-Dichloropropane	ND	0.50	1	04/03/2016 04:21

(Cont.)

NELAP 4033ORELAP

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"
1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client: P & D Environmental
Date Received: 3/29/16 20:42
Date Prepared: 4/3/16-4/4/16
Project: 0461; Red Hanger Kleaners

WorkOrder: 1603E70
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B13-W	1603E70-005A	Water	03/28/2016 14:30	GC16	118968

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.50	1	04/03/2016 04:21
cis-1,3-Dichloropropene	ND	0.50	1	04/03/2016 04:21
trans-1,3-Dichloropropene	ND	0.50	1	04/03/2016 04:21
Diisopropyl ether (DIPE)	ND	0.50	1	04/03/2016 04:21
Ethylbenzene	ND	0.50	1	04/03/2016 04:21
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	04/03/2016 04:21
Freon 113	ND	0.50	1	04/03/2016 04:21
Hexachlorobutadiene	ND	0.50	1	04/03/2016 04:21
Hexachloroethane	ND	0.50	1	04/03/2016 04:21
2-Hexanone	ND	0.50	1	04/03/2016 04:21
Isopropylbenzene	ND	0.50	1	04/03/2016 04:21
4-Isopropyl toluene	ND	0.50	1	04/03/2016 04:21
Methyl-t-butyl ether (MTBE)	ND	0.50	1	04/03/2016 04:21
Methylene chloride	ND	0.50	1	04/03/2016 04:21
4-Methyl-2-pentanone (MIBK)	ND	0.50	1	04/03/2016 04:21
Naphthalene	ND	0.50	1	04/03/2016 04:21
n-Propyl benzene	ND	0.50	1	04/03/2016 04:21
Styrene	ND	0.50	1	04/03/2016 04:21
1,1,1,2-Tetrachloroethane	ND	0.50	1	04/03/2016 04:21
1,1,2,2-Tetrachloroethane	ND	0.50	1	04/03/2016 04:21
Tetrachloroethene	18	0.50	1	04/03/2016 04:21
Toluene	ND	0.50	1	04/03/2016 04:21
1,2,3-Trichlorobenzene	ND	0.50	1	04/03/2016 04:21
1,2,4-Trichlorobenzene	ND	0.50	1	04/03/2016 04:21
1,1,1-Trichloroethane	ND	0.50	1	04/03/2016 04:21
1,1,2-Trichloroethane	ND	0.50	1	04/03/2016 04:21
Trichloroethene	ND	0.50	1	04/03/2016 04:21
Trichlorofluoromethane	ND	0.50	1	04/03/2016 04:21
1,2,3-Trichloropropane	ND	0.50	1	04/03/2016 04:21
1,2,4-Trimethylbenzene	ND	0.50	1	04/03/2016 04:21
1,3,5-Trimethylbenzene	ND	0.50	1	04/03/2016 04:21
Vinyl Chloride	ND	0.50	1	04/03/2016 04:21
Xylenes, Total	ND	0.50	1	04/03/2016 04:21

(Cont.)

NELAP 4033ORELAP

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"
1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1603E70
Date Received:	3/29/16 20:42	**Extraction Method:**	SW5030B
Date Prepared:	4/3/16-4/4/16	**Analytical Method:**	SW8260B
Project:	0461; Red Hanger Kleaners	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B13-W	1603E70-005A	Water	03/28/2016 14:30	GC16	118968

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
Dibromofluoromethane	89	70-130		04/03/2016 04:21
Toluene-d8	97	70-130		04/03/2016 04:21
4-BFB	81	70-130		04/03/2016 04:21

Analyst(s): HK

(Cont.)

NELAP 4033ORELAP

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"
1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client: P & D Environmental
Date Received: 3/29/16 20:42
Date Prepared: 4/3/16-4/4/16
Project: 0461; Red Hanger Kleaners

WorkOrder: 1603E70
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B14-W	1603E70-006A	Water	03/29/2016 07:15	GC16	118968

Analytes	Result	RL	DF	Date Analyzed
Acetone	10	10	1	04/03/2016 05:01
tert-Amyl methyl ether (TAME)	ND	0.50	1	04/03/2016 05:01
Benzene	ND	0.50	1	04/03/2016 05:01
Bromobenzene	ND	0.50	1	04/03/2016 05:01
Bromochloromethane	ND	0.50	1	04/03/2016 05:01
Bromodichloromethane	ND	0.50	1	04/03/2016 05:01
Bromoform	ND	0.50	1	04/03/2016 05:01
Bromomethane	ND	0.50	1	04/03/2016 05:01
2-Butanone (MEK)	ND	2.0	1	04/03/2016 05:01
t-Butyl alcohol (TBA)	ND	2.0	1	04/03/2016 05:01
n-Butyl benzene	ND	0.50	1	04/03/2016 05:01
sec-Butyl benzene	ND	0.50	1	04/03/2016 05:01
tert-Butyl benzene	ND	0.50	1	04/03/2016 05:01
Carbon Disulfide	ND	0.50	1	04/03/2016 05:01
Carbon Tetrachloride	ND	0.50	1	04/03/2016 05:01
Chlorobenzene	ND	0.50	1	04/03/2016 05:01
Chloroethane	ND	0.50	1	04/03/2016 05:01
Chloroform	ND	0.50	1	04/03/2016 05:01
Chloromethane	ND	0.50	1	04/03/2016 05:01
2-Chlorotoluene	ND	0.50	1	04/03/2016 05:01
4-Chlorotoluene	ND	0.50	1	04/03/2016 05:01
Dibromochloromethane	ND	0.50	1	04/03/2016 05:01
1,2-Dibromo-3-chloropropane	ND	0.20	1	04/03/2016 05:01
1,2-Dibromoethane (EDB)	ND	0.50	1	04/03/2016 05:01
Dibromomethane	ND	0.50	1	04/03/2016 05:01
1,2-Dichlorobenzene	ND	0.50	1	04/03/2016 05:01
1,3-Dichlorobenzene	ND	0.50	1	04/03/2016 05:01
1,4-Dichlorobenzene	ND	0.50	1	04/03/2016 05:01
Dichlorodifluoromethane	ND	0.50	1	04/03/2016 05:01
1,1-Dichloroethane	ND	0.50	1	04/03/2016 05:01
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	04/03/2016 05:01
1,1-Dichloroethene	ND	0.50	1	04/03/2016 05:01
cis-1,2-Dichloroethene	ND	0.50	1	04/03/2016 05:01
trans-1,2-Dichloroethene	ND	0.50	1	04/03/2016 05:01
1,2-Dichloropropane	ND	0.50	1	04/03/2016 05:01
1,3-Dichloropropane	ND	0.50	1	04/03/2016 05:01
2,2-Dichloropropane	ND	0.50	1	04/03/2016 05:01

(Cont.)

NELAP 4033ORELAP

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"
1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1603E70
Date Received:	3/29/16 20:42	**Extraction Method:**	SW5030B
Date Prepared:	4/3/16-4/4/16	**Analytical Method:**	SW8260B
Project:	0461; Red Hanger Kleaners	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B14-W	1603E70-006A	Water	03/29/2016 07:15	GC16	118968

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.50	1	04/03/2016 05:01
cis-1,3-Dichloropropene	ND	0.50	1	04/03/2016 05:01
trans-1,3-Dichloropropene	ND	0.50	1	04/03/2016 05:01
Diisopropyl ether (DIPE)	ND	0.50	1	04/03/2016 05:01
Ethylbenzene	ND	0.50	1	04/03/2016 05:01
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	04/03/2016 05:01
Freon 113	ND	0.50	1	04/03/2016 05:01
Hexachlorobutadiene	ND	0.50	1	04/03/2016 05:01
Hexachloroethane	ND	0.50	1	04/03/2016 05:01
2-Hexanone	ND	0.50	1	04/03/2016 05:01
Isopropylbenzene	ND	0.50	1	04/03/2016 05:01
4-Isopropyl toluene	ND	0.50	1	04/03/2016 05:01
Methyl-t-butyl ether (MTBE)	ND	0.50	1	04/03/2016 05:01
Methylene chloride	ND	0.50	1	04/03/2016 05:01
4-Methyl-2-pentanone (MIBK)	ND	0.50	1	04/03/2016 05:01
Naphthalene	ND	0.50	1	04/03/2016 05:01
n-Propyl benzene	ND	0.50	1	04/03/2016 05:01
Styrene	ND	0.50	1	04/03/2016 05:01
1,1,1,2-Tetrachloroethane	ND	0.50	1	04/03/2016 05:01
1,1,2,2-Tetrachloroethane	ND	0.50	1	04/03/2016 05:01
Tetrachloroethene	2.1	0.50	1	04/03/2016 05:01
Toluene	ND	0.50	1	04/03/2016 05:01
1,2,3-Trichlorobenzene	ND	0.50	1	04/03/2016 05:01
1,2,4-Trichlorobenzene	ND	0.50	1	04/03/2016 05:01
1,1,1-Trichloroethane	ND	0.50	1	04/03/2016 05:01
1,1,2-Trichloroethane	ND	0.50	1	04/03/2016 05:01
Trichloroethene	ND	0.50	1	04/03/2016 05:01
Trichlorofluoromethane	ND	0.50	1	04/03/2016 05:01
1,2,3-Trichloropropane	ND	0.50	1	04/03/2016 05:01
1,2,4-Trimethylbenzene	ND	0.50	1	04/03/2016 05:01
1,3,5-Trimethylbenzene	ND	0.50	1	04/03/2016 05:01
Vinyl Chloride	ND	0.50	1	04/03/2016 05:01
Xylenes, Total	ND	0.50	1	04/03/2016 05:01

(Cont.)

NELAP 4033ORELAP

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1603E70
Date Received:	3/29/16 20:42	**Extraction Method:**	SW5030B
Date Prepared:	4/3/16-4/4/16	**Analytical Method:**	SW8260B
Project:	0461; Red Hanger Kleaners	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B14-W	1603E70-006A	Water	03/29/2016 07:15	GC16	118968

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
Dibromofluoromethane	89	70-130		04/03/2016 05:01
Toluene-d8	97	70-130		04/03/2016 05:01
4-BFB	80	70-130		04/03/2016 05:01

Analyst(s): HK

NELAP 4033ORELAP

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"
1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Quality Control Report

Client: P & D Environmental
Date Prepared: 4/2/16
Date Analyzed: 4/2/16
Instrument: GC16
Matrix: Water
Project: 0461; Red Hanger Kleaners

WorkOrder: 1603E70
BatchID: 118968
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L
Sample ID: MB/LCS-118968
1603E48-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	9.54	0.50	10	-	95	54-140
Benzene	ND	9.56	0.50	10	-	96	47-158
Bromobenzene	ND	-	0.50	-	-	-	-
Bromochloromethane	ND	-	0.50	-	-	-	-
Bromodichloromethane	ND	-	0.50	-	-	-	-
Bromoform	ND	-	0.50	-	-	-	-
Bromomethane	ND	-	0.50	-	-	-	-
2-Butanone (MEK)	ND	-	2.0	-	-	-	-
t-Butyl alcohol (TBA)	ND	38.9	2.0	40	-	97	42-140
n-Butyl benzene	ND	-	0.50	-	-	-	-
sec-Butyl benzene	ND	-	0.50	-	-	-	-
tert-Butyl benzene	ND	-	0.50	-	-	-	-
Carbon Disulfide	ND	-	0.50	-	-	-	-
Carbon Tetrachloride	ND	-	0.50	-	-	-	-
Chlorobenzene	ND	8.60	0.50	10	-	86	43-157
Chloroethane	ND	-	0.50	-	-	-	-
Chloroform	ND	-	0.50	-	-	-	-
Chloromethane	ND	-	0.50	-	-	-	-
2-Chlorotoluene	ND	-	0.50	-	-	-	-
4-Chlorotoluene	ND	-	0.50	-	-	-	-
Dibromochloromethane	ND	-	0.50	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.20	-	-	-	-
1,2-Dibromoethane (EDB)	ND	9.06	0.50	10	-	91	44-155
Dibromomethane	ND	-	0.50	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.50	-	-	-	-
Dichlorodifluoromethane	ND	-	0.50	-	-	-	-
1,1-Dichloroethane	ND	-	0.50	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	9.87	0.50	10	-	99	66-125
1,1-Dichloroethene	ND	9.15	0.50	10	-	91	47-149
cis-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
1,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,3-Dichloropropane	ND	-	0.50	-	-	-	-
2,2-Dichloropropane	ND	-	0.50	-	-	-	-

(Cont.)

NELAP 4033ORELAP

QA/QC Officer

McCampbell Analytical, Inc.
"When Quality Counts"
1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Quality Control Report

Client: P & D Environmental
Date Prepared: 4/2/16
Date Analyzed: 4/2/16
Instrument: GC16
Matrix: Water
Project: 0461; Red Hanger Kleaners

WorkOrder: 1603E70
BatchID: 118968
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L
Sample ID: MB/LCS-118968
1603E48-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
1,1-Dichloropropene	ND	-	0.50	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
Diisopropyl ether (DIPE)	ND	9.89	0.50	10	-	99	57-136
Ethanol	ND	-	50	-	-	-	-
Ethylbenzene	ND	-	0.50	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	10.2	0.50	10	-	102	55-137
Freon 113	ND	-	0.50	-	-	-	-
Hexachlorobutadiene	ND	-	0.50	-	-	-	-
Hexachloroethane	ND	-	0.50	-	-	-	-
2-Hexanone	ND	-	0.50	-	-	-	-
Isopropylbenzene	ND	-	0.50	-	-	-	-
4-Isopropyl toluene	ND	-	0.50	-	-	-	-
Methanol	ND	-	500	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	9.92	0.50	10	-	99	53-139
Methylene chloride	ND	-	0.50	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.50	-	-	-	-
Naphthalene	ND	-	0.50	-	-	-	-
n-Propyl benzene	ND	-	0.50	-	-	-	-
Styrene	ND	-	0.50	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
Tetrachloroethene	ND	-	0.50	-	-	-	-
Toluene	ND	9.25	0.50	10	-	93	52-137
1,2,3-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.50	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.50	-	-	-	-
Trichloroethene	ND	8.06	0.50	10	-	81	43-157
Trichlorofluoromethane	ND	-	0.50	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.50	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.50	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.50	-	-	-	-
Vinyl Chloride	ND	-	0.50	-	-	-	-
Xylenes, Total	ND	-	0.50	-	-	-	-

(Cont.)

NELAP 4033ORELAP

QA/QC Officer

McCampbell Analytical, Inc.
"When Quality Counts"
1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Quality Control Report

Client: P & D Environmental
Date Prepared: 4/2/16
Date Analyzed: 4/2/16
Instrument: GC16
Matrix: Water
Project: 0461; Red Hanger Kleaners

WorkOrder: 1603E70
BatchID: 118968
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L
Sample ID: MB/LCS-118968
1603E48-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Surrogate Recovery							
Dibromofluoromethane	22.8	23.1		25	91	92	70-130
Toluene-d8	24.3	23.3		25	97	93	70-130
4-BFB	2.06	2.08		2.5	83	83	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	10.6	10.5	10	ND	106	105	69-139	1.30	20
Benzene	9.64	9.53	10	ND	96	95	69-141	1.15	20
t-Butyl alcohol (TBA)	49.4	52.5	40	ND	124	131	41-152	6.01	20
Chlorobenzene	8.49	8.36	10	ND	85	84	77-120	1.48	20
1,2-Dibromoethane (EDB)	9.67	9.88	10	ND	97	99	76-135	2.20	20
1,2-Dichloroethane (1,2-DCA)	10.4	10.4	10	ND	104	104	73-139	0	20
1,1-Dichloroethene	8.94	9.02	10	ND	89	90	59-140	0.851	20
Diisopropyl ether (DIPE)	10.4	10.1	10	ND	104	101	72-140	3.39	20
Ethyl tert-butyl ether (ETBE)	11.2	10.8	10	ND	111	108	71-140	3.02	20
Methyl-t-butyl ether (MTBE)	11.3	11.2	10	ND	113	112	73-139	0.364	20
Toluene	9.01	9.02	10	ND	90	90	71-128	0	20
Trichloroethene	8.00	7.99	10	ND	80	80	64-132	0	20
Surrogate Recovery									
Dibromofluoromethane	23.1	23.3	25		92	93	73-131	0.730	20
Toluene-d8	23.0	23.2	25		92	93	72-117	1.02	20
4-BFB	2.05	2.17	2.5		82	87	74-116	5.71	20

NELAP 4033ORELAP

QA/QC Officer

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1603E70 **ClientCode: PDEO**

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ EQuIS ☑ 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; Paul.King@pdenviro.c
cc/3rd Party:
PO:
ProjectNo: 0461; Red Hanger Kleaners

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

Requested TAT: 5 days;
Date Received: 03/29/2016
Date Logged: 03/29/2016

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
1603E70-001	B9-W	Water	3/28/2016 14:05	☐	A											
1603E70-002	B10-W	Water	3/28/2016 14:20	☐	A											
1603E70-003	B11-W	Water	3/28/2016 16:15	☐	A											
1603E70-004	B12-W	Water	3/28/2016 12:15	☐	A											
1603E70-005	B13-W	Water	3/28/2016 14:30	☐	A											
1603E70-006	B14-W	Water	3/29/2016 7:15	☐	A											

Test Legend:

1	8260B_W	2		3		4	
5		6		7		8	
9		10		11		12	

Prepared by: Jena Alfaro

Comments: Always send reports to: lab@pdenviro.com; Paul.King@pdenviro.com; pdking0000@aol.com

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
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

WORK ORDER SUMMARY

Client Name: P & D ENVIRONMENTAL
Project: 0461; Red Hanger Kleaners
Comments: Always send reports to: lab@pdenviro.com; Paul.King@pdenviro.com; pdking0000@aol.com

QC Level: LEVEL 2
Client Contact: Paul King
Contact's Email: lab@pdenviro.com; Paul.King@pdenviro.com; pdking0000@aol.com

Work Order: 1603E70
Date Logged: 3/29/2016

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

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1603E70-001A	B9-W	Water	SW8260B (VOCs)	3	VOA w/ HCl	☐	3/28/2016 14:05	5 days	Present	☐	
1603E70-002A	B10-W	Water	SW8260B (VOCs)	3	VOA w/ HCl	☐	3/28/2016 14:20	5 days	Present	☐	
1603E70-003A	B11-W	Water	SW8260B (VOCs)	3	VOA w/ HCl	☐	3/28/2016 16:15	5 days	Present	☐	
1603E70-004A	B12-W	Water	SW8260B (VOCs)	3	VOA w/ HCl	☐	3/28/2016 12:15	5 days	Present	☐	
1603E70-005A	B13-W	Water	SW8260B (VOCs)	3	VOA w/ HCl	☐	3/28/2016 14:30	5 days	Present	☐	
1603E70-006A	B14-W	Water	SW8260B (VOCs)	3	VOA w/ HCl	☐	3/29/2016 7:15	5 days	Present	☐	

NOTES: **- STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).**

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

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

1603E70

PROJECT NUMBER: 0461

PROJECT NAME: RED HANGER KLEANERS 6239 COLLEGE AVE. OAKLAND, CA

SAMPLED BY: (PRINTED & SIGNATURE)
MICHAEL BASS-DESCHENES Michael Bass-Deschenes

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	ANALYSIS(ES): VOCs BY 8260B INCLUDING ICE AND ASSOCIATED DECOMPOSITION PRACTICES	PRESERVATIVE	REMARKS
B9-W	3/28/16	1405	H2O		3	X	ICE	NORMAL TAT
B10-W	"	1420	"		3	X	"	"
B11-W	"	1615	"		3	X	"	"
B12-W	"	1215	"		3	X	"	"
B13-W	"	1430	"		3	X	"	"
B14-W	3/29/16	0715	"		3	X	"	"

	DATE	TIME			
RELINQUISHED BY: (SIGNATURE) Michael Bass-Deschenes	3-29-16	1350	RECEIVED BY: (SIGNATURE)	Total No. of Samples (This Shipment)	6
RELINQUISHED BY: (SIGNATURE)	3-29-16	1620	RECEIVED BY: (SIGNATURE)	Total No. of Containers (This Shipment)	18
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)		

LABORATORY: MC CAMPBELL ANALYTICAL INC
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: VOAs PRESERVED WITH HCL

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Sample Receipt Checklist

Client Name:	**P & D Environmental**	Date and Time Received:	**3/29/2016 16:20**
Project Name:	**0461; Red Hanger Kleaners**	Date Logged:	**3/29/2016**
WorkOrder №:	**1603E70** Matrix: Water	Received by:	Jena Alfaro
Carrier:	Bernie Cummins (MAI Courier)	Logged by:	Jena Alfaro

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 ☐	
Sample/Temp Blank temperature	Temp: 2.4°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☑	No ☐	NA ☐
Sample labels checked for correct preservation?	Yes ☑	No ☐	
pH acceptable upon receipt (Metal: <2; 522: <4; 218.7: >8)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	
	(Ice Type: WET ICE)		

UCMR3 Samples:

Total Chlorine tested and acceptable upon receipt for EPA 522?	Yes ☐	No ☐	NA ☑
Free Chlorine tested and acceptable upon receipt for EPA 218.7, 300.1, 537, 539?	Yes ☐	No ☐	NA ☑

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

Comments:

Nowell, Keith, Env. Health

From: PDKing0000@aol.com
Sent: Wednesday, April 06, 2016 10:53 AM
To: Nowell, Keith, Env. Health
Cc: gary_bates@efiglobal.com; ronpatelvidge@gmail.com; patrick@ellwoodcommercial.com; Roe, Dilan, Env. Health
Subject: RO2981 - Red Hanger Kleaners - Soil and Groundwater Sample Results
Attachments: 0461.R5 Attachments 040516 DRAFT 1.pdf

Hi Keith,

You will find attached a pdf summary document (0461.R5 Attachments 040516 DRAFT 1.pdf) containing the following DRAFT information for the subject site:

o Summary tables of soil and groundwater sample results.

o A figure showing the borehole locations where the soil and groundwater samples were collected with PCE groundwater concentrations, and a copy of the figure showing groundwater PCE isoconcentration contours.

o Copies of the laboratory reports for the soil and groundwater samples.

Based on the low PCE concentrations detected in the soil and groundwater samples I do not recommend that any of the soil samples that were placed on HOLD be analyzed.

Please let me know if you have any comments regarding the soil or groundwater sample results or the soil samples that are presently on HOLD.

Thank you!

Paul

Paul H. King
Professional Geologist

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

(510) 658-6916 telephone
(510) 834-0152 facsimile
(510) 387-6834 cellular
Paul.King@pdenviro.com

In a message dated 3/17/2016 16:08:56 Pacific Daylight Time, Keith.Nowell@acgov.org writes:

> Dear Mr. Elvidge,
>
> Alameda County Environmental Health (ACEH) staff has reviewed the case file including the recently submitted document entitled *Site Investigation and Soil Vapor Extraction Feasibility Test Work Plan* (Work Plan) prepared by P & D Environmental, Inc. (P&D), dated March 15, 2016. The referenced report proposes to:
>
> - Advance six onsite boreholes (B9 through B14) for the collection of grab groundwater (GGW) samples;
> - Install two onsite soil gas wells (SG4-17 and SG11-17) to depth of 17 feet below the ground surface (bgs) for soil gas sample collection;

- Use of a video camera to evaluate the integrity of the on-site sanitary sewer, perform an exploratory excavation along the length of a section of the sewer line to evaluate trench construction materials, evaluate the presence of tetrachloroethene (PCE) in the trench materials, and install a slotted horizontal soil vapor extraction (SVE) pipe alongside the portion of the sanitary sewer trench where exploratory excavation is performed;
- Installation of three 17-foot deep SVE wells (SVE1, SVE2, and SVE3) for SVE feasibility testing; and
- Perform a SVE feasibility test using existing soil gas wells and vapor pins at the site to monitor for vacuum in the vicinity of the locations where soil vapor is extracted.

ACEH generally concurs with the proposed scope of work. The proposed scope of work may be implemented provided that the modifications requested in the technical comments below are addressed and incorporated during the field implementation. Submittal of a revised Work Plan is not required unless an alternate scope of work outside that described in the Work Plan and technical comments below is proposed. Please provide 72-hour advance written notification to this office (e-mail preferred to: keith.nowell@acgov.org) prior to the start of field activities.

TECHNICAL COMMENTS

1. **Sand Pack**- The Department of Toxic Substances Control (DTSC) July 2015 document entitled *Advisory- Active Soil Gas Investigations* (Advisory) states for soil gas wells deeper than 15 feet, a tremie pipe should be used to avoid bridging or segregation during placement of the sand pack and annular seal. The Work Plan does not indicate a tremie pipe will be used for the constructing the 17-foot deep soil gas wells. Therefore, please incorporate the use of a tremie pipe for sand and seal placement in accordance with the Advisory. This is consistent with the technical comments made by ACEH in its November 6, 2015 review letter of the document entitled *Soil Gas Investigation Work Plan*, prepared by P&D and dated October 16, 2015.

2. **Well Seal-** The description of the well seal, consisting of a hydrated bentonite slurry, is not in agreement with the Advisory, which calls for emplacing at least six inches of dry granular bentonite on top of each sand pack. ACEH requests placement of at least six inches of dry granular bentonite on top of each sand pack in accordance with the Advisory.

   The proposed soil gas wells are described as permanent wells. However, the WP does not discuss the length of time the soil gas wells are anticipated to be in service. Bentonite-only annular seals are discouraged for long-term use as bentonite annular seals in the vadose zone desiccate readily and will not rehydrate once damaged. The Advisory states that, for wells that will be sampled for less than one year, the annular seal can be hydrated bentonite or other materials, as appropriate. However, for wells that will be used for longer than one year, the annular seal should be neat cement with bentonite.

   If the service life of the soil gas wells is not known, ACEH requests that an annular seal consisting of neat cement with bentonite be used. This is consistent with the technical comments made by ACEH in its November 6, 2015 review letter of the P&D document entitled *Soil Gas Investigation Work Plan*, dated October 16, 2015, and will insure a well construction similar to the previously installed soil gas wells at the site.

3. **Well Depth-** As stated above, two soil gas wells and three SVE wells are proposed to be advanced to a depth of 17 feet bgs. Previous investigations conducted at the site have documented depths to water in the 16- to 21-foot bgs range. In accordance with the Advisory, the deepest soil gas samples should be collected near the capillary fringe, not in or below the capillary fringe. Therefore, ACEH requests the depth to water be evaluated in each of the well bores prior to soil gas well installation, and that the depth of each well be adjusted to a shallower depth if it is determined to be warranted. This is consistent with the technical comments made in the November 6, 2015 ACEH letter commenting on the October 16, 2015 P&D document entitled *Soil Gas Investigation Work Plan*.

4. **Well Cover-** The method of securing the five wells, as described in the Work Plan, is to enclose each well in a well box with a lid that is secured with bolts. ACEH requests that, in addition to the well box, a gas-tight valve or fitting for capping the sampling tube be used to provide additional well protection. Please incorporate capping to all site soil gas wells.

5. **Soil Sample Analysis-** The Work Plan states that soil samples will be collected from all of the continuously cored boreholes at a depth immediately above the water table and that, with the exception of the 3-foot bgs soil sample collected from borehole B9, all of the soil samples will be placed on hold pending receipt

of the groundwater sample results. The Work Plan does not specify what happens upon receipt of the groundwater sample results.

ACEH requests the groundwater sample analytical report be provided to ACEH for review prior to a determination on how to proceed with the soil samples. Please note that the hold times for soil samples analysis is 14 days, potentially requiring expedited analysis of the GGW samples. Therefore, ACEH requests incorporating an appropriate GGW analysis turn-around time to provide an adequate review period.

TECHNICAL REPORT REQUEST

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

- **June 20, 2016- Site Investigation and Soil Vapor Extraction Feasibility Test Report** (file name: RO0002981_SWI_FEASSTUD_R_yyyy-mm-dd)

Thank you for your cooperation. ACEH looks forward to working with you and your consultants to advance the case toward closure. Should you have any questions regarding this correspondence or your case, please call me at (510) 567-6764 or send an electronic mail message at keith.nowell@acgov.org

Regards,

Keith Nowell

Keith Nowell PG, CHG

Hazardous Materials Specialist

Alameda County Environmental Health

1131 Harbor Bay Parkway

Alameda , CA 94502-6540

phone: 510 / 567 - 6764

fax: 510 / 337 - 9335

email: keith.nowell@acgov.org

PDF copies of case files can be reviewed/downloaded at:

http://www.acgov.org/aceh/lop/ust.htm

=

Nowell, Keith, Env. Health

From: Jonathan W. Redding <JRedding@wendel.com>
Sent: Wednesday, May 11, 2016 9:39 AM
To: Nowell, Keith, Env. Health
Cc: ronpatelvidge@gmail.com; Gary Bates; Patrick Ellwood; dcs@youngdahl.net; Paul King; Roe, Dilan, Env. Health
Subject: Re: Conditional Work Plan Approval - ACEH case file RO2981 and GeoTracker Global ID T10000000416, Red Hanger Kleaners, 6235-6239 College Ave., Oakland

Keith:
Thanks for the expedited review and approval. Jonathan

Sent from my iPad. Pardon computer generated typos.

On May 11, 2016, at 9:24 AM, Nowell, Keith, Env. Health <Keith.Nowell@acgov.org> wrote:

> Dear Mr. Elvidge,
>
> Alameda County Environmental Health (ACEH) staff has reviewed the case file including the recently submitted document entitled *050916 Status Report Figures DRAFT 1* prepared by P & D Environmental, Inc. (P&D), received by ACEH as an electronic mail dated May 10, 2016 with figures provided as an attachment. The referenced electronic mail proposes to advance five soil bores, SVE4 through SVE8, to be converted to soil vapor extraction (SVE) wells, and states the same SVE well construction methods will be used as approved in the ACEH work plan approval letter dated 3/17/16. The attached figure provides the location of the SVE wells.
>
> ACEH generally concurs with the proposed scope of work. The proposed scope of work may be implemented. Please provide 72-hour advance written notification to this office (e-mail preferred to: keith.nowell@acgov.org) prior to the start of field activities.
>
> **TECHNICAL REPORT REQUEST**
>
> Please upload technical reports to the ACEH ftp site (Attention: Keith Nowell), and to the State Water Resources Control Board's Geotracker website, in accordance with the following specified file naming convention and schedule:
>
> - **June 20, 2016- Site Investigation and Soil Vapor Extraction Feasibility Test Report** (file name: RO0002981_SWI_FEASSTUD_R_yyyy-mm-dd)
>
> Thank you for your cooperation. ACEH looks forward to working with you and your consultants to advance the case toward closure. Should you have any questions regarding this correspondence or your case, please call me at (510) 567-6764 or send an electronic mail message at keith.nowell@acgov.org
>
> Regards,
> Keith Nowell

Keith Nowell PG, CHG
Hazardous Materials Specialist

Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda , CA 94502-6540
phone: 510 / 567 - 6764
fax: 510 / 337 - 9335
email: keith.nowell@acgov.org

PDF copies of case files can be reviewed/downloaded at:

http://www.acgov.org/aceh/lop/ust.htm

Nowell, Keith, Env. Health

From: PDKing0000@aol.com
Sent: Thursday, May 12, 2016 7:24 PM
To: Nowell, Keith, Env. Health; Roe, Dilan, Env. Health
Cc: Gary_Bates@efiglobal.com; jredding@wendel.com; mehrdad@lrm-consulting.com; patrick@ellwoodcommercial.com; ronpatelvidge@gmail.com; peet@prodigy.net
Subject: RO2981 - 6239 College Ave- Telephone call from neighbor 5/11/16

Hi Keith and Dilan,

I received a telephone message 5/11/16 at 2:34 PM from Kristin Eppler (510-601-6203 Akepplerr@gmail.com). I returned her call 5/11/16 and we spoke from 7:15 PM to 7:43 PM. She said that she lives on the upper floor of the residential structure located on 63rd Street that is located immediately to the west of the 6239 College Ave property. I believe she said she is in the back unit (the building has 2 units on the ground floor and 2 units upstairs).

Kristin said that she remembered the dry cleaner operations, has seen our recent investigations, and is concerned about site conditions. I told her that there has been a PCE release, that we have investigated it, and that we are now in the process of installing a SVE system with multiple extraction locations, including 3 extraction locations along the property boundary.

Kristin said that she wanted to know the name of the property owner for the former dry cleaner building and she asked if the property owner where she is located has been notified of the condition at the former dry cleaner property. I said that it was my understanding that the building for the dry cleaner was owned by an entity, and that I did not know if there were multiple owners for the entity. She named Menna Tesfatsian as a property manager for her property and I said that I had requested site access from Menna to investigate the property, I said that Menna said he had conferred with the property owner for the property where Kristin is located, and that Menna had then told me that access was denied.

I said that all of the results of investigations to date and site background or history are provided at GeoTracker and the County website. Kristin said that she had spoken with someone 5/11/16 about GeoTracker and that she had not been successful in getting information at GeoTracker. I said that I would provide her information on how to access the investigation results at GeoTracker.

I asked if she was an attorney or a writer because her questions were very focused. She said she was neither. She said that construction has been going on at the property where she lives for over 4 years, and that recently there has been a problem with homeless people occupying the building because of the prolonged construction, and so she is very aware of things that are going on around her.

Please let me know if you have any questions or need any additional information.

Thank you!

Paul

Paul H. King
Professional Geologist

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

(510) 658-6916 telephone
(510) 834-0152 facsimile
(510) 387-6834 cellular
Paul.King@pdenviro.com

Nowell, Keith, Env. Health

From: Roe, Dilan, Env. Health
Sent: Friday, May 13, 2016 7:21 AM
To: PDKing0000@aol.com
Cc: Jonathan W. Redding; Nowell, Keith, Env. Health
Subject: Re: RO2981 - 6239 College Ave- Telephone call from neighbor 5/11/16

Thanks Paul - do you have her contact information. Given the inquiry I think it is important to get a fact sheet out to the tenants of that building asap.

Dilan

Sent from my iPhone

On May 12, 2016, at 7:21 PM, "PDKing0000@aol.com" <PDKing0000@aol.com> wrote:

> Hi Keith and Dilan,
>
> I received a telephone message 5/11/16 at 2:34 PM from Kristin Eppler (510-601-6203 Akepplerr@gmail.com). I returned her call 5/11/16 and we spoke from 7:15 PM to 7:43 PM. She said that she lives on the upper floor of the residential structure located on 63rd Street that is located immediately to the west of the 6239 College Ave property. I believe she said she is in the back unit (the building has 2 units on the ground floor and 2 units upstairs).
>
> Kristin said that she remembered the dry cleaner operations, has seen our recent investigations, and is concerned about site conditions. I told her that there has been a PCE release, that we have investigated it, and that we are now in the process of installing a SVE system with multiple extraction locations, including 3 extraction locations along the property boundary.
>
> Kristin said that she wanted to know the name of the property owner for the former dry cleaner building and she asked if the property owner where she is located has been notified of the condition at the former dry cleaner property. I said that it was my understanding that the building for the dry cleaner was owned by an entity, and that I did not know if there were multiple owners for the entity. She named Menna Tesfatsian as a property manager for her property and I said that I had requested site access from Menna to investigate the property, I said that Menna said he had conferred with the property owner for the property where Kristin is located, and that Menna had then told me that access was denied.
>
> I said that all of the results of investigations to date and site background or history are provided at GeoTracker and the County website. Kristin said that she had spoken with someone 5/11/16 about GeoTracker and that she had not been successful in getting information at GeoTracker. I said that I would provide her information on how to access the investigation results at GeoTracker.
>
> I asked if she was an attorney or a writer because her questions were very focused. She said she was neither. She said that construction has been going on at the property where she lives for over 4 years, and that recently there has been a problem with homeless people occupying the building because of the prolonged construction, and so she is very aware of things that are going on around her.
>
> Please let me know if you have any questions or need any additional information.
>
> Thank you!
>
> Paul
>
> Paul H. King
> Professional Geologist

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

(510) 658-6916 telephone
(510) 834-0152 facsimile
(510) 387-6834 cellular
Paul.King@pdenviro.com

Nowell, Keith, Env. Health

From: Jonathan W. Redding <JRedding@wendel.com>
Sent: Friday, May 13, 2016 7:39 AM
To: Roe, Dilan, Env. Health
Cc: PDKing0000@aol.com; Nowell, Keith, Env. Health; Ron Elvidge; Mr. Patrick Ellwood
Subject: Re: RO2981 - 6239 College Ave- Telephone call from neighbor 5/11/16

Dilan and Keith:
That is our thinking as well. Paul was going to draft something for me to look at next week and then we will get it over to you by end of week, if that is soon enough. Have a nephew birthday party out of town today/ this weekend. Thanks! Jonathan

Sent from my iPad. Pardon computer generated typos.

> On May 13, 2016, at 7:20 AM, Roe, Dilan, Env. Health <Dilan.Roe@acgov.org> wrote:
>
> Thanks Paul - do you have her contact information. Given the inquiry I think it is important to get a fact sheet out to the tenants of that building asap.
>
> Dilan
>
> Sent from my iPhone
>
> On May 12, 2016, at 7:21 PM, "PDKing0000@aol.com<mailto:PDKing0000@aol.com>" <PDKing0000@aol.com<mailto:PDKing0000@aol.com>> wrote:
>
> Hi Keith and Dilan,
>
> I received a telephone message 5/11/16 at 2:34 PM from Kristin Eppler (510-601-6203 Akepplerr@gmail.com<mailto:Akepplerr@gmail.com>). I returned her call 5/11/16 and we spoke from 7:15 PM to 7:43 PM. She said that she lives on the upper floor of the residential structure located on 63rd Street that is located immediately to the west of the 6239 College Ave property. I believe she said she is in the back unit (the building has 2 units on the ground floor and 2 units upstairs).
>
> Kristin said that she remembered the dry cleaner operations, has seen our recent investigations, and is concerned about site conditions. I told her that there has been a PCE release, that we have investigated it, and that we are now in the process of installing a SVE system with multiple extraction locations, including 3 extraction locations along the property boundary.
>
> Kristin said that she wanted to know the name of the property owner for the former dry cleaner building and she asked if the property owner where she is located has been notified of the condition at the former dry cleaner property. I said that it was my understanding that the building for the dry cleaner was owned by an entity, and that I did not know if there were multiple owners for the entity. She named Menna Tesfatsian as a property manager for her property and I said that I had requested site access from Menna to investigate the property, I said that Menna said he had conferred with the property owner for the property where Kristin is located, and that Menna had then told me that access was denied.

>
> I said that all of the results of investigations to date and site background or history are provided at GeoTracker and the County website. Kristin said that she had spoken with someone 5/11/16 about GeoTracker and that she had not been successful in getting information at GeoTracker. I said that I would provide her information on how to access the investigation results at GeoTracker.
>
> I asked if she was an attorney or a writer because her questions were very focused. She said she was neither. She said that construction has been going on at the property where she lives for over 4 years, and that recently there has been a problem with homeless people occupying the building because of the prolonged construction, and so she is very aware of things that are going on around her.
>
> Please let me know if you have any questions or need any additional information.
>
> Thank you!
>
> Paul
>
> Paul H. King
> Professional Geologist
>
> P&D Environmental, Inc.
> 55 Santa Clara Avenue, Suite 240
> Oakland, CA 94610
>
> (510) 658-6916 telephone
> (510) 834-0152 facsimile
> (510) 387-6834 cellular
> Paul.King@pdenviro.com<mailto:Paul.King@pdenviro.com>

Nowell, Keith, Env. Health

From: Roe, Dilan, Env. Health
Sent: Friday, May 13, 2016 8:05 AM
To: Jonathan W. Redding
Cc: PDKing0000@aol.com; Nowell, Keith, Env. Health; Ron Elvidge; Mr. Patrick Ellwood
Subject: Re: RO2981 - 6239 College Ave- Telephone call from neighbor 5/11/16

I would like to aim for a draft to us by Wednesday so we can be sure to have it distributed by Friday.

Sent from my iPhone

On May 13, 2016, at 7:36 AM, Jonathan W. Redding <JRedding@wendel.com> wrote:

> Dilan and Keith:
> That is our thinking as well. Paul was going to draft something for me to look at next week and then we will get it over to you by end of week, if that is soon enough. Have a nephew birthday party out of town today/ this weekend. Thanks! Jonathan
>
> Sent from my iPad. Pardon computer generated typos.
>
> > On May 13, 2016, at 7:20 AM, Roe, Dilan, Env. Health <Dilan.Roe@acgov.org> wrote:
> >
> > Thanks Paul - do you have her contact information. Given the inquiry I think it is important to get a fact sheet out to the tenants of that building asap.
> >
> > Dilan
> >
> > Sent from my iPhone
> >
> > On May 12, 2016, at 7:21 PM, "PDKing0000@aol.com<mailto:PDKing0000@aol.com>" <PDKing0000@aol.com<mailto:PDKing0000@aol.com>> wrote:
> >
> > Hi Keith and Dilan,
> >
> > I received a telephone message 5/11/16 at 2:34 PM from Kristin Eppler (510-601-6203 Akepplerr@gmail.com<mailto:Akepplerr@gmail.com>). I returned her call 5/11/16 and we spoke from 7:15 PM to 7:43 PM. She said that she lives on the upper floor of the residential structure located on 63rd Street that is located immediately to the west of the 6239 College Ave property. I believe she said she is in the back unit (the building has 2 units on the ground floor and 2 units upstairs).
> >
> > Kristin said that she remembered the dry cleaner operations, has seen our recent investigations, and is concerned about site conditions. I told her that there has been a PCE release, that we have investigated it, and that we are now in the process of installing a SVE system with multiple extraction locations, including 3 extraction locations along the property boundary.
> >

> Kristin said that she wanted to know the name of the property owner for the former dry cleaner building and she asked if the property owner where she is located has been notified of the condition at the former dry cleaner property. I said that it was my understanding that the building for the dry cleaner was owned by an entity, and that I did not know if there were multiple owners for the entity. She named Menna Tesfatsian as a property manager for her property and I said that I had requested site access from Menna to investigate the property, I said that Menna said he had conferred with the property owner for the property where Kristin is located, and that Menna had then told me that access was denied.
>
> I said that all of the results of investigations to date and site background or history are provided at GeoTracker and the County website. Kristin said that she had spoken with someone 5/11/16 about GeoTracker and that she had not been successful in getting information at GeoTracker. I said that I would provide her information on how to access the investigation results at GeoTracker.
>
> I asked if she was an attorney or a writer because her questions were very focused. She said she was neither. She said that construction has been going on at the property where she lives for over 4 years, and that recently there has been a problem with homeless people occupying the building because of the prolonged construction, and so she is very aware of things that are going on around her.
>
> Please let me know if you have any questions or need any additional information.
>
> Thank you!
>
> Paul
>
> Paul H. King
> Professional Geologist
>
> P&D Environmental, Inc.
> 55 Santa Clara Avenue, Suite 240
> Oakland, CA 94610
>
> (510) 658-6916 telephone
> (510) 834-0152 facsimile
> (510) 387-6834 cellular
> Paul.King@pdenviro.com<mailto:Paul.King@pdenviro.com>

Nowell, Keith, Env. Health

From: PDKing0000@aol.com
Sent: Friday, May 13, 2016 8:07 AM
To: Roe, Dilan, Env. Health
Cc: Nowell, Keith, Env. Health; jredding@wendel.com; mehrdad@lrm-consulting.com; patrick@ellwoodcommercial.com; ronpatelvidge@gmail.com; peet@prodigy.net; Gary_Bates@efiglobal.com
Subject: Re: RO2981 - 6239 College Ave- Telephone call from neighbor 5/11/16

Hi Dilan,

I have cut and pasted below an e-mail that I sent to Kristin Eppler last night 5/12/16 with information on how to access the available information at GeoTracker and the County website. Her contact info is 510-601-6203 Akepplerr@gmail.com .

Paul

****

From: PDKing0000@aol.com
To: Akepplerr@gmail.com
Sent: 5/12/2016 19:34:56 Pacific Daylight Time
Subj: Information for Accessing GeoTracker for 6239 College Avenue, Oakland

Hi Kristin,

As a follow up to our telephone conversation yesterday 5/11/16, I am providing you information on how to access information regarding the subject property at GeoTracker.

You can access GeoTracker at the following link.

http://geotracker.waterboards.ca.gov/

Enter the desired address (6239 College Avenu, Oakland), and then click on the Search button.

Hover the cursor over the green box that is visible on the map at the approximate location of the site until the cursor turns into a hand with a pointing finger, then left click once and a window will pop up.

Left click once on the blue hyperlink name of the site that is in the window that popped up (RED HANGER KLEANERS).

On the second row of tabs left click once on Site Maps/Documents.

Scroll down to the section titled Site Documents.

Left click once on the blue hyperlink on the left that is the title of the document that you are interested in. The document will then download for you to either open or save.

The site investigation documents are also provided on the Alameda County website at the following link.

http://ehgis.acgov.org/dehpublic/dehpublic.jsp

When you get to the screen with the map, select the LOP button to then navigate to the information for the site.

Please let me know if you need additional information.

Thank you!

Paul

Paul H. King
Professional Geologist

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

(510) 658-6916 telephone
(510) 834-0152 facsimile
(510) 387-6834 cellular
Paul.King@pdenviro.com

****

In a message dated 5/13/2016 07:20:37 Pacific Daylight Time, Dilan.Roe@acgov.org writes:

> Thanks Paul - do you have her contact information. Given the inquiry I think it is important to get a fact sheet out to the tenants of that building asap.
>
> Dilan
>
> Sent from my iPhone
>
> On May 12, 2016, at 7:21 PM, "PDKing0000@aol.com<mailto:PDKing0000@aol.com>" <PDKing0000@aol.com<mailto:PDKing0000@aol.com>> wrote:
>
> Hi Keith and Dilan,
>
> I received a telephone message 5/11/16 at 2:34 PM from Kristin Eppler (510-601-6203 Akepplerr@gmail.com<mailto:Akepplerr@gmail.com>). I returned her call 5/11/16 and we spoke from 7:15 PM to 7:43 PM. She said that she lives on the upper floor of the residential structure located on 63rd Street that is located immediately to the west of the 6239 College Ave property. I believe she said she is in the back unit (the building has 2 units on the ground floor and 2 units upstairs).
>
> Kristin said that she remembered the dry cleaner operations, has seen our recent investigations, and is concerned about site conditions. I told her that there has been a PCE release, that we have investigated it, and that we are now in the process of installing a SVE system with multiple extraction locations, including 3 extraction locations along the property boundary.
>
> Kristin said that she wanted to know the name of the property owner for the former dry cleaner building and she asked if the property owner where she is located has been notified of the condition at the former dry cleaner property. I said that it was my understanding that the building for the dry cleaner was owned by an entity, and that I did not know if there were multiple owners for the entity. She named Menna Tesfatsian as a property manager for her property and I said that I had requested site access from Menna to investigate the property, I said that Menna said he had conferred with the property owner for the property where Kristin is located, and that Menna had then told me that access was denied.
>
> I said that all of the results of investigations to date and site background or history are provided at GeoTracker and the County website. Kristin said that she had spoken with someone 5/11/16 about GeoTracker and that she had not been successful in getting information at GeoTracker. I said that I would provide her information on how to access the investigation results at GeoTracker.
>
> I asked if she was an attorney or a writer because her questions were very focused. She said she was neither. She said that construction has been going on at the property where she lives for over 4 years, and that recently there has been a problem with homeless people occupying the building because of the prolonged construction, and so she is very aware of things that are going on around her.

Please let me know if you have any questions or need any additional information.

Thank you!

Paul

Paul H. King
Professional Geologist

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

(510) 658-6916 telephone
(510) 834-0152 facsimile
(510) 387-6834 cellular
Paul.King@pdenviro.com<mailto:Paul.King@pdenviro.com>

Nowell, Keith, Env. Health

From: paul.king@pdenviro.com
Sent: Wednesday, May 18, 2016 3:34 PM
To: Roe, Dilan, Env. Health
Cc: Nowell, Keith, Env. Health; ronpatelvidge@gmail.com; patrick@ellwoodcommercial.com; peet@prodigy.net; jredding@wendel.com; mehrdad@lrm-consulting.com; Gary_Bates@efiglobal.com; pdking0000@aol.com
Subject: Re: RO2981 - 6239 College Ave- Fact Sheet DRAFT 6
Attachments: RO2981_FactSheet_IndoorAirMitigation_DRAFT6 on 051816.docx

Hi Dilan,

Per your request, you will find attached DRAFT 6 of the Fact Sheet which incorporates the most recent information for the subject site (document RO2981 FactSheet IndoorAirMitigation DRAFT6 on 051816.docx).

Please let me know if you need any additional information.

Thank you!

Paul

Paul H. King
Professional Geologist

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

(510) 658-6916 telephone
(510) 834-0152 facsimile
(510) 387-6834 cellular
Paul.King@pdenviro.com

In a message dated 5/13/2016 08:05:33 Pacific Daylight Time, Dilan.Roe@acgov.org writes:

> I would like to aim for a draft to us by Wednesday so we can be sure to have it distributed by Friday.
>
> Sent from my iPhone
>
> On May 13, 2016, at 7:36 AM, Jonathan W. Redding <JRedding@wendel.com<mailto:JRedding@wendel.com>> wrote:
>
> Dilan and Keith:
> That is our thinking as well. Paul was going to draft something for me to look at next week and then we will get it over to you by end of week, if that is soon enough. Have a nephew birthday party out of town today/ this weekend. Thanks! Jonathan
>
> Sent from my iPad. Pardon computer generated typos.
>
> > On May 13, 2016, at 7:20 AM, Roe, Dilan, Env. Health <Dilan.Roe@acgov.org<mailto:Dilan.Roe@acgov.org>> wrote:
> >
> > Thanks Paul - do you have her contact information. Given the inquiry I think it is important to get a fact

sheet out to the tenants of that building asap.
>
> Dilan
>
> Sent from my iPhone
>
> On May 12, 2016, at 7:21 PM,
"PDKing0000@aol.com<mailto:PDKing0000@aol.com><mailto:PDKing0000@aol.com>"
<PDKing0000@aol.com<mailto:PDKing0000@aol.com><mailto:PDKing0000@aol.com>> wrote:
>
> Hi Keith and Dilan,
>
> I received a telephone message 5/11/16 at 2:34 PM from Kristin Eppler (510-601-6203 Akepplerr@gmail.com<mailto:Akepplerr@gmail.com><mailto:Akepplerr@gmail.com>). I returned her call 5/11/16 and we spoke from 7:15 PM to 7:43 PM. She said that she lives on the upper floor of the residential structure located on 63rd Street that is located immediately to the west of the 6239 College Ave property. I believe she said she is in the back unit (the building has 2 units on the ground floor and 2 units upstairs).
>
> Kristin said that she remembered the dry cleaner operations, has seen our recent investigations, and is concerned about site conditions. I told her that there has been a PCE release, that we have investigated it, and that we are now in the process of installing a SVE system with multiple extraction locations, including 3 extraction locations along the property boundary.
>
> Kristin said that she wanted to know the name of the property owner for the former dry cleaner building and she asked if the property owner where she is located has been notified of the condition at the former dry cleaner property. I said that it was my understanding that the building for the dry cleaner was owned by an entity, and that I did not know if there were multiple owners for the entity. She named Menna Tesfatsian as a property manager for her property and I said that I had requested site access from Menna to investigate the property, I said that Menna said he had conferred with the property owner for the property where Kristin is located, and that Menna had then told me that access was denied.
>
> I said that all of the results of investigations to date and site background or history are provided at GeoTracker and the County website. Kristin said that she had spoken with someone 5/11/16 about GeoTracker and that she had not been successful in getting information at GeoTracker. I said that I would provide her information on how to access the investigation results at GeoTracker.
>
> I asked if she was an attorney or a writer because her questions were very focused. She said she was neither. She said that construction has been going on at the property where she lives for over 4 years, and that recently there has been a problem with homeless people occupying the building because of the prolonged construction, and so she is very aware of things that are going on around her.
>
> Please let me know if you have any questions or need any additional information.
>
> Thank you!
>
> Paul
>
> Paul H. King
> Professional Geologist
>
> P&D Environmental, Inc.
> 55 Santa Clara Avenue, Suite 240
> Oakland, CA 94610
>
> (510) 658-6916 telephone
> (510) 834-0152 facsimile
> (510) 387-6834 cellular
> Paul.King@pdenviro.com<mailto:Paul.King@pdenviro.com><mailto:Paul.King@pdenviro.com>

Fact Sheet on Environmental Assessment

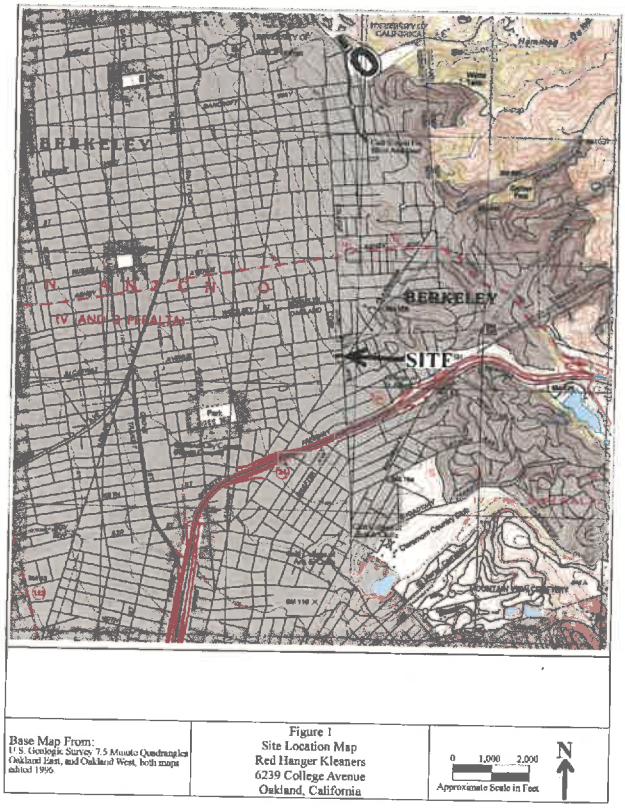
Former Red Hanger Kleaners Site

6239 College Avenue
Oakland, California
Alameda County
ACEH File No. RO0002981
November 2015

This fact sheet is being provided to describe site background, past work to investigate site contamination, next steps, the oversight process for the site, and how you can obtain more information.

Spring, 2016

The Alameda County Environmental Health Department (ACEH) is issuing this fact sheet to inform you of ongoing environmental investigation and remediation work at the former Red Hanger Kleaners (site), located at 6239 College Avenue in Oakland, California (Figure 1).



The purpose of the environmental investigation work is to gather more information on the nature and extent of dry cleaning chemicals potentially present in soil vapor beneath the ground surface at and in the vicinity of the former dry cleaning suite. The purpose of the remediation is to reduce dry cleaning chemical concentrations beneath the ground surface. This fact sheet contains information concerning historical use of the site, results of recent environmental investigations, remediation activities, and information contacts. A glossary of certain terms also is included.

Site Background - The former Red Hanger Kleaners site currently is situated within a commercial portion of College Avenue just north of Claremont Avenue near the corner of 63rd Street. The subject site includes a three-story building (Onsite Building) on a 0.17-acre lot with several operating businesses within suites within the Onsite Building. The former Red Hanger Kleaners store occupied the ground floor of the Onsite Building from 1987 until 2015 (approximately 28 years). The building to the north at 6251-6255 College Avenue was reported to have been occupied by dry cleaner stores from 1953 to 1987 (approximately 34 years) with Red Hanger Kleaners identified at this location from 1982 to 1987. It is unknown when the dry cleaning operations utilized tetrachloroethene (PCE) as the dry cleaning solvent. Once released, Volatile Organic Compounds (VOCs) such as PCE are able to move in the environment, transitioning from soil to groundwater, from groundwater to soil, and from groundwater or soil to soil vapor and potentially to ambient outdoor and indoor air. Of particular interest is the potential for movement of VOCs into the inside of buildings where people may potentially be exposed to VOCs in the air. This process is referred to as vapor intrusion to indoor air.

Glossary of Terms

Soil Vapor—Soil vapor refers to the air that is present in the open spaces between soil particles between the ground surface and the water table. It includes air (primarily oxygen and nitrogen, like above ground), water vapor, and occasionally pollutants.

Volatile organic compounds (VOCs)—VOCs are organic chemicals, including those present in many common solvents that readily evaporate at temperatures normally found at ground surface and at shallow depths. Examples of VOC usage include dry cleaning solvent, carburetor cleaner, brake fluid, and paint solvents.

Recent Investigation Activities - Environmental investigations have been performed at the site beginning in March 2005; these investigations have included sampling and analysis of soil, soil vapor, groundwater and indoor air to assess the type and extent of contamination at the site. In total, laboratory analysis has been conducted on 113 samples collected from 74 soil boreholes (borings) and indoor air sampling containers.

Environmental investigations performed at the site have identified that VOCs, specifically PCE, appears to have been released into the subsurface beneath and adjacent to the Onsite Building. Releases of PCE may also have occurred from adjacent dry cleaners referenced above.

In general, soil and groundwater concentrations reported during the investigations performed at the site are near or below applicable regulatory screening levels. Concentrations of PCE reported in soil vapor beneath the Onsite Building and within the onsite parking areas occur at concentrations greater than applicable regulatory screening levels, therefore requiring remediation to reduce such levels to below screening levels. In addition, PCE and trichloroethene (TCE) were detected in indoor air samples from the Onsite Building at concentrations greater than applicable regulatory agency screening levels. The presence of these chemicals at concentrations exceeding regulatory screening levels does not necessarily indicate that adverse impacts to human health or the environment are occurring. To this end and out of the abundance of caution, tenant notifications regarding site conditions, including efforts to reduce indoor air VOC concentrations and sample results were provided to tenants on August 20, September 22, October 16, and November 2, 2015.

Soil Vapor and Indoor Air Mitigation and Remediation – To reduce PCE and TCE concentrations in indoor air within the Onsite Building, cracks in the floor slab of the ground floor of the Onsite Building and the elevator pit were sealed, and the hallway and stairwell carpets were shampooed. In addition, air filtration equipment was placed in the Onsite Building in September 2015, with and the air ventilation increased for portions of the building in October 2015. The laboratory analytical results of air samples collected on October 13 and October 21, 2015 confirmed that the air filtration and ventilation mitigation measures effectively reduced PCE and TCE air concentrations in the Onsite Building to below detectable concentrations or to below actionable regulatory agency trigger and screening concentrations. In collaboration with the California Department of Toxic Substances Control (DTSC), it was concluded that chemical impacts at the site do not pose an imminent or unacceptable health risk to daily site occupants.

Cleanup of Environmental Impacts – To reduce PCE concentrations in soil vapor beneath the Onsite Building and within the onsite parking areas, a Soil Vapor Extraction (SVE) system is being installed in May 2016 to reduce subsurface PCE concentrations, in particular targeting soil vapor concentrations beneath the Onsite Building and within the onsite parking area. The system will begin fulltime operation at the beginning of June, 2016. PCE vapors extracted by the SVE system will be treated onsite via activated carbon, with no PCE emissions to ambient air.

Next Steps – The SVE system will be operated continuously and monitored to verify progress for subsurface PCE concentration reduction. Additional subsurface investigation may also be performed in offsite areas to complete definition of the subsurface extent of PCE in soil vapor and groundwater.

The entire case file can be viewed over the internet on the ACEH at http://www.acgov.org/aceh/lop/ust.htm or at the State of California Water Resources Control Board website at http://geotracker.swrcb.ca.gov.

Please send written comments regarding the investigation and remedial actions to Keith Nowell at the address below.

For More Information

Please contact any of the following individuals with questions or concerns you may have:

Keith Nowell
Alameda County Environmental Health Case Manager
510-567-6764
keith.nowell@acgov.org

Dilan Roe
Alameda County Environmental Health Program Manager
510-567-6767
dilan.roe@acgov.org

Paul King
P&D Environmental Inc.; Consultant
510-658-6916
Paul.King@pdenviro.com