Department of Toxic Substances Control

Matthew Rodriquez
Secretary for
Environmental Protection

Barbara A. Lee, Director
8800 Cal Center Drive
Sacramento, California 95826-3200

Edmund G. Brown Jr.
Governor

Proposition 65 Notification
Pursuant to California Health & Safety Code § 25180.7
Designated Government Employee Disclosure

TO: Stanislaus County Board of Supervisors
Dick Monteith, Vice-Chairman
1010 10th Street, Suite 6500
Modesto, California 95354

Stanislaus County Health Services Agency
Mary Ann Lee, Managing Director
830 Scenic Drive
P.O. Box 3271
Modesto, California 95353

FROM: James Rohrer, P.G. J.R.
Engineering Geologist
Brownfields & Environmental Restoration Program

DATE: December 4, 2014

PROPERTY NAME: Former Sunshine Carpet and Drapery Cleaners

ADDRESS: 1645 Princeton Avenue, Modesto, California

This notification, by a designated government employee of the California Department of Toxic Substances Control ("DTSC"), is made pursuant to the State's Safe Drinking Water and Toxic Enforcement Act of 1986 ("Proposition 65"). More specifically, this notification is made pursuant to California Health and Safety Code section 25180.7, which is part of Proposition 65.

I have obtained information in the course of my official duties pertaining to the property address specified above, indicating that discharges of tetrachloroethene (PCE) have occurred, and that such discharges, or threatened discharges could cause substantial injury to the public health or safety.

DTSC understands that the property at 1645 Princeton Avenue in Modesto is currently being operated as a commercial towel cleaning service known as B and B Towel Service.

B and B Towel Service indicated that PCE is not used in their cleaning operation. DTSC has entered into a Voluntary Cleanup Agreement with the City of Modesto to characterize soil and groundwater contamination at the former Sunshine Carpet and Drapery Cleaners that was located at 1645 Princeton Avenue, Modesto, California.

In a report dated November 3, 2014, from the City of Modesto's consultant (Tetra Tech, Inc.) to DTSC, analytical results for indoor air, sub-slab air, soil gas and groundwater samples confirmed the presence of elevated PCE concentrations. Calculated health risks that exceed the point of departure risk of 1E-06 are shown in the attached memorandum to me from a DTSC toxicologist dated December 2, 2014. Also attached are two figures from the Tetra Tech report to show sample locations that are referenced in the attached memorandum.

Please see the attached memorandum for a summary of the sampling and analyses.

Based on the information in the attached memorandum, there is reason to believe that the discharges could cause injury to the public health.

If you have any questions, please call me at (916) 255-3709 between 8:00 a.m. and 5:00 p.m., Monday through Friday or I can be reached by e-mail at jim.rohrer@dtsc.ca.gov.

I hereby certify that I am a designated employee and that I have reported the above information concerning a discharge or threatened discharge of hazardous waste to the appropriate officials pursuant to Section 25180.7 of the Health and Safety Code.

Signed James Rohrer

Title Engineering Geologist

Date 12/4/14

Attachments

cc: Roland Stevens
Assistant City Attorney
rstevens@modestogov.com

Department of Toxic Substances Control

Matthew Rodriquez
Secretary for
Environmental Protection

Miriam Barcellona Ingenito, Acting Director
8800 Cal Center Drive
Sacramento, California 95826-3200

Edmund G. Brown Jr.
Governor

MEMORANDUM

TO: Jim Rohrer, PG
Project Manager
National Priorities List Unit
8800 Cal Center Drive
Sacramento, CA 95826-3200

FROM: Valerie L. Mitchell, Ph.D.
Staff Toxicologist
Human and Ecological Risk Office (HERO)
8810 Cal Center Drive, 2nd Floor
Sacramento, CA 95826-3200

DATE: December 2, 2014

SUBJECT: Former Sunshine Carpet and Drapery Cleaners

PCA: 12018 Site: 101454-11

Background: As part of the greater Modesto Groundwater investigation a number of current and former dry cleaners have been identified as being potential sources for elevated levels of chlorinated solvents in groundwater as well as in the subsurface. Former Sunshine Carpet and Drapery Cleaners is one of the identified dry cleaner sites. Tetrachloroethylene (PCE) is the main chemical of concern and has been detected in groundwater, soil-gas, and indoor air. The Former Sunshine Carpet and Drapery Cleaners site is currently occupied by an industrial cleaning operation, which reportedly does not use PCE in their operations. Daughter products of PCE including trichloroethylene (TCE), cis- 1,2- dichloroethylene (cis 1,2 DCE), trans-1,2-dichloroethylene (trans 1,2 DCE), and vinyl chloride (VC) were also detected. HERO calculated risks based on maximum concentrations previously detected and presented the results in a memorandum dated December 11, 2012. HERO made the following conclusions in that memorandum: "The estimated risks associated with Former Sunshine Cleaners exceed the de minimis risk of $1x10^{-6}$, and the estimated risk from sub-slab soil gas sampling of PCE indicate a risk in excess of the risk management range of $1x10^{-6}$ to $1x10^{-4}$ ($3x10^{-2}$ and $6x10^{-3}$ for residential and industrial receptors,

respectively). These results suggest that remediation of chlorinated VOCs may be necessary in the groundwater and sub surface at and near the Former Sunshine Cleaners. HERO recommends additional indoor air sampling (8 and 24 hour) and sub slab sampling be completed in order to fully characterize the extent of the risks due to vapor intrusion." The current document under review presents the additional sampling requested in that memorandum.

Document Reviewed:
HERO was asked to review "Vapor Monitoring Point Results, Indoor Air, and 3rd Quarter 2014 Groundwater Monitoring Results, Former Sunshine Carpet and Drapery Cleaners, Modesto, CA, Presented in a letter dated November 3, 2014 to DTSC Project Manager James Rohrer, Prepared by Tetra Tech GEO, 2969 Prospect Park Drive, Suite 100, Rancho Cordova, California.

Overview:
This document includes the results of the installation of one sub-slab vapor monitoring point, sampling of 3 vapor monitoring points at both 5 and 24-25 feet below ground surface (ft bgs), sampling of indoor and outdoor air, and the third quarter groundwater monitoring of 10 monitoring wells. HERO was asked to calculate the estimated indoor air risks and non-cancer hazards based on the data presented in the report.

Estimated Risks to Indoor Air:

A) Soil Gas:
HERO calculated the potential risks to indoor air based on soil gas data in sub-slab (1 ft bgs), shallow (5 ft bgs) and at depth (24-25 ft bgs) samples collected on and near the former Sunshine Cleaners Site. Estimated potential cancer risks and non-cancer hazards were calculated for the industrial exposure scenario for each detection. In order to be as conservative as possible, HERO used the default soil parameters for sand in the J&E model. The results of this screening level risk assessment are presented in Table 1 below. Both PCE and TCE were detected in soil gas samples. The sub-slab sample VMP-1A resulted in the highest estimated indoor air risk to the industrial receptor at $1x10^{-2}$. The corresponding residential indoor air risk estimate is $6x10^{-2}$. Both of these risks significantly exceed the risk management range of $1x10^{-6}$ to $1x10^{-4}$. The highest estimated risks from the soil vapor samples for an industrial land use scenario were seen in VMP-6 with an estimated risk $1x10^{-4}$. The corresponding residential risk is estimated to be $1x10^{-3}$, which exceeds the risk management range.

Table 1: Calculated Industrial Indoor Air Risk based on PCE and TCE in soil vapor

		Tetrachloroethylene (PCE)			Trichloroethylene (TCE)		
Sample ID	Depth (ft bgs)	Concentration (µg/m3)	Estimated Risk	HQ	Concentration (µg/m3)	Estimated Risk	HQ
VMP-1A	1	520,000	**$1.3x10^{-2}$**	**169.60**	10,000	**$1.7X10^{-4}$**	**57.08**
VMP-5	5	14,000	**$3.4X10^{-6}$**	0.05	380	$7.7X10^{-8}$	0.03
	25	160,000	**$1.1X10^{-5}$**	0.15	11,000	$6.8X10^{-7}$	0.23
VMP-6	5	460,000	**$1.1X10^{-4}$**	**1.53**	5,800	**$1.2X10^{-6}$**	0.40
	24.5	130,000	**$9.1X10^{-6}$**	0.12	410	$2.6X10^{-8}$	0.01
VMP-8	5	3,500	$8.6X10^{-7}$	0.01	<270	NA	NA
	24	2,200	$1.6X10^{-7}$	0.00	<270	NA	NA

Bolded results exceed the de minimis risk of $1x10^{-6}$ or an HQ of 1

B) Groundwater:

HERO calculated Risk Based Concentrations (RBCs) for groundwater volatilization into indoor air based on a depth to groundwater of 32 feet and using the default soil parameters for sand in the J&E Model. It's important to note that these RBCs are slightly different than those calculated in HERO's 2012 memo based on a shallower reported depth to groundwater and as EPA has recently updated their exposure parameters and DTSC has updated our version of the J&E model to comply with these changes. Table 2 lists the RBCs for PCE, TCE, and VC for both industrial and residential land uses both sets of RBCs are based off an estimated cancer risk of $1x10^{-6}$. HERO further calculated risks for PCE, TCE, and VC detected in monitoring wells sampled during the August 2014 sampling event. The results of that analysis for PCE and TCE are presented in Table 3. The estimated risk to residential receptors exceeded the point of departure of $1x10^{-6}$ for seven of ten of the wells samples. This includes MW-7B, which is the closest well to residential development (estimated cumulative risk of $4x10^{-6}$). VC was only detected in a single well, MW-1A, which is the monitoring well on the site property. The cumulative risk for PCE, TCE, and VC combined in that well is $2x10^{-5}$ for industrial and $2x10^{-4}$ for residential.

Table 2: Groundwater Risk Based Concentrations

	PCE (µg/L)	TCE (µg/L)	VC (µg/L)
Residential RBC	4.2	8.2	0.1
Industrial RBC	37	71	0.088

Table 3: Estimated Risks for Inhalation of Indoor Air due to Groundwater Volatilization

	Tetrachloroethylene (PCE)			Trichloroethylene (TCE)		
	Concen. (µg/L)	Industrial Risk	Residential Risk	Concen. (µg/L)	Industrial Risk	Residential Risk
MW-1A	680	**$1.8X10^{-5}$**	**$1.6X10^{-4}$**	120	**$1.7X10^{-6}$**	**$1.5X10^{-5}$**
MW-1B	<0.5	NA	NA	<0.5	NA	NA
MW-3A	250	**$6.8X10^{-6}$**	**$6.0X10^{-5}$**	1.2	$1.7X10^{-8}$	$1.5X10^{-7}$
MW-4A	93	**$2.5X10^{-6}$**	**$2.2X10^{-5}$**	<0.5	NA	NA
MW-4B	18	$4.9X10^{-7}$	**$4.3X10^{-6}$**	2.5	$3.5X10^{-8}$	$3.0X10^{-7}$
MW-6A	100	**$2.7X10^{-6}$**	**$2.4X10^{-5}$**	0.64	9.0X10-09	$7.8X10^{-8}$
MW-6B	63	**$1.7X10^{-6}$**	**$1.5X10^{-5}$**	<0.5	NA	NA
MW-7B	9	$2.4X10^{-7}$	**$2.1X10^{-6}$**	18	$2.5X10^{-7}$	**$2.2X10^{-6}$**
MW-8A	0.66	$1.8X10^{-8}$	$1.6X10^{-7}$	<0.5	NA	NA
MW-8B	4.6	$1.2X10^{-7}$	$1.1X10^{-6}$	<0.5	NA	NA

C) Indoor Air:

Two indoor air samples were collected from within the former Sunshine Cleaners building; one from the office area and one in the restroom. In addition an outdoor air sample was also collected. Air samples were collected over an 8 hour time period. In addition to PCE and TCE, benzene was detected in the indoor air and contributed significantly to the indoor air risk estimates. PCE was detected at 24 µg/m^3 (Indoor Air Screening Level is 2.08 µg/m^3) and benzene at 9.2 µg/m^3 (Indoor Air Screening Level is 0.042 µg/m^3) in the indoor air of the office, which results in an estimated cumulative risk for the current industrial workers of $2x10^{-4}$, which exceeds the risk management range. It was noted in the report that gardening equipment and gasoline were being stored in the office and may account for the elevated concentrations of benzene in the indoor air. Risks due to PCE alone are estimated at $1x10^{-5}$. TCE did not contribute significantly to the indoor air risk. The non-cancer hazard for indoor air for all COPCs was well below the target of 1.

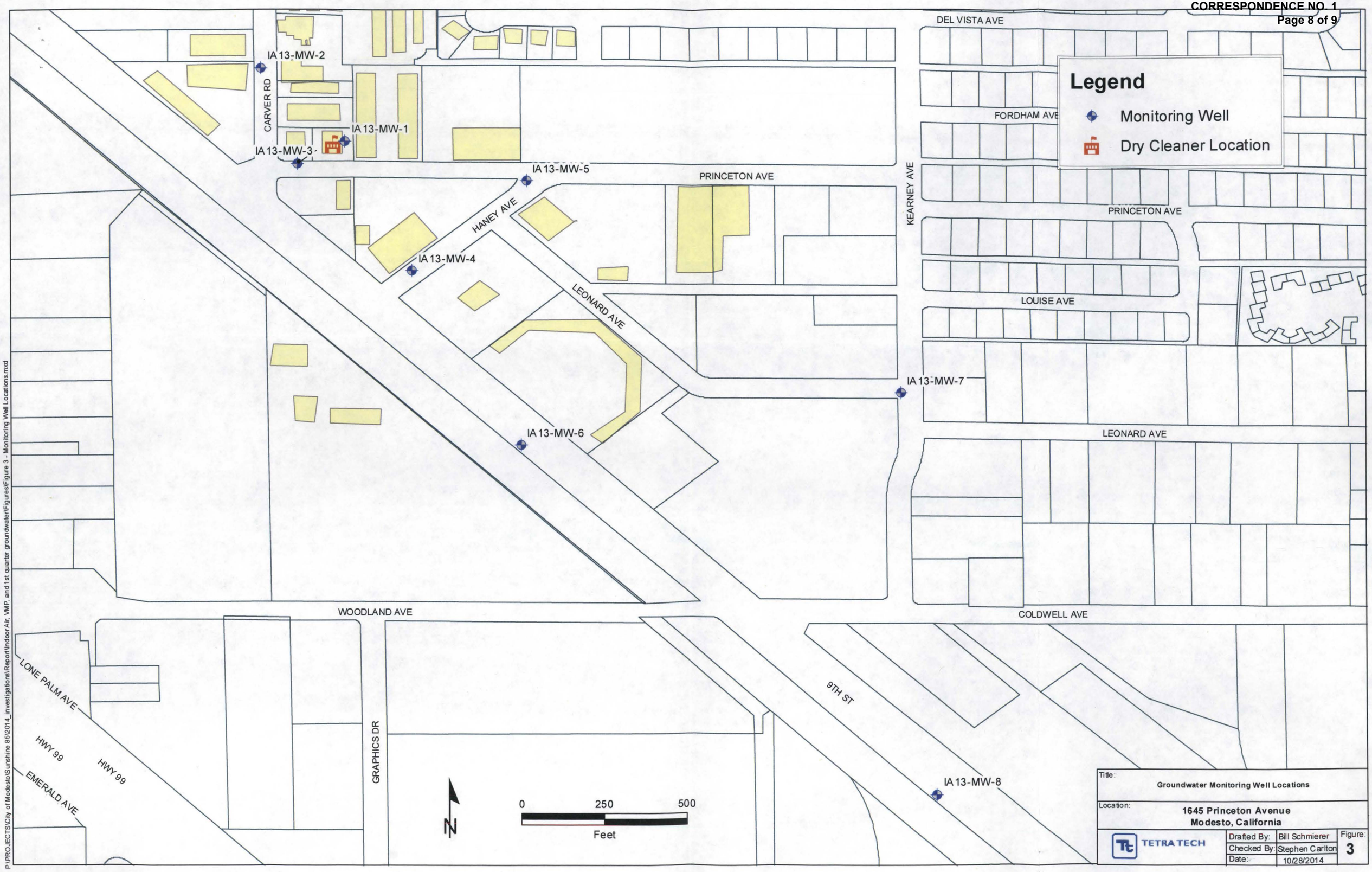
Conclusions and Recommendations:

Multiple lines of evidence have been used to evaluate the potential for volatilization of PCE from the subsurface into the indoor air at and around the former Sunshine Cleaners. Each media evaluated (soil gas, groundwater, and indoor air) indicate that the risks on the site exceed the point of departure of $1x10^{-6}$. The subslab sample obtained contained incredibly elevated concentrations of both PCE and TCE that resulted in risk estimates well in excess of the risk management range of $1x10^{-6}$ to $1x10^{-4}$ and the HQ of 1. These results indicate that some remediation is necessary to reduce the levels of PCE in the indoor air within the building. Additionally, this is concerning as any alterations (cracks, drilling, etc) to the slab of the building could result in significantly higher indoor air concentrations. A Proposition 65 warning may be necessary for the Former Sunshine Cleaners, HERO defers to the Project Manager to make that decision. In addition offsite samples collected from both soil gas and groundwater demonstrate that the PCE contamination exists off-site at concentrations

that also exceed risk-based concentrations. HERO recommends additional soil vapor monitoring points be installed closer to and within the residential area to the east of Kearney Avenue in order to better evaluate the potential threat to indoor air in those residences.

If you have any further questions, you may contact me at 916-255-6440 or email me at Valerie.Mitchell@dtsc.ca.gov

Reviewed By:
Claudio Sorrentino, Ph.D.
Senior Toxicologist
Human and Ecological Risk Office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HANEY AVE
LEONARD AVE
GRAPHICS DR
LONE PALM AVE
EMERALD AVE
HWY 99
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97TH ST
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Legend
Monitoring Well
Dry Cleaner Location
N
0
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500
Feet
Title:
Groundwater Monitoring Well Locations
Location:
1645 Princeton Avenue
Modesto, California
TETRA TECH
Drafted By: Bill Schmierer
Checked By: Stephen Carlton
Date: 10/28/2014
Figure:
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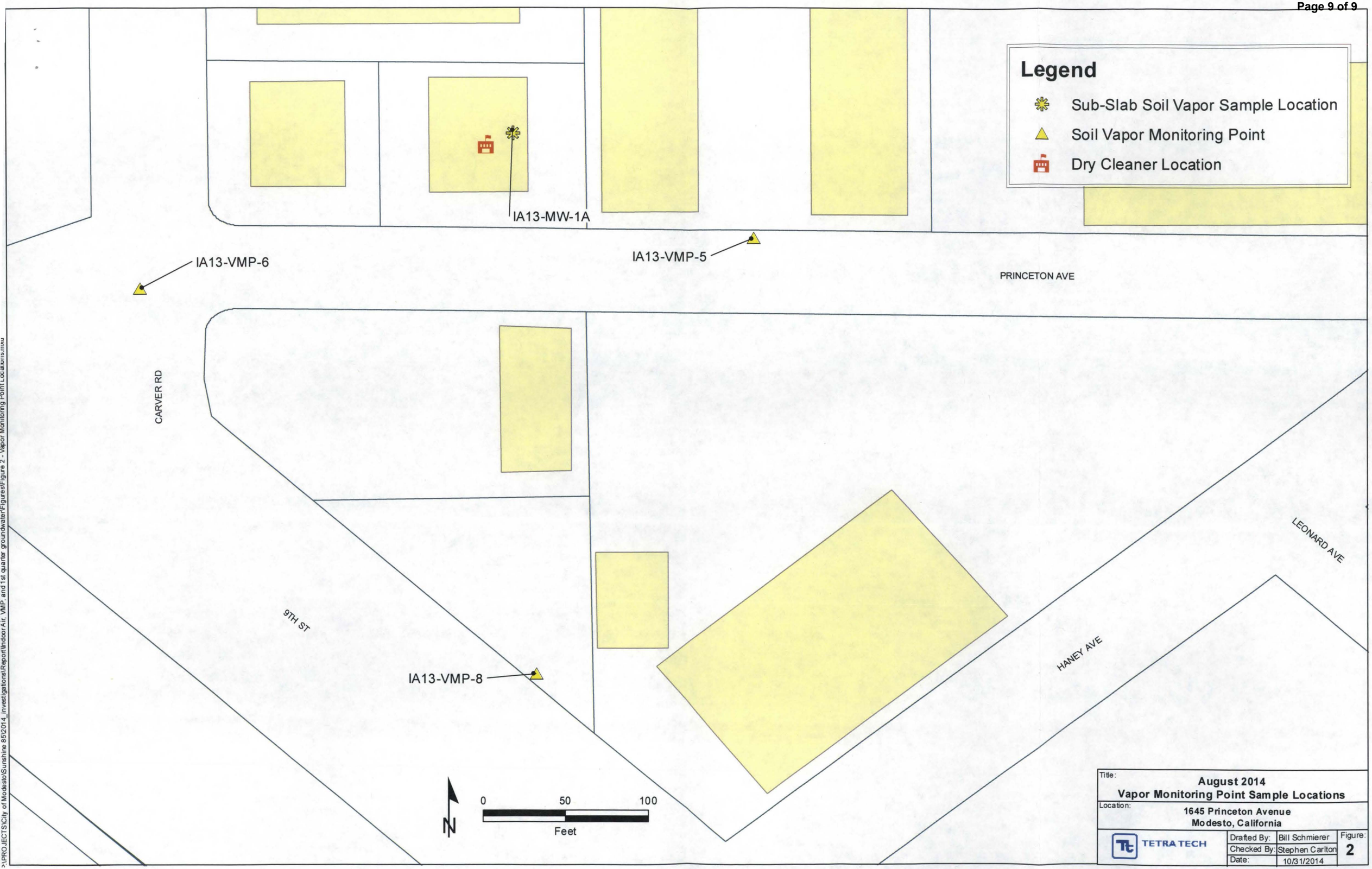

Title: **August 2014 Vapor Monitoring Point Sample Locations**

Location: **1645 Princeton Avenue Modesto, California**

TETRA TECH

Drafted By:	Bill Schmierer
Checked By:	Stephen Carlton
Date:	10/31/2014

Figure: **2**

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