March 13, 2015

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By Alameda County Environmental Health at 2:50 pm, Mar 16, 2015

Mr. Mark Detterman
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502-6540

I, Reid Settlemier, hereby authorize ERAS Environmental, Inc. to submit the Remedial Action Plan for 3037-3115 Adeline St., Oakland in Oakland, California, dated March 11, 2015 to the Alameda County Health Care Services Agency.

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.

Signature: _____

Printed Name: B. Reid Settlemier

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ERAS Environmental, Inc.

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REMEDIAL ACTION PLAN

FOR

3037-3115 ADELINE STREET
OAKLAND, CALIFORNIA

Prepared for

Mr. John Murray
John Murray Productions
1196 32nd Street
Oakland, CA 94608

And

Mr. Reid Settlemier
RWW Properties LLC
6114 LaSalle Avenue, #535
Oakland, CA 94611

March 11, 2015

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CERTIFICATION

This **Remedial Action Plan** at 3037-3115 Adeline Street in Oakland, California, has been prepared by ERAS Environmental, Inc. (ERAS) under the professional supervision of the Registered Geologist whose signature appears hereon.

This report was prepared in general accordance with the accepted standard of practice that exists in Northern California at the time the investigation was performed. Judgments leading to conclusions and recommendations are generally made with an incomplete knowledge of the conditions present. More extensive studies, including additional environmental investigations, can tend to reduce the inherent uncertainties associated with such studies.

Our firm has prepared this report for the Client's exclusive use for this particular project and in accordance with generally accepted professional practices within the area at the time of our investigation. No other representations, expressed or implied, and no warranty or guarantee is included or intended.

This report may be used only by the client and only for the purposes stated within a reasonable time from its issuance. Land use, site conditions (both on-site and off-site) or other factors may change over time, and additional work may be required with the passage of time. Any party other than the client who wishes to use this report shall notify ERAS of such intended use. Based on the intended use of report, ERAS may require that additional work be performed and that an updated report be issued. Non-compliance with any of these requirements by the client or anyone else will release ERAS from any liability resulting from the use of this report by any unauthorized party.

Sincerely,
ERAS Environmental, Inc.

Andrew Savage
Project Geologist

Curtis Payton
California Registered Professional Geologist 5608

March 11, 2015

1.0 BACKGROUND

This Remedial Action Plan for 3037-3115 Adeline Street in Oakland (the "Property") is prepared in response to the letter regarding the Property from Alameda County Health Care Services Agency (ACHCSA) dated January 16, 2015.

1.1 SITE DESCRIPTION

The Property is located at 3037-3115 Adeline Street in Oakland, California **(Figure 1)** in an area of mixed commercial and residential uses. The Property is on the northwest side of Adeline Street between 30th and 32nd Streets in the northern portion of Oakland and is improved with a concrete tilt up building and an asphalt paved yard area.

A bronze foundry operated on part of the Property (3037 and 3101 Adeline Street) from at least 1928 to 1963. Machine shops operated at 3101 and 3115 Adeline Street from at least 1951 until 1959.

Other historical uses of the Property have been a mattress factory, candy warehouse, stonework, gym, and an event planning and production company.

1.2 PREVIOUS INVESTIGATIONS AND REMEDIAL ACTIONS

The locations of all borings on the Property are shown on the site map included as **Figure 2**. The analytical results for the soil samples collected are compiled in **Table 1** and **1a**. The analytical results for groundwater samples collected are compiled on **Table 2**. **Appendix A** lists the previous investigation reports. The boring logs from the ERAS November 2014 investigations are included in **Appendix B.**

May, 2013: A Phase 2 soil and groundwater investigation was performed by Partner Engineering and Science, Inc. (Partner). A total of 5 soil borings were drilled on the Property in the general areas of the former foundry and machine shops and a furnace that was associated with the foundry.

Partner reported concentrations of total petroleum hydrocarbons as diesel range organics (TPH-dro[1]) and as oil range organics (TPH-oro) in Boring PES-B2 at 3 feet and 7 feet. Concentrations of TPH-dro and TPH-oro were 1,200 milligrams per kilogram (mg/Kg) and 950 mg/Kg at 3 feet and 1,600 and 860 mg/Kg at 7 feet. Concentrations of TPH-dro were above

[1] TPH-gro, TPH-dro, and TPH-oro are methods that compare analytical results to standards for gasoline, diesel and motor oil, respectively. Therefore analytical results are estimates of quantities based on what would be expected for the range of hydrocarbon results for the standard. Gasoline range organics (gro) are those hydrocarbon compounds that are in the range of C6 to C10, diesel range organics (dro) are those hydrocarbon compounds that are in the range of C10 to C23, and oil range organics (oro) are those hydrocarbon compounds that are in the range of C18 to C36. There can be overlap in reporting methods as well as identification of compounds that fall within the standard that may not necessarily be derived from gasoline, diesel, or oil.

the California Regional Water Quality Control Board Environmental Screening Level (ESL) of 110 mg/Kg (Table A, RWQCB, December 2013). The sample from 3 feet also contained total petroleum hydrocarbons as gasoline (TPH-gro) at a concentration of 46 mg/Kg. Partner does not appear to have had the laboratory run silica gel cleanup on the samples prior to analysis to remove biogenic hydrocarbon interferences.

Naphthalene was detected at 5.3 mg/Kg in the sample from Boring PES-B2 at 3 feet. This concentration was above the ESL of 1.2 mg/Kg (Table A, RWQCB, December 2013). No other concentrations of TPH-dro, TPH-oro or naphthalene were detected in soil samples.

Lead and copper were detected in soil at 3 feet in borings PES-B1 and PESB-2 which appear to be above background concentrations. However the maximum concentration of copper of 1,200 mg/Kg is below the ESL of 5,000 mg/Kg (Table A, RWQCB, December 2013). The maximum concentration of lead of 140 mg/Kg is below the ESL of 320 mg/Kg (Table A, RWQCB, December 2013).

No concentrations of TPH-dro or TPH-oro were detected in groundwater samples from Borings PES-B1 and PES-B2. Volatile organic compounds (VOCs) were not detected in the groundwater sample collected from PES-B1. Naphthalene was not detected in the groundwater sample from PES-B2. No groundwater samples were collected from borings PES-B3, PES-B4, or PES-B5.

The highest concentrations of contaminants appeared to be in the area of the former furnace.

November, 2013: A Phase 1 Environmental Site Assessment (ESA) was conducted by Rincon Associates, Inc. (Rincon). Rincon identified the following information for the Property.

- A bronze foundry operated at part of the Property (3037 and 3101 Adeline Street) from at least 1928 to 1963.

- Machine shops operated at 3101 and 3115 Adeline Street from at least 1951 until 1959.

- Six nearby historic auto stations were listed on the environmental database. Rincon indicated these sites were located hydrologically up-gradient and there is potential that contamination from these sites could have impacted groundwater beneath the subject property.

Rincon concluded foundry operations can involve the use of heavy metals including copper, lead, nickel and zinc. Machine shop operations can involve the use of cutting oil and degreasing solvents. Rincon indicated the former use of the Property represented a potential recognized environmental condition (REC) and recommended a subsurface investigation.

November 2014: ERAS conducted a subsurface soil investigation and seven borings (B-1, B-2, B-3, B-4, B-6, B-7, and B-8) were advanced for sample collection.

Borings B-1, B-3, B-4, and B-7 were advanced to a depth of 12 feet bgs, borings B-2 and B-6 were advanced to 16 feet bgs, and boring B-8 was advanced to 4 feet bgs.

Soil samples were collected from the following depths from each boring:

B-1	1.5-2 feet bgs, 3-3.5 feet bgs, and 9-9.5 feet bgs
B-2	2-2.5 feet bgs, 3-3.5 feet bgs, 7.5-8 feet bgs, and 15.5-16 feet bgs
B-3	2-2.5 feet bgs, 3-3.5 feet bgs, 7.5-8 feet bgs, and 11.5-12 feet bgs
B-4	3-3.5 feet bgs, 7.5-8 feet bgs, and 9.5-10 feet bgs
B-6	1.5-2 feet bgs, 2.5-3 feet bgs, 7.5-8 feet bgs, and 15.5-16 feet bgs
B-7	2-2.5 feet bgs, 3-3.5 feet bgs, 7.5-8 feet bgs, and 11.5-12 feet bgs
B-8	1.5-2 feet bgs

The soil samples collected from the zone of 1.5-2.5 feet bgs and 2.5-3.5 feet bgs were analyzed for TPH-gro by EPA Method SW8021B/8015B, TPH-dro and TPH-oro by EPA Method SW8015B, and copper, lead, and tin by EPA Method SW6020 with the exception of borings B-1, B-4, and B-7 where the 2.5-3.5 foot sample was only analyzed for the three metals and not the hydrocarbons

The soil samples collected from depth greater than 3.5 feet bgs were analyzed for only the presence of the hydrocarbons.

The concentrations of the contaminants of concern above the ESL appeared to be limited to the area of borings B-2, B-3, B-6, and PES-B2 which is in the area of the former furnace. Concentrations of contaminants above the ESL were detected to a depth of approximately 8 feet bgs. Samples collected at depths of 12 feet bgs did not contain concentrations above the ESLs. Based on the depth to water (17.5 to 19.5 feet bgs), the lack of groundwater contamination in the prior borings (PES-B1 & -B2), the attenuation of the degree of contamination in the soil samples with depth above 12 ft bgs, and the concentrations of deeper soil samples in comparison to the ESLs, contaminants detected in the soil column did not appear to pose a risk of contamination to groundwater beneath the Property.

ERAS recommended that elevated concentrations of contaminants be removed to a depth of up to 10 feet and the soil be properly disposed. Following the completion of the soil excavation confirmation samples should be collected to determine what concentrations of the contaminants remain in the subsurface.

December 2014: As part of a consideration of site closure including a deed restriction by the ACHCSA an additional soil sample was collected for analysis from the vicinity of former boring B-2 from a depth of 2-2.5 feet bgs (where elevated concentrations of contaminants were previously found). The sample was analyzed for polychlorinated dibenzo-p-dioxins (PCDD's) and polychlorinated dibenzofurans (PCDF's) by EPA Method E1613, semi volatile organic compounds (SVOC's) by EPA Method SW8270C, poly chlorinated biphenyl's (PCB's) by EPA Method SW8082, and TPH-dro and oro by EPA Method SW8015B as requested by the ACHCSA.

No concentrations of PCDD's, PCDF's, or PCB's were detected above their respective ESL's. The only concentration of SVOC's detected was 2-methylnaphthalene at 31 mg/Kg which is above the ESL of 0.25 mg/Kg. TPH-dro and TPH-oro were also detected above their respective ESL's of 110 mg/Kg and 500 mg/Kg. TPH-dro was detected at 3,500 mg/Kg and TPH-oro was detected at 2,200 mg/Kg.

ERAS recommended that a Site Management Plan and Deed Restriction be prepared since it is unlikely that all contaminant-impacted soil could be removed due to the location of improvements relative to the contamination. Moreover, the results of the analyses indicated a relatively rapid decline in concentration of contaminants with distance from the source; indicating a low potential for exposure to human and ecological receptors, especially with the proposed institutional controls recommended to be implemented.

In response, the ACHCSA indicated that due to the high leachability of 2-methylnapthalene a remedial action plan and well survey was needed to outline remediation in the form of source removal to the extent feasible.

1.3 GEOLOGY AND HYDROGEOLOGY

The Property is in the southern part of the City of Oakland in the San Francisco Bay area. The San Francisco Bay area occupies a broad alluvial valley that slopes gently northward and is flanked by alluvial fans deposited at the foot of the Diablo Range to the east and the Santa Cruz Mountains to the west. Surface topography in the immediate vicinity of the Property is gently sloping down to the west towards Oakland Outer Harbor.

The Property is at an elevation of approximately 20 feet above Mean Sea Level according to the United States Geological Survey (USGS) Oakland East Quadrangle California 7.5 Minute Series topographic map.

Materials underlying the site are unconsolidated deposits of near shore and beach sediments, deposited in Oakland Bay at higher sea level stands. At shallow depths beneath these sediments are chert, greywacke, serpentine and shale bedrock that are a part of the Cretaceous to Jurassic-aged Franciscan Formation. Bedrock is exposed to the east-northeast on the upland surfaces.

The subject site is located on the San Francisco Bay Plain in the northernmost part of the Santa Clara Valley Groundwater Basin, (DWR, 1967), the surface of which slopes gently down toward west.

The regional groundwater flow follows the topography, moving from areas of higher elevation to areas of lower elevation. The regional groundwater flow direction in the area of the Property is estimated to be toward the west-southwest toward the Oakland Outer Harbor.

Based on the borings drilled on the Property, the subsurface vadose zone lithology encountered consisted of sand and rock fill beneath the asphalt pavement to a depth of 1.5-2 feet bgs

underlain by silty clay, silty sand, gravely sand, and sandy gravel. The bulk of the vadose zone consisted of a silty clay. Groundwater was reported at depths of approximately 17.5 to 19.5 feet. Total depth explored on the Property was 20 feet bgs. The lithologic logs for the borings advanced on the Property are included in **Appendix B**.

1.4 EXTENT OF CONTAMINATION

1.4.1 Soil

A map showing the estimated distribution of TPH-dro in soil above the ESL is included as **Figure 3**. The concentrations detected in soil samples collected during investigations in 2013 and 2014 are displayed in the area of TPH-dro impact. These figures show the inferred approximate horizontal extent of soil contamination of TPH-dro above 110 mg/Kg.

1.4.2 Groundwater

No concentrations of the contaminants of concern have been detected in the groundwater samples collected on the Property above their respective ESLs.

1.4.3 Soil-Gas and Sub-Slab Vapor

No volatile compounds were identified in the soil or groundwater samples collected on the Property above their respective ESLs. Due to the lack of volatiles above their respective ESLs soil gas and sub-slab vapor samples were not collected for analysis.

1.5 ENVIRONMENTAL ISSUES AND POTENTIAL RECEPTORS

The following discusses the potential exposure pathways for contamination in the various exposure mediums (soil, aqueous and vapor phases) through potential exposure pathways (dermal contact, ingestion, or inhalation) to potential receptors that may be at risk.

1.5.1 Contaminated Medium

<u>Vapor Phase</u>
No volatile compounds were identified in the soil or groundwater samples collected on the Property above their respective ESLs. Due to the lack of volatiles above their respective ESLs soil gas and sub-slab vapor samples were not collected for analysis.

<u>Soil</u>
Maximum soil concentrations were found to exceed the direct exposure ESLs for both commercial and residential land use. Based on the attenuation of the degree of contamination in the soil samples with depth approaching 12 feet bgs these concentrations are not considered likely to pose a threat to the groundwater beneath the Property. The bulk of the contamination is located in the vicinity of borings B-2, B-3, B-6, and PES-B2 between 2 and 10 feet bgs.

Groundwater

Based on groundwater sample results during previous phases of investigation, groundwater beneath the Property has not been affected by the contaminants detected in the soil. Based on the pavement and/or structural cover at the Property, groundwater is not considered likely to be affected in the future by the contaminants detected in the soil.

1.5.2 Receptors

Inhalation

No volatile compounds were identified in the soil or groundwater samples collected on the Property at concentrations that would have the potential to create a vapor issue. Therefore the contaminants do not pose a human health risk due to inhalation of indoor air onsite.

Dermal Contact

Concentrations of petroleum hydrocarbons mainly (TPH-dro) in soil were found to exceed the commercial and residential ESLs for direct exposure. Therefore the soil found to exceed the ESLs could either be remediated to the extent feasible or a deed restriction (institutional control) could be placed on the Property limiting subsurface renovation, construction or improvement activities in the future that would involve intrusive excavation work.

Ingestion

Groundwater samples collected from onsite were not found to contain concentrations of the contaminants of concern. Based on commercial use of the Property, none of the contaminated soil is exposed to the surface or otherwise available to the ingestion pathway. Therefore there is not a current hazard of ingestion**.**

1.5.2 Well Survey

ERAS performed a well survey for recently installed water supply wells using data from both the ACPWD and the California Department of Water Resources (DWR) for an area of an approximately 1,500 foot radius from the Property. Only two water supply wells used for irrigation, domestic, industrial, or municipal water were found to be located within a 1,500 foot radius of the Property. The remaining wells were determined to be used for groundwater monitoring, groundwater extraction, vapor extraction, test well, geotechnical investigation, cathodic protection, or were abandoned.

The two water supply wells within a 1,500 foot radius of the Property were both indicated to be industrial water supply wells. One was indicated to be located at 3516 Adeline Street and the other was located at 2926 San Pablo Avenue. Neither of these wells were located in a close vicinity and in a down-gradient direction from the Property. The well located at 3516 Adeline Street was located approximately 1/3 of a mile to the north-northeast and the well located at 2926 San Pablo Avenue was located approximately 1/3 of a mile to the southeast.

The data generated from the well survey is included in **Appendix C**.

2.0 FEASIBILITY STUDY

2.1 SCREENING CRITERIA

2.1.1 Target Clean-Up Levels

The proposed TCLs for TPH-dro and –oro along with 2-methylnapthalene are based on the Tier I ESLs for the protection of human health.

ERAS proposes the following target cleanup levels for soil contamination on the Property where feasibly removed.

- TPH-dro: 110 mg/Kg
- TPH-oro: 500 mg/Kg
- 2-methylnapthalene: 0.25 mg/Kg

2.1.2 Area of Contamination in Soil

Figure 3 displays the estimated horizontal extent of shallow soil between 2 and 16 feet bgs with contaminant concentrations above 110 mg/Kg TPH-dro.

The area of soil requiring remediation from 2 to 10 feet bgs is approximately 300 cubic yards.

2.1.3 Area of Contamination in Groundwater

Groundwater has not been impacted by the contaminants of concern.

2.1.4 Site Conditions

Site improvements pose special logistical challenges to full remediation. The northern portion of the contaminated area underlies part of the building that is occupied by a gym. This portion is covered by the concrete building foundation and is not considered to be easily contacted and thus a threat to human health.

2.2 REMEDIATION TECHNOLOGY FEASIBILITY ASSESSMENT

Various remediation technologies have been screened to evaluate the most appropriate method to remediate the petroleum hydrocarbon impacts to the soil at the Property. The following remediation technologies have been considered: excavation, bioremediation, natural attenuation, and institutional controls. These technologies are described briefly below.

2.2.1 Alternative 1 - Excavation

The excavation alternative was considered for the area of soil above 110 mg/Kg of TPH-dro other than the portion extending under the current building. This alternative would quickly remove the bulk of the hydrocarbon mass. Once the feasibly removed contamination has been excavated confirmation soil samples should be collected to determine what concentrations of the contaminant of concern remain in place on the Property. One sample would be collected from each side wall along with one from the base of the boring unless groundwater was encountered at which point a groundwater sample would be collected.

The soil will then be properly disposed of and the excavated area backfilled with clean fill.

This alternative appears to be the most feasible active remediation method.

2.2.2 Alternative 2 – In Situ Bioremediation

The in situ bioremediation alternative would involve application of a liquid medium (rich in nitrogen and phosphorous) in order to introduce a food source and bacterial growth booster to the soil that would accelerate conversion of the hydrocarbons to less toxic compounds or gases. This alternative comes with an unacceptable risk of mobilizing contaminants in the soil into the groundwater and was therefore not considered further.

2.2.3 Alternative 3 – Ex Situ Bioremediation

The ex situ bioremediation alternative would involve excavation of contaminated soil, storage on site and application of a dry or liquid medium (rich in nitrogen and phosphorous) in order to introduce a food source and bacterial growth booster to the soil that would accelerate conversion of the hydrocarbons to less toxic compounds or gases. This alternative would require the same methods as Alternative 1 with the added effort of managing soil on site, adding soil amendments, permitting with the Bay Area Air Quality Management District, security against tampering. In addition, the likelihood of returning the treated soil to the excavation is low based on the clayey nature of the soil and its generally poor properties for compaction and placement of fill. This would therefore necessitate disposal at a landfill which shares the same outcome with Alternative 1 but at a higher cost. This alternative was determined to be cost and space prohibitive.

2.2.4 Alternative 4 – Natural Attenuation

This alternative was determined to be cost and time prohibitive given the monitoring requirements generally attached to these types of actions.

2.2.5 Alternative 5 – Institutional Controls

This alternative would involve applying a deed restriction or covenant to the Property prohibiting any excavation activities for the purpose of renovation, construction, or

improvements involving intrusive ground work without notification of the City of Oakland and County of Alameda and approved engineering controls during the proposed earthwork.

This alternative was determined to be the most cost and time efficient method since the concern of the ACHCSA is the high leachability of 2-methylnapthalene. The area impacted by the contaminants of concern is an asphalt paved parking lot with no landscaping. There is no recharge of water to the subsurface in this area due to a surface cap (parking lot), if maintained there is no longer a risk of leachability of 2-methylnapthalene.

3.0 CORRECTIVE ACTION PLAN

3.1 REMEDIAL TECHNOLOGY SELECTION

As indicated in Section 1.5, the primary health risk associated with this plume is the potential for dermal contact from TPH-dro and 2-methylnapthalene in the vadose zone.

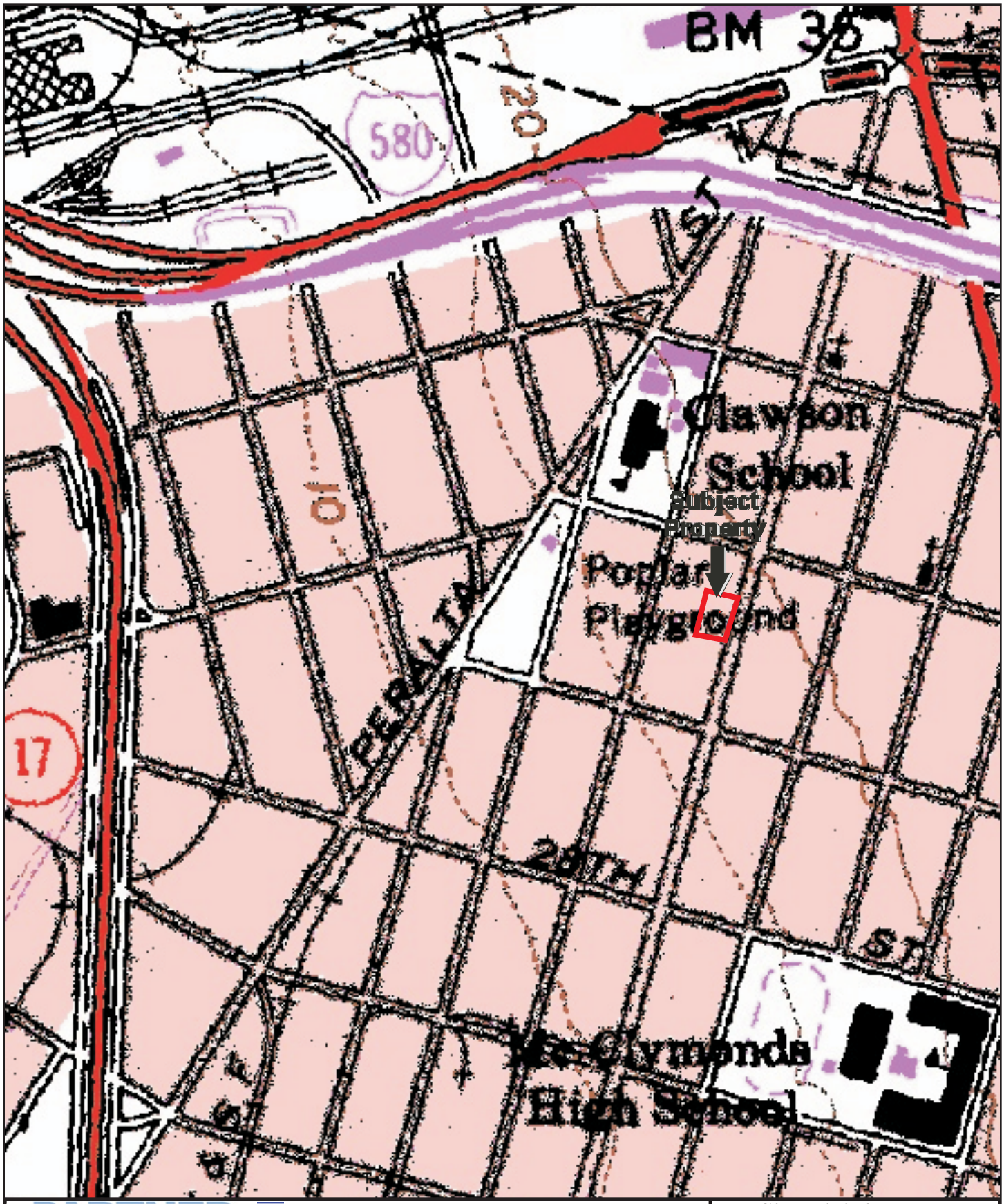
Bioremediation and natural attenuation are not considered to be the best choice for remediation of the petroleum hydrocarbon impacted soil beneath the Property due to cost and other risks.

While excavation appears to be the most feasible active remediation method ERAS concludes that that this method in not necessary due to the current use of this portion of the Property.

Institutional controls was determined to be the most cost and time efficient method since the concern of the ACHCSA is the high leachability of 2-methylnapthalene. The area impacted by the contaminants of concern is an asphalt paved parking lot with no landscaping. There is no recharge of water to the subsurface in this area due to a surface cap (parking lot), if maintained there is no longer a risk of leachability of 2-methylnapthalene.

Institutional controls involving a deed restriction or covenant to the Property would prohibit any excavation activities for the purpose of renovation, construction, or improvements involving intrusive ground work without notification of the City of Oakland and County of Alameda, approved engineering controls during the proposed earthwork, and the maintenance of the parking lot (cap).

FIGURES

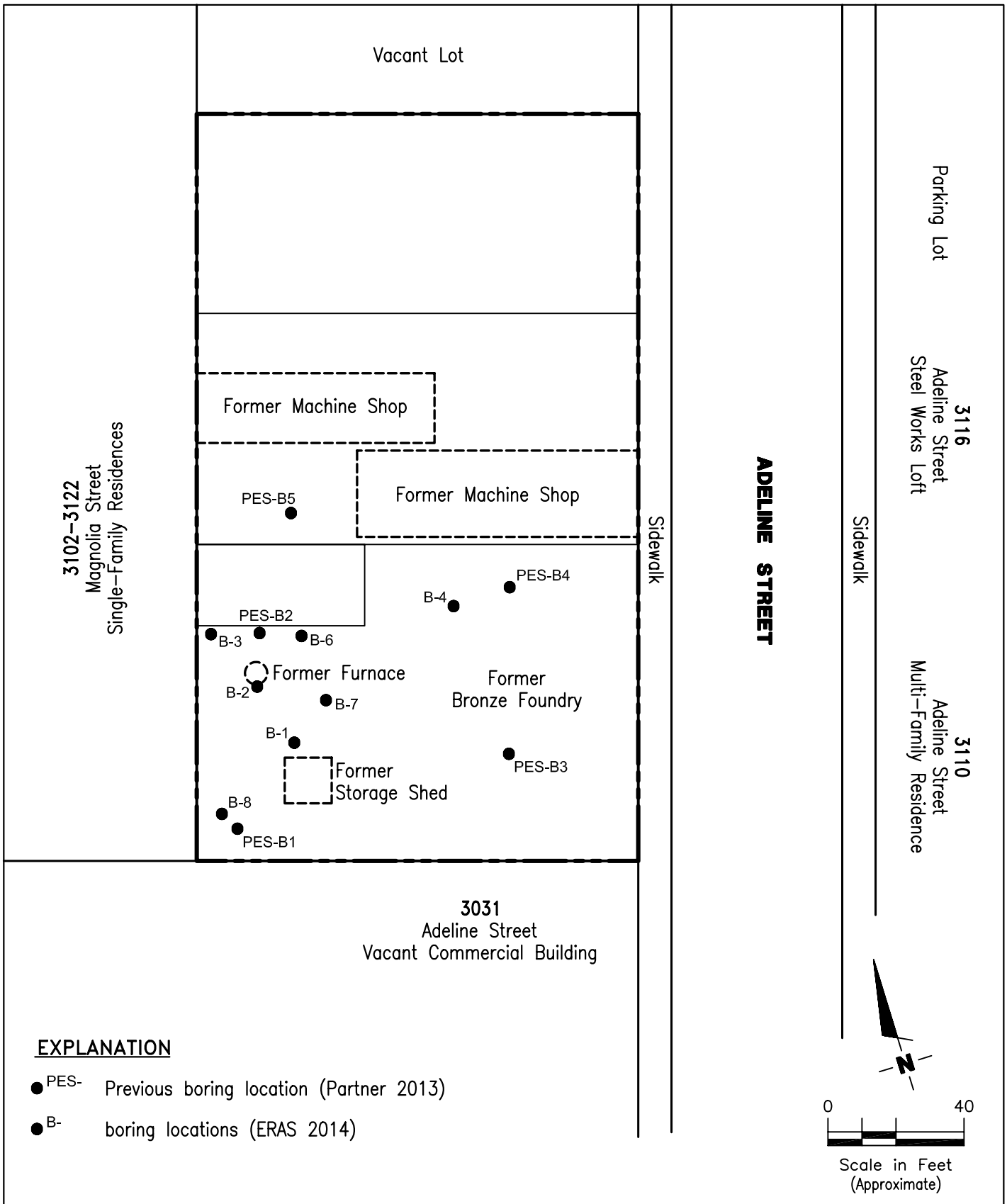


USGS Oakland West Quadrangle
Version: 1980

Site Vicinity Map

Figure	
1	

3037, 3101 & 3115 Adeline Street
Oakland, California 94608

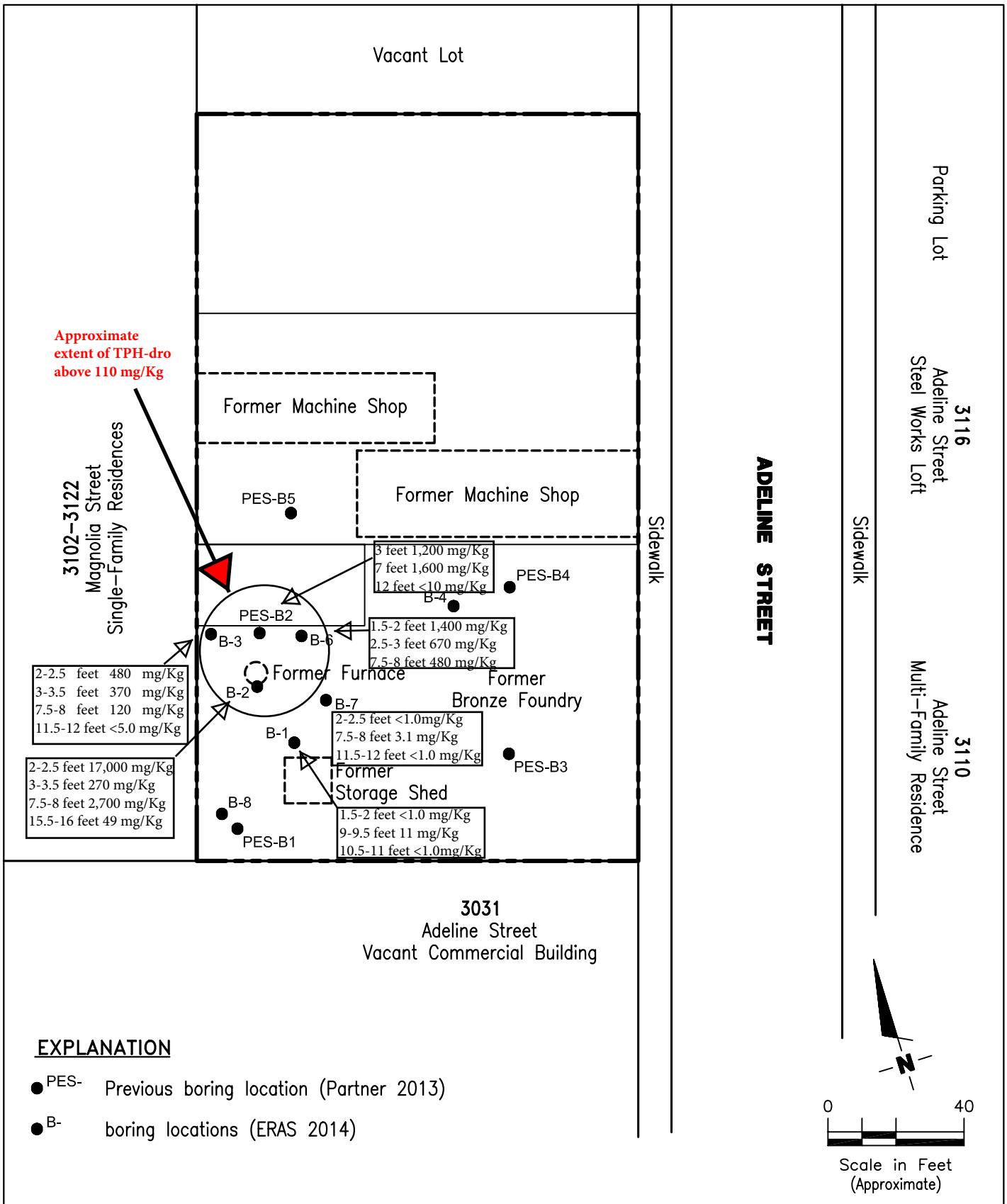


BORING LOCATION MAP

DATE		JOB NUMBER
10/14	–	14157B
REVIEWED BY	3037, 3101 & 3115 Adeline Street	FIGURE
AS	Oakland, California	2

ERAS Environmental Inc.

ERAS 11-02-2014 Boring location map.dwg



EXTENT & BORING LOCATION MAP

3037, 3101 & 3115 Adeline Street
Oakland, California

REVIEWED BY
AS

FIGURE
3

ERAS Environmental Inc.

ERAS 11-02-2014 Boring location map.dwg

TABLES

TABLE 1. ANALYTICAL RESULTS - SOIL

3037-3115 Adeline Street, Oakland

Sample ID	Date	TPH-gro	TPH-dro	TPH-dro*	TPH-oro	TPH-oro*	Copper	Lead	Tin
		(mg/Kg)							
PES-B1-3	1-May-13	NA	NA	NA	NA	NA	160	43	NA
PES-B2-3	1-May-13	46	**1,200**	NA	**950**	NA	**1,200**	140	NA
PES-B2-7	1-May-13	NA	**1,600**	NA	**860**	NA	15	<3.0	NA
PES-B2-12	1-May-13	NA	<10	NA	<10	NA	11	8	NA
PES-B2-18	1-May-13	NA	<10	NA	<10	NA	17	<3.0	NA
PES-B3-3	1-May-13	<10	<10	NA	<10	NA	17	<3.0	NA
PES-B4-3	1-May-13	NA	NA	NA	NA	NA	11	<3.0	NA
PES-B4-11	1-May-13	<10	<10	NA	<10	NA	NA	NA	NA
PES-B5-3	1-May-13	NA	NA	NA	NA	NA	18	44	NA
PES-B5-7	1-May-13	<10	<10	NA	<10	NA	NA	NA	NA
B-1, 1.5-2	21-Oct-14	<1	<1.0	NA	<5.0	NA	210	25	<5.0
B-1, 3-3.5	21-Oct-14	NA	NA	NA	NA	NA	22	6.7	<5.0
B-1, 9-9.5	21-Oct-14	<1	11	NA	100	NA	NA	NA	NA
B-1, 10.5-11	21-Oct-14	<1	<1.0	NA	<5.0	NA	NA	NA	NA
B-2, 2-2.5	21-Oct-14	**540**	**17,000**	**20,000**	**8,700**	**11,000**	**1,200**	**650**	78
B-2, 3-3.5	21-Oct-14	190	**270**	NA	<250	NA	24	7.8	<5
B-2, 7.5-8	21-Oct-14	200	**2,700**	NA	**1,700**	NA	NA	NA	NA
B-2, 15.5-16	21-Oct-14	4.1	49	NA	38	NA	NA	NA	NA
B-3, 2-2.5	21-Oct-14	<1	**480**	NA	430	NA	31	7.0	<5
B-3, 3-3.5	21-Oct-14	150	**370**	NA	<250	NA	22	8.8	<5
B-3, 7.5-8	21-Oct-14	<1	**120**	NA	100	NA	NA	NA	NA
B-3, 11.5-12	21-Oct-14	<1	<5.0	NA	<5.0	NA	NA	NA	NA
B-4, 3-3.5	21-Oct-14	NA	NA	NA	NA	NA	18	5.8	<5
B-4, 7.5-8	21-Oct-14	<1	<5.0	NA	<5.0	NA	NA	NA	NA
B-4, 9.5-10	21-Oct-14	<1	1.2	NA	<5.0	NA	NA	NA	NA
B-6, 1.5-2	21-Oct-14	55	**1,400**	NA	**1,200**	NA	**380**	120	20
B-6, 2.5-3	21-Oct-14	180	**670**	NA	280	NA	22	7.1	<5
B-6, 7.5-8	21-Oct-14	40	**480**	NA	280	NA	NA	NA	NA
B-6, 15.5-16	21-Oct-14	<1	<1.0	NA	<5.0	NA	NA	NA	NA
B-7, 2-2.5	21-Oct-14	<1	<1.0	NA	<5.0	NA	87	18	<5
B-7, 3-3.5	21-Oct-14	NA	NA	NA	NA	NA	18	7.1	<5
B-7, 7.5-8	21-Oct-14	<1	3.1	NA	14	NA	NA	NA	NA
B-7, 11.5-12	21-Oct-14	<1	<1.0	NA	<5.0	NA	NA	NA	NA
B-8, 1.5-2	21-Oct-14	NA	NA	NA	NA	NA	23	10	<5
ESL <3m		500	110	110	500	500	230	320	-
ESL >3m		770	110	110	1000	1000	5,000	320	-

Notes

NA = Not Analyzed

(mg/Kg) = Miligrams per Kilogram

TPH-gro = Total petroleum hydrocarbons quantified as gasoline range organics

TPH-dro = Total petroleum hydrocarbons quantified as diesel range organics

TPH-oro = Total petroleum hydrocarbons quantified as oil range organics

TPH-dro* = Total petroleum hydrocarbons quantified as diesel range organics run without silica gel cleanup

TPH-oro* = Total petroleum hydrocarbons quantified as oil range organics run without silica gel cleanup

ESL <3m = environmental screening limits set forth by the RWQCQ for soil shallower than 3 meters on a commercial Property where groundwater is considered a potential source of drinking water

ESL >3m = environmental screening limits set forth by the RWQCQ for soil deeper than 3 meters on a commercial Property where groundwater is considered a potential source of drinking water

Bold Type Indicates Reported Value Above the ESL.

TABLE 1a. ANALYTICAL RESULTS - SOIL

3037-3115 Adeline Street, Oakland

PCDD's & PCDF's	B-2-2.5 Results in pg/g	WHO-TEF	ESL pg/g
1,2,3,4,6,7,8-HpCDD	4.16	0.01	180
OCDD	8.42	0.0003	6,000
2,3,4,7,8-PeCDF	4.1	0.3	60
1,2,3,4,7,8-HxCDF	5.42	0.1	18
1,2,3,6,7,8-HxCDF	5.42	0.1	18
2,3,4,6,7,8-HxCDF	8.82	0.1	18
1,2,3,4,6,7,8-HpCDF	31.9	0.01	180
Total tetradioxins	5.7		
Total heptadioxins	8.76		
Total tetrafurans	19.6		
Total heptafurans	31.9		
Total hexafurans	60.6		
Total pentafurans	23.7		

SVOC's	Results in mg/Kg		ESL
2-methylnaptht**h**alene	**31**		0.25

PCB's
Non detected above their respective detection limit

TPH	Results in mg/Kg		ESL
TPH-dro	**3,500**		110
TPH-oro	**2,200**		500

Table Notes:
pg/g = grams per picogram
WHO-TEF = World Health Organization Toxic Equivalency Factor
ESL – environmental screening limits set forth by the California Regional Water Quality Control Board as of December 2013

TABLE 2. ANALYTICAL RESULTS - GROUNDWATER

3037-3115 Adline Street, Oakland

Sample ID	Date	TPH-gro	TPH-dro
		(µg/L)	
PES-B1-GW	1-May-13	<0.50	<0.50
PES-B2-GW	1-May-13	NA	<0.50
ESL		100	100

Notes

NA = Not Analyzed

(µg/L) = microgram per liter

TPH-gro = Total petroleum hydrocarbons quantified as gasoline range organics

TPH-dro = Total petroleum hydrocarbons quantified as diesel range organics

TPH-oro = Total petroleum hydrocarbons quantified as oil range organics

ESL = environmental screening limits set forth by the RWQCQ for a Property where groundwater is considered a potential source of drinking water

APPENDIX A

LIST OF PREVIOUS INVESTIGATION REPORTS

ERAS Environmental, Inc., Subsurface Soil Investigation Report, 3037-3115 Adeline Street, Oakland, California, November 13, 2014.

ERAS Environmental, Inc., Additional Limited Soil Investigation. 3037-3115 Adeline Street, Oakland, California, December 23, 2014

Partner Engineering and Science, Inc., Limited Phase II Subsurface Investigation, 3037, 3101, and 3115 Adeline Street, Oakland, California 94608, Client Project Number WF-SF-13-005073-03-1, May 24, 2013.

Rincon Consultants, Inc., Phase 1 Environmental Site Assessment, 3037, 3101, and 3115 Adeline Street, Oakland, California, November 15, 2013.

APPENDIX B

BORING LOGS

ERAS Environmental

Log of Boring B-1

PROJECT: *14063B*	ADDRESS: *3037–3115 Adeline Street*
JOB NUMBER: *14063B*	LOCATION: *North of former Storage Shed*
DATE STARTED: *10–21–14*	First Water (ft. bgs.): *NA* DATE: *10–21–14*
DATE FINISHED: *10–21–14*	TOTAL DEPTH: *12 feet*
DRILLING METHOD: *Hydraulic Push*	GEOLOGIST: *Andrew Savage*
DRILLING COMPANY: *ECA*	Reviewed By: –

DEPTH ft.	PID (ppm)	BLOWS/ 1/2'	SAMPLE NO.	RECOVERY	GRAPHIC LOG	WATER LEVEL	GEOLOGIC DESCRIPTION	WELL DIAGRAM
							Asphalt + sand/rock fill	
	2' 0						Silty Clay (CL), very dark brown (10YR 2/2), damp, medium stiff, medium plasticity, no HC (hydrocarbon) odor	
	3.5' 0						at 4 feet, color change to yellowish brown (10YR 5/4)	
5								
	8' 0							
	9.5' 0						Silty Sand (SM), very dark grayish brown (10YR 3/2), damp, medium dense, 30% silt, 70% fine to medium grain poorly graded sand, no HC odor	
10	11' 0			NR NR			Silty Clay (CL), yellowish brown (10YR 5/4), damp, very stiff, medium plasticity, 30% 1/8 – 1 inch gravel, no HC odor	
							Bottom of Boring 12 feet bgs, 10–21–14	
15								
20								

ERAS Environmental	**Log of Boring B-2**
PROJECT: *14063B*	ADDRESS: *3037–3115 Adeline Street*
JOB NUMBER: *14063B*	LOCATION: *South of PES–B2*
DATE STARTED: *10–21–14*	First Water (ft. bgs.): *NA* DATE: *10–21–14*
DATE FINISHED: *10–21–14*	TOTAL DEPTH: *16 feet*
DRILLING METHOD: *Hydraulic Push*	GEOLOGIST: *Andrew Savage*
DRILLING COMPANY: *ECA*	Reviewed By: –

DEPTH ft.	PID (ppm)	BLOWS/ 1/2'	SAMPLE NO.	RECOVERY	GRAPHIC LOG	WATER LEVEL	GEOLOGIC DESCRIPTION	WELL DIAGRAM
							Asphalt + sand/rock fill	
	2.5' 3.1						Silty Clay (CL), very dark brown (10YR 2/2), damp, medium stiff, medium plasticity, very strong HC (hydrocarbon) odor, free product appears to be present	
	3.5' 3.2			NR			at 5 feet, color change to dark greenish gray (Gley 1 4/1), 10% 1/8–1/2 inch roak	
5								
	7' 3.1							
	8' 12.8'						Gravely Sand (SW), dark greenish gray (Gley 1 4/1), damp, dense, 60% fine to to coarse well graded sand, 40% 1/8–1/2 inch rock, hydrocarbon odor present	
							Silty Clay (CL), dark greenish gray (Gley 1 4/1), damp, stiff, medium plasticity, 10% 1/8 – 1 inch rock, hydrocarbon odor present	
10	10' 2.6						at 11 feet, mottled with yellowish brown (10YR 5/4)	
	13' 0							
15							at 16 feet, still mottled and a slight hydrocarbon odor was present	
	16' 0						Bottom of Boring 16 feet bgs, 10–21–14	
20								

ERAS Environmental

Log of Boring B-3

PROJECT: *14063B*	ADDRESS: *3037–3115 Adeline Street*
JOB NUMBER: *14063B*	LOCATION: *West of PES–B2*
DATE STARTED: *10–21–14*	First Water (ft. bgs.): *NA* DATE: *10–21–14*
DATE FINISHED: *10–21–14*	TOTAL DEPTH: *12 feet*
DRILLING METHOD: *Hydraulic Push*	GEOLOGIST: *Andrew Savage*
DRILLING COMPANY: *ECA*	Reviewed By: –

DEPTH ft.	PID (ppm)	BLOWS/ 1/2'	SAMPLE NO.	RECOVERY	GRAPHIC LOG	WATER LEVEL	GEOLOGIC DESCRIPTION	WELL DIAGRAM
							Asphalt + sand/rock fill	
	2.5' 3.1						Silty Clay (CL), very dark brown (10YR 2/2), damp, medium stiff, medium plasticity, strong HC (hydrocarbon) odor	
	3.5' 0							
5							at 5 feet, color change to yellowish brown (10YR 5/4), hydrocarbon odor present	
	7' 0						at 7 feet, very slight hydrocarbon odor	
	8' 0						at 8 feet, very stiff, no HC odor, 5% 1/8–1 inch rock	
10	10' 0							
	12' 0						Bottom of Boring 12 feet bgs, 10–21–14	
15								
20								

ERAS Environmental	**Log of Boring B-4**
PROJECT: *14063B*	ADDRESS: *3037–3115 Adeline Street*
JOB NUMBER: *14063B*	LOCATION: *West of PES–B4*
DATE STARTED: *10–21–14*	First Water (ft. bgs.): *NA* DATE: *10–21–14*
DATE FINISHED: *10–21–14*	TOTAL DEPTH: *12 feet*
DRILLING METHOD: *Hydraulic Push*	GEOLOGIST: *Andrew Savage*
DRILLING COMPANY: *ECA*	Reviewed By: –

DEPTH ft.	PID (ppm)	BLOWS/ 1/2'	SAMPLE NO.	RECOVERY	GRAPHIC LOG	WATER LEVEL	GEOLOGIC DESCRIPTION	WELL DIAGRAM
							Asphalt + sand/rock fill	
	1.5' 0						Silty Clay (CL), very dark grayish brown (10YR 2/2), damp, medium stiff, medium plasticity, no HC (hydrocarbon) odor	
	3.5' 0							
5							at 4.5 feet, color change to yellowish brown (10YR 5/4)	
	7' 0							
	8' 0						at 7–10 feet, 10% 1/8–1/4 inch rock	
10	10' 0						Sandy Gravel (GW), dark yellowish brown (10YR 4/6), damp, medium dense, 35% fine to coarse well graded sand, 65% 1/8–1/2 inch rock, no HC odor	
	12' 0						at 11 feet, small amount of perched water was observed	
							Bottom of Boring 12 feet bgs, 10–21–14	
15								
20								

ERAS Environmental	**Log of Boring B-6**
PROJECT: *14063B*	ADDRESS: *3037–3115 Adeline Street*
JOB NUMBER: *14063B*	LOCATION: *East of PES–B2*
DATE STARTED: *10–21–14*	First Water (ft. bgs.): *NA* DATE: *10–21–14*
DATE FINISHED: *10–21–14*	TOTAL DEPTH: *16 feet*
DRILLING METHOD: *Hydraulic Push*	GEOLOGIST: *Andrew Savage*
DRILLING COMPANY: *ECA*	Reviewed By: –

DEPTH ft.	PID (ppm)	BLOWS/ 1/2'	SAMPLE NO.	RECOVERY	GRAPHIC LOG	WATER LEVEL	GEOLOGIC DESCRIPTION	WELL DIAGRAM
							Asphalt + sand/rock fill	
	2' 1.2						Silty Clay (CL), very dark brown (10YR 2/2), damp, medium stiff, medium plasticity, HC (hydrocarbon) odor present	
	3' 1.2			NR				
				NR				
5							at 5 feet, dark gray (10YR 4/1), very stiff, HC odor present	
	7' 2.9							
	8' 2.1							
10	10' 0.6							
							at 11 feet, color change to yellowish brown (10YR 5/4), no HC odor present	
	13' 0							
15								
	16' 0						Bottom of Boring 16 feet bgs, 10–21–14	
20								

ERAS Environmental

Log of Boring B-7

PROJECT: *14063B*	ADDRESS: *3037–3115 Adeline Street*
JOB NUMBER: *14063B*	LOCATION: *Southeast of PES–B2*
DATE STARTED: *10–21–14*	First Water (ft. bgs.): *NA* DATE: *10–21–14*
DATE FINISHED: *10–21–14*	TOTAL DEPTH: *12 feet*
DRILLING METHOD: *Hydraulic Push*	GEOLOGIST: *Andrew Savage*
DRILLING COMPANY: *ECA*	Reviewed By: –

DEPTH ft.	PID (ppm)	BLOWS/ 1/2'	SAMPLE NO.	RECOVERY	GRAPHIC LOG	WATER LEVEL	GEOLOGIC DESCRIPTION	WELL DIAGRAM
							Asphalt + sand/rock fill	
	2.5' 0						Silty Clay (CL), very dark brown (10YR 2/2), damp, medium stiff, medium plasticity, no HC (hydrocarbon) odor	
	3.5' 0			NR				
5							at 5 feet, color change to yellowish grown (10YR 5/4)	
	7' 0							
	8' 0						same	
10	10' 0							
	12' 0						Bottom of Boring 12 feet bgs, 10–21–14	
15								
20								

ERAS Environmental	**Log of Boring B-8**
PROJECT: *14063B*	ADDRESS: *3037–3115 Adeline Street*
JOB NUMBER: *14063B*	LOCATION: *Southwest corner*
DATE STARTED: *10–21–14*	First Water (ft. bgs.): *NA* DATE: *10–21–14*
DATE FINISHED: *10–21–14*	TOTAL DEPTH: *4 feet*
DRILLING METHOD: *Hydraulic Push*	GEOLOGIST: *Andrew Savage*
DRILLING COMPANY: *ECA*	Reviewed By: –

DEPTH ft.	PID (ppm)	BLOWS/ 1/2'	SAMPLE NO.	RECOVERY	GRAPHIC LOG	WATER LEVEL	GEOLOGIC DESCRIPTION	WELL DIAGRAM
	2' 0.1						Asphalt + sand/rock fill	
				NR			Silty Clay (CL), very dark brown (10YR 2/2), damp, medium stiff, medium plasticity, no HC (hydrocarbon) odor	
				NR				
5							Bottom of Boring 4 feet bgs, 10–21–14	
10								
15								
20								

APPENDIX C

WELL SURVEY DATA

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

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STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

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WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

FIGURES

TABLES

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LIST OF PREVIOUS INVESTIGATION REPORTS

ERAS Environmental, Inc., Subsurface Soil Investigation Report, 3037-3115 Adeline Street, Oakland, California, November 13, 2014.

ERAS Environmental, Inc., Additional Limited Soil Investigation. 3037-3115 Adeline Street, Oakland, California, December 23, 2014

Partner Engineering and Science, Inc., Limited Phase II Subsurface Investigation, 3037, 3101, and 3115 Adeline Street, Oakland, California 94608, Client Project Number WF-SF-13-005073-03-1, May 24, 2013.

Rincon Consultants, Inc., Phase 1 Environmental Site Assessment, 3037, 3101, and 3115 Adeline Street, Oakland, California, November 15, 2013.

APPENDIX B

BORING LOGS

APPENDIX C

WELL SURVEY DATA