Detterman, Mark, Env. Health

From: Yola Bayram [ybayram@awrcorp.net]
Sent: Thursday, December 03, 2015 6:47 PM
To: Detterman, Mark, Env. Health
Cc: Steve Michelson
Subject: Addendum for 1700 Jefferson Work Plan RO#151
Attachments: 2015 08 27 Sample Table.pdf; F1a_Proposed_Sampling_Location_8-27-15.pdf; F1 _Proposed_Sampling_Locations_9_22_2015.pdf

Hi Mark,

On behalf of ARC and based on phone conversations, email correspondence, and our on-site meeting with Lance Lo, the apartment building property owner, on July 31, 2015, this email provides the following as an addendum to the *2013 Conceptual Site Model and Work Plan for 1700 Jefferson Street, Oakland, California and Foundation Depth Survey Report*.

This addendum also adjusts the sampling depths to comply with the new DTSC Soil Gas Advisory, July 2015, which recommends sampling near the source area to model vapor intrusion risk. In practice, the actual sampling depth will be based on the actual depth to ground water when samples are collected. In addition, this addendum also biases sampling depth to more permeable materials.

This addendum includes the following:

- Table 1 provides the rationale, sample depths, and analyses for each soil boring.
- Table 2 provides the rationale, sample depths, and analyses for each soil vapor location.
- Figures 1 and 1a show the additional borings proposed to be advance.

This addendum proposes the following:

- Install 7 soil vapor wells at various depths adjacent to the neighboring apartment's courtyard and on the property,
- Advance 10 temporary soil vapor points within the on-site building, on Jefferson St, and on 18th Street to assess risks to occupants in the apartment building, on-site building, and neighboring properties,
- Advance one additional boring on-site adjacent to the courtyard to collect soil samples,
- Advance one additional boring on Jefferson Street to sample ground water; and
- Advancing one boring near MW-5, in the area of patch in the sidewalk to collect soil samples and two soil vapor samples from different depths.

Though not ideal, in lieu of an access agreement from the owner of the adjacent apartment building, borings adjacent to the courtyard will provide some information to help characterize potential risks to human health or environmental. All soil gas samples will sampled in accordance with the July 2015 DTSC Soil Gas Advisory and AWR SOP's that have been provided in previous reports.

We hope this Addendum meets your needs. Please call with your comments or questions.

Regards,

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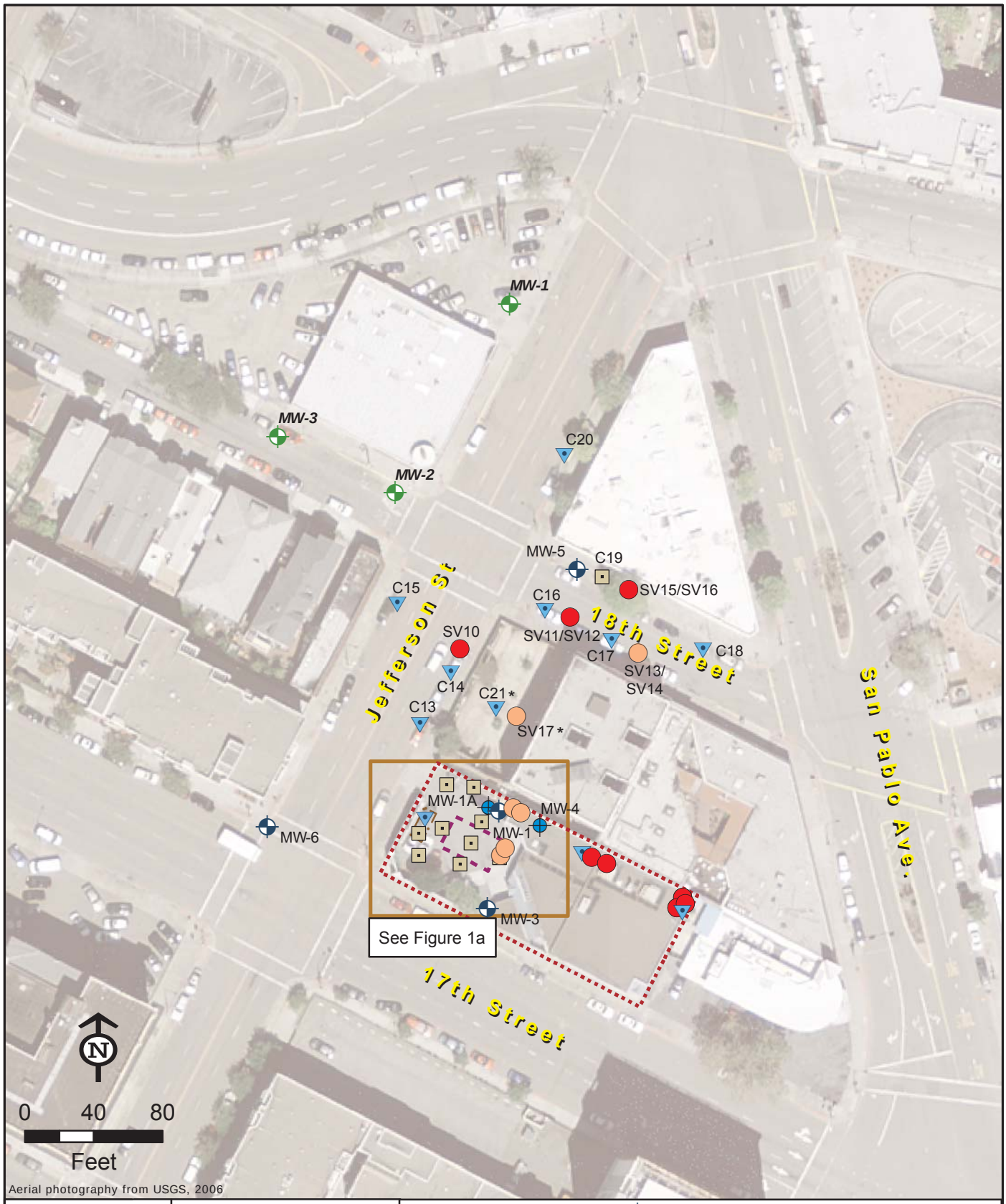


APPLIED WATER RESOURCES

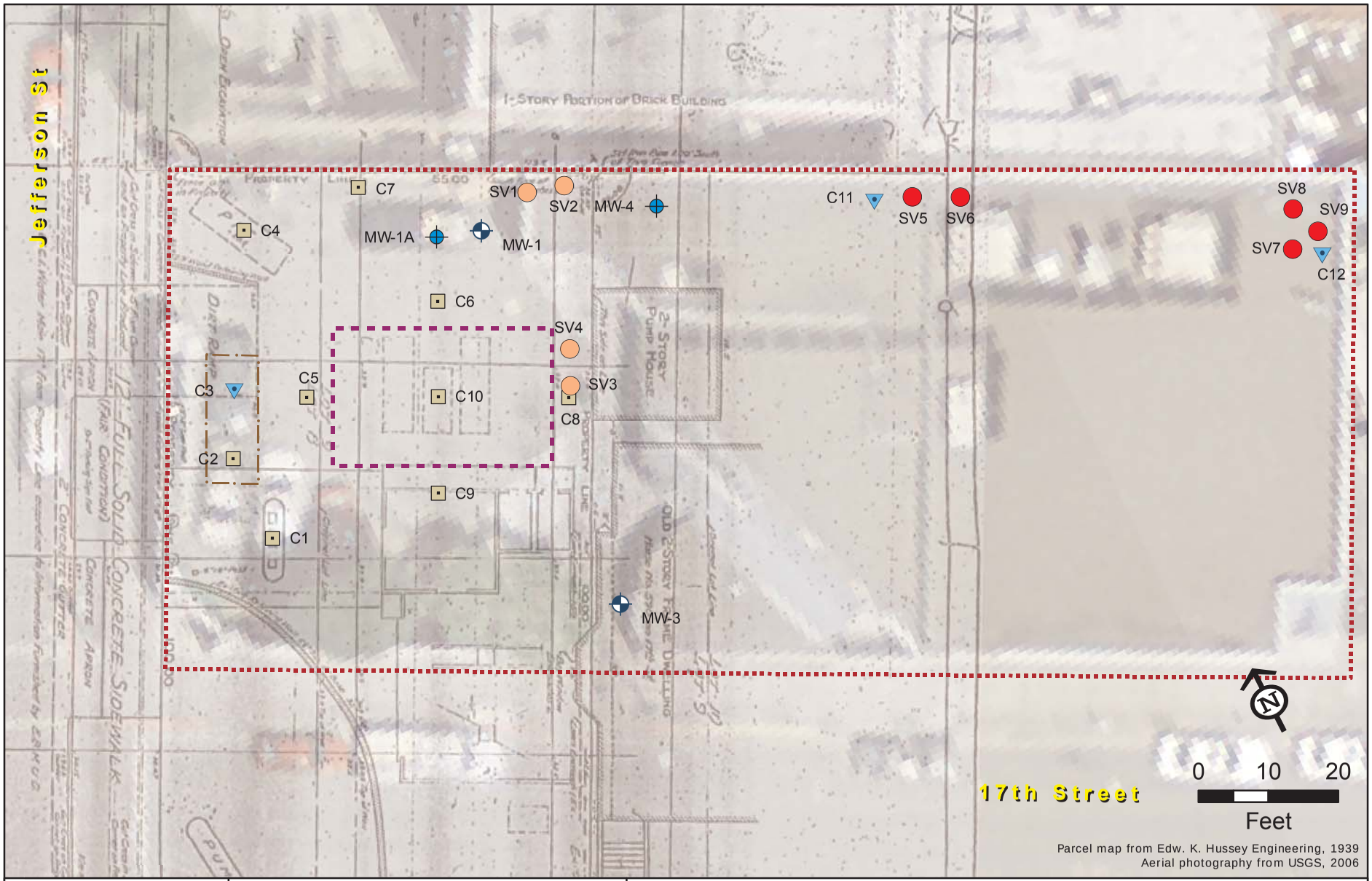
Figure - 1

Proposed Sampling Locations

1700 Jefferson Street, Oakland, CA

- Proposed Soil Vapor Well
- Proposed Soil Sample
- Proposed Ground Water and Soil Samples
- Proposed Temporary Soil Vapor Point
- Monitor Well
- Extraction Well
- 612 18th Street Monitor Well (Destroyed)
- Former Dispenser Island (approx)
- Tank Removal Excavation Area (approx.)
- Property Boundary

* = If Access Allowed



APPLIED WATER RESOURCES

Figure - 1a

Proposed Sampling Locations Detail Map

1700 Jefferson Street, Oakland, CA

- Proposed Soil Vapor Well
- Proposed Soil Sample
- Proposed Groundwater and Soil Samples
- Proposed Temporary Soil Vapor Point
- Monitor Well
- Extraction Well
- Tank Removal Excavation Area (approx.)
- Property Boundary
- Former Dispenser Island (approx.)

Table 1
Proposed Sampling Points and Analyses
1700 Jefferson St, Oakland, CA

Boring ID	Rationale for Sampling	Sample Depth (ft bgs)	TPHg	TPHd	TPHmo	BTEX	Naphthalene	LUFT-5 Metals	PAHs	Fuel Oxygenates	Lead Scavengers	Ethanol and Methanol
C1	Potential Location of Former Fuel Dispenser	3	X			X	X	X	X			
		8	X			X	X	X				
		Smear	X			X	X	X				
C2	Potential Location of Former Fuel Dispenser	3	X			X	X	X	X			
		8	X			X	X	X				
		Smear	X			X	X	X				
C3	Potential Location of Former Fuel Dispenser	3	X			X	X	X	X			
		8	X			X	X	X				
		Smear	X			X	X	X				
		GW	X			X				X	X	X
C4	"Pit" in 1939 Plan	3	X	X	X	X	X	X	X			
		8	X	X	X	X	X	X				
		Smear	X	X	X	X	X	X				
C5	Former UST Area	3	X			X	X	X	X			
		8	X			X	X	X				
		Smear	X			X	X	X				
C6	Former UST Area	3	X			X	X	X	X			
		8	X			X	X	X				
		Smear	X			X	X	X				
C7	Soil Delineation	12	X			X	X	X	X			
		Smear	X			X	X	X				
C8	Former UST Area	3	X			X	X	X	X			
		8	X			X	X	X				
		Smear	X			X	X	X				
C9	Former UST Area	3	X			X	X	X	X			
		8	X			X	X	X				
		Smear	X			X	X	X				
C10	Former UST Area	3	X			X	X	X	X			
		8	X			X	X	X				
		Smear	X			X	X	X				
C11	Plume Delineation/Risk to Indoor Air	3	X			X	X	X	X			
		8	X			X	X	X				
		Smear	X			X	X					
		GW	X			X				X	X	X
C12	Plume Delineation/Risk to Indoor Air	3	X			X	X	X	X			
		8	X			X	X	X				
		Smear	X			X	X					
		GW	X			X				X	X	X
C13	Plume Delineation/Risk to Indoor Air	Smear	X			X	X					
		GW	X			X				X	X	X
C14	Plume Delineation/Risk to Indoor Air	Smear	X			X	X					
		GW	X			X				X	X	X
C15	Plume Delineation	Smear	X			X	X					
		GW	X			X				X	X	X
C16	Plume Delineation/Connection to MW-5	Smear	X			X	X					
		GW	X			X				X	X	X
C17	Plume Delineation/Connection to MW-5	Smear	X			X	X					
		GW	X			X				X	X	X
C18	Plume Delineation	Smear	X			X	X					
		GW	X			X				X	X	X
C19	Possible UST Patch in Sidewalk	3	X	X	X	X	X	X	X			
		8	X	X	X	X	X	X				
		Smear	X			X	X					
C20	Plume Delineation	Smear	X			X	X					
		GW	X			X				X	X	X
C21	Plume Delineation/Risk to Indoor Air	Smear	X			X	X					
		GW	X			X				X	X	X

Smear: Capillary fringe and within the zone of ground water elevation fluctuation
GW: Ground Water Sample

Soil Sample
Ground Water Sample

Soil samples at other depths may be collected and analyzed depending on field observations, PID readings, and odors.

Table 2
Proposed Vapor Points and Analyses
1700 Jefferson St, Oakland, CA

Boring ID	Rationale for Sampling	Sample Depth (ft bgs)	Lithology	Temporary or Permanent	TO-15	Atmospheric Gases
SV1	Indoor Air Risk for Apartment Building/On-site Building	17	SP	Permanent	X	X
SV2	Indoor Air Risk for On-Site Building	6	SM	Permanent	X	X
SV3	Indoor Air Risk for Apartment Building/On-site Building	~20	SP	Permanent	X	X
SV4	Indoor Air Risk for On-Site Building	~5	SM	Permanent	X	X
SV5	Indoor Air Risk for Apartment Building/On-site Building	~22.5	SP	Temporary	X	X
SV6	Indoor Air Risk for On-Site Building	6	SM	Temporary	X	X
SV7	Indoor Air Risk for Neighboring Property/On-site Building	~22.5	SP	Temporary	X	X
SV8	Indoor Air Risk for Neighboring Property/On-site Building	~10	SW	Temporary	X	X
SV9	Indoor Air Risk for Neighboring Property/On-site Building	6	CL	Temporary	X	X
SV10	Indoor Air Risk for Apartment Building	17	SP	Temporary	X	X
SV11	Indoor Air Risk for Apartment Building	17	SP	Temporary	X	X
SV12	Indoor Air Risk for Apartment Building	11.5	SM	Temporary	X	X
SV13	Indoor Air Risk for Apartment Building	17	SP	Permanent	X	X
SV14	Indoor Air Risk for Apartment Building	11.5	SM	Permanent	X	X
SV15	Indoor Air Risk for Building near MW-5	19	SP	Temporary	X	X
SV16	Indoor Air Risk for Building near MW-5	6	SP	Temporary	X	X
SV17	Indoor Air Risk for Apartment Building	6*	SP	Permanent	X	X

*: Depth below courtyard surface
SP: Poorly graded sand
SM: Silty sand
CL: Fat clay
SW: Well graded sand

Depths may be adjusted depending on lithology/moisture encountered