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By Alameda County Environmental Health 2:36 pm, Aug 01, 2016

29 July 2016

Ms. Karel Detterman, P.G.
Hazardous Materials Specialist
Alameda County Department of Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502
San Francisco, CA 94102

**Re: Additional Soil Investigation Report Dated 29 July 2016
3093 Broadway, Oakland, CA
Local Oversight Program Case No. RO0000199**

Dear Ms. Detterman,

Please find attached the above-referenced report for the Former Connell Oldsmobile site, located at 3093 Broadway in Oakland, California. The Report was prepared by Langan Treadwell Rollo.

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.

OWNER:

3093 BROADWAY HOLDINGS, L.L.C.

**By: 3093 BROADWAY VENTURE, L.L.C.,
as its sole member**

**By: CV 3093 Broadway, LLC,
as its Administrative Member**

By: Stephen Siri

Name: STEPHEN SIRI

Title: PRINCIPAL

29 July 2016

Ms. Karel Detterman, P.G.
Hazardous Materials Specialist
Alameda County Department of Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502

**Subject: Additional Soil Investigation Report
3093 Broadway
Oakland, California
ACEH Case No.: RO0000199
Langan Project No.: 731637001**

Dear Ms. Detterman:

As requested by the Alameda County Department of Environmental Health (ACEH), and on behalf of 3093 Broadway Holdings, L.L.C., Langan Treadwell Rollo (Langan) has prepared this Additional Soil Investigation Report to summarize the soil sampling conducted at the Former Connell Oldsmobile Site (site), located at 3093 Broadway in Oakland, California (Figure 1) in March 2016. Soil samples were collected from the site and analyzed as described in the Work Plan for Additional Soil Sampling dated 9 March 2015¹. Soil sampling was conducted to collect additional analytical data in the western portion of the site prior to excavation to facilitate offsite disposal. The soil in this portion of the site was not impacted by the fuel release from the former underground storage tanks (USTs), previously located beneath the sidewalk adjacent to Hawthorne Street. The analytical data is required by potential receiving facilities as a standard review measure for soil. Background information, the field investigation, and results are described below.

1.0 BACKGROUND INFORMATION

The site is located in a mixed-use area, near commercial, medical, and residential properties. The approximately 3.4-acre site is bounded by Hawthorne Street to the north, Broadway to the east, Webster Street to the west, and a grocery store to the south. The development will include a commercial strip fronting Broadway and a parking garage on the ground floor. Residential units will be developed on the third story and higher. Three USTs that previously contained gasoline, diesel, and waste oil were removed from beneath the Hawthorne Avenue sidewalk, north of the former service bay, in December 1989. Excavation of the site is part of

¹ Langan Treadwell Rollo. 2016. Work Plan for Additional Soil Sampling, 3093 Broadway, Oakland, California. March 9.

the development, and is an element of the soil corrective action implementation described in the 21 May 2015 Feasibility Study and Corrective Action Plan (FS/CAP)² for the site.

1.1 Previous Environmental Investigations and Remediation

Site investigation in response to a fuel release from the former USTs was performed between 1990 and 2015, subsurface impacts at the site include petroleum compounds from the former UST systems, lead impacts in shallow soil in the former service bay area, and motor oil range hydrocarbons and polyaromatic hydrocarbons (PAHs) in fill soil beneath the parking lot area. The Corrective Action Plan (CAP) for the site is currently being implemented. Site grading for the development is planned to reduce existing grade by approximately 3 to 18 feet; the ground floor will be roughly level with Broadway.

1.2 Site Geology and Hydrogeology

The site elevation ranges from approximately 52 to 68 feet above mean sea level (a-msl). The site slopes downward to the southeast, from Webster Street to Broadway, and is underlain by unconsolidated sediments ranging from silty clays to sandy gravels. Based on geotechnical sampling conducted by Langan at the site, unconsolidated sediments extend to at least 50 feet below ground surface (bgs). The surficial geology is mapped as the Temescal Formation, which consists of quaternary age alluvial fan deposits comprised of interbedded layers of silt, sand, clay, and gravel (Radbrush, 1957). Alluvial fan deposits are characterized by laterally discontinuous and heterogeneous layers of irregular thickness. The depth to groundwater (Langan, 2014b) beneath the site ranges from approximately 16 to 27 feet bgs. Groundwater beneath the site flows toward the southeast (Langan, 2014a).

2.0 FIELD INVESTIGATION

On 18 March 2016, Langan advanced four soil borings to 7.5 feet bgs to collect additional data needed for off-site disposal of soil. The locations were chosen to further characterize soil within the western portion of the site.

2.1 Soil Sampling

The boring locations, identified as D1, D2, D3, and D4, are shown on Figure 2. The borings were advanced using a truck mounted drill-rig operated by Cascade Drilling, LP (Cascade) of Richmond, California, a California-licensed drilling company. Copies of the drilling permits are included in Attachment A. The soil borings were advanced by hydraulically driving a dual-tube sampling system. Each boring was initially advanced to five feet bgs with a hand auger to clear the location for buried utilities. Soil cores were visually inspected and continuously logged by Langan personnel in general accordance with the Unified Soil Classification System (USCS) working under the supervision of a California professional geologist. Soil was screened for

² Langan Treadwell Rollo. 2015. Feasibility Study and Corrective Action Plan, 3093 Broadway, Oakland, California. May 21.

organic vapors using a calibrated Photoionization Detector (PID). Upon completion, the borings were backfilled with neat cement grout.

2.2 Laboratory Analysis

As part of this investigation, Langan submitted soil samples for the following analyses:

- Total Petroleum Hydrocarbons as diesel (TPHd) and motor oil (TPHmo) using United States Environmental Protection Agency (EPA) Method 8015B;
- Total Petroleum Hydrocarbons as gasoline (TPHg) and BTEX compounds using EPA Method 8021B/8015B; and
- California Assessment Metals (CAM) 17 metals using EPA Method 6010B.

3.0 RESULTS

The investigation findings are discussed in the subsections below.

3.1 Drilling Observations

Fill material was observed in each of the four borings and consisted of sand, silt, and occasional concrete and brick material, boring D4 contained larger amounts of brick and concrete than the other locations. In general, the observed site lithology was consistent with historically observed conditions. The site is predominately underlain by unconsolidated sediments ranging from silty clays to clayey silts with occasional thin beds of silty sand and gravel. No odor or staining was observed in the collected cores, and field screening using a PID did not detect volatile compounds. Soil boring logs describing the materials encountered and PID readings are presented in Attachment B.

Groundwater was observed in boring D4 at 4.5 feet; based on the results of previous investigations at the site, the observed groundwater is shallow perched water that occurs seasonally in a small portion of the site.

3.2 Analytical Results

Soil analytical results for petroleum compounds and metals are summarized in Tables 1 and 2, and the analytical laboratory reports are included in Attachment C.

At each of the four boring locations; TPHd, TPHg, TPHmo, and BTEX were below the laboratory reporting limits. Metals tested were at background levels or below laboratory detection limits.

4.0 SUMMARY

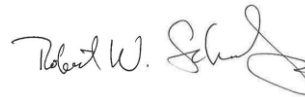
Four soil samples were collected from the western parking lot area. The samples were analyzed for petroleum compounds and metals. Petroleum compounds were not detected in the samples, and the metals concentrations were generally within the anticipated background ranges.

Sincerely yours,

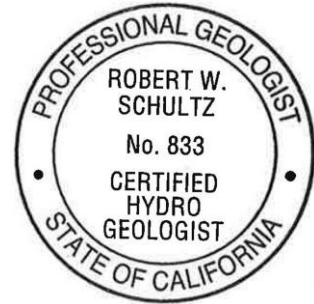
Langan Treadwell Rollo



Tyler Houghton
Senior Staff Engineer



Robert W. Schultz, CHG
Senior Project Manager



Attachments:

Table 1 Soil Analytical Results for TPH and BTEX
Table 2 Soil Analytical Results for Metals

Figure 1 Site Location Map
Figure 2 Additional Soil Sampling Locations

Attachment A Permit Copies
Attachment B Boring Logs
Attachment C Analytical Laboratory Report

731637001.28 RS

TABLES

Table 1
Soil Analytical Results for Petroleum Compounds
3093 Broadway
Oakland, California

Sample ID	Sample Depth (feet bgs)	Sample Date	TPHd	TPHg	TPHmo	Benzene	Ethylbenzene	Toluene	Xylenes	MTBE
			mg/kg							
D1	7.5	3/18/2016	<1.0	<1.0	<5.0	<0.005	<0.005	<0.005	<0.015	--
D2	7.5	3/18/2016	<1.0	<1.0	<5.0	<0.005	<0.005	<0.005	<.015	--
D3	7.5	3/18/2016	<1.0	<1.0	<5.0	<0.005	<0.005	<0.005	<.015	--
D4	7.5	3/18/2016	<1.0	<1.0	<5.0	<0.005	<0.005	<0.005	<.015	--

Notes:

bgs - below ground surface

mg/kg - milligrams per kilogram

BETX/MTBE = Methyl tertiary butyl ether and Benzene, Ethylbenzene, Toluene, and Zylenes using EPA Method 8021B

TPHg - Total Petroleum Hydrocarbons as Gasoline using EPA Method 8015Bm

TPHd - Total Petroleum Hydrocarbons as Diesel Range using EPA Method SW8015B

TPHmo - Total Petroleum Hydrocarbons as Motor Oil using EPA Method SW8015B

< 1.0 - Analyte was not detected above the laboratory reporting limit (1.0 mg/kg)

-- not analyzed, not applicable or criteria not established

Table 2
Soil Analytical Results for Metals
3093 Broadway
Oakland, California

Sample ID	Sample Depth (feet bgs)	Sample Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium (Total)	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
			mg/kg																
D1	7.5	3/18/2016	<0.50	1.4	110	<0.50	<0.25	34	7.0	13	4.1	0.18	0.51	37	<0.5	<0.5	<0.5	30	40
D2	7.5	3/18/2016	<0.50	8.6	100	0.58	<0.25	120	7.3	21	4.3	0.11	<.50	49	<0.50	<0.50	<0.50	57	43
D3	7.5	3/18/2016	0.71	7.2	230	1.0	0.25	77	16	33	12	<.050	0.5	160	<0.50	<0.50	<0.50	63	75
D4	7.5	3/18/2016	<0.50	4.0	64	<0.50	<0.25	66	8.3	16	7.5	0.053	7.9	37	<0.50	<0.50	<0.50	50	23

Notes:

bgs - below ground surface

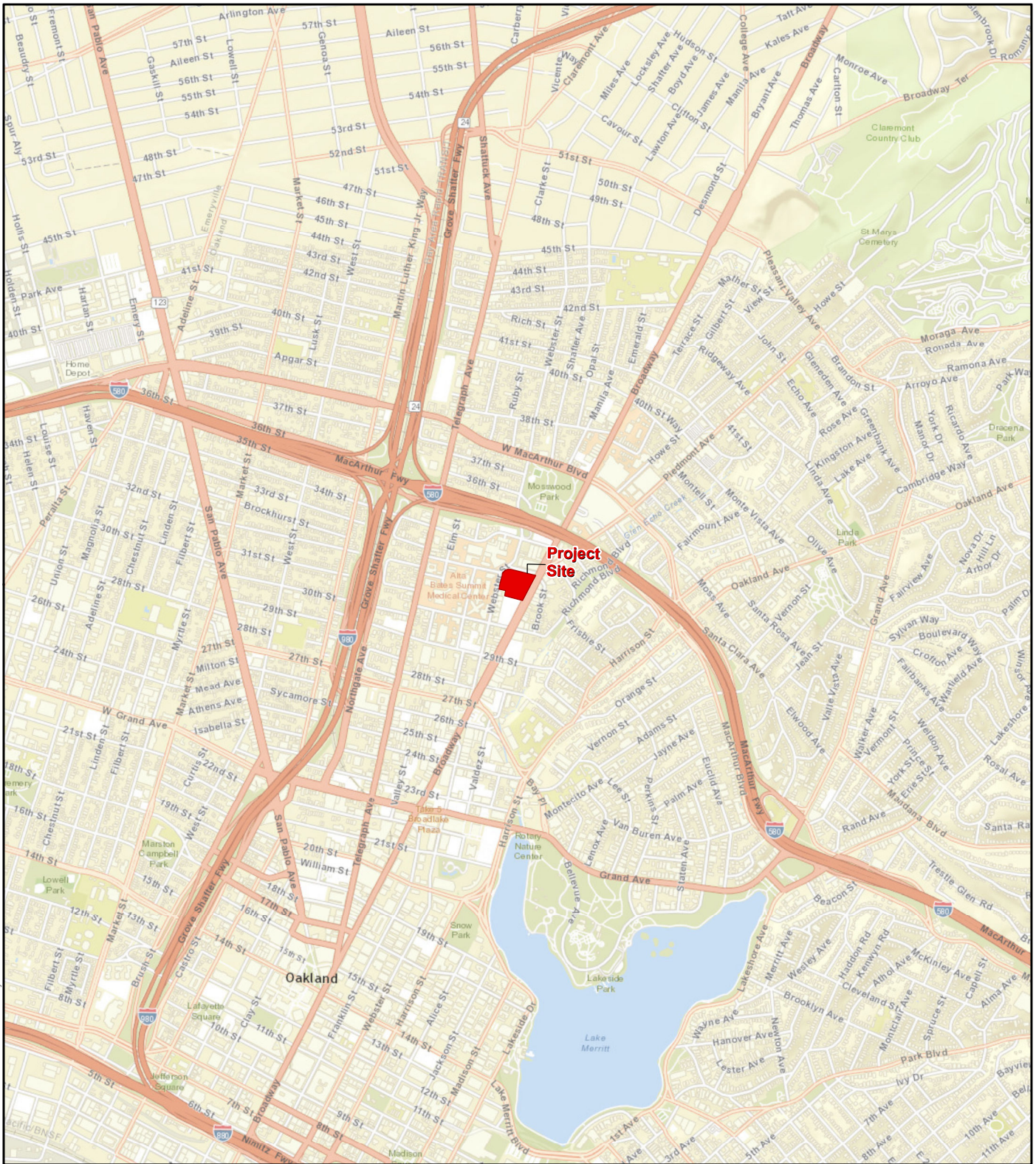
mg/kg - milligrams per kilogram

--not analyzed, not applicable or criteria not established

<0.5 - Analyte was not detected at or above the laboratory reporting limit (0.5 mg/kg)

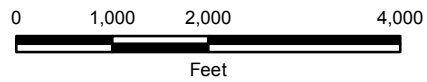
CAM 17 Metals analyzed using EPA Method SW6020

FIGURES



Notes:

1. World street basemap is provided through Langan's Esri ArcGIS software licensing and ArcGIS online. Credits: Sources: Esri, DeLorme, NAVTEQ, USGS, Intermap, iPC, NRCAN.
2. Map displayed in California State Plane Coordinate System, Zone III, North American Datum of 1983 (NAD83), US Survey Feet.



3093 BROADWAY
Oakland, California

SITE LOCATION MAP

LANGAN TREADWELL ROLLO

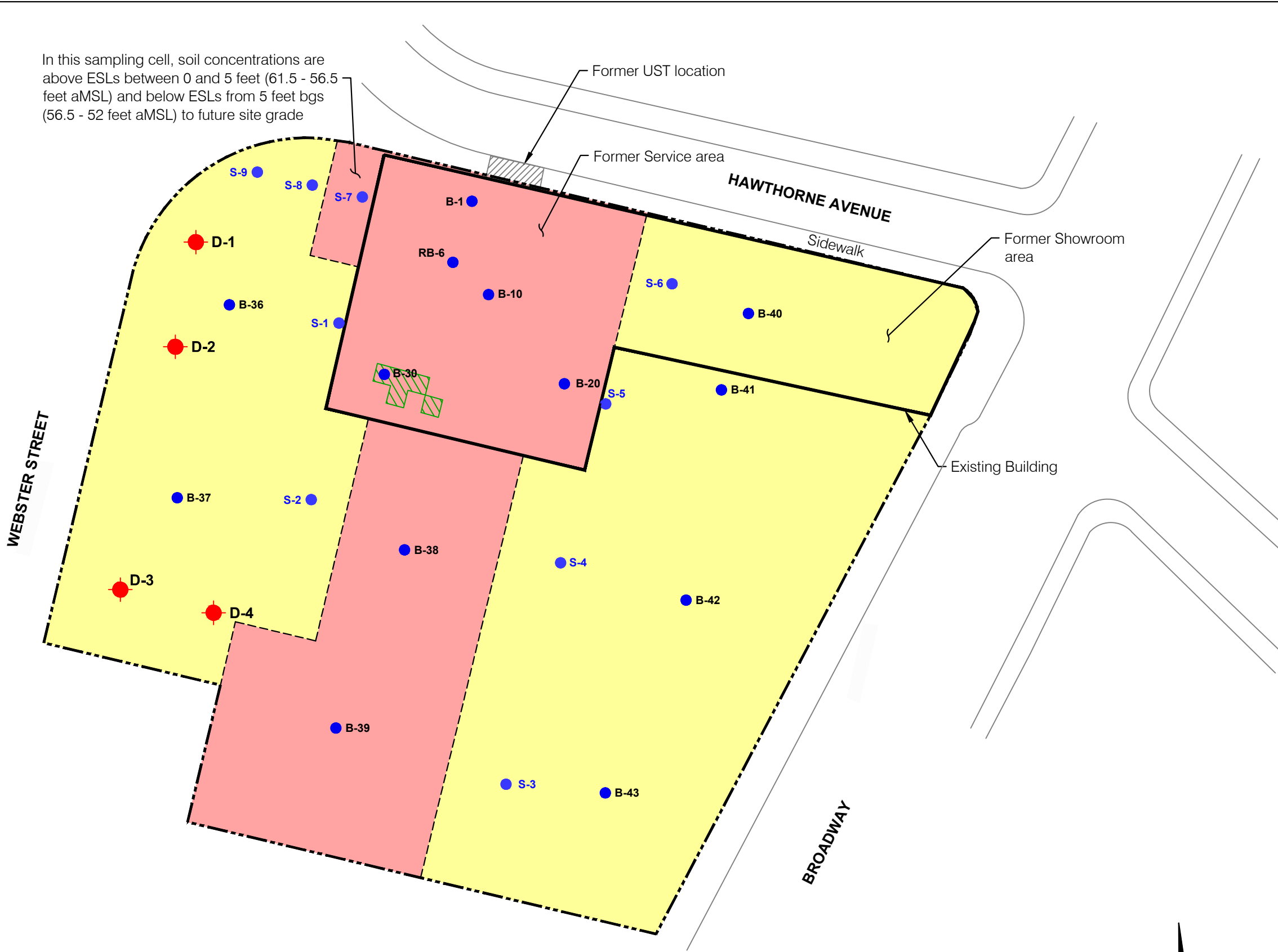
Date 3/9/2016

Project 7316317001

Figure 1

\\langan.com\data\SF\01\731637001\Cadd Data - 731637001\2D-DesignFiles\Environmental\731637001-N-SP0156.dwg 4/6/16

In this sampling cell, soil concentrations are above ESLs between 0 and 5 feet (61.5 - 56.5 feet aMSL) and below ESLs from 5 feet bgs (56.5 - 52 feet aMSL) to future site grade



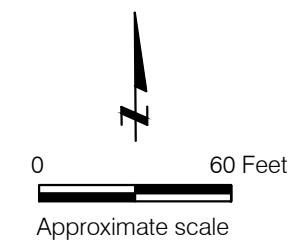
EXPLANATION

- **D-1** Additional soil sampling location
- **B-36** Pre-excavation soil sampling location by Langan Treadwell Rollo, May 2015 - September 2015
- Site boundary
- One or more detected concentrations exceed the Residential Environmental Screening Levels (ESL)
- Detected concentrations are less than the Residential ESLs
- Outline of Lead-Impacted area

Notes:

1. Soil samples from B-1, 10, 20, 30, 36-43 were analyzed for Total petroleum hydrocarbons (TPH) as gasoline, TPH as diesel, TPH as motor oil, polycyclic aromatic hydrocarbons (PAHs), volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), PCBs, pesticides, and CAM-17 Metals.
2. Soil samples from RB-6 were analyzed for TPH as gasoline, TPH as diesel, benzene, ethylbenzene, toluene, xylenes, MTBE, and naphthalene only.
3. Soil samples from S-1 to S-9 were analyzed for TPH as gasoline, TPH as diesel, TPH as motor oil, BTEX, MTBE, and benzo(a)pyrene.
4. Residential ESLs for soil are from Table A-1 - Environmental Screening Levels for Shallow Soil (<3 meters), Residential Land Use, where groundwater is a current or potential drinking water resource, San Francisco Regional Water Quality Control Board, December 2013.
5. Future site grade is planned to be 52 feet above Mean Sea Level (MSL), so soil samples collected at elevations greater than 52 feet above MSL are projected to be removed.
6. Arsenic is not included in the screening shown on this figure because naturally occurring arsenic exceeds the Residential ESL. Arsenic concentrations detected in site soil were within the range of anticipated naturally occurring arsenic concentrations.

aMSL = above Mean Sea Level



3093 BROADWAY Oakland, California		
ADDITIONAL SOIL SAMPLING LOCATIONS		
Date 04/06/16	Project No. 731637001	Figure 2
LANGAN TREADWELL ROLLO		

Reference: Base map from a drawing titled "C2.0 Conceptual Grading Plan," by BKF, dated 08/19/14 and "First Floor Plan," by Van Tilburg, Babvard & Soderbergh, AIA, dated 10/03/14.

**ATTACHMENT A
PERMIT COPIES**

Alameda County Public Works Agency - Water Resources Well Permit



Public Works Agency
—Alameda County—

399 Elmhurst Street
Hayward, CA 94544-1395
Telephone: (510)670-6633 Fax:(510)782-1939

Application Approved on: 03/16/2016 By jamesy

Permit Numbers: W2016-0149
Permits Valid from 03/18/2016 to 03/18/2016

Application Id: 1457130556982
Site Location: 3093 Broadway

City of Project Site:Oakland

Oakland, CA. 94611

Project Start Date: 03/18/2016

Completion Date:03/18/2016

Assigned Inspector: Contact Lindsay Furuyama at (925) 956-2311 or Lfuruyama@groundzonees.com

Applicant: Langan Treadwell Rollo - Tyler Houghton
555 Montgomery Street, Suite 1300, San Francisco, CA 94111

Phone: 415-955-5200 x5255

Property Owner: 3093 Broadway Holdings, LLC.
2235 3rd street. suite E202, San Francisco, CA 94107

Phone: --

Client: ** same as Property Owner **

Contact: Robert Schultz

Phone: --

Cell: --

Receipt Number: WR2016-0099 Total Due: \$265.00
Payer Name : Robert W Schultz Total Amount Paid: \$265.00
Paid By: MC PAID IN FULL

Works Requesting Permits:

Borehole(s) for Investigation-Environmental/Monitorinig Study - 4 Boreholes

Driller: Cascade Drilling, LP - Lic #: 938110 - Method: DP

Work Total: \$265.00

Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2016-0149	03/16/2016	06/16/2016	4	4.00 in.	7.50 ft

Specific Work Permit Conditions

1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site. The containers shall be clearly labeled to the ownership of the container and labeled hazardous or non-hazardous.
2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.
3. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.
4. Applicant shall contact assigned inspector listed on the top of the permit at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.
5. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of \$500.00.

Alameda County Public Works Agency - Water Resources Well Permit

6. Electronic Reporting Regulations (Chapter 30, Division 3 of Title 23 & Division 3 of Title 27, CCR) require electronic submission of any report or data required by a regulatory agency from a cleanup site. Submission dates are set by a Regional Water Board or by a regulatory agency. Once a report/data is successfully uploaded, as required, you have met the reporting requirement (i.e. the compliance measure for electronic submittals is the actual upload itself). The upload date should be on or prior to the regulatory due date.

7. NOTE:

Under California laws, the owner/operator are responsible for reporting the contamination to the governmental regulatory agencies under Section 25295(a). The owner/operator is liable for civil penalties under Section 25299(a)(4) and criminal penalties under Section 25299(d) for failure to report a leak. The owner/operator is liable for civil penalties under Section 25299(b)(4) for knowing failure to ensure compliance with the law by the operator. These penalty provisions do not apply to a potential buyer.

8. Prior to any drilling activities onto any public right-of-ways, it shall be the applicants responsibilities to contact and coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits required for that City or to the County and follow all City or County Ordinances. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County a Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

9. Permit is valid only for the purpose specified herein. No changes in construction procedures, as described on this permit application. Boreholes shall not be converted to monitoring wells, without a permit application process.

**ATTACHMENT B
BORING LOGS**

PROJECT:

3093 BROADWAY
Oakland, California

Log of Boring D-1

PAGE 1 OF 1

Boring location: See Site Plan, Figure 2

Logged by: T. Houghton
Drilled By: Cascade

Date started: 3/18/16

Date finished: 3/18/16

Drilling method: Direct Push

Hammer weight/drop: NA

Hammer type: NA

Sampler: Dual Tube

DEPTH (feet)	SAMPLES				PID (ppm)	LITHOLOGY	MATERIAL DESCRIPTION
	Sample Number	Sample	Blow Count	Recovery (inches)			
1						CL	3 inches asphalt
2						ML	GRAVELLY CLAY (CL) 30 percent gravel, dark brown, stiff, moist, medium plasticity, subrounded gravel, no odor
3							CLAYEY SILT (ML) light brown, stiff, moist, low plasticity, no odor
4							
5							
6				36"/36"	0.0		
7							
8	D-1-7.5				0.0		
9							
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Boring terminated at a depth of 8 feet below ground surface.
Boring backfilled with grout.
Groundwater not encountered during drilling.

LANGAN TREADWELL ROLLO

Project No.:
731637001

Figure:
A-1

TEST ENVIRONMENTAL INCHES 731637001 ENVIRONMENTAL - D-1 TO D-4.GPJ T&R.GDT 7/29/16

PROJECT:

3093 BROADWAY
Oakland, California

Log of Boring D-2

PAGE 1 OF 1

Boring location: See Site Plan, Figure 2

Logged by: T. Houghton
Drilled By: Cascade

Date started: 3/18/16

Date finished: 3/18/16

Drilling method: Direct Push

Hammer weight/drop: NA

Hammer type: NA

Sampler: Dual Tube

DEPTH (feet)	SAMPLES				PID (ppm)	LITHOLOGY	MATERIAL DESCRIPTION
	Sample Number	Sample	Blow Count	Recovery (inches)			
1						CL	3 inches asphalt concrete
2							GRAVELLY CLAY (CL) 45 percent gravel, dark brown, stiff, moist, medium plasticity, subangular gravel, no odor
3							SANDY SILT with GRAVEL (SM) light brown, medium stiff, moist, low plasticity, subangular gravel
4						SM	
5							
6				36"/36"	0.0		
7				36"/36"	0.0		
8	D-2-7.5				0.0		
9							
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30							

Boring terminated at a depth of 8 feet below ground surface.
Boring backfilled with grout.
Groundwater not encountered during drilling.

LANGAN TREADWELL ROLLO

Project No.:
731637001

Figure:
A-2

TEST ENVIRONMENTAL INCHES 731637001 ENVIRONMENTAL - D-1 TO D-4.GPJ T&R.GDT 7/29/16

PROJECT:

3093 BROADWAY
Oakland, California

Log of Boring D-3

PAGE 1 OF 1

Boring location: See Site Plan, Figure 2

Logged by: T. Houghton
Drilled By: Cascade

Date started: 3/18/16

Date finished: 3/18/16

Drilling method: Direct Push

Hammer weight/drop: NA

Hammer type: NA

Sampler: Dual Tube

DEPTH (feet)	SAMPLES				PID (ppm)	LITHOLOGY	MATERIAL DESCRIPTION
	Sample Number	Sample	Blow Count	Recovery (inches)			
1						CL	4 inches asphalt
2						CL	GRAVELLY CLAY (CL) 40 percent gravel, dark brown, stiff, moist, low plasticity, subangular gravel, no odor
3						CL	CLAY (CL) light brown, soft, moist, medium plasticity, no odor
4							
5							
6						CL	SANDY CLAY (CL) 15 percent sand, light brown, stiff, moist, low plasticity, no odor
7				36"/36"	0.0		
8	D-3-7.5				0.0		
9							
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Boring terminated at a depth of 8 feet below ground surface.
Boring backfilled with grout.
Groundwater not encountered during drilling.

LANGAN TREADWELL ROLLO

Project No.: 731637001 Figure: A-3

TEST ENVIRONMENTAL INCHES 731637001 ENVIRONMENTAL - D-1 TO D-4.GPJ T&R.GDT 7/29/16

PROJECT:

3093 BROADWAY
Oakland, California

Log of Boring D-4

PAGE 1 OF 1

Boring location: See Site Plan, Figure 2

Logged by: T. Houghton
Drilled By: Cascade

Date started: 3/18/16

Date finished: 3/18/16

Drilling method: Direct Push

Hammer weight/drop: NA

Hammer type: NA

Sampler: Dual Tube

DEPTH (feet)	SAMPLES				PID (ppm)	LITHOLOGY	MATERIAL DESCRIPTION
	Sample Number	Sample	Blow Count	Recovery (inches)			
1						CL	3 inches asphalt
2						SM	GRAVELLY CLAY (CL) 15 percent gravel, 85 percent fines, dark brown, stiff, moist, low plasticity, no odor
3						SM	SILTY SAND (SM) 10 percent gravel, 60 percent sand, 30 percent fines, loose, moist, non plastic, subrounded gravel, no odor, fill with brick, occasional cobble
4						SC	SANDY CLAY (SC)
5						SM	10 percent gravel, 30 percent sand, 60 percent fines, light brown to gray, loose, wet, non plastic, no odor, fill, wet at 3.5 feet
6				35.5"	0.0	SM	SILTY SAND (SM) 10 percent gravel, 60 percent sand, 30 percent fines, gray to light brown, medium dense, wet, subrounded gravel, no odor
7				36"	0.0	SM	SILTY SAND (SM) 10 percent gravel, 50 percent sand, 40 percent fines, brown, dense, moist, subangular gravel, low plasticity, no odor
8	D-4-7.5						
9							
10							
11							
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Boring terminated at a depth of 8 feet below ground surface.
Boring backfilled with grout.
Groundwater comes to 2 feet below ground surface during drilling.

LANGAN TREADWELL ROLLO

Project No.:
731637001

Figure:
A-4

TEST ENVIRONMENTAL INCHES 731637001 ENVIRONMENTAL - D-1 TO D-4.GPJ T&R.GDT 7/29/16

**ATTACHMENT C
ANALYTICAL LABORATORY REPORT**



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1603953

Report Created for: Treadwell & Rollo

555 Montgomery St., Suite 1300
San Francisco, CA 94111

Project Contact: Robert Schultz

Project P.O.:

Project Name: 731637001; 3093 Broadway

Project Received: 03/18/2016

Analytical Report reviewed & approved for release on 03/21/2016 by:

Angela Rydelius,
Laboratory Manager

The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.





Glossary of Terms & Qualifier Definitions

Client: Treadwell & Rollo
Project: 731637001; 3093 Broadway
WorkOrder: 1603953

Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DLT	Dilution Test
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PDS	Post Digestion Spike
PDSD	Post Digestion Spike Duplicate
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
ST	Sorbent Tube
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)

Quality Control Qualifiers

F1	MS/MSD recovery and/or RPD is out of acceptance criteria; LCS validated the prep batch.
F8	MS/MSD recovery and/or RPD was out of acceptance criteria; PDS validated the prep batch. If PDS recovery was out of acceptance criteria, DLT validated the prep batch.
F9	MS/MSD recovery and/or RPD was out of acceptance criteria; DLT validated the prep batch.



Analytical Report

Client: Treadwell & Rollo
Date Received: 3/18/16 16:16
Date Prepared: 3/18/16
Project: 731637001; 3093 Broadway

WorkOrder: 1603953
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
D1	1603953-001A	Soil	03/18/2016 07:45	ICP-MS1	118267

Analytes	Result	RL	DF	Date Analyzed
Antimony	ND	0.50	1	03/21/2016 10:34
Arsenic	1.4	0.50	1	03/21/2016 10:34
Barium	110	5.0	1	03/21/2016 10:34
Beryllium	ND	0.50	1	03/21/2016 10:34
Cadmium	ND	0.25	1	03/21/2016 10:34
Chromium	34	0.50	1	03/21/2016 10:34
Cobalt	7.0	0.50	1	03/21/2016 10:34
Copper	13	0.50	1	03/21/2016 10:34
Lead	4.1	0.50	1	03/21/2016 10:34
Mercury	0.18	0.050	1	03/21/2016 10:34
Molybdenum	0.51	0.50	1	03/21/2016 10:34
Nickel	37	0.50	1	03/21/2016 10:34
Selenium	ND	0.50	1	03/21/2016 10:34
Silver	ND	0.50	1	03/21/2016 10:34
Thallium	ND	0.50	1	03/21/2016 10:34
Vanadium	30	0.50	1	03/21/2016 10:34
Zinc	40	5.0	1	03/21/2016 10:34

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	110	70-130	03/21/2016 10:34

Analyst(s): AC



Analytical Report

Client: Treadwell & Rollo
Date Received: 3/18/16 16:16
Date Prepared: 3/18/16
Project: 731637001; 3093 Broadway

WorkOrder: 1603953
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
D2	1603953-002A	Soil	03/18/2016 08:10	ICP-MS1	118267

Analytes	Result	RL	DF	Date Analyzed
Antimony	ND	0.50	1	03/21/2016 10:40
Arsenic	8.6	0.50	1	03/21/2016 10:40
Barium	100	5.0	1	03/21/2016 10:40
Beryllium	0.58	0.50	1	03/21/2016 10:40
Cadmium	ND	0.25	1	03/21/2016 10:40
Chromium	120	0.50	1	03/21/2016 10:40
Cobalt	7.3	0.50	1	03/21/2016 10:40
Copper	21	0.50	1	03/21/2016 10:40
Lead	4.3	0.50	1	03/21/2016 10:40
Mercury	0.11	0.050	1	03/21/2016 10:40
Molybdenum	ND	0.50	1	03/21/2016 10:40
Nickel	49	0.50	1	03/21/2016 10:40
Selenium	ND	0.50	1	03/21/2016 10:40
Silver	ND	0.50	1	03/21/2016 10:40
Thallium	ND	0.50	1	03/21/2016 10:40
Vanadium	57	0.50	1	03/21/2016 10:40
Zinc	43	5.0	1	03/21/2016 10:40

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	107	70-130	03/21/2016 10:40

Analyst(s): AC



Analytical Report

Client: Treadwell & Rollo
Date Received: 3/18/16 16:16
Date Prepared: 3/18/16
Project: 731637001; 3093 Broadway

WorkOrder: 1603953
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
D3	1603953-003A	Soil	03/18/2016 08:30	ICP-MS1	118267

Analytes	Result	RL	DF	Date Analyzed
Antimony	0.71	0.50	1	03/21/2016 10:46
Arsenic	7.2	0.50	1	03/21/2016 10:46
Barium	230	5.0	1	03/21/2016 10:46
Beryllium	1.0	0.50	1	03/21/2016 10:46
Cadmium	0.25	0.25	1	03/21/2016 10:46
Chromium	77	0.50	1	03/21/2016 10:46
Cobalt	16	0.50	1	03/21/2016 10:46
Copper	33	0.50	1	03/21/2016 10:46
Lead	12	0.50	1	03/21/2016 10:46
Mercury	ND	0.050	1	03/21/2016 10:46
Molybdenum	0.50	0.50	1	03/21/2016 10:46
Nickel	160	0.50	1	03/21/2016 10:46
Selenium	ND	0.50	1	03/21/2016 10:46
Silver	ND	0.50	1	03/21/2016 10:46
Thallium	ND	0.50	1	03/21/2016 10:46
Vanadium	63	0.50	1	03/21/2016 10:46
Zinc	75	5.0	1	03/21/2016 10:46

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	106	70-130	03/21/2016 10:46

Analyst(s): AC



Analytical Report

Client: Treadwell & Rollo
Date Received: 3/18/16 16:16
Date Prepared: 3/18/16
Project: 731637001; 3093 Broadway

WorkOrder: 1603953
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
D4	1603953-004A	Soil	03/18/2016 09:00	ICP-MS1	118267

Analytes	Result	RL	DF	Date Analyzed
Antimony	ND	0.50	1	03/21/2016 10:52
Arsenic	4.0	0.50	1	03/21/2016 10:52
Barium	64	5.0	1	03/21/2016 10:52
Beryllium	ND	0.50	1	03/21/2016 10:52
Cadmium	ND	0.25	1	03/21/2016 10:52
Chromium	66	0.50	1	03/21/2016 10:52
Cobalt	8.3	0.50	1	03/21/2016 10:52
Copper	16	0.50	1	03/21/2016 10:52
Lead	7.5	0.50	1	03/21/2016 10:52
Mercury	0.053	0.050	1	03/21/2016 10:52
Molybdenum	7.9	0.50	1	03/21/2016 10:52
Nickel	37	0.50	1	03/21/2016 10:52
Selenium	ND	0.50	1	03/21/2016 10:52
Silver	ND	0.50	1	03/21/2016 10:52
Thallium	ND	0.50	1	03/21/2016 10:52
Vanadium	50	0.50	1	03/21/2016 10:52
Zinc	23	5.0	1	03/21/2016 10:52

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	110	70-130	03/21/2016 10:52

Analyst(s): AC



Analytical Report

Client: Treadwell & Rollo
Date Received: 3/18/16 16:16
Date Prepared: 3/18/16
Project: 731637001; 3093 Broadway

WorkOrder: 1603953
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
D1	1603953-001A	Soil	03/18/2016 07:45	GC7	118260

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	03/18/2016 18:53
MTBE	---	0.050	1	03/18/2016 18:53
Benzene	ND	0.0050	1	03/18/2016 18:53
Toluene	ND	0.0050	1	03/18/2016 18:53
Ethylbenzene	ND	0.0050	1	03/18/2016 18:53
Xylenes	ND	0.015	1	03/18/2016 18:53

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	94	70-130	03/18/2016 18:53

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
D2	1603953-002A	Soil	03/18/2016 08:10	GC7	118260

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	03/18/2016 19:23
MTBE	---	0.050	1	03/18/2016 19:23
Benzene	ND	0.0050	1	03/18/2016 19:23
Toluene	ND	0.0050	1	03/18/2016 19:23
Ethylbenzene	ND	0.0050	1	03/18/2016 19:23
Xylenes	ND	0.015	1	03/18/2016 19:23

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	101	70-130	03/18/2016 19:23

Analyst(s): IA

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Date Received: 3/18/16 16:16
Date Prepared: 3/18/16
Project: 731637001; 3093 Broadway

WorkOrder: 1603953
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
D3	1603953-003A	Soil	03/18/2016 08:30	GC7	118287

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	03/18/2016 19:53
MTBE	---	0.050	1	03/18/2016 19:53
Benzene	ND	0.0050	1	03/18/2016 19:53
Toluene	ND	0.0050	1	03/18/2016 19:53
Ethylbenzene	ND	0.0050	1	03/18/2016 19:53
Xylenes	ND	0.015	1	03/18/2016 19:53

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	100	70-130	03/18/2016 19:53

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
D4	1603953-004A	Soil	03/18/2016 09:00	GC7	118287

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	03/18/2016 20:23
MTBE	---	0.050	1	03/18/2016 20:23
Benzene	ND	0.0050	1	03/18/2016 20:23
Toluene	ND	0.0050	1	03/18/2016 20:23
Ethylbenzene	ND	0.0050	1	03/18/2016 20:23
Xylenes	ND	0.015	1	03/18/2016 20:23

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	102	70-130	03/18/2016 20:23

Analyst(s): IA



Analytical Report

Client: Treadwell & Rollo
Date Received: 3/18/16 16:16
Date Prepared: 3/18/16
Project: 731637001; 3093 Broadway

WorkOrder: 1603953
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
D1	1603953-001A	Soil	03/18/2016 07:45	GC9b	118235

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	03/18/2016 23:32
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/18/2016 23:32

Surrogates	REC (%)	Limits	Date Analyzed
C9	95	70-130	03/18/2016 23:32

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
D2	1603953-002A	Soil	03/18/2016 08:10	GC9a	118235

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	03/19/2016 21:30
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/19/2016 21:30

Surrogates	REC (%)	Limits	Date Analyzed
C9	93	70-130	03/19/2016 21:30

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
D3	1603953-003A	Soil	03/18/2016 08:30	GC9a	118235

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	03/19/2016 20:13
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/19/2016 20:13

Surrogates	REC (%)	Limits	Date Analyzed
C9	92	70-130	03/19/2016 20:13

Analyst(s): TK

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Date Received: 3/18/16 16:16
Date Prepared: 3/18/16
Project: 731637001; 3093 Broadway

WorkOrder: 1603953
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
D4	1603953-004A	Soil	03/18/2016 09:00	GC9a	118235

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	03/19/2016 15:03
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/19/2016 15:03

Surrogates	REC (%)	Limits	Date Analyzed
C9	92	70-130	03/19/2016 15:03

Analyst(s): TK



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 3/18/16
Date Analyzed: 3/18/16
Instrument: ICP-MS3
Matrix: Soil
Project: 731637001; 3093 Broadway

WorkOrder: 1603953
BatchID: 118267
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-118267
 1603932-004AMS/MSD

QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Antimony	ND	50.1	0.50	50	-	100	75-125
Arsenic	ND	51.4	0.50	50	-	103	75-125
Barium	ND	518	5.0	500	-	104	75-125
Beryllium	ND	51.5	0.50	50	-	103	75-125
Cadmium	ND	50.9	0.25	50	-	102	75-125
Chromium	ND	51.4	0.50	50	-	103	75-125
Cobalt	ND	49.1	0.50	50	-	98	75-125
Copper	ND	52.9	0.50	50	-	106	75-125
Lead	ND	49.8	0.50	50	-	100	75-125
Mercury	ND	1.22	0.050	1.25	-	98	75-125
Molybdenum	ND	47.8	0.50	50	-	96	75-125
Nickel	ND	52.6	0.50	50	-	105	75-125
Selenium	ND	51.4	0.50	50	-	103	75-125
Silver	ND	53.4	0.50	50	-	107	75-125
Thallium	ND	48.3	0.50	50	-	97	75-125
Vanadium	ND	50.8	0.50	50	-	102	75-125
Zinc	ND	517	5.0	500	-	103	75-125
Surrogate Recovery							
Terbium	490	494		500	98	99	70-130



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 3/18/16
Date Analyzed: 3/18/16
Instrument: ICP-MS3
Matrix: Soil
Project: 731637001; 3093 Broadway

WorkOrder: 1603953
BatchID: 118267
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-118267
 1603932-004AMS/MSD

QC Summary Report for Metals

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Antimony	46.7	44.8	50	0.7520	92	88	75-125	4.04	20
Arsenic	50.3	49.7	50	3.595	93	92	75-125	1.24	20
Barium	596	570	500	114.5	96	91	75-125	4.48	20
Beryllium	48.0	46.5	50	ND	95	93	75-125	3.03	20
Cadmium	47.3	46.1	50	0.5794	93	91	75-125	2.53	20
Chromium	147	149	50	117.3	59,F8	63,F8	75-125	1.42	20
Cobalt	51.3	51.7	50	9.206	84	85	75-125	0.855	20
Copper	80.8	103	50	37.80	86	131,F8	75-125	24.4,F8	20
Lead	178	189	50	327.7	0,F9	0,F9	75-125	NA	20
Mercury	1.32	1.27	1.25	0.1727	92	88	75-125	3.71	20
Molybdenum	47.1	45.6	50	2.722	89	86	75-125	3.30	20
Nickel	133	140	50	90.57	85	100	75-125	5.41	20
Selenium	46.7	45.2	50	ND	93	90	75-125	3.26	20
Silver	48.5	47.3	50	ND	97	94	75-125	2.61	20
Thallium	44.4	42.8	50	ND	89	86	75-125	3.74	20
Vanadium	83.4	80.7	50	36.17	94	89	75-125	3.27	20
Zinc	673	585	500	160.6	102	85	75-125	13.9	20

Surrogate Recovery

Terbium	464	447	500		93	89	70-130	3.82	20
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Analyte	PDS Result	SPK Val	SPKRef Val	PDS %REC	PDS Limits
Chromium	164	50	117.3	93	80-120
Copper	86.7	50	37.80	98	80-120

Analyte	DLT Result	DLTRef Val	RPD	RPD Limit
Lead	330	327.7	0.654	10



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 3/18/16
Date Analyzed: 3/20/16 - 3/21/16
Instrument: GC19, GC7
Matrix: Soil
Project: 731637001; 3093 Broadway

WorkOrder: 1603953
BatchID: 118260
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-118260

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.509	0.40	0.60	-	85	70-130
MTBE	ND	0.0853	0.050	0.10	-	85	70-130
Benzene	ND	0.102	0.0050	0.10	-	102	70-130
Toluene	ND	0.0953	0.0050	0.10	-	95	70-130
Ethylbenzene	ND	0.106	0.0050	0.10	-	106	70-130
Xylenes	ND	0.341	0.015	0.30	-	114	70-130
Surrogate Recovery							
2-Fluorotoluene	0.116	0.127		0.10	116	127	70-130



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 3/18/16
Date Analyzed: 3/19/16 - 3/21/16
Instrument: GC3, GC7
Matrix: Soil
Project: 731637001; 3093 Broadway

WorkOrder: 1603953
BatchID: 118287
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-118287

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.615	0.40	0.60	-	103	70-130
MTBE	ND	0.0918	0.050	0.10	-	92	70-130
Benzene	ND	0.0975	0.0050	0.10	-	98	70-130
Toluene	ND	0.0993	0.0050	0.10	-	99	70-130
Ethylbenzene	ND	0.0965	0.0050	0.10	-	97	70-130
Xylenes	ND	0.291	0.015	0.30	-	97	70-130
Surrogate Recovery							
2-Fluorotoluene	0.104	0.0984		0.10	104	98	70-130



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 3/17/16
Date Analyzed: 3/18/16
Instrument: GC39A, GC9b
Matrix: Soil
Project: 731637001; 3093 Broadway

WorkOrder: 1603953
BatchID: 118235
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg
Sample ID: MB/LCS-118235
 1603899-001AMS/MSD

QC Report for SW8015B w/out SG Clean-Up

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	42.9	1.0	40	-	107	70-130
TPH-Motor Oil (C18-C36)	ND	-	5.0	-	-	-	-
Surrogate Recovery							
C9	26.3	23.7		25	105	95	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	109	92.8	40	23.59	212,F1	173,F1	70-130	15.7	30
Surrogate Recovery									
C9	26.1	26.7	25		104	107	70-130	2.21	30

1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1603953

ClientCode: TWRF

WaterTrax
 WriteOn
 EDF
 Excel
 EQulS
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:
 Robert Schultz
 Treadwell & Rollo
 555 Montgomery St., Suite 1300
 San Francisco, CA 94111
 (415) 955-5241 FAX: (415) 955-9041

Email: rschultz@Langan.com, thoughton@langan.
 cc/3rd Party:
 PO:
 ProjectNo: 731637001; 3093 Broadway

Bill to:
 Accounts Payable
 Treadwell & Rollo
 555 Montgomery St., Suite 1300
 San Francisco, CA 94111
 Langan_InvoiceCapture@concursoft.com

Requested TAT: 1 day;

Date Received: 03/18/2016
Date Logged: 03/18/2016

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
1603953-001	D1	Soil	3/18/2016 7:45	<input type="checkbox"/>	A	A	A										
1603953-002	D2	Soil	3/18/2016 8:10	<input type="checkbox"/>	A	A	A										
1603953-003	D3	Soil	3/18/2016 8:30	<input type="checkbox"/>	A	A	A										
1603953-004	D4	Soil	3/18/2016 9:00	<input type="checkbox"/>	A	A	A										

Test Legend:

1	CAM17MS_TTLC_S	2	G-MBTEX_S	3	TPH(DMO)_S	4	
5		6		7		8	
9		10		11		12	

Prepared by: Agustina Venegas

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days). Hazardous samples will be returned to client or disposed of at client expense.



WORK ORDER SUMMARY

Client Name: TREADWELL & ROLLO
Project: 731637001; 3093 Broadway
Comments:

QC Level: LEVEL 2
Client Contact: Robert Schultz
Contact's Email: rschultz@Langan.com, thoughton@langan.com

Work Order: 1603953
Date Logged: 3/18/2016

WaterTrax WriteOn EDF Excel Fax Email HardCopy ThirdParty J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1603953-001A	D1	Soil	SW8015B (Diesel & Motor Oil)	1	Acetate Liner	<input type="checkbox"/>	3/18/2016 7:45	1 day		<input type="checkbox"/>	
			SW8021B/8015Bm (G/MBTEX)			<input type="checkbox"/>		1 day			
			SW6020 (CAM 17)			<input type="checkbox"/>		1 day			
1603953-002A	D2	Soil	SW8015B (Diesel & Motor Oil)	1	Acetate Liner	<input type="checkbox"/>	3/18/2016 8:10	1 day		<input type="checkbox"/>	
			SW8021B/8015Bm (G/MBTEX)			<input type="checkbox"/>		1 day			
			SW6020 (CAM 17)			<input type="checkbox"/>		1 day			
1603953-003A	D3	Soil	SW8015B (Diesel & Motor Oil)	1	Acetate Liner	<input type="checkbox"/>	3/18/2016 8:30	1 day		<input type="checkbox"/>	
			SW8021B/8015Bm (G/MBTEX)			<input type="checkbox"/>		1 day			
			SW6020 (CAM 17)			<input type="checkbox"/>		1 day			
1603953-004A	D4	Soil	SW8015B (Diesel & Motor Oil)	1	Acetate Liner	<input type="checkbox"/>	3/18/2016 9:00	1 day		<input type="checkbox"/>	
			SW8021B/8015Bm (G/MBTEX)			<input type="checkbox"/>		1 day			
			SW6020 (CAM 17)			<input type="checkbox"/>		1 day			

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).
 - MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.

1603953

- 555 Montgomery Street, Suite 1300, San Francisco, CA 94111 Ph: 415.955.9040/Fax: 415.955.9041
- 501 14th Street, Third Floor, Oakland CA 94612 Ph: 510.874.4500/Fax: 510.874.4507
- 777 Campus Commons Road, Suite 200, Sacramento, CA 95825 Ph: 916.565.7412/Fax: 916.565.7413

Site Name: 3093 Broadway
 Job Number: 731637001
 Project Manager/Contact: Robert Schultz
 Samplers: Tyler Houghton
 Recorder (Signature Required): [Signature]

Turnaround Time
24 hr.

Field Sample Identification No.	Date	Time	Lab Sample No.	Matrix			No. Containers & Preservative					Analysis Requested		Remarks	
				Soil	Water	Other	HCL	H ₂ SO ₄	HNO ₃	Ice	Other	Silica gel clean-up	Hold		
D1	3/18/16	0745		X											
D2		0810		X											
D3		0830		X											
D4	3/18/16	0900		X											
Relinquished by: (Signature) <u>[Signature]</u>				Date <u>3/18/16</u>		Time		Received by: (Signature) <u>[Signature]</u>				Date <u>3-18-16</u>		Time <u>1345</u>	
Relinquished by: (Signature) <u>[Signature]</u>				Date <u>3-18-16</u>		Time <u>1430</u>		Received by: (Signature) <u>[Signature]</u>				Date <u>3/18/16</u>		Time <u>1430</u>	
Relinquished by: (Signature)				Date		Time		Received by Lab: (Signature)				Date		Time	
Sent to Laboratory (Name): <u>McC Campbell</u>								Method of Shipment <input type="checkbox"/> Lab courier <input type="checkbox"/> Fed Ex <input type="checkbox"/> Airborne <input type="checkbox"/> UPS <input type="checkbox"/> Hand Carried <input type="checkbox"/> Private Courier (Co. Name)							

White Copy - Original

Yellow Copy - Laboratory

Pink Copy - Field

COC Number: **15364**



Sample Receipt Checklist

Client Name: **Treadwell & Rollo**
 Project Name: **731637001; 3093 Broadway**
 WorkOrder No: **1603953** Matrix: Soil
 Carrier: Bernie Cummins (MAI Courier)

Date and Time Received: **3/18/2016 14:30**
 Date Logged: **3/18/2016**
 Received by: **Agustina Venegas**
 Logged by: **Agustina Venegas**

Chain of Custody (COC) Information

Chain of custody present? Yes No
 Chain of custody signed when relinquished and received? Yes No
 Chain of custody agrees with sample labels? Yes No
 Sample IDs noted by Client on COC? Yes No
 Date and Time of collection noted by Client on COC? Yes No
 Sampler's name noted on COC? Yes No

Sample Receipt Information

Custody seals intact on shipping container/cooler? Yes No NA
 Shipping container/cooler in good condition? Yes No
 Samples in proper containers/bottles? Yes No
 Sample containers intact? Yes No
 Sufficient sample volume for indicated test? Yes No

Sample Preservation and Hold Time (HT) Information

All samples received within holding time? Yes No
 Sample/Temp Blank temperature Temp: 2.9°C NA
 Water - VOA vials have zero headspace / no bubbles? Yes No NA
 Sample labels checked for correct preservation? Yes No
 pH acceptable upon receipt (Metal: <2; 522: <4; 218.7: >8)? Yes No NA
 Samples Received on Ice? Yes No

(Ice Type: WET ICE)

UCMR3 Samples:

Total Chlorine tested and acceptable upon receipt for EPA 522? Yes No NA
 Free Chlorine tested and acceptable upon receipt for EPA 218.7, 300.1, 537, 539? Yes No NA

* NOTE: If the "No" box is checked, see comments below.

 Comments: