

Detterman, Mark, Env. Health

From: Bill Dugan WellTest, Inc. [dugan@welltest.biz]
Sent: Monday, February 08, 2016 6:09 PM
To: henryh510@gmail.com
Cc: Detterman, Mark, Env. Health
Subject: Results of Vapor Intrusion Sampling at the Former Four Seasons Cleaners
Attachments: Four Seasons Cleaners - Case # RO0003155 -- Air Sample Results Letter -- 02-08-2016.pdf

Uncle Wongs:

Attached is a notification letter summarizing the results of recent soil vapor intrusion sampling work completed within the former dry cleaning unit adjacent to your suite. This letter was prepared at the request of the Alameda County Department Environmental Health staff. Please contact me if you have any comments or questions.

Thank you.

Bill Dugan, PG



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February 8, 2016

Re: Air Sampling Results Notification (Letter #5028)
Four Seasons Cleaners – Case # RO0003155
13778 Doolittle Ave., San Leandro, California

To Occupants of Adjacent Suites to the Former Four Seasons Cleaners:

Under the direction of the Alameda County Environmental Health Department (ACEH), Mr. Ernie Lee the owner of the Marina Faire Shopping Center, and WellTest, Inc. (WTI), the owner's environmental consultant, are investigating the occurrence of dry cleaning related compounds in the subsurface and indoor air at the former Four Seasons Cleaners, 13778 Doolittle Drive, San Leandro, California. On October 30, 2015 a soil gas and indoor air survey was conducted at the former dry cleaner location by WTI with oversight from the ACEH. We are writing to provide you with the results this sampling event.

The main compounds of concern (COCs) are perchloroethylene (also known as tetrachloroethylene, perc, or PCE), and trichloroethene (or TCE). Depending on the amount and duration of exposure, PCE and TCE can have adverse human health effects such as kidney and liver damage and has caused cancer in laboratory animals.

Sampling Results

The sample results indicate that COCs were found in indoor air, outdoor air, and soil gas within the former Four Seasons Cleaners suite. Reported concentrations of PCE, TCE, and cis-1,2-dichloroethene (cis-1,2-DCE) in indoor air exceed environmental screening levels published by the San Francisco Bay Regional Water Quality Control Board (RWQCB). The concentrations of PCE and TCE significantly exceed screening levels which require immediate response actions to reduce or eliminate exposure to these chemicals. A summary of the indoor and outdoor air sampling results are presented in the Table attached to this document. Additionally, a summary of the soil gas sampling results and their respective cancer risks and health indexes are presented in the following table:

Sample ID	Sample Date	Depth (ft bgs)	Sample Matrix	PCE ($\mu\text{g}/\text{m}^3$)	Hazard Index	Cancer Risk
SG-1A	10/30/15	5.0	Soil Gas	20,000,000	8.61	6.46E-04
SG-2A	10/30/15	5.0	Soil Gas	1,300,000	0.560	4.20E-05
VP-1	10/30/15	subslab	Soil Gas	2,900,000	9.49	7.12E-04
VP-2	10/30/15	subslab	Soil Gas	180,000	0.589	4.42E-05
VP-3	10/30/15	subslab	Soil Gas	470,000	1.54	1.15E-04
VP-4	10/30/15	subslab	Soil Gas	160,000	0.524	3.93E-05

Notes:

Sub-slab = 0.8 ft = 0.2 m,

The Department of Toxic Substance Control (DTSC) recommends that whenever the Cancer Risk is greater than 1.0E-04 and/or the hazard index is greater than 1.0 (as exists at the subject site), a response action in the form of vapor intrusion mitigation and/or source remediation is necessary.

The full technical document prepared by WTI, which documents the sampling activities and results, can be found online at the following url:

http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/9022223770/T10000006425.PDF

What actions are being taken to resolve the problem?

ACEH has notified the building owner, Mr. Ernie Lee, and occupants about the problem so that they are aware of potential health risks.

There are means of reducing the concentrations of the chemicals in indoor air and preventing the subsurface chemicals from migrating into the building. Increasing the air flow in the building (outdoor air intake with fans) can reduce the concentrations of contaminants indoors, and pressurizing the building (Heating and Ventilation System modifications) can help prevent toxic subsurface vapors from migrating inside. Currently, the property owner is determining the quickest method to increase the air flow indoors. Additionally, a low pressure barrier may also be created beneath the building to prevent vapor migration from below, but this will take time. Concurrently, WTI is continuing its investigation of the solvent contamination at the site to obtain the environmental information needed for developing short and long term solutions to the problem(s). WTI, the ACEH, and the property owner will continue to work closely together and with the tenants to ensure that your health is protected.

Project Contacts

Thank you for your participation in this study. If you have any questions regarding this letter or any other aspect of the study please do not hesitate to contact any of the following:

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Tables and Figures

TABLE 1
SUMMARY OF HISTORICAL SOIL VAPOR ANALYTICAL DATA
13778 DOOLITTLE DRIVE, SAN LEANDRO, CA

Sample ID	Sample Depth (ft)	Sample Date	B ($\mu\text{g}/\text{m}^3$)	T ($\mu\text{g}/\text{m}^3$)	E ($\mu\text{g}/\text{m}^3$)	o-Xyl ($\mu\text{g}/\text{m}^3$)	p&m-Xyl ($\mu\text{g}/\text{m}^3$)	PCE ($\mu\text{g}/\text{m}^3$)	TCE ($\mu\text{g}/\text{m}^3$)	cis-1,2DCE ($\mu\text{g}/\text{m}^3$)	VC ($\mu\text{g}/\text{m}^3$)	IPA ($\mu\text{g}/\text{m}^3$)
S1 Air	0.5	08/10/14	ND	ND	ND	ND	ND	63,000	890	ND<320	ND<210	NA
S2 Air	0.5	08/10/14	ND	ND	ND	ND	ND	240,000	16,000	ND<960	ND<620	NA
S3 Air	0.5	08/10/14	ND	ND	ND	ND	ND	4,500,000	92,000	ND<20,000	ND<13,000	NA
SG-1A	5.0	10/30/15	590	1,800	ND<43	ND<38	ND<94	20,000,000	810,000	170,000	ND<75	3,900
SG-2A	5.0	10/30/15	ND<67	ND<51	ND<45	ND<40	ND<98	1,300,000	180,000	50,000	ND<78	ND<75
VP-1	subslab	10/30/15	ND<69	ND<52	ND<46	ND<41	ND<100	2,900,000	140,000	18,000	ND<80	ND<77
VP-2	subslab	10/30/15	ND<63	ND<48	ND<42	ND<38	ND<92	180,000	12,000	220	ND<74	370,000
VP-3	subslab	10/30/15	ND<63	ND<48	ND<42	ND<38	ND<92	470,000	5,400	ND<58	ND<74	ND<71
VP-4	subslab	10/30/15	ND<56	ND<43	ND<38	ND<34	ND<83	160,000	7,300	200	ND<66	27,000

--- = Parameter not analyzed

<0.5 / ND = Not present at or above reporting detection limit

$\mu\text{g}/\text{m}^3$ = micrograms per cubic meter = ppmv

ESLs = Environmental Screening Levels, May 2013

CHHSL Comm/Ind. = California Human Health Screening Level, January 2005

B = Benzene

T = Toluene

E = Ethylbenzene

Xyl = Xylenes

MtBE = Methyl-t-butyl ether

PCE = Tetrachloroethene

TCE = Trichloroethene

VC = Vinyl Chloride

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

IPA = Isopropyl Alcohol

TABLE 2
SUMMARY OF CURRENT INDOOR & OUTDOOR AIR ANALYTICAL DATA
13778 DOOLITTLE DRIVE, SAN LEANDRO, CA

Sample ID	Sample Date	B ($\mu\text{g}/\text{m}^3$)	T ($\mu\text{g}/\text{m}^3$)	E ($\mu\text{g}/\text{m}^3$)	o-Xyl ($\mu\text{g}/\text{m}^3$)	p&m-Xyl ($\mu\text{g}/\text{m}^3$)	PCE ($\mu\text{g}/\text{m}^3$)	TCE ($\mu\text{g}/\text{m}^3$)	cis-1,2DCE ($\mu\text{g}/\text{m}^3$)	VC ($\mu\text{g}/\text{m}^3$)	IPA ($\mu\text{g}/\text{m}^3$)
OUT-1	10/30/15	ND<11	ND<8.6	ND<7.6	ND<6.7	ND<17	1,500	32	ND<10	ND<13	ND<13
IND-1	10/30/15	ND<13	ND<10	ND<6.9	ND<7.9	ND<19	220	ND<22	ND<12	ND<15	ND<15
IND-2	10/30/15	ND<12	ND<9.2	ND<8.1	ND<7.2	ND<18	18,000	240	49	ND<14	ND<14
ESLs Comm/Ind.		0.42	1,300	4.9	440		2.1	3.0	NA	0.16	NA

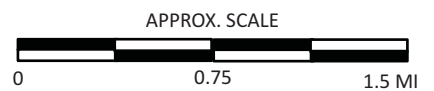
--- = Parameter not analyzed
 <0.5 / ND = Not present at or above reporting detection limit
 $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter = ppmv
 ESLs = Environmental Screening Levels, May 2013

B = Benzene
 T = Toluene
 E = Ethylbenzene
 Xyl = Xylenes
 MtBE = Methyl-t-butyl ether

PCE = Tetrachloroethene
 TCE = Trichloroethene
 VC = Vinyl Chloride
 cis-1,2DCE = cis-1,2-Dichloroethene
 IPA = Isopropyl Alcohol



SOURCE: USGS 1:24,000 SCALE SERIES, SAN LEANDRO QUAD



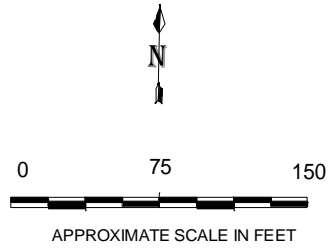
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**13778 DOOLITTLE AVE.
SAN LEANDRO, CALIFORNIA**

SITE VICINITY MAP

FIGURE

1




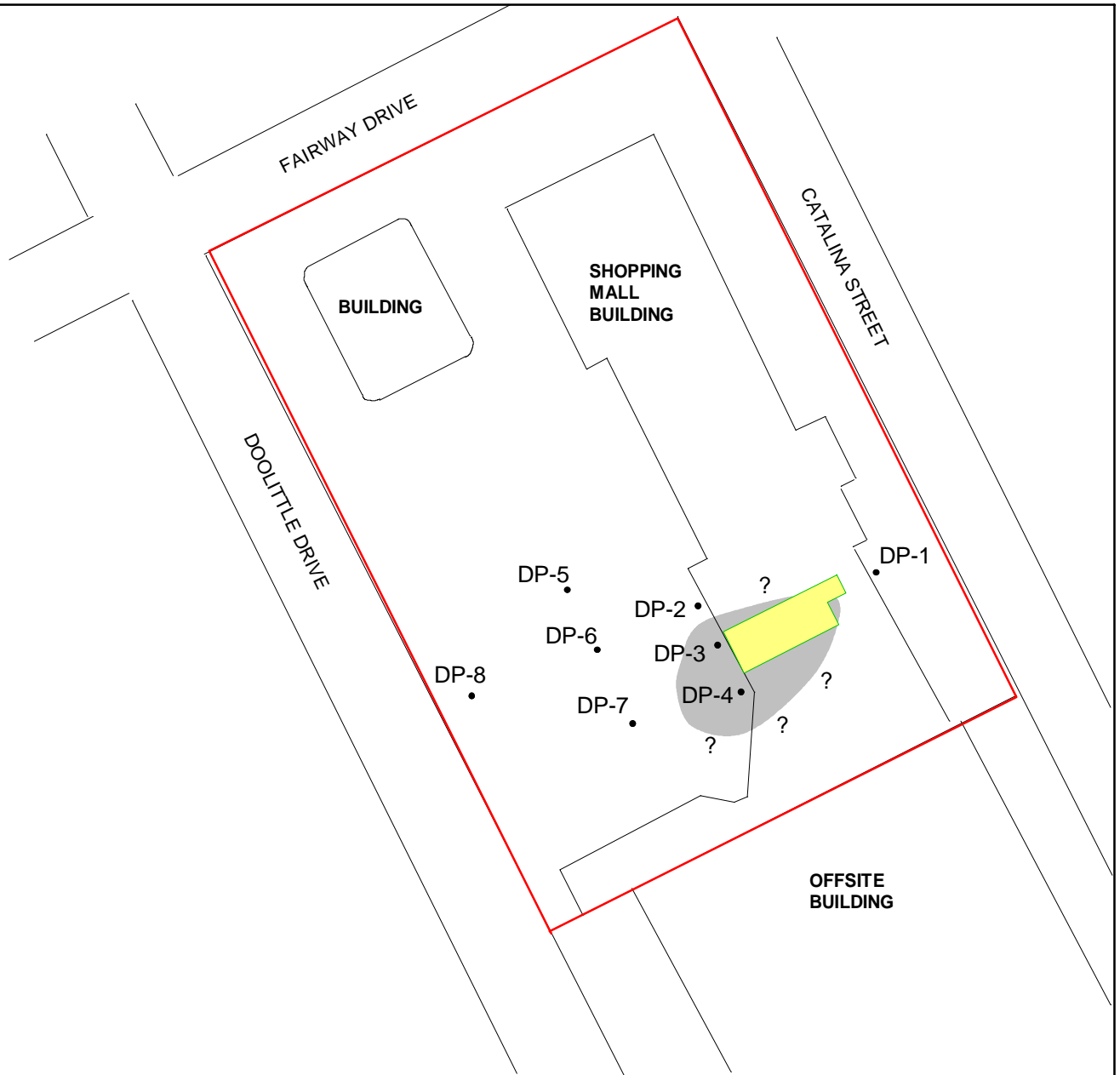
LEGEND

DP-8 • EXPLORATORY BORING (02/18/15)

 FOUR SEASONS CLEANERS

 PARCEL 80G-931-1-5

 PRELIMINARY ESTIMATE OF LATERAL EXTENT OF SHALLOW GROUNDWATER IMPACTED BY VOLATILE ORGANIC COMPOUNDS



ALL LOCATIONS ARE APPROXIMATE

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EXTENDED SITE MAP SHOWING BORING DP-1 THROUGH DP-8 (02/18/15)

FOUR SEASONS CLEANERS
 13778 DOOLITTLE DRIVE
 SAN LEANDRO, CALIFORNIA

FIGURE

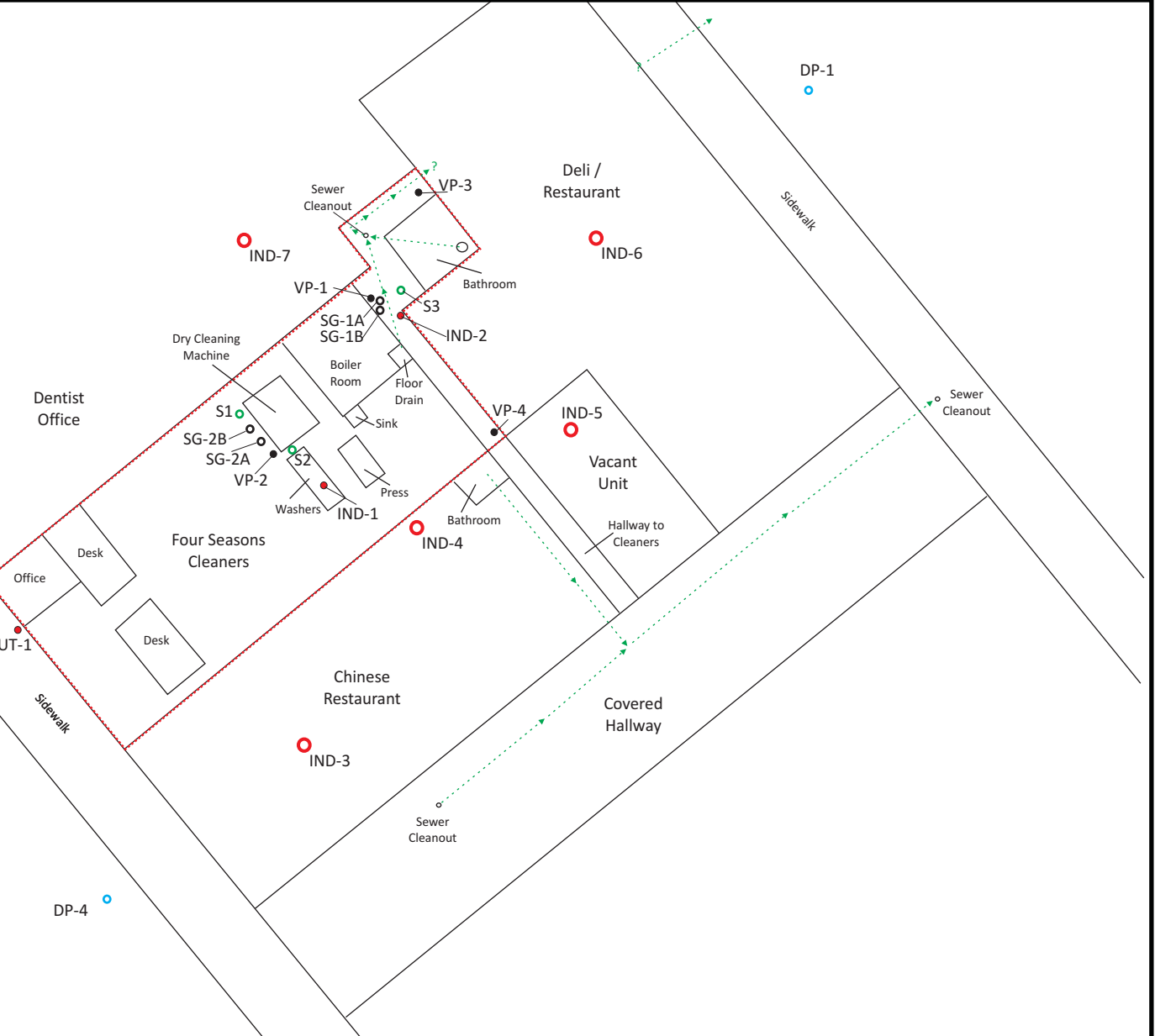
2

Legend

- DP-1 Historical Boring Location (WTI - 2/18/15)
- S1 Historical Boring Location (PIERS 8/10/14)
- SG-1A Soil Gas Sampling Location
- VP-1 Subslab (Vapor Pin) Sampling Location
- IND-1 Historical Indoor/Outdoor Air Sampling Location
- IND-5 Proposed Indoor Air Sampling Location

Area of Dry Cleaner

Approx Scale



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13778 DOOLITTLE DRIVE
SAN LEANDRO, CALIFORNIA

DETAILED SITE MAP SHOWING
PROPOSED AND HISTORICAL SAMPLING LOCATIONS

FIGURE

3