mark@jonas1me.com

JONAS & ASSOCIATES INC.
Environmental Consultants

2815 Mitchell Drive, Suite 209 • Walnut Creek, CA 94598 • Tel: (~~510~~) 933-5360 • Fax: (~~510~~) 933-5362
925 925

ENVIRONMENTAL PROTECTION
98 OCT 20 PM 4:06

October 16, 1998

Ms. Eva Chu
Hazardous Materials Specialist
Alameda County Environmental Health Services
1131 Harbor Bay Parkway, Second Floor
Alameda, California 94502
(510) 567-6762; 337-9335 fax

Subject: B5 and B6 Soil Vapor Sampling and Results.
Project: Former PACO Pumps, 9201 San Leandro Street, Oakland, California.
J&A #: PCO-220

Dear Ms. Chu:

In the May 4, 1998 letter titled "Soil Vapor Sampling at 9201 San Leandro Street, Oakland, CA" Alameda County Environmental Health Services (Alameda County or Agency) recommended that two soil vapor samples be collected at the former Paco Pumps facility located at 9201 San Leandro Street, in Oakland, California. These samples were to be collected from two boreholes within an enclosed room where earlier samples, identified at B1 and B2, sampled and analyzed groundwater and soil. Results of sampling boreholes B1 and B2 are presented in an April 1, 1997 J&A letter report titled "Soil and Groundwater Sampling and Analysis." Because of finding elevated concentrations additional downgradient groundwater samples were collected, identified as B3 and B4. Results associated with sampling B3 and B4 are presented in a March 11, 1998 J&A letter report titled "B3 and B4 Groundwater Sampling and Results."

This correspondence presents the sampling method and results for soil vapor samples collected from boreholes B5 and B6. The scope of work was defined in a July 7, 1998 J&A letter titled "Soil Vapor Sampling Work Plan" as modified in a July 10, 1998 J&A letter titled "Attachment to July 7, 1998 Soil Vapor Sampling Work Plan." Alameda County approved the proposed scope of work in their July 28, 1998 "Work Plan Approval for 9201 San Leandro Street, Oakland, CA."

Drilling and Soil Vapor Sampling Procedures

To collected soil vapor samples, boreholes B5 and B6 were drilled by Gregg Drilling inside an enclosed room inside a building at the 9201 San Leandro Street facility. This work was performed using a Geoprobe. The boreholes were located adjacent to previous boreholes identified at B1 and B2. Boreholes B5 and B6 are identified on the attached Figure 1.

A Drilling Permit Application was submitted to the Alameda County Public Works Agency on September 2, 1998. This was subsequently approved on September 14, 1998 (attached). On September 17, 1998 Underground Service Alert (USA) was notified of upcoming drilling activities. The USA ticket for this project is identified as 249954. On September 22, 1998 at both borehole locations, Gregg Drilling augered through the building's 4" thick asphalt floor. A ramset geoprobe hydraulically advance the probe to a depth of approximately 2.5 feet below the base of the asphalt. A hose was connect to the tip of the geoprobe. After advancing to the proper depth the tip was pulled back and the hose was purged of ambient air using a hand-held suction device. A one-liter Summa Canister was then connected to the hose and a vapor sample was collected. Because of fines in the soil a good seal was maintained during sample collection. Borehole B5 used Summa Canister 608 and borehole B6 used Summa Canister 617. Each borehole was filled with concrete to grade.

After vapor collection each sample was properly labeled and required information presented in a Chain of Custody record (attached). The samples were then transported to Air Toxics Ltd. laboratory located at 180 Blue Ravine Road, Suite B, Folsom, California 95630, telephone number (800) 985-5955. The California ELAP certification for Air Toxics Ltd. is 1149. The soil vapor was analyzed for Benzene, Toluene, Ethyl Benzene, Total Xylenes, TPH (C5+ Hydrocarbons) as Gasoline, and TPH (C2-C4 Hydrocarbons) as Gasoline. Laboratory results were certified on October 12, 1998 and are presented as an attachment to this letter report.

Analytical Results and Risk Based Screening Levels

Analytical results are presented by Air Toxics Ltd. in units of ppmv (parts per million vapor) that were converted to ppbv (parts per billion vapor) to coincide with Risk Based Screening Levels (RBSLs) provided by Alameda County (attached). Following is a summary of the analytical results and RBSLs:

TPH-GASOLINE AND BTEX
SOIL VAPOR RESULTS
AND RBSLs

Analyte	B5-3' (ppbv)	B6-3' (ppbv)	RBSL (ppbv)	Exceeds RBSL
Benzene	51,000	29,000	384	Yes
Toluene	6,800	5,300	140,000	No
Ethyl Benzene	ND(2,500)	ND(2,100)	358,000	No
Total Xylenes	4,400	4,900	2,604,000	No
TPH (C5+) Gasoline	15,000,000	9,800,000	NA	-
TPH (C2-C4) Gasoline	160,000	2,000,000	NA	-

When compared w/ Oak RBCA Tier 2 soil gas numbers. It did not exceed RBSL of 3.7×10^6 in sandy silt sediments.

Summary

The sampling results indicate that benzene in soil vapor exceeds the RBSL at boreholes B5 and B6. Toluene, Ethyl Benzene, and Total Xylenes do not exceed RBSLs.

Recommendation

As stated in Alameda County's letter titled "Soil Gas Vapor Sampling at 9201 San Leandro Street, Oakland, CA":

> If the vapor concentrations are above the RBSLs, then a risk management plan will be required to mitigate vapors that may enter the enclosed room.

Following is a recommendation for a risk management plan for the enclosed room at the 9201 San Leandro Street facility:

1/ Place a wall mounted fan which would aid in removing ambient air from the enclosed room at the facility. Air would be vented outside. The fan would be activated by a wall mounted light switch.

We would like to meet with you to discuss this option.

Concluding Statement

As always, it is a pleasure to work with you and Alameda County Health Care Services Agency. Please call to discuss any issue associated with this project.

Sincerely,
JONAS & ASSOCIATES INC.

Mark Jonas, R.G.
Project Manager

REGISTERED GEOLOGISTS • MARK L. JONAS No. 6392 • STATE OF CALIFORNIA

attachments: Figure 1 "Boreholes B5 and B6 and Analytical Results", Drilling Permit, Chain-of-Custody Record, Laboratory Data Sheets, and RBSLs.

cc: Distribution

b5b6rpt.pc0

DOCUMENT DISTRIBUTION

Former Paco Pumps
9201 San Leandro Street, Oakland, California:

Small Business Administration
District Counsel
Small Business Administration
455 Market Street, Sixth Floor
San Francisco, California 94105

Lender
Kathryn J. Sennott
District Manager
Heller Financial
50 Beale Street, 16th Floor
San Francisco, California 94105

Borrower
Leonard M. Silvani
GP Holding, LLC
P.O. Box 14046
Oakland, California 94614

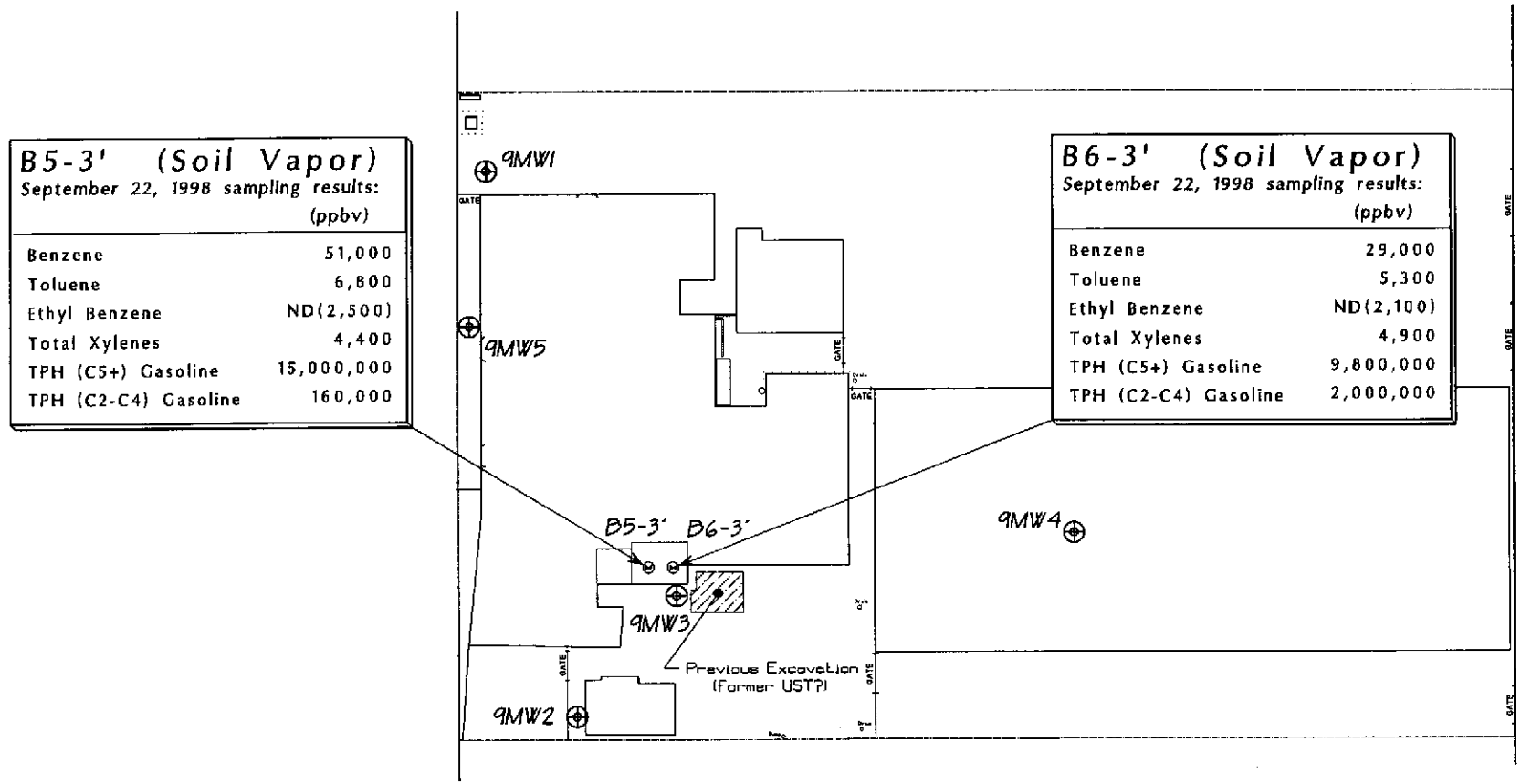
BAEDC
James Baird
Bay Area Employment Development Company
1801 Oakland Boulevard, Suite 300
Walnut Creek, California 94596

Indemnitor
Mr. John Lilla
Paco Pumps, Inc.
16801 Greenspoint Park Drive, Suite 355
Houston, Texas 77060

Drawn by M.L.J. 10-14-1998

Drawning Number PCO220-10/98:F1

Figure 1



Legend:

⊕ Monitoring Well

⊗ Borehole Locations

Scale

50 0 50 100 Feet

Borehole B5 and B6 and Analytical Results

Former PACO PUMPS
9201 San Leandro Street
Oakland, California

Prepared by
JONAS & ASSOCIATES INC.

Date: 10-14-1998 Locations Approx.	Figure 1	Drawing Number PCO220-10/98:F1

ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
951 TURNER COURT, SUITE 300, HAYWARD, CA 94545-2651
PHONE (510) 670-5575 ANDREAS GODFREY FAX (510) 670-5262
(510) 670-5248 ALVIN KAN

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT Former Paco Pumps
9201 San Leandro Street
Oakland, California 94603

California Coordinates Source _____ ft. Accuracy ± ___ ft.
CCN _____ ft. CCE _____ ft.
APN 37°44'32" lat., 122°11'07" longitude

CLIENT
Name Mr. John Lilla - Vice President
Address 16801 Greenspoint Park Drive, 281/775-1697
City Houston, Texas Zip 77060

APPLICANT
Name Jonas & Associates, Inc.
c/o Mark L. Jonas, R.G. Fax 925/933-5360
Address 2815 Mitchell Dr, 209 Phone 925/933-5362
City Walnut Creek, CA Zip 94598

TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Cathodic Protection	☐	General	☐
Water Supply	☐	Contamination	☒
Monitoring	☐	Well Destruction	☐

PROPOSED WATER SUPPLY WELL USE

New Domestic	☐	Replacement Domestic	☐
Municipal	☐	Irrigation	☐
Industrial	☐	Other _____	☐

DRILLING METHOD:

Mud Rotary	☐	Air Rotary	☐	Auger	☐
Cable	☐	Other	☒	Hydropunch	

DRILLER'S LICENSE NO. 485165

WELL PROJECTS
Drill Hole Diameter _____ in. Maximum
Casing Diameter _____ in. Depth _____ ft.
Surface Seal Depth _____ ft. Number _____

GEOTECHNICAL PROJECTS B5, B6
Number of Borings 2 Maximum
Hole Diameter 2 in. Depth 4 ft.

ESTIMATED STARTING DATE September 22, 1998
ESTIMATED COMPLETION DATE September 22, 1998

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE Mark L. Jonas DATE 9/2/98
Mark L. Jonas, R.G.

FOR OFFICE USE

PERMIT NUMBER 98WR388
WELL NUMBER _____
APN _____

PERMIT CONDITIONS

Circled Permit Requirements Apply

(A.) **GENERAL**
1. A permit application should be submitted so as to arrive at the ACPWA office five days prior to proposed starting date.
(2.) Submit to ACPWA within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well projects, or drilling logs and location sketch for geotechnical projects.
(3.) Permit is void if project not begun within 90 days of approval date.

B. WATER SUPPLY WELLS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.

C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

(D.) **GEOTECHNICAL**
Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

E. CATHODIC
Fill hole above anode zone with concrete placed by tremie.

F. WELL DESTRUCTION
See attached.

G. SPECIAL CONDITIONS

APPROVED A. Kan DATE 9/14/98

AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX: (916) 985-1020

CHAIN-OF-CUSTODY RECORD

Nº 016836

Page 1 of 1

Contact Person: Mark Jones, R.G.
Company: Jones & Associates, Inc.
Address: 2815 Mitchell Dr., S. 209 City: Walnut Creek State: CA Zip: 94598
Phone: (925) 933-5360 FAX: (925) 933-5362
Collected By: Signature: Mark Jones

Project info:
P.O. #:
Project #: PCO-220
Project Name: 9201 Paco

Turn Around Time:
☑ Normal
☐ Rush ____ Specify

Lab I.D.	Field Sample I.D.	Date & Time	Analyses Requested	Canister Pressure / Vacuum Initial	Final	Receipt
01	B5-3'	9/22/98 1410	TPH-gasoline, BTEX	-25" Hg	0" Hg	OK,
02	B6-3'	9/22/98 1515	TPH-gasoline, BTEX	-26" Hg	0" Hg	1.0 Hr
						9/28/98

Relinquished By: (Signature) Date/Time: Mark Jones 9/23/98 1000 Print Name: Mark Jones
Relinquished By: (Signature) Date/Time:
Relinquished By: (Signature) Date/Time:
Received By: (Signature) Date/Time: Debbie Peace 9/25/98 1115
Received By: (Signature) Date/Time:

Notes:
B5 canister 608
B6 canister 617

Lab Use Only	Shipper Name	Air Bill #	Opened By:	Date/Time	Temp. (°C)	Condition	Custody Seals Intact?	Work Order #
	UPS Ground	1Z95D.05031420 7283	DLP	9/25/98 1115	Ambient	good	Yes No None N/A	9809362

Form 1293 rev. 06

@AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

RECEIVED 10/14/98 J:A

WORK ORDER #: 9809362

Work Order Summary

CLIENT: Mr. Mark Jonas
Jonas and Associates
2815 Mitchell Drive, Suite 209
Walnut Creek, CA 94598

BILL TO: Same

PHONE: 925-933-5360
FAX: 925-933-5362

P.O. # NR
PROJECT # PCO-220 9201 Paco

DATE RECEIVED: 9/25/98
DATE COMPLETED: 10/12/98

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.
01A	B5-3'	TO-3	0.0 "Hg
02A	B6-3'	TO-3	1.0 "Hg
03A	Lab Blank	TO-3	NA
03B	Lab Blank	TO-3	NA

LAB NARRATIVE:
Compounds detected between the detection limit and the low point on the curve are "J" flagged.

CERTIFIED BY: Jordan Trueman
Laboratory Director

DATE: 10/12/98

Certification numbers: CA ELAP - 1149, NY ELAP - 11291, UT ELAP - E-217

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA 95630
(916) 985-1000 • (800) 985-5955 • FAX (916) 985-1020

AIR TOXICS LTD.

SAMPLE NAME : B5-3'

ID#: 9809362-01A

EPA Method TO-3 GC/PID/FID

File Name:	6100514	**Date of Collection:**	9/24/98
Dil. Factor:	2520	**Date of Analysis:**	10/ 5/98

Compound	Det. Limit (ppmv)	Amount (ppmv)
Benzene	2.5	51
Toluene	2.5	6.8 J
Ethyl Benzene	2.5	Not Detected
Total Xylenes	2.5	4.4 J
TPH (C5+ Hydrocarbons) ref. to Gasoline	25	15000
C2-C4 Hydrocarbons ref. to Gasoline	25	160

J = Estimated value.

Container Type: 1 Liter Summa Canister

Surrogates	% Recovery	Method Limits
Fluorobenzene (PID)	110	50-150
Fluorobenzene (FID)	139	50-150

AIR TOXICS LTD.

SAMPLE NAME : B6-3'

ID#: 9809362-02A

EPA Method TO-3 GC/PID/FID

File Name:	**6100816**	**Date of Collection:**	**9/24/98**
Dil. Factor:	**2090**	**Date of Analysis:**	**10/ 8/98**

Compound	Det. Limit (ppmv)	Amount (ppmv)
Benzene	2.1	29
Toluene	2.1	5.3 J
Ethyl Benzene	2.1	Not Detected
Total Xylenes	2.1	4.9 J
TPH (C5+ Hydrocarbons) ref. to Gasoline	21	9800 B
C2-C4 Hydrocarbons ref. to Gasoline	21	2000

B = Compound present in laboratory blank, background subtraction not performed.
J = Estimated value.

Container Type: 1 Liter Summa Canister

Surrogates	% Recovery	Method Limits
Fluorobenzene (PID)	118	50-150
Fluorobenzene (FID)	127	50-150

FROM ALAMEDA CO EHS HAZ-OPS 510 337 9335 1998,06-04 11:43 #407 P.01/01

DRAFT

Commercial Receptors - Risk Based Screening Levels (RBSLs), Recommended Maximum Allowable Concentration of BTEX in Vapor at 3 Feet Below Ground Surface[a], No Building Slab Assumed (ie. dirt floor).

Units	Benzene[b]		Toluene[c]	Ethylbenzene[c]	Xylenes[c]
	10^{-5} Risk	10^{-6} Risk			
Vapor → ppbv	384	38.4	140,000	358,000	2,604,000
µg/L	1.24	0.124	535	1,580	11,500
µg/m³	1,240	124	535,000	1,580,000	11,500,000

Notes:

a = Calculated using equations and parameters from Tables X2.2, X2.3, X2.4, X2.5, X2.6 and X2.7 of American Society for Testing and Materials, 1995, Standard Guide for Risk-Based Corrective Action Applied at Petroleum Release Sites, E 1739-95.

b = Concentrations for benzene are based on a carcinogenic risk of 1 in 100,000 (10^{-5}) and 1 in 1,000,000 (10^{-6}) using California's standard cancer slope factor of 0.1 kg-day/mg.

c = Concentrations for non-carcinogenic compounds are based on a chronic hazard quotient of 1.0.

Prepared by Tim Utterback, Tom Fojut & Pleas McNeel, Weiss Associates; Ravi Arulanantham & Stephen I. Morse, RWQCB-SFB

To: Mark Jonas
R. Eva Chu

I:\vapor\vatrcene.doc