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WORKPLAN FOR ADDITIONAL SOIL AND SOIL VAPOR SAMPLING REQUIRED FOR UNDERGROUND STORAGE TANK CLOSURE

Former Charles Lowe Facility

1400 Park Avenue, Emeryville, California

Prepared for:

Emeryville Properties

1400 Park Avenue
EMERYVILLE, CALIFORNIA 94608-0445

Prepared by:

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Encinitas, California 92024

Gwen Tellegen, P.E.
Principal Engineer

MAY 2016

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Certification

I declare under penalty of perjury that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge. Information, conclusions, and recommendations in this document have been prepared by a California Professional Geologist and a California Professional Engineer.

5-5-2016

Gwen Tellegen, P.E.
Principal Engineer

Date

REGISTERED PROFESSIONAL ENGINEER
GWENDOLYN TELLEGEN
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STATE OF CALIFORNIA

May 5, 2016

Mr. Mark E. Detterman,
Senior Hazardous Materials Specialist Alameda County
Enviromental Health Department Environmental Protection
1131 Harbor Bay Parkway, Suite 250
Alameda ,CA.94502-6577

Re: Perjury Statement Request.

"I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge."

William W. Lewerenz, Partner

Emeryville Properties, LLC.

1.0 INTRODUCTION AND PURPOSE

On behalf of Emeryville Properties LLC, Dudek has prepared this Workplan describing the vapor sampling and analysis procedures used to collect and analyze soil vapor samples (for methane and naphthalene) and soil samples (for naphthalene) at the Site located at 1400 Park Avenue in Emeryville, California (Site- see **Figure 1**). On April 4, 2016, as a final step in the Site Closure process, Alameda County Department of Environmental Health (ACDEH) issued a letter requesting the preparation of a Workplan describing soil vapor sampling and analysis procedures. This Workplan required by ACDEH to address additional agency concerns regarding the potential presence of methane and naphthalene in soil vapor in the area of the former Undeground Storage Tanks (USTs) at the Site. In an email dated April 19, 2016, ACDEH also requested the collection and analysis of soil samples for naphthalene from locations adjacent to the previous UST hand auger borings that had detected levels of TPH.

The purpose of this work is to obtain Site Closure on the UST case since this data on methane and naphthalene concentrations in soil vapor will be last information required by ACDEH to meet the criteria for the State Water Resources Control Board's Low Threat Underground Storage Tank Case Closure Policy (LTCP) at the Site.

This Workplan proposes collecting soil vapor from temporary soil vapor monitoring points installed at four locations adjacent to the former USTs at the Site. As requested by ACDEH, the soil vapor points will be installed at five feet below ground surface (bgs) and all four vapor samples will be analyzed for methane and naphthalene. In addition, soil samples collected from locations adjacent to the highest TPH detections in vadose zone soils found in during the 2015 soils investigation conducted by Dudek .

The following information is presented in this Work Plan:

- A site background including history of uses and general site setting,
- Soil vapor and soil sampling procedures and locations,
- Laboratory analyses of samples,
- Data presentation in a report with tables and maps
- A request for site closure follow the completion of this Workplan

1.1 Regulatory History

On July 11, 2014, Emeryville Properties and Gwen Tellegen met with Mr. Mark Detterman and provided hard copies of all previous site investigation reports for the Site as well as the No Further Action Letter for the former Chromex Facility, dated December 13, 1995 (See **Appendix A**). At this meeting, it was determined that the only Site's only outstanding issue requiring closure was the former Gasoline and Diesel/Waste Oil Underground Storage Tanks (USTs) removed from the Site on October 23, 1995. At that meeting, ACDEH requested a Workplan for the assessment of soils in the immediate vicinity of the USTs as well as a summary of the historic groundwater gradient at and surrounding the Site. ACDEH indicated that closure of the USTs would be granted if no soils impact remained in place in the immediate area of the former USTS. Later, in a January 28, 2015 conversation, Mr. Mark Detterman of ACDEH asked that a grab groundwater be collected as a part of the Closure Request for the USTs.

On February 9, 2015, Terraphase Engineering (Terraphase) submitted a Workplan to collect soil and a grab groundwater sample in the area of the former UST to address data gaps, as requested in an ACDEH letter dated the May 23, 2014 (Terraphase, 2015). On April 8, 2015, the ACDEH gave approval to a modified version of the Terraphase Workplan, requiring multiple discrete soil samples be analyzed from 0-5 and 5-10 feet below ground surface according at intervals with noted signs of contamination, that testing TPH motor oil be analyzed and that a grab groundwater sample be collected from the UST excavation area. On May 15, 2015, ACDEH issued an email stating that intact soil samples collected by hand auger is acceptable and that a grab groundwater will need to be collected if hydrocarbons are found in the hand-auger soil samples.

1.2 Soil and Groundwater Sampling Conducted in 2015

On June 17, 2015, Dudek collected six soil samples and one grab groundwater sample pursuant to the Terraphase Work Plan and ACDEH modified approval thereof. The results of this sampling were documented in the Site Closure Report that also presented a Site Conceptual Model that was submitted to ACDEH in August of 2015 (Dudek, 2015). No detected concentrations of BTEX or oxygenates were found in the soil and groundwater samples. Soil samples had TPH gasoline concentrations ranging from <0.290 mg/kg to 190 mg/kg, TPH diesel concentrations ranging from <5 mg/kg to 1500 mg/kg, and TPH motor oil concentrations ranging from 36 mg/kg to 4300 mg/kg.

No VOCs were detected in the very turbid (378 NTU) grab groundwater sample. Low levels of TPH gasoline (130 µg/L), TPH diesel was (0.67 mg/L), and TPH motor oil (2.0 mg/L) were found in the grab groundwater sample collected from the temporary monitoring well which was constructed in boring HA1. Based on these sampling results, and the favorable results of a Low Threat Closure analysis, Dudek requested Site Closure (Dudek, 2015).

Following their review of the August 2015 Site Closure Report, ACDEH prepared a letter dated April 4, 2016 in which additional soil sampling and analysis for naphthalene and soil vapor sampling for methane were required. In an email dated April 19, 2016, Mr. Mark Detterman of ACDEH also requested analysis of soil vapor for naphthalene.

2.0 SITE BACKGROUND

2.1 Site Location and Description

The Site is located at 1400 Park Avenue in the City of Emeryville, County of Alameda, California with an Assessor Parcel Number 49-1033-2. The vicinity of the Site is generally developed with commercial/industrial properties, with one residential building found adjacent to the north of the Site (see **Figure 1**).

The Site is approximately 2.15 acres in size, and is developed with a 60,000 square foot building which is currently occupied by Peet's Coffee and Tea corporate offices. The rest of the Site consists of paved parking areas and is covered with concrete, asphalt or buildings, except the northeast area of the parking lot where there is a small dirt area, a hedge area, and planter boxes (about 150 square feet in size).

2.2 Geology and Hydrogeology

The Site is located near the eastern edge of the San Francisco Bay on a tidal plain (USGS, 1979). Soils found adjacent to the UST are comprised of sandy clay to a depth of approximately 10.5 feet bgs; and from 10.5 feet to 24 feet bgs there are alternating lenses of clayey sand, clayey gravel and sandy clay. The closest surface water body is the San Francisco Bay which is located 0.45 miles west of the Site. In the immediate vicinity of the former USTs at the Site, groundwater has been first encountered at depths of 9.5 to 11 feet bgs in soil borings and in the UST excavation (ASE 1995, Dudek 2015).

In four groundwater gauging events, shallow groundwater flow measured at the Site has been shown to be to the west, west-northwest and southwest (Alton Geoscience, 1995, ASE 1996, ASE, 1997, TRG 2007). Terraphase's 2015 Workplan described groundwater gradients at the Site over time. The calculated groundwater flow across the site is very low from at rates of 0.0048 to 0.007 feet per foot. (Terraphase, 2015).

In January 2015, Terraphase conducted water level gauging of MW1 and MW2 which are the remaining monitoring wells at the Site. At that time it was noted that MW4 had been paved over by the construction of a new 10 foot wide sidewalk on Horton Street. The depth to groundwater at that time was measured at 5.74 to 8.35 feet bgs. The measured water elevations by Terraphase in MW1 and MW2 indicated a groundwater flow direction towards the southwest at a gradient of 0.0048 feet per foot which is consistent with the flow direction found in 2007.

Site History

The Site is the former locations of the Charles Lowe Company, which produced and repaired marine and industrial equipment at the Site from 1973 to 1991 (ASE, 1996). The portion of the Site that will be investigated during this assessment is the immediate area of three former USTs installed in the north parking lot by the Charles Lowe Company. These USTs were discovered during Site improvement activities in 1995 after Charles Lowe moved from the property at the termination of their lease and were removed under ACDEH oversight in October 1995.

Charles Lowe also operated a minor electroplating and metal spraying facility in a small portion of the Site from 1973 until 1991. In 1992, the portion of the facility used by Chromex was dismantled and a former

below-grade concrete vault associated with Chromex's activities was removed (Alton, 1995). Based on a series of subsurface investigations, the ACDEH issued a "No Further Action" letter for the former chromium vault at the Site in December 1995 (see **Appendix A**). Between 1994 and 1996 four monitoring wells (MW-1, MW-2, MW-3 and MW-4) were installed at the Site. These monitoring wells have been monitored intermittently between 1994 and 2007. In 1995, under ACDEH oversight, soils were excavated and sampled beneath the former honing pit area (ASE, 1995). In 1997, ASE successfully abandoned a half buried 700 gallon steel Above-Ground Storage Tank (AST), which was found to contain only rainwater. No significant concentrations of petroleum hydrocarbons were detected in soil sampled from the vicinity of the tank, liquid sampled from within the tank, and groundwater sampled from MW-3 (ASE, 1997). MW-3 was properly abandoned in 1999 with ACDEH approval to accommodate the construction of a loading dock.

2.3 Surrounding Land Uses

The surrounding properties and building construction types, as identified by Mr. William Lewerenz of Emeryville properties are described in the table below :

Figure ID Number	Property Name/Tenant Name	Address	Direction from the Site	Building Construction	Current Building Use/Comments
1	Horton Street Lofts	4250 and 4300 Horton Street	North	Masonry brick with slab floor; no basement	Residential artist lofts
2a	VN Shipping	4225 Horton Street	West-northwest	Concrete tilt-up with slab floor; no basements observed	Warehouse
2b	VS Shipping	4221 Horton Street	West	Concrete tilt-up with slab floor; no basement observed	Warehouse
2c	Elemental Led, Inc.	1460 Park Avenue	West-southwest	Concrete tilt-up with slab floor; no basement observed	LED lighting distributor
3	T.D.P. East Bay Partners, LLC	1450 Sherwin Avenue	Northwest	Masonry brick with slab; no basement	Former Sherwin-Williams Paint manufacturing plant; currently awaiting planning and permit approval for redevelopment as office space and mixed use.

2.4 History of UST Removal, Soil and Groundwater Sampling

In October 1995, ASE removed three 550 gallon USTs from the Site, two of which historically contained gasoline and one contained diesel/waste oil. During the removal, the gasoline tanks were noted to be intact, but several holes were observed in the waste oil/diesel UST. ASE noted staining and odor in soils at 9 feet bgs, or 12-24" beneath the bottoms of the former USTs (ASE, 1996). To document the conditions immediately below the tanks, ASE sampled soils at 9 feet bgs. Initial samples collected from below the USTs at 9 feet below ground surface were found to contained Total Petroluem Hydrocarbons (TPH) and Benzene, Toluene, Ethylbenzene and Xylenes (BTEX) (see **Table 1**). The visually-impacted soils were over-excavated to a total depth of 12 feet bgs and confirmation samples were collected from the base of the excavation at the north and south end of the former USTs. A total of 65.29 tons of soil was removed from beneath and around the tanks. The excavation confirmation had no detected concentrations of BTEX or TPH (gasoline, diesel, motor oil) see **Table 1** (ASE, 1996). Although groundwater began to enter the excavation at 11 feet bgs, ASE noted soil below groundwater appeared to be free of staining

After the results of the soil samples were received, ASE contacted Mr. Brian Oliva of the ACDEH, who was overseeing remediation at the sight. ASE explained the excavation and removal activities in addition to the results of the soil and groundwater sampling. Mr. Oliva concurred with ASE's recommendation to conduct no further over-excavation or soil remedial activities, with respect to the USTs, and Mr. Oliva agreed to allow ASE to backfill, compact and resurface the excavation. The tank pit excavation was lined with visquene and backfilled with imported soils, compacted and resurfaced with concrete (ASE, 1996).

Within two weeks of the UST removal, a groundwater sample taken from MW-1 which is located 30 feet from and down-gradient of the UST excavation. This sample had no detected Benzene, Ethylbenzene or TPH although low levels of Toluene at 4.0 ug/L and Total Xylenes at 7.8 ug/L were detected, which are far below the California Maximum Contaminant Levels (MCLs) for drinking water of 150 ug/L and 1750 ug/L) for these compounds (see **Table 2**). Low levels of PCE, TCE and cis-1,2-DCE were also detected at concentrations consistent with other known offsite sources in the immediate vicinity of the Site, including the former Del Monte and Electro Coatings Inc. facilities. These solvents were never used at the Site

Groundwater sampling of all the monitoring wells on-Site (MW-1 through MW-4) was carried out by ASE on December 13, 1996, and MW1 was sampled again on March 21, 1997. Depth to groundwater was gauged during these events and a groundwater gradient and direction of 0.0056 feet per foot towards the west was observed. There were no detected concentrations of TPH as gasoline, diesel, motor oil, BTEX or MTBE in any of these events in MW-1 through MW-4 (ASE.

In 2006, under ACDEH oversight, The Reynolds Group (TRG) re-developed and sampled the remaining groundwater monitoring wells at the Site. The purpose of the sampling was to obtain Site Closure for the past release of petroleum hydrocarbons and a No Further Action Letter for the three former USTs. The results of this sampling showed no detected levels of TPH gasoline, diesel, BTEX, MTBE or other fuel oxygenates in any of the groundwater samples collected from MW1, MW2 and MW4 at the Site (see **Table 2**). Based on the results of the sampling, Emeryville Properties requested Site closure and that a No Further Action Letter be issued for the UST case. (TRG, 2007)

In response to a letter issued by ACDEH letter issued in May, 2014, a meeting between Emeryville Properties and ACDEH on July 2014 and ACDEH correspondence in January 2015, Terraphase prepared a Workplan to collect additional soil samples in the immediate vicinity of the former USTSs (Terraphase, 2015). The February 9, 2015 Workplan called for soil sampling from 3 borings surrounding the former UST excavation and was designed to address data gaps, as required by ACDEH as a final step to grant Closure of the UST case. On April 8, 2015, the ACDEH gave approval to a modified version of the Terraphase Workplan, specifying that discrete soil samples be collected from the 0-5 and 5-10 feet intervals based on signs of contamination (visual, PID and odors), adding TPH motor oil as an analyte and requiring that a grab groundwater sample be collected from the UST excavation area. On May 15, 2015, ACDEH issued an email stating that intact soil samples collected by hand auger was acceptable and that collection of a grab groundwater would be required if hydrocarbons were found in the hand-auger soil samples.

Dudek conducted the soil and groundwater sampling described in the ACDEH approved modified Workplan on June 17,′ 2015 (Dudek, 2015). In one of the soil borings (HA2), refusal was encountered at 1.5 feet, and no soil samples were collected. In the other two soil boring locations, two samples were collected from the vadose zone (4 and 7 feet bgs in HA1; 3 and 6 feet bgs in HA3) and one sample was collected from the saturated zone in each boring (9.5 feet bgs in HA1 and 10 feet feet bgs in HA3).

In the 2015 investigation, no BTEX or oxygenates were detected at or above laboratory reporting limits in any of the soil samples collected and analyzed (see **Table 1**). In addition, no TPH as gasoline was detected in the vadose zone soil samples. Vadose zone soil samples had TPH as diesel concentrations ranging from <5 to 53 mg/kg and TPH as motor oil concentrations ranging from 36 to 350 mg/kg. Saturated soil samples had TPH as gasoline concentrations of 2 and 190 mg/kg, TPH as diesel concentrations of 1,500 and 1,400 mg/kg, and TPH as motor oil concentrations of 4,300 and 4,200 mg/kg. Groundwater was first encountered in the soil borings at depth of 7.5 to 8 feet bgs.

A turbid (378 NTU) grab groundwater sample was collected from a temporary monitoring well screened from 7.5 to 12 feet bgs in hand auger boring HA1. BTEX and oxygenates were not detected at or above laboratory reporting limits in the 2015 grab groundwater sample (see **Table 2**). In this grab groundwater sample TPH as gasoline was detected at a concentration of 130 µg/L, TPH as diesel was detected at a concentration of 0.67 mg/L, and TPH as motor oil was detected at a concentration of 2.0 mg/L. Based on the results of sampling, Emeryville Properties requested that ACDEH issue a Low Threat Closure for the UST case at the Site.

3.0 DRILLING PROCEDURES AND LOCATIONS

3.1 Pre-field Activities

A health and safety plan (HASP) for the soil vapor and soil sampling at the Site will be prepared prior to the investigation activities. All personnel at the Site, including onsite subcontractors and regulatory personnel, will be required to familiarize themselves with the HASP and sign an acknowledgement that they have read the HASP. The HASP will identify the chemical compounds that have been encountered at the Site. During the field work all personnel in the work area will wear the proper personal protective equipment (PPE), as outlined in the HASP.

3.2 Permitting

Alameda County Public Works Agency (ACPWA) is the agency with jurisdictional responsibility for well/borehole drilling in Emeryville. The ACPWA requires a permit for boreholes of any depth greater than 3 feet bgs. Dudek will complete a permit application and obtain the appropriate permit from the ACPWA before completing the proposed sampling and will provide ACPWA and ACDEH with the exact date and time of the sampling activities at least one week in advance to the work.

3.3 Utility Clearance

The soil vapor sample locations will be marked using white marking paint prior to the field work. Underground Service Alert of Northern California will be notified at least 48-hours prior to drilling.

3.4 Soil Vapor Sampling Point Installation Procedures

To install the temporary soil vapor sampling points, a direct-push rig will hydraulically push 1.5-inch-outer-diameter drive rods to the maximum depth at each sampling location. Soil gas probes will be set at a depth of approximately 5 feet below ground surface (bgs) in each location. When the target depth is reached, the temporary soil gas point will be constructed within the annulus of the drive rods. The soil gas probe will be constructed with a temporary airstone filter, 1/4" outer diameter Teflon tubing (0.187 inch inner diameter), and a valve at the termination. The probe tip will be set within a minimum of 6 inches of sand, and topped with a minimum of one foot of dry, granular bentonite, followed by hydrated bentonite per the DTSC Guidelines (DTSC 2015). Hydrated bentonite or a bentonite-cement grout will be used to fill the remaining annulus to 0.5 foot bgs. The drive rods will be removed as the construction of the soil gas well is completed.

At the ground surface, the tubing will be fitted with an airtight valve. The assembly will be covered with a traffic cone to prevent damage prior to sampling.

Shut-In Test

Prior to purging and sampling, a shut-in test will be conducted on the sampling train to check for leaks in the above-ground fittings of the sampling apparatus. The shut-in test is conducted by attaching the complete sample train assembly to the termination valve on the soil gas sampling point. With the valve attached to the soil gas point in the “off” position, a purge syringe or vacuum pump is used to evacuate the sample train of air to a minimum measured vacuum of approximately 100 inches of water. The vacuum is observed on an in-line

vacuum gauge which is positioned prior to the purge syringe or vacuum pump. The vacuum gauge is observed for one minute and all above ground connections are considered air-tight if the pressure on the gauge does not noticeably dissipate. If there is an observable loss in vacuum, the fittings in the sample assembly will be checked and tightened and the system re-tested. Sampling of the soil gas point will not begin until the system is considered air-tight.

Leak Test

A leak test will be performed on each individual soil gas sampling point in order to test the integrity of the entire sampling system. A gaseous leak check compound helium, will be used to evaluate sample integrity. A shroud will be placed over the entire sampling system, including the sampling container and the soil gas well annulus. The shroud will be infused with the tracer compound for at least five minutes prior to purging to allow for the tracer compound to equilibrate. Gaseous tracer concentration inside the shroud will be monitored using a helium detector frequently for the duration of purging and sampling to ensure that a suitable minimum tracer concentration is maintained. Tracer concentration will be measured during purging to check for leaks, and if concentration in the purge sample is ≥5% of the concentration in the shroud, corrective action will be taken to remedy the leak in the soil vapor well prior to the collection of soil gas samples.

Soil Gas Purging

In accordance with DTSC guidance, the purpose of the purging activities is to remove stagnant soil gas in the soil gas well tubing and screen prior to sample collection. Three purge volumes will be extracted prior to vapor sampling. If water is entrained in the sampling system during purging or sampling, the sampling will be discontinued. A note will be made on the field form that the soil gas sample was unrecoverable. If it is not possible to recover a soil gas sample from the initial 5 feet bgs depth due to tight soils and excess vacuum conditions, another attempt to install the vapor probe at a depth of 4 or 6 feet bgs will be made.

Soil Gas Sampling Procedure

Soil vapor samples will collected for analysis of naphthalene concentrations using Method TO-17 in active sorbent tubes provided by the analytical laboratory. A measured volume of soil vapor, as specified in the directions provided by the sorbent tube, will be pulled through the vapor canister using a clean calibrated syringe.

Soil vapor samples for methane and oxygen analysis will be collected in Tedlar bags using clean calibrated syringe and shipped to a stationary laboratory for analysis using EPA Method 3C within 72 hours of their collection.

As specified in the Department of Toxic Substances Control Board (DTSC) 2015 Advisory on Active Soil Gas Investigations, the soil vapor samples will be collected from the installed vapor points a minimum of two hours after their installation. Three tubing and sand pack volumes will be purged from the soil vapor sampling point using a calibrated syringe. Then, a sample will be collected in the sorbent tube using calibrated syringe. Air flow rate through the tube will be monitored during sampling, and will not vary by more than 10%. A flow rate of less than 200 milliters per minute will be maintained throughout sampling. During the monitoring event, the concentrations of methane will be measured in each of the 4 sample points using a GEM-2000 Plus. The GEM-2000 Plus is capable of detecting methane to a concentration of 0.1% by volume.

Temporary Soil Gas Point Decommissioning

Decommissioning of the temporary soil gas wells will be conducted in accordance with the DTSC Guidance and will consist of the following steps:

1) Well tubing will be pulled from the sub surface;
2) The open hole will be filled with hydrated bentonite to within one foot of the surface grade;
3) Concrete will be placed in the top foot of the boring.

3.5 Soil Vapor Point Locations

To satisfy the ACDEH request for methane and naphthalene soil vapor data, 4 soil vapor borings will be located around the former excavation area surrounding the removed USTs in the estimated perimeter area the tank excavation (see **Figure 2**). These soil vapor sampling locations will provide sufficient information to determine if levels of methane or naphthalene above concern levels remain in place in the vicinity of the USTs.

3.6 Soil Vapor Sample Analyses

Samples from the 4 soil vapor points will be collected for methane analysis by a GEM 2000 meter and for laboratory analysis using EPA Method 3C. Samples for naphthalene from 3 of the soil vapor points will be analyzed using EPA Method TO-17. Chain of custody procedures will be followed in transporting the samples to the analytical laboratory.

3.7 Soil Sampling

Soil samples will be collected from borings adjacent to the HA1 and HA3 borings advanced in 2015 for analysis of naphthalene concentrations using EPA Method 8270. Using a direct push drill rig, intact soil samples will be collected in acetate or stainless steel sleeves. The ends of the sample tubes will be covered with Teflon sheeting and then capped and placed into ziplock bags and placed into a cooler for shipment to the analytical laboratory. Chain of custody procedures will be followed in transporting the samples to the analytical laboratory.

Soil samples will be collected at the depth of highest TPH concentration detected in vadose zone soils during the 2015 soil sampling conducted by Dudek. One sample will be collected adjacent to sample HA1-4' and one sample will be collected adjacent to sample HA3-6'.

3.8 Site Investigation Schedule

The Site investigation will proceed within 15 days of authorization from the ACCEH.

3.9 Data Evaluation and Reporting

A Soil Vapor Sampling Report and a Site Closure Report will be submitted to the ACDEH and will include tables, figures, and sample results. Any detected levels of methane and naphthalene will be compared the LEL and UEL for methane to USEPA Region 9 Screening Levels for naphthalene. In addition, Dudek will upload the data to the SWRCB Geotracker on-line database and to the Alameda County FTP Site.

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FIGURES

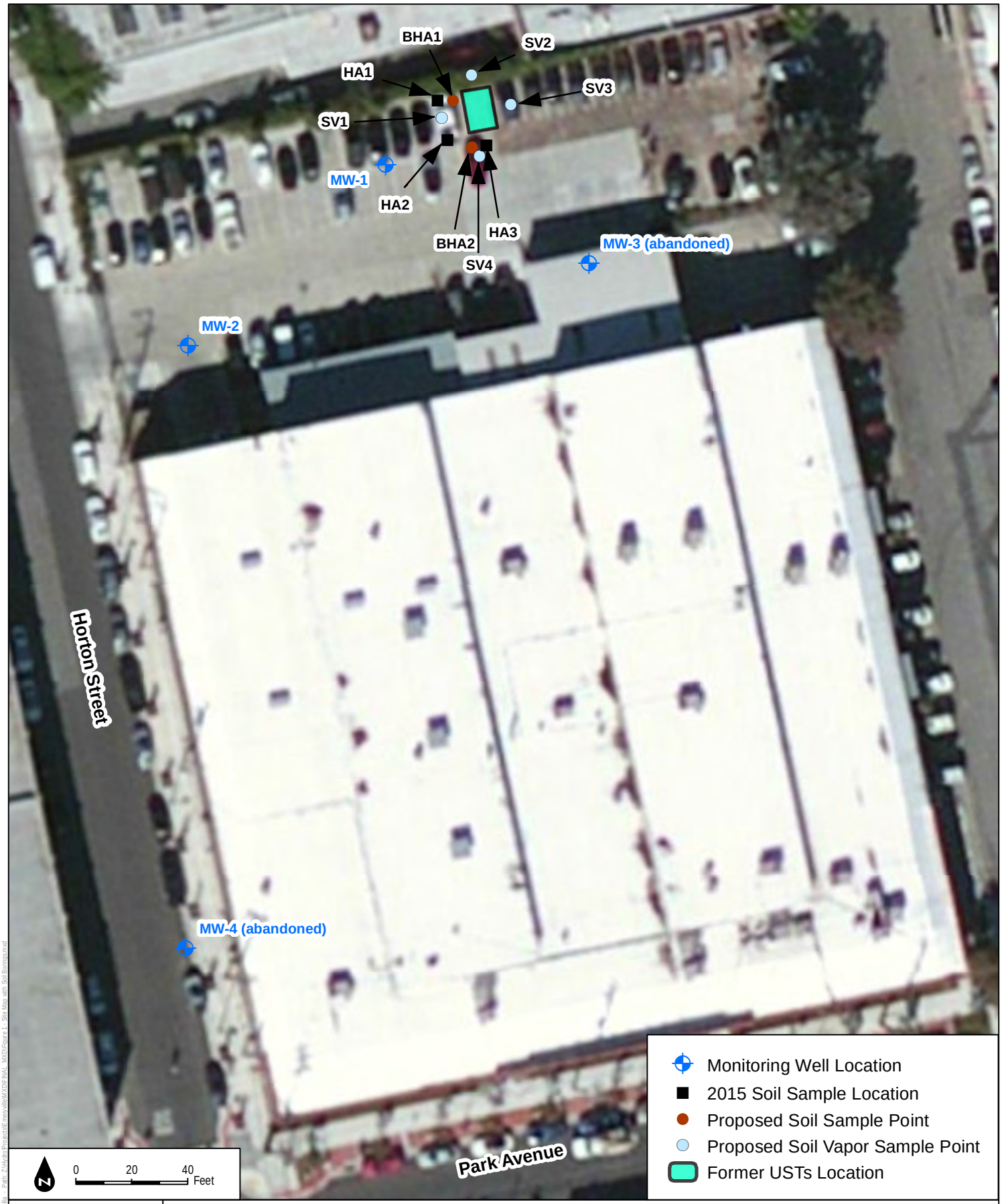

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FIGURE 1

Site Map with Soil Boring and Soil Vapor Point Locations

1400 Park Avenue, Emeryville, California

May 2016

TABLES

Table 1 - Soil Samples Collected in Vicinity of Former USTs
1400 Park Avenue, Emeryville, CA

Sample Name	Sample Date	Sample Depth (feet bgs)	Sample Location Description	TPH Gasoline (mg/kg)	TPH Diesel (mg/kg)	TPH Motor Oil (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)
Removed Soil Samples from Bottom of UST Excavation, Before Overexcavation										
North, 9'	10/23/1995	9	North end, bottom of excavation, below gas UST	140	4,800	14,000	<0.005	0.55	0.81	7.4
Middle, 9'	10/23/1995	9	Middle, bottom of excavation below gas UST	1,300	2,600	8,000	0.41	6.1	13	110
South, 9'	10/23/1995	9	Southern end, bottom of excavation below diesel/motor oil UST	1,100	2,100	5,800	0.22	5.6	5	33
Soil Samples Remaining In Place, After Overexcavation										
North, 12'	10/23/1995	12	Northern end, bottom of excavation, after overexcavation	<1.0	<1.0	<5.0	<0.005	<0.005	<0.005	<0.005
South, 12'	10/23/1995	12	Southern end, bottom of excavation after overexcavation	<1.0	<1.0	<5.0	<0.005	<0.005	<0.005	0.027
HA1-4'	6/17/15	4	Northwest edge of former UST Excavation	<0.390	53	350	<1.8	<1.8	<1.8	<3.6
HA1-7'	6/17/15	7		<0.380	<5.0	36	<1.9	<1.9	<1.9	<3.9
HA1-9.5'	6/17/15	9.5		2.0	1,500	4,300	<1.7	<1.7	<1.7	<3.3
HA2	6/17/15	refusal due to rock or concrete debris at 1.5'	Western edge of former UST between HA1 and HA3	*Unable to collect sample*						
HA3-3'	6/17/15	3	Southwest edge of former UST Excavation	<0.320	<10	35	<1.6	<1.6	<1.6	<3.2
HA3-6'	6/17/15	6		<0.290	14	56	<1.5	<1.5	<1.5	<3.0
HA3-10'	6/17/15	10		190	1400	4,200	<1.5	<1.5	<1.5	<3.1

Table 2 - Groundwater Sample Results										
Sample Name / Monitoring Well ID	Location Description	Sample Date	EPA Method 8015M			EPA Method 8240/8260B				
			TPH Gasoline (ug/L)	TPH Diesel (mg/L)	TPH Motor Oil (mg/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	MTBE (ug/L)
HA1-Grab-GW	Northwest edge of former UST Excavation	6/17/15	130	0.67	2.0	<0.50	<0.50	<0.50	<1.0	<0.50
MW-1	30 feet WestSouthwest of former USTs location	11/6/1995	--	<0.05	<0.25	<2	4	<2	7.8	--
		12/13/1996	<50	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5	<5
		3/21/1997	<50	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<5
		1/15/2007	<50	<0.1	--	<1	<5	<5	<5	<1
MW-2	110 feet Southwest of former USTs location	12/13/1996	--	--	--	<2	<2	<2	<2	--
		1/15/2007	<50	<0.1	--	<1	<5	<5	<5	<1
MW-3	90 feet EastSoutheast of former USTs location	12/13/1996	--	--	--	<2	<2	<2	<2	--
		1/15/2007	D	D	D	D	D	D	D	D
MW-4	270 feet SouthSouthwest of former USTs location	12/13/1996	<50	0.14	<0.5	<2	<2	<2	<2	--
		1/15/2007	<50	<0.1	--	<1	<5	<5	<5	<1

D - monitoring well destroyed with ACDEH Approval during loading dock expansion
MTBE = Methyl Tert Butyl Ether

Appendix A

ACHCSA Closure Letter For Investigation of the Chromium Vault, Former Chromex/Charles Lowe Facility–December 1995

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RAFAT A. SHAHID, DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
1131 Harbor Bay Parkway
Alameda, CA 94502-6577
(510) 567-6777

December 13, 1995

William Lewerenz
Emeryville Properties,
699 Second Street
San Francisco, CA 94107

Subject: Closure Letter for Investigation of the Chromium Vault,Former Chromex/Charles Lowe Facility, 1400 Park Avenue, Emeryville Ca 94608

Dear Mr. Lewerenz:

This office has received the "Supplemental Site Assessment Report" dated May 17, 1995, and submitted by Alton Geoscience, the consultant of record for remediation actions regarding the former chromium vault. Thank you for submission of the document.

Review of the report indicates that low levels of chromium in the "dissolved phase" remain at the site. However, the low levels of chromium remaining in the groundwater do not appear to pose a threat to the public health and the environment. Therefore, with regards to the investigation of the former chromium vault located at the site, this office, with the concurrence of the Regional Water Quality Control Board, finds that **"No Further Work"** will be required at this time.

In light of these levels, and the potential for on-site migration from other sources, monitoring wells should not be destroyed or otherwise removed from the site. By allowing the wells to remain, you will be able to insure that any on-site migration from an off-site source that may be encounter in the future, is not the responsibility of activities that have taken place on site.

This office commends the work undertaken regarding the investigation. If you have any questions regarding this document, please contact this office. The number is (510) 567-6737.

Prior to the closure of the site regarding the former chromium vault, it will be necessary for you to remit the sum of $3000.00 dollars. This sum represents the amount owed in the deposit/refund account set up for oversight activities. Upon receipt of this amount, the site will be removed from the "active list" of oversight cases.

Sincerely,

Brian P Oliva

Brian P. Oliva, REHS, REA
Senior Hazardous Materials Specialist

cc: Jun Makashima, Acting Director Alameda County Department of Environmental Health,
Gordon Colman, Acting Chief, Alameda County Department of Environmental Health,
Sum Arigala, Regional Water Quality Control Board
Ariu Levi, Manager, North Area, Alameda County
Mike Benjamin, Thomas Short Co., 1685 34th St., Oakland, CA 94608

SH