Wickham, Jerry, Env. Health

From: Kalve, Erica <Erica.Kalve@arcadis-us.com>
Sent: Friday, April 10, 2015 3:58 PM
To: Wickham, Jerry, Env. Health
Cc: Tim Simon (Tim.Simon@aspirepublicschools.org); Tan, Angeline; Goldberg Day, Amy
Subject: Update Regarding Building 200 - former Pacific Electric Motors Site located at 1009 66th Avenue in Oakland, California (Fuel Leak Case Number RO0411)
Attachments: Figure 1.pdf; Aspire-Bldg 200 VI Sampling Results.pdf

Dear Jerry,

This email provides the January 2015 analytical results for crawl space, outdoor air, and soil gas samples collected at the former Pacific Electric Motors Site located at 1009 66th Avenue in Oakland, California (Fuel Leak Case Number RO0411). Work was conducted in accordance with the Revised Vapor Intrusion Evaluation Work Plan dated September 12, 2014, and the Work Plan Addendum for Vapor Intrusion Evaluation of Existing Building, dated November 24, 2014. A detailed report is in progress and will be provided shortly. However, prior to finalizing the report, we would like to discuss the sample results and path forward.

Attached for your review is Figure 1 presenting the approximate soil gas and crawl space sample locations and Table 1 summarizing crawl space and soil gas sample results and associated residential risk based screening levels. As shown, the outdoor air and crawl space samples exceed the benzene screening level of 0.084 micrograms per cubic meter (µg/m^3). Other COPCs were either detected or not detected below the respective screening levels.

Note that in the two soil gas samples collected, benzene was detected at low to non-detect concentrations. The low levels of benzene present in soil gas, coupled with the ambient levels of benzene in outdoor air, indicate that the concentrations detected in the crawl space samples may not be attributable to vapor intrusion. In fact, in reviewing a summary of ambient air monitoring data for the bay area, benzene is commonly detected in outdoor air. A nearby monitoring location is located in Berkeley and the annual average concentration of benzene in outdoor air is reported for 2008 at 0.875 µg/m^3 and 2009 at 0.531 µg/m^3 (BAAQMD 2009).

Since the crawl space results were above the applicable screening level, though ambient benzene is likely the majority contributor, we are prepared to implement an indoor air sampling event although we do not think that indoor air sampling is necessary. If needed, this event would be to verify that indoor air is of the same quality as outdoor air. However, we do recommend additional soil vapor monitoring to reattempt sample collection at SVP-6, SVP-9, and SVP-10, and to further evaluate conditions over a few sample events.

Please let us know if you would like to schedule a conference call to discuss. We look forward to hearing from you soon.

Best Regards,
Erica

Reference:
Bay Area Air Quality Management District (BAAQMD). 2009. Summary and Analysis of West Berkeley Air Monitoring Results. April 14.

Please note my new contact information is provided below.

Erica Kalve, PG | Senior Geologist | erica.kalve@arcadis-us.com

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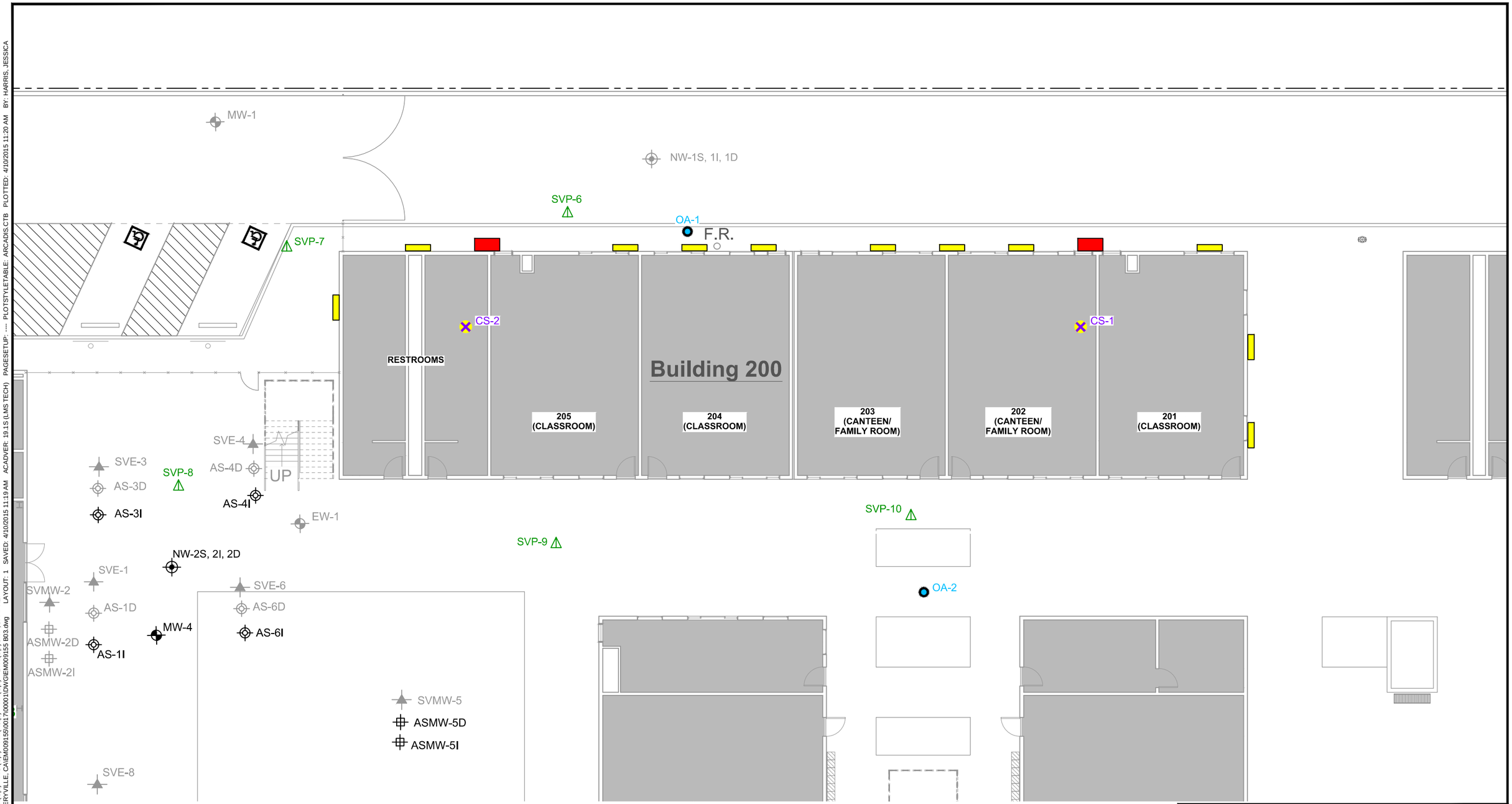

LEGEND:

——— – – ———	Property Line	SVP-9 ⚠	Soil Vapor Point Location
MW-4 ⊕	Monitoring Well	CS-1 ✕	Crawl Space Sampling Location[1]
NW-2S ⊕	Nested Monitoring Well	OA-1 ●	Outdoor Air Sampling Location
AS-6I ⊕	Air Injection Well	▭	1 ft x 4 ft Vent
ASMW-5D ⊞	Air Injection Monitoring Well	▭	2 ft x 4 ft Access / Vent Well Crawl Space
SVE-1 ⊕	SVE or SVE Monitoring Well		

SVE = Soil Vapor Extraction

GREY symbols represent abandoned well locations

NOTE:

1. Teflon tubing will be extended approximately 5-10 feet under the building for the crawl space sample. The sampling canisters will be placed at the crawl space access.

N

0 15 FEET

(SCALE: 1" = 15')

1009 66TH AVENUE, OAKLAND, CALIFORNIA

BUILDING 200 AND CRAWL SPACE SAMPLING LOCATIONS

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FIGURE 1

Table 1
Indoor Air and Soil Vapor Analytical Results
Former Pacific Electric Motors Facility
1009 66th Avenue, Oakland, California

results reported in micrograms per cubic meter (ug/m3)

Sample ID	Sample Date	Benzene	Toluene	Ethyl Benzene	m,p-Xylene	o-Xylene	MTBE	TPH-GRO	Naphthalene (TO-15)	Naphthalene (TO-17)
Indoor Air Sample Results										
USEPA Residential RSL for Indoor Air/DTSC Note 3		0.084	310	1.1	10	10	11	--	0.083	0.083
OA-1	1/17/2015	**0.55**	1.6	0.32	1.0	0.36	<0.53	<60	<3.9	--
OA-2	1/17/2015	**0.51**	1.2	0.23	0.73	0.28	<0.55	<62	<4.0	--
CS-1	1/17/2015	**0.73**	5.3	0.89	4.3	0.92	<0.54	190	<3.9	--
CS-2	1/17/2015	**0.70**	5.6	1.0	4.7	1.1	<0.58	230	<4.2	--
Soil Gas Sample Results										
Adjusted Soil Gas Screening Level Future Residential Buildings[1]		84	310,000	1,100	100,000	100,000	11,000	--	83	83
SVP-6	1/17/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS
SVP-7	1/17/2015	<2.4	<2.9	<3.3	<3.3	<3.3	<2.7	830	<16	<17
SVP-8	1/17/2015	3.6	7.4	<3.6	8.7	3.7	13	3100	<18	<17
SVP-9	1/17/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS
SVP-10	1/17/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS
Field blank	1/17/2015	--	--	--	--	--	--	--	--	<17

Notes

Bold indicates result above the screening level
USEPA = United States Environmental Protection Agency
RSL = Regional Screening Level
MTBE = methyl tert-butyl ether
CS = crawl space
1 = Attenuation factor for a future residential building is 0.001 (DTSC 2011).

< = not detected above the reporting limit
-- = not available; not analyzed

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Sample ID	Sample Date	Benzene	Toluene	Ethyl Benzene	m,p-Xylene	o-Xylene	MTBE	TPH-GRO	Naphthalene (TO-15)	Naphthalene (TO-17)

NS = not sampled; SVP-6 and SVP-9 could not be sampled due to water coming in the sample train; SVP-10 could not be sampled due to tight vapor conditions.

Reference:

California Department of Toxic Substances Control (DTSC). 2011. Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air