



27 July 2017
Project 731641601

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By Alameda County Environmental Health 9:22 am, Aug 02, 2017

Mr. Mark Detterman, PG, CEG
Senior Hazardous Materials Specialist
Alameda County Health Care Services Agency
Environmental Health Department
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

Subject: Remediation Progress Report
2302 Valdez Street
Oakland, California
Alameda County SCP Case No. RO0003149
Langan Project: 731641601

Dear Mr. Detterman:

I have read and acknowledge the content, recommendations and/or conclusions contained in the attached document submitted on my behalf to ACDEH's FTP server and the SWRCB's GeoTracker website.

Sincerely yours,

Brian Pianca
Vice President
CRP / WP Alta Waverly Owner, LLC

555 Montgomery Street, Suite 1300 San Francisco, CA 94111 T: 415.955.5200 F: 415.955.5201

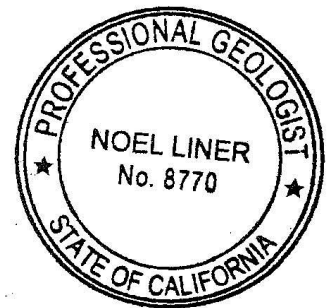
TO: Mr. Mark Detterman, PG, CEG – Alameda County Department of Environmental Health Services

FROM: Peter J. Cusack – Langan Engineering and Environmental Services
Noel Liner, PG – Langan Engineering and Environmental Services
Karianne Staehlin – Langan Engineering and Environmental Services

DATE: 27 July 2017

PROJECT: Alta Waverly
2302 Valdez Street
Oakland, California
Langan Project No.: 731641601
Alameda County SCP Case No.: RO00031498

SUBJECT: Remediation Progress Report
RO3149_EX_R_2017-07-27



On behalf of WP West Acquisitions, LLC, Langan Engineering and Environmental Services (Langan) is pleased to present this technical memorandum summarizing the recent environmental activities for the Alta Waverly development project at 2302 Valdez Street (Site) in Oakland, California (Figure 1). Please note that this memorandum is merely a summary of recent environmental Site activities and precedes our more detailed Soil Management Completion Report (SMCR), to be completed prior to the completion of all Site development activities, and submitted to Alameda County Department of Environmental Health Services (ACEH).

The SMCR will present a chronology of the construction events, a summary of analytical data, a copy of all manifests from the Site, and a description of all soil and groundwater management activities at the Site. The report will also contain laboratory analytical results and figures, as appropriate, to provide detail regarding the amount and type of contamination encountered during various activities. The report will also summarize any residual contaminants that were left on the Site after completion of redevelopment activities and document that soil handling procedures were implemented in accordance with the Soil and Groundwater Management Plan (SGMP).

SITE BACKGROUND

The Site is bound by Valdez Street to the west, Waverly Street to the east, 23rd Street and an existing nine-story parking garage to the south, and residential buildings and parking lots to the north (Figure 2). The Site is T-shaped, measuring approximately 350 feet along Valdez Street, approximately 115 feet along 23rd Street, and approximately 100 feet along Waverly Street. The Site is currently an active construction site.

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Remediation Progress Report
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The Site was previously occupied by the Oakland Tribune Garage facility, which contained three service bays with hydraulic lifts for vehicle repair, located on the eastern side of the building. A gasoline dispensing pump was formerly located near the center of the building; and a floor sump, presumably used to drain fluids from cleaning the floors, in the northeastern corner of the building. The sump was reportedly removed and sealed in 1988. In addition, two underground storage tanks (USTs) (one 8,000-gallon gasoline tank and one 750-gallon waste oil tank) previously located beneath the Valdez Street sidewalk, directly outside of the western side of the building, were removed in February 1988.

SITE DEVELOPMENT PLAN

The proposed development plan consists of constructing a mixed-use development of the Site, consisting of below grade parking, street level commercial space, and upper floor residential units which will cover the entire property. The proposed structure is a seven-story, mixed-use (retail and residential) building over a partially below-grade parking level. Residential parking will be below grade along Valdez Street, with an at-grade entrance along Waverly Street. During Site construction, soil will be excavated to approximately 14 feet below ground surface (bgs) with a deeper excavation (approximately 4 feet) for the elevator pit.

SOIL AND GROUNDWATER MANAGEMENT PLAN

Langan's recent SGMP dated 29 January 2016 was prepared for the Site to address soil and groundwater management practices and procedures to be employed during Site development activities. The SGMP was developed based on the results of previous investigations conducted at the Site, and based on Site development plans prepared by Pyatok Architect and Urban Design dated 12 October 2015.

The SGMP summarized the Site's regulatory history, including the removal of former USTs and soil and groundwater sampling from groundwater monitoring wells installed across the Site, and subsequent monitoring activities. The SGMP also summarized the results of Langan's previous subsurface investigations, which indicate that the fill material underlying the Site contains elevated levels of petroleum hydrocarbons and heavy metals and will need to be disposed off-Site at Class I and Class II regulated landfills. Because of the Site's documented history with soil and groundwater contamination, Langan's SGMP also proposed to conduct verification soil sampling. The proposed verification soil sampling would consist of collecting both perimeter sidewall samples and confirmation bottom samples from the Site's finished grade excavation to verify that the lateral and vertical extent of the removal action meets the remedial action goals.

Upon reviewing Langan's SGMP and previous reports, ACEH granted conditional approval of the SGMP for implementation in a letter dated 26 February 2016.

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RECENT ENVIRONMENTAL ACTIVITIES

Groundwater Monitoring Well Abandonment

Prior to Site development activities and excavation, a total of seven active groundwater monitoring wells were located on Site. Groundwater monitoring wells MW-2 through MW-7 were installed by others in November 2010 and MW-10 was installed by Langan in February 2015. It should be noted that in previous reports, by Langan, monitoring well MW-5 could not be located and was believed to have been abandoned. However, subsequent to the demolition of the previous Oakland Tribune Garage facility and the Site's concrete slabs and asphalt-paved surfaces, groundwater monitoring well MW-5 was located, and had not been properly abandoned.

In April 2016, all seven groundwater monitoring wells were decommissioned after approval from ACEH and with an Alameda County Public Water Agency (ACPWA) permit and under the oversight of an ACPWA inspector. Approximate locations of the former groundwater monitoring wells, decommissioned by Langan, are shown on Figure 2.

Soil Segregation and Off-Site Disposal

Langan's previous subsurface investigations indicated that the fill material underlying the Site contains elevated levels of petroleum hydrocarbons and heavy metals and will need to be disposed off-Site at Class I and Class II regulated landfills. The approximate location and extent of Class I hazardous material, including both Federal RCRA and State of California non-RCRA, is shown on Figure 2.

On 28 April 2016, all Federal RCRA hazardous material was excavated, loaded directly into trucks, transported and disposed off-Site. From 29 April 2016 through 3 May 2016, all State of California non-RCRA hazardous material was excavated, loaded directly into trucks, transported and disposed off-Site. Subsequent to the removal of all hazardous material, mass excavation and removal of the remaining non-hazardous material was essentially completed in mid-June 2016.

Verification Soil Sampling

As required by ACEH and previously outlined in Langan's SGMP, verification soil sampling was conducted on-Site, to verify that the lateral and vertical extent of the removal actions met the previously set remedial action goals.

Perimeter Sidewall Sampling

Perimeter sidewall sampling was conducted from April 2016 until June 2016. The sampling consisted of collecting Site perimeter soil samples from the pre-drill holes drilled during the soldier pile installation activities. As shown on Figure 3, a total of 24 perimeter sidewall samples (SP-3 through SP-130) were collected from the respective pre-drilled soldier pile

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installation holes, outlined by the shoring plans. All soil samples were submitted to McCampbell Analytical, Inc. (McCampbell), a state-certified analytical laboratory in Pittsburg, California under appropriate chain-of-custody documentation and analyzed for the following:

- Total petroleum hydrocarbons (TPH) as gasoline (TPHg), TPH as diesel (TPHd), and TPH as motor oil (TPHmo) by EPA Method 8021/8015;
- Leaking underground fuel tank (LUFT) 5 metals by EPA Method 6020; and
- Total arsenic by EPA Method 6020.

The soil analytical results for non-metals are presented in Table 1 and were compared to the Site cleanup goals, previously established in the SGMP, and the San Francisco Bay Area Regional Water Quality Control Board (RWQCB) Tier 1 Environmental screening levels (ESLs) for soil. TPHg was detected at or above the method reporting limit (1.0 milligrams per kilogram (mg/kg)) in 3 of the 24 soil samples analyzed at concentrations ranging from 2.4 mg/kg to 200 mg/kg. TPHd was detected at or above the method reporting limit (1.0 mg/kg) in 3 of the 24 soil samples analyzed at concentrations ranging from 2.8 mg/kg to 760 mg/kg. TPHmo was detected at or above the method reporting limit (5.0 mg/kg) in 4 of the 24 soil samples analyzed at concentrations ranging from 15 mg/kg to 5,800 mg/kg. Based on these results, one sample (SP-26-7'), exceeds both the Site cleanup goals and the Tier 1 ESLs established for TPHg, TPHd, and TPHmo. One additional sample (SP-130-1.5') detected TPHmo at a concentration of 260 mg/kg, which exceeds the Site cleanup goal (100 mg/kg) but does not exceed the Tier 1 ESL (5,100 mg/kg).

The soil analytical results for metals are presented in Table 2 and were compared to the Site cleanup goals. Total arsenic was detected at or above the method reporting limit in each of the 24 soil samples analyzed, at concentrations ranging from 2.0 mg/kg to 8.4 mg/kg. Two samples (SP-17-7' and SP-18-10') detected total arsenic at concentrations of 6.2 mg/kg and 8.4 mg/kg, respectively. These detections exceed the established Site cleanup goal for arsenic (5.10 mg/kg), but are within background levels for the San Francisco Bay Area. Total lead was detected at or above the method reporting limit in each of the 24 soil samples analyzed, at concentrations ranging from 3.5 mg/kg to 230 mg/kg. One sample (SP-123-2.5') detected total lead at a concentration of 230 mg/kg, which exceeds the established Site cleanup goal for lead, 80 mg/kg. The remaining metal concentrations were within normal background ranges found in San Francisco Bay Area and did not exceed Site cleanup goals, where established.

Confirmation Bottom Sampling

Confirmation bottom sampling was conducted on 20 June 2016. The sampling consisted of collecting soil samples from the bottom of the Site's proposed grade excavation. As shown on Figure 3, a total of 24 confirmation bottom samples (C-1 through C-24) were collected from the bottom of the Site's excavation, based on an approximate 50 foot by 50 foot grid. All soil samples were submitted to McCampbell under appropriate chain-of-custody documentation and analyzed for the following:

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- TPHg, TPHd, and TPHmo by EPA Method 8021/8015;
- Total arsenic by EPA Method 6020
- Total chromium by EPA Method 6020; and
- Total lead by EPA Method 6020.

The soil analytical results for non-metals are presented in Table 3 and were compared to the Site cleanup goals, previously established in the SGMP, and the RWQCB Tier 1 ESLs for soil. TPHg was not detected at or above the method reporting limit (1.0 mg/kg) in any of the 24 samples analyzed. TPHd was detected at or above the method reporting limit (1.0 mg/kg) in 3 of the 24 soil samples analyzed at concentrations ranging from 1.7 mg/kg to 15 mg/kg, none of which exceed the cleanup goal, 100 mg/kg. TPHmo was detected at or above the method reporting limit (5.0 mg/kg) in 3 of the 24 soil samples analyzed at concentrations ranging from 6.3 mg/kg to 140 mg/kg. One sample (C-13) detected TPHmo at a concentration of 140 mg/kg, which exceeds the Site cleanup goal (100 mg/kg). However, at the time of sampling, location C-13 was reportedly not excavated to final grade. The area was resampled on 22 June 2016, after being excavated and graded to final depth. TPHmo was not detected at or above the method reporting limit (5.0 mg/kg) in the resampled area (C-13A).

The soil analytical results for metals are presented in Table 4 and were compared to the Site cleanup goals. Total arsenic was detected at or above the method reporting limit in each of the 24 soil samples analyzed, at concentrations ranging from 0.90 mg/kg to 10 mg/kg. Six of the 24 samples detected total arsenic concentrations that exceed the established Site cleanup goal for arsenic (5.10 mg/kg), but are within background levels for the San Francisco Bay Area.

If you have any questions after reviewing this report, please contact us at (415) 955-5200.

Tables:

Table 1	Soil Analytical Results for Non-Metals, Perimeter Sidewall Sampling
Table 2	Soil Analytical Results for Metals, Perimeter Sidewall Sampling
Table 3	Soil Analytical Results for Non-Metals, Confirmation Soil Sampling
Table 4	Soil Analytical Results for Metals, Confirmation Soil Sampling

Figures:

Figure 1	Site Location Map
Figure 2	Site Plan with Locations of Decommissioned Groundwater Monitoring Wells and Previous Extent of Hazardous Material
Figure 3	Site Plan with Verification Sampling Locations

Appendices:

Appendix A	Certified Analytical Reports and Chain-of-Custody Documentation
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TABLES

Table 1
Non-Metals Analytical Results in Soil
Perimeter Sidewall Sampling
Alta Waverly
Oakland, California

Langan Project: 731641601
 July 2017

Sample ID	Depth	Date Sampled	TPHg	TPHd	TPHmo
	(feet)		(mg/kg)		
SP-3-5.5'	5.5	4/28/16	< 1.0	< 1.0	< 5.0
SP-10-6'	6.0	4/28/16	< 1.0	< 1.0	< 5.0
SP-17-7'	7.0	4/28/16	< 1.0	< 1.0	< 5.0
SP-18-10'	10.0	4/28/16	< 1.0	< 1.0	< 5.0
SP-19-7'	7.0	4/28/16	2.4	2.8	15
SP-21-7'	7.0	4/28/16	2.4	< 1.0	< 5.0
SP-24-7'	7.0	4/27/16	< 1.0	< 1.0	< 5.0
SP-25-7'	7.0	4/28/16	< 1.0	< 1.0	< 5.0
SP-26-7'	7.0	4/28/16	200	760	5,800
SP-33-7'	7.0	4/28/16	< 1.0	< 1.0	< 5.0
SP-40-8'	8.0	5/3/16	< 1.0	< 1.0	< 5.0
SP-47-7'	7.0	5/5/16	< 1.0	< 1.0	< 5.0
SP-54-7'	7.0	5/15/16	< 1.0	< 1.0	< 5.0
SP-61-6.5'	6.5	5/6/16	< 1.0	< 1.0	< 5.0
SP-68-7'	7.0	5/9/16	< 1.0	< 1.0	< 5.0
SP-75-6'	6.0	5/10/16	< 1.0	< 1.0	< 5.0
SP-83-6.5'	6.5	5/12/16	< 1.0	< 1.0	< 5.0
SP-89-5'	5.0	5/19/16	< 1.0	< 1.0	< 5.0
SP-96-4.5'	4.5	5/24/16	< 1.0	< 1.0	< 5.0
SP-102-3'	3.0	5/24/16	< 1.0	< 1.0	< 5.0
SP-108-4'	4.0	5/27/16	< 1.0	< 1.0	< 5.0
SP-116-3'	3.0	6/2/16	< 1.0	< 1.0	< 5.0
SP-123-2.5'	2.5	6/2/16	< 1.0	< 1.0	16
SP-130-1.5'	1.5	6/2/16	< 1.0	9.4	260
Site Cleanup Goals			100	100	100
Tier 1 ESLs			100	230	5,100

Notes:

mg/kg - milligrams per kilograms

TPHg - Total Petroleum Hydrocarbons as Gasoline

TPHd - Total Petroleum Hydrocarbons as Diesel Range

TPHmo - Total Petroleum Hydrocarbons as Motor Oil

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

Bold - Detected concentration exceeds the established Site cleanup goals and/or the Tier 1 ESLs

Tier 1 ESLs - RWQCB Environmental Soil Screening Levels based on a generic conceptual site model designed for use at most sites. The Tier 1 ESL summary table is generally derived from the most conservative ESL for each compound (February 2016 [Rev.3])

Table 2
Metal Analytical Results in Soil
Perimeter Sidewall Sampling
Alta Waverly
Oakland, California

Langan Project: 731641601
 July 2017

Sample ID	Depth (feet)	Date Sampled	Arsenic	Cadmium	Chromium	Lead	Nickel	Zinc
	(feet)		(mg/kg)					
SP-3-5.5'	5.5	4/28/16	2.8	< 0.25	33	4.8	44	29
SP-10-6'	6.0	4/28/16	2.6	< 0.25	34	5.6	62	35
SP-17-7'	7.0	4/28/16	6.2	0.26	59	8.7	62	65
SP-18-10'	10.0	4/28/16	8.4	< 0.25	86	8.9	74	31
SP-19-7'	7.0	4/28/16	3.7	0.43	43	5.6	61	46
SP-21-7'	7.0	4/28/16	3.6	0.31	40	5.9	60	40
SP-24-7'	7.0	4/27/16	3.2	< 0.25	39	6.4	53	32
SP-25-7'	7.0	4/28/16	2.9	< 0.25	34	4.6	35	28
SP-26-7'	7.0	4/28/16	5.0	< 0.25	45	24	66	33
SP-33-7'	7.0	4/28/16	2.6	< 0.25	45	6.8	73	44
SP-40-8'	8.0	5/3/16	4.2	< 0.25	56	8.7	59	55
SP-47-7'	7.0	5/5/16	3.1	< 0.25	50	4.8	52	32
SP-54-7'	7.0	5/15/16	3.6	< 0.25	60	7.3	65	39
SP-61-6.5'	6.5	5/6/16	2.0	< 0.25	44	3.5	52	41
SP-68-7'	7.0	5/9/16	2.6	< 0.25	45	5.3	70	40
SP-75-6'	6.0	5/10/16	3.8	< 0.25	32	14	51	36
SP-83-6.5'	6.5	5/12/16	2.9	< 0.25	40	4.9	60	32
SP-89-5'	5.0	5/19/16	3.0	< 0.25	44	14	51	34
SP-96-4.5'	4.5	5/24/16	3.8	< 0.25	47	4.8	67	30
SP-102-3'	3.0	5/24/16	2.3	< 0.25	41	5.5	43	25
SP-108-4'	4.0	5/27/16	2.9	< 0.25	29	7.5	23	25
SP-116-3'	3.0	6/2/16	4.7	< 0.25	37	11	20	27
SP-123-2.5'	2.5	6/2/16	4.6	1.1	35	230	32	490
SP-130-1.5'	1.5	6/2/16	4.0	< 0.25	37	74	34	120
Background [Metal] in Bay Area Soils*			1.2-31	0.27-3.3	10-142	4.8-65	16-144	33-282
Site Cleanup Goals			5.10	NE	1,000	80	NE	NE
Hazardous Waste Criteria								
TTLIC	(mg/kg)		500	100	2,500	1,000	2,000	5,000
STLC	(mg/L)		5	1	--	--	20	250
TCLP	(mg/L)		5	1	--	--	--	--

Notes:

mg/kg - milligrams per kilograms

< 0.25 - Analyte was not detected above the laboratory reporting limit (0.25 mg/kg).

Bold - Detected concentration exceed Site cleanup goals

NE - No Site cleanup goal established

*Background concentration ranges of metals in Bay Area soils, Appendix A, Table A-2 from Environmental Resources Management. Feasibility Study, Hookston Station, Pleasant Hill, California. July 2006

TTLIC - California Total Threshold Limit Concentration - State hazardous waste criterion

STLC - California Soluble Threshold Limit Concentration

TCLP - Federal Toxicity Characteristic Leaching Procedure

Table 3
Non-Metals Analytical Results in Soil
Confirmation Soil Sampling
Alta Waverly
Oakland, California

Langan Project: 731641601
 July 2017

Sample ID	Date Sampled	TPHg	TPHd	TPHmo
		(mg/kg)		
C-1	06/20/16	< 1.0	< 1.0	< 5.0
C-2	06/20/16	< 1.0	< 1.0	< 5.0
C-3	06/20/16	< 1.0	< 1.0	< 5.0
C-4	06/20/16	< 1.0	< 1.0	< 5.0
C-5	06/20/16	< 1.0	< 1.0	< 5.0
C-6	06/20/16	< 1.0	< 1.0	< 5.0
C-7	06/20/16	< 1.0	< 1.0	< 5.0
C-8	06/20/16	< 1.0	< 1.0	< 5.0
C-9	06/20/16	< 1.0	< 1.0	< 5.0
C-10	06/20/16	< 1.0	< 1.0	< 5.0
C-11	06/20/16	< 1.0	< 1.0	< 5.0
C-12	06/20/16	< 1.0	< 1.0	< 5.0
C-13	06/20/16	< 1.0	13	140
C-13 A	06/22/16	–	–	< 5.0
C-14	06/20/16	< 1.0	< 1.0	< 5.0
C-15	06/20/16	< 1.0	< 1.0	< 5.0
C-16	06/20/16	< 1.0	< 1.0	< 5.0
C-17	06/20/16	< 1.0	< 1.0	< 5.0
C-18	06/20/16	< 1.0	1.7	6.3
C-19	06/20/16	< 1.0	< 1.0	< 5.0
C-20	06/20/16	< 1.0	< 1.0	< 5.0
C-21	06/20/16	< 1.0	< 1.0	< 5.0
C-22	06/20/16	< 1.0	< 1.0	< 5.0
C-23	06/20/16	< 1.0	< 1.0	< 5.0
C-24	06/20/16	< 1.0	15	53
Site Cleanup Goals		100	100	100
Tier 1 ESLs		100	230	5,100

Notes:

mg/kg - milligrams per kilograms

TPHg - Total Petroleum Hydrocarbons as Gasoline

TPHd - Total Petroleum Hydrocarbons as Diesel Range

TPHmo - Total Petroleum Hydrocarbons as Motor Oil

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

Bold - Detected concentrations exceeds Site cleanup goals

– Not analyzed

Tier 1 ESLs - RWQCB Environmental Soil Screening Levels based on a generic conceptual site model designed for use at most sites. The Tier 1 ESL summary table is generally derived from the most conservative ESL for each compound (February 2016 [Rev.3])

Table 4
Metal Analytical Results in Soil
Confirmation Soil Sampling
Alta Waverly
Oakland, California

Langan Project: 731641601
 July 2017

Sample ID	Date Sampled	Arsenic	Chromium	Lead
		(mg/kg)		
C-1	06/20/16	5.5	50	6.6
C-2	06/20/16	3.3	41	5.8
C-3	06/20/16	2.6	36	4.6
C-4	06/20/16	3.8	93	16
C-5	06/20/16	5.3	43	6.1
C-6	06/20/16	0.90	29	3.8
C-7	06/20/16	4.8	36	7.7
C-8	06/20/16	3.3	31	3.8
C-9	06/20/16	2.2	40	4.6
C-10	06/20/16	2.9	29	4.0
C-11	06/20/16	4.2	33	6.0
C-12	06/20/16	4.2	45	9.6
C-13	06/20/16	4.5	43	12
C-14	06/20/16	9.6	83	8.5
C-15	06/20/16	2.6	46	8.8
C-16	06/20/16	6.0	48	7.2
C-17	06/20/16	10	72	13
C-18	06/20/16	2.5	31	7.3
C-19	06/20/16	3.3	41	9.5
C-20	06/20/16	9.8	53	6.8
C-21	06/20/16	4.4	64	6.8
C-22	06/20/16	3.4	41	5.0
C-23	06/20/16	3.9	64	6.9
C-24	06/20/16	3.2	37	4.6
Background [Metal] in Bay Area Soils*		1.2-31	10-142	4.8-65
Site Cleanup Goals		5.10	1,000	80
Hazardous Waste Criteria				
TTL		500	2,500	1,000
STL		5	--	--
TCL		5	--	--

Notes:

mg/kg - milligrams per kilograms

Bold - Detected concentrations exceeds Site cleanup goals

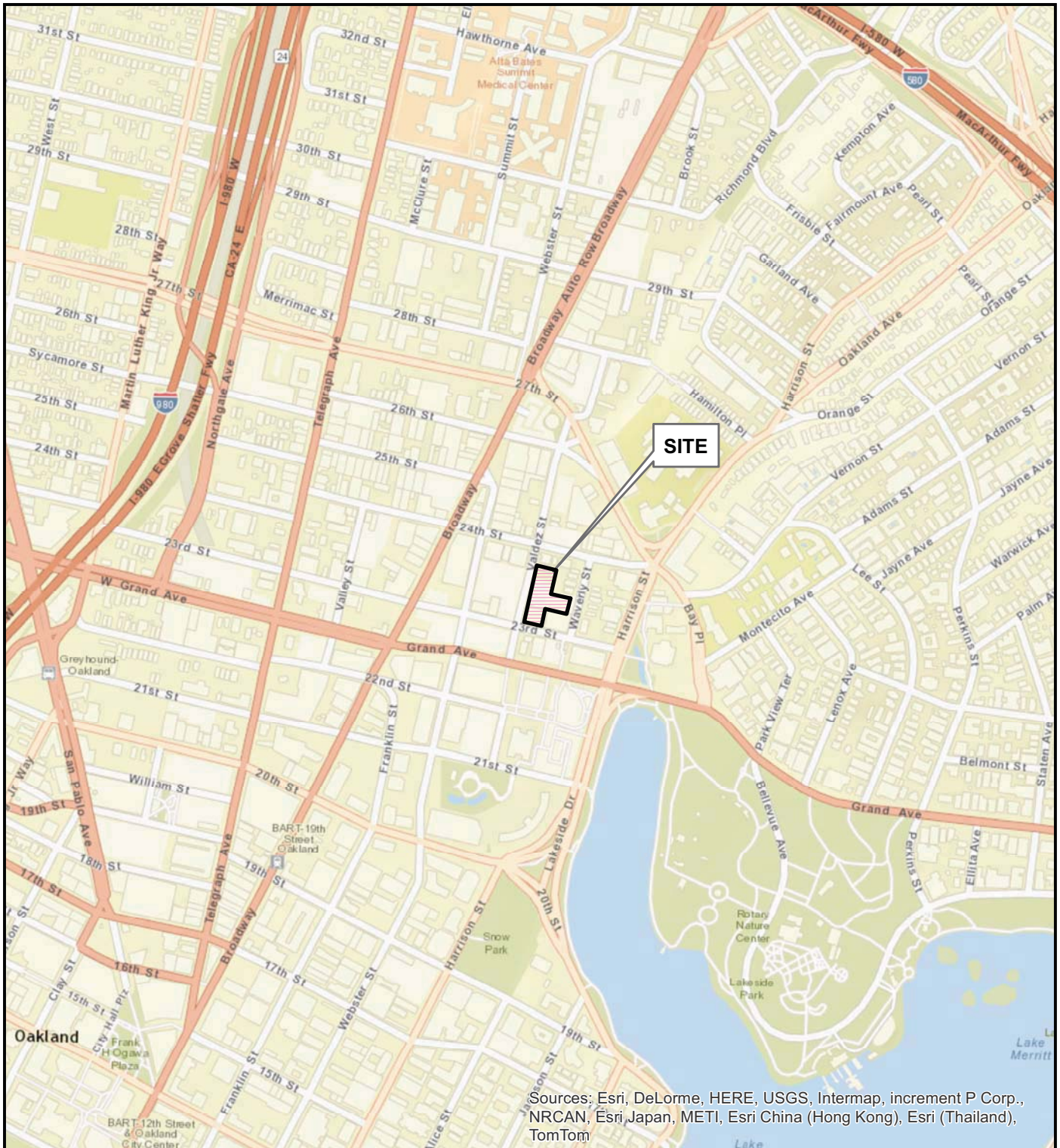
*Background concentration ranges of metals in Bay Area soils, Appendix A, Table A-2 from Environmental Resources Management. Feasibility Study, Hookston Station, Pleasant Hill, California. July 2006

TTL - California Total Threshold Limit Concentration - State hazardous waste criterion

STL - California Soluble Threshold Limit Concentration

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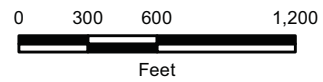
FIGURES



Sources: Esri, DeLorme, HERE, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom

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.



ALTA WAVERLY
2302 VALDZEZ STREET
 Oakland, California

SITE LOCATION MAP

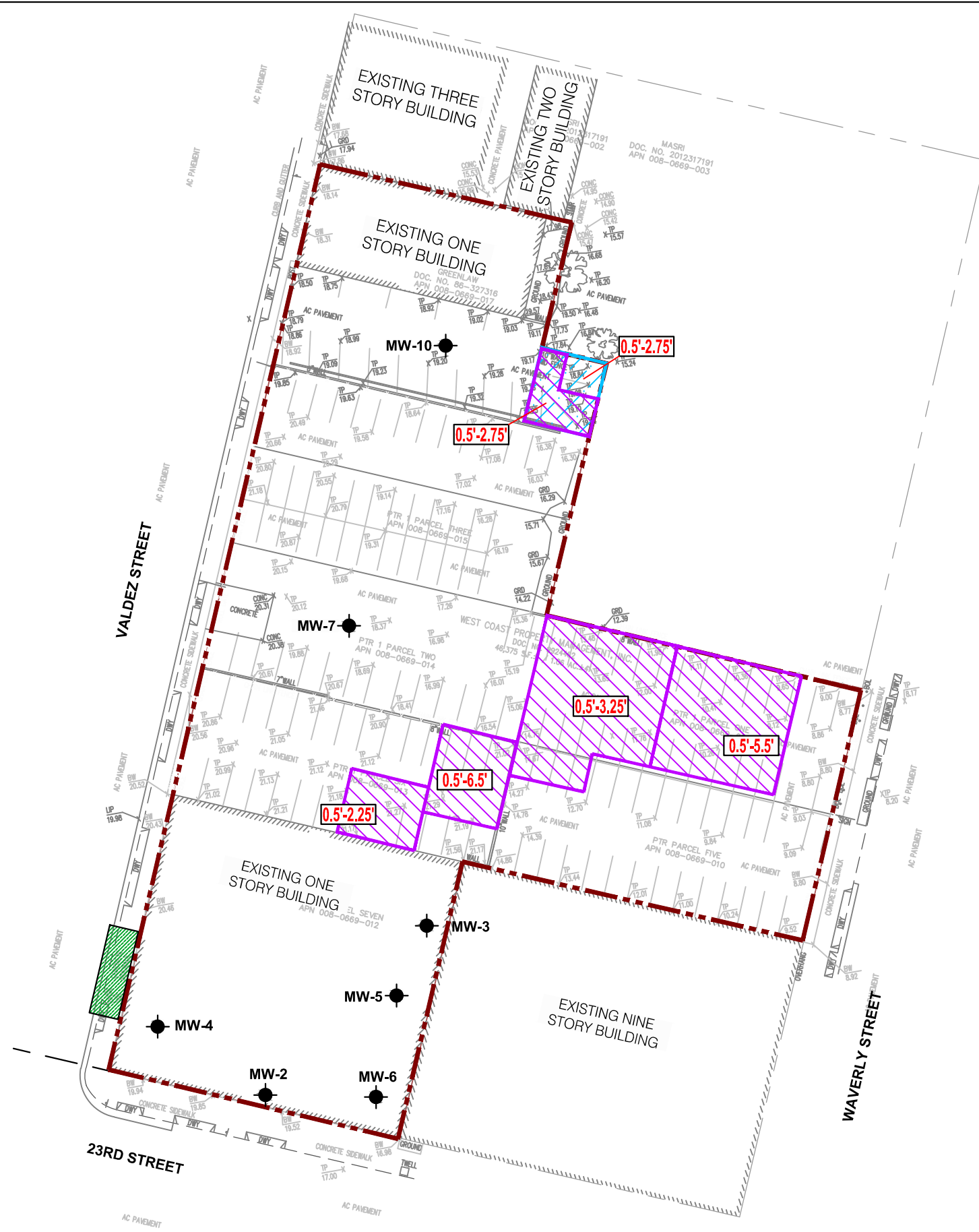
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Date 07/27/17







Project No. 731641601

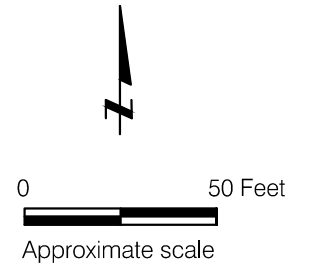
Figure 1

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EXPLANATION

-  MW-5 Approximate location of former groundwater monitoring well decommissioned by Langan Treadwell Rollo, April 2016
-  Approximate location of former USTs. Removed February 1988
-  Approximate extent of Federal RCRA Hazardous Material
-  Approximate extent of State of California Non-RCRA Hazardous Material
-  0.5'-2.75' Approximate depth of hazardous material
-  Approximate Site boundary



ALTA WAVERLY 2302 VALDEZ STREET Oakland, California		
SITE PLAN WITH LOCATIONS OF DECOMMISSIONED GROUNDWATER MONITORING WELLS AND PREVIOUS EXTENT OF HAZARDOUS MATERIAL		
Date 07/27/17	Project No. 731641601	Figure 2

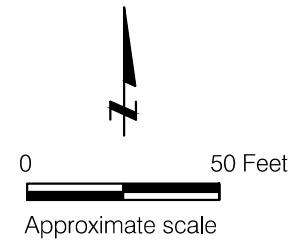
LANGAN

Reference: Base map from drawing titled "Existing Site Boundary Plan", by BKF, dated 21 November 2014.



EXPLANATION

- C-1** ● Approximate location of confirmation bottom soil sample by Langan Treadwell Rollo, June 2016
- SP-3** ● Approximate location of perimeter sidewall soil sample by Langan Treadwell Rollo, April through June 2016
- Approximate Site boundary



ALTA WAVERLY 2302 VALDEZ STREET Oakland, California		
SITE PLAN WITH VERIFICATION SAMPLING LOCATIONS		
Date 07/27/17	Project No. 731641601	Figure 3
LANGAN		

Reference: Base map from a drawing titled "Shoring Plan," Sheet SH3, by Hohbach-Lewin, Inc., revision dated 03/23/16.

**APPENDIX A
CERTIFIED ANALYTICAL REPORTS AND CHAIN OF CUSTODY
DOCUMENTATION**



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1606A36

Report Created for: Treadwell & Rollo

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

Project Contact: Peter Cusack

Project P.O.:

Project Name: 731641601; 23rd & Valdez

Project Received: 06/22/2016

Analytical Report reviewed & approved for release on 06/23/2016 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: 731641601; 23rd & Valdez
WorkOrder: 1606A36

Glossary Abbreviation

%D	Serial Dilution Percent Difference
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 (Serial Dilution)
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)



Analytical Report

Client: Treadwell & Rollo
Date Received: 6/22/16 14:03
Date Prepared: 6/22/16
Project: 731641601; 23rd & Valdez

WorkOrder: 1606A36
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
C-13 A	1606A36-001A	Soil	06/22/2016 13:05	GC9b	122642

Analytes	Result	RL	DF	Date Analyzed
TPH-Motor Oil (C18-C36)	ND	5.0	1	06/22/2016 19:24

Surrogates	REC (%)	Limits	Date Analyzed
C9	88	70-130	06/22/2016 19:24

Analyst(s): TK



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 6/21/16
Date Analyzed: 6/22/16
Instrument: GC9a
Matrix: Soil
Project: 731641601; 23rd & Valdez

WorkOrder: 1606A36
BatchID: 122642
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg
Sample ID: MB/LCS-122642
 1606A01-001AMS/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	39.7	1.0	40	-	99	70-130
TPH-Motor Oil (C18-C36)	ND	-	5.0	-	-	-	-
Surrogate Recovery							
C9	24.3	24.4		25	97	98	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)	39.5	38.6	40	2.337	93	91	70-130	2.17	30
Surrogate Recovery									
C9	24.6	24.5	25		98	98	70-130	0	30



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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1606A36

ClientCode: TWRF

WaterTrax
 WriteOn
 EDF
 Excel
 EQulS
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:
 Peter Cusack
 Treadwell & Rollo
 555 Montgomery St., Suite 1300
 San Francisco, CA 94111
 (415) 955-5244 FAX: (415) 955-9041

Email: pcusack@langan.com
 cc/3rd Party: rnmilano@treadwellrollo.com;
 PO:
 ProjectNo: 731641601; 23rd & Valdez

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: 06/22/2016
Date Logged: 06/22/2016

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	
1606A36-001	C-13 A	Soil	6/22/2016 13:05	<input type="checkbox"/>	A												

Test Legend:

1	TPH_S	2		3		4	
5		6		7		8	
9		10		11		12	

Prepared by: Valerie Riva

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: 731641601; 23rd & Valdez
Comments:

QC Level: LEVEL 2
Client Contact: Peter Cusack
Contact's Email: pcusack@langan.com

Work Order: 1606A36
Date Logged: 6/22/2016

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
1606A36-001A	C-13 A	Soil	SW8015B (TEPHs) <TPH-Motor Oil (C18-C36)>	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	6/22/2016 13:05	1 day		<input type="checkbox"/>	

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.



Sample Receipt Checklist

Client Name: **Treadwell & Rollo**
 Project Name: **731641601; 23rd & Valdez**
 WorkOrder No: **1606A36** Matrix: Soil
 Carrier: Client Drop-In

Date and Time Received: **6/22/2016 14:03**
 Date Logged: **6/22/2016**
 Received by: Valerie Riva
 Logged by: Valerie Riva

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: 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

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

 Comments:



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1606892

Report Created for: Treadwell & Rollo

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

Project Contact: Peter Cusack

Project P.O.: 731641601

Project Name: 731641601; 23rd and Valdez

Project Received: 06/20/2016

Analytical Report reviewed & approved for release on 06/21/2016 by:

Angela Rydelius,
Laboratory Manager

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Glossary of Terms & Qualifier Definitions

Client: Treadwell & Rollo
Project: 731641601; 23rd and Valdez
WorkOrder: 1606892

Glossary Abbreviation

%D	Serial Dilution Percent Difference
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 (Serial Dilution)
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.
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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)

Analytical Qualifiers

e2	diesel range compounds are significant; no recognizable pattern
e7	oil range compounds are significant



Glossary of Terms & Qualifier Definitions

Client: Treadwell & Rollo
Project: 731641601; 23rd and Valdez
WorkOrder: 1606892

Quality Control Qualifiers

F10 MS/MSD outside control limits. Physical or chemical interferences exist due to sample matrix.



Analytical Report

Client: Treadwell & Rollo
Date Received: 6/20/16 14:45
Date Prepared: 6/20/16
Project: 731641601; 23rd and Valdez

WorkOrder: 1606892
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
C-1	1606892-001A	Soil	06/20/2016 10:23	GC19	122513

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	06/20/2016 19:56
MTBE	---	0.050	1	06/20/2016 19:56
Benzene	---	0.0050	1	06/20/2016 19:56
Toluene	---	0.0050	1	06/20/2016 19:56
Ethylbenzene	---	0.0050	1	06/20/2016 19:56
Xylenes	---	0.015	1	06/20/2016 19:56

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	100	70-130	06/20/2016 19:56

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-2	1606892-002A	Soil	06/20/2016 10:25	GC19	122513

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	06/20/2016 20:27
MTBE	---	0.050	1	06/20/2016 20:27
Benzene	---	0.0050	1	06/20/2016 20:27
Toluene	---	0.0050	1	06/20/2016 20:27
Ethylbenzene	---	0.0050	1	06/20/2016 20:27
Xylenes	---	0.015	1	06/20/2016 20:27

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	100	70-130	06/20/2016 20:27

Analyst(s): IA



Analytical Report

Client: Treadwell & Rollo
Date Received: 6/20/16 14:45
Date Prepared: 6/20/16
Project: 731641601; 23rd and Valdez

WorkOrder: 1606892
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
C-3	1606892-003A	Soil	06/20/2016 10:28	GC19	122513
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		1.0	1	06/20/2016 20:58
MTBE	---		0.050	1	06/20/2016 20:58
Benzene	---		0.0050	1	06/20/2016 20:58
Toluene	---		0.0050	1	06/20/2016 20:58
Ethylbenzene	---		0.0050	1	06/20/2016 20:58
Xylenes	---		0.015	1	06/20/2016 20:58
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	98		70-130		06/20/2016 20:58
Analyst(s): IA					

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-4	1606892-004A	Soil	06/20/2016 10:30	GC19	122513
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		1.0	1	06/20/2016 21:29
MTBE	---		0.050	1	06/20/2016 21:29
Benzene	---		0.0050	1	06/20/2016 21:29
Toluene	---		0.0050	1	06/20/2016 21:29
Ethylbenzene	---		0.0050	1	06/20/2016 21:29
Xylenes	---		0.015	1	06/20/2016 21:29
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	98		70-130		06/20/2016 21:29
Analyst(s): IA					



Analytical Report

Client: Treadwell & Rollo
Date Received: 6/20/16 14:45
Date Prepared: 6/20/16
Project: 731641601; 23rd and Valdez

WorkOrder: 1606892
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
C-5	1606892-005A	Soil	06/20/2016 10:35	GC19	122513

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	06/20/2016 23:01
MTBE	---	0.050	1	06/20/2016 23:01
Benzene	---	0.0050	1	06/20/2016 23:01
Toluene	---	0.0050	1	06/20/2016 23:01
Ethylbenzene	---	0.0050	1	06/20/2016 23:01
Xylenes	---	0.015	1	06/20/2016 23:01

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	107	70-130	06/20/2016 23:01

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-6	1606892-006A	Soil	06/20/2016 10:45	GC19	122513

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	06/20/2016 23:31
MTBE	---	0.050	1	06/20/2016 23:31
Benzene	---	0.0050	1	06/20/2016 23:31
Toluene	---	0.0050	1	06/20/2016 23:31
Ethylbenzene	---	0.0050	1	06/20/2016 23:31
Xylenes	---	0.015	1	06/20/2016 23:31

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	101	70-130	06/20/2016 23:31

Analyst(s): IA



Analytical Report

Client: Treadwell & Rollo
Date Received: 6/20/16 14:45
Date Prepared: 6/20/16
Project: 731641601; 23rd and Valdez

WorkOrder: 1606892
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
C-7	1606892-007A	Soil	06/20/2016 10:50	GC19	122513

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	06/21/2016 00:02
MTBE	---	0.050	1	06/21/2016 00:02
Benzene	---	0.0050	1	06/21/2016 00:02
Toluene	---	0.0050	1	06/21/2016 00:02
Ethylbenzene	---	0.0050	1	06/21/2016 00:02
Xylenes	---	0.015	1	06/21/2016 00:02

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	103	70-130	06/21/2016 00:02

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-8	1606892-008A	Soil	06/20/2016 10:55	GC19	122513

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	06/21/2016 00:32
MTBE	---	0.050	1	06/21/2016 00:32
Benzene	---	0.0050	1	06/21/2016 00:32
Toluene	---	0.0050	1	06/21/2016 00:32
Ethylbenzene	---	0.0050	1	06/21/2016 00:32
Xylenes	---	0.015	1	06/21/2016 00:32

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	102	70-130	06/21/2016 00:32

Analyst(s): IA



Analytical Report

Client: Treadwell & Rollo
Date Received: 6/20/16 14:45
Date Prepared: 6/20/16
Project: 731641601; 23rd and Valdez

WorkOrder: 1606892
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
C-9	1606892-009A	Soil	06/20/2016 11:00	GC19	122513
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		1.0	1	06/21/2016 01:03
MTBE	---		0.050	1	06/21/2016 01:03
Benzene	---		0.0050	1	06/21/2016 01:03
Toluene	---		0.0050	1	06/21/2016 01:03
Ethylbenzene	---		0.0050	1	06/21/2016 01:03
Xylenes	---		0.015	1	06/21/2016 01:03
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	100		70-130		06/21/2016 01:03
Analyst(s): IA					

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-10	1606892-010A	Soil	06/20/2016 11:05	GC19	122544
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		1.0	1	06/21/2016 01:34
MTBE	---		0.050	1	06/21/2016 01:34
Benzene	---		0.0050	1	06/21/2016 01:34
Toluene	---		0.0050	1	06/21/2016 01:34
Ethylbenzene	---		0.0050	1	06/21/2016 01:34
Xylenes	---		0.015	1	06/21/2016 01:34
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	100		70-130		06/21/2016 01:34
Analyst(s): IA					

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Treadwell & Rollo
Date Received: 6/20/16 14:45
Date Prepared: 6/20/16
Project: 731641601; 23rd and Valdez

WorkOrder: 1606892
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
C-11	1606892-011A	Soil	06/20/2016 12:10	GC19	122544
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		1.0	1	06/21/2016 02:04
MTBE	---		0.050	1	06/21/2016 02:04
Benzene	---		0.0050	1	06/21/2016 02:04
Toluene	---		0.0050	1	06/21/2016 02:04
Ethylbenzene	---		0.0050	1	06/21/2016 02:04
Xylenes	---		0.015	1	06/21/2016 02:04
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	100		70-130		06/21/2016 02:04
Analyst(s): IA					

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-12	1606892-012A	Soil	06/20/2016 12:25	GC19	122544
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		1.0	1	06/21/2016 02:35
MTBE	---		0.050	1	06/21/2016 02:35
Benzene	---		0.0050	1	06/21/2016 02:35
Toluene	---		0.0050	1	06/21/2016 02:35
Ethylbenzene	---		0.0050	1	06/21/2016 02:35
Xylenes	---		0.015	1	06/21/2016 02:35
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	102		70-130		06/21/2016 02:35
Analyst(s): IA					



Analytical Report

Client: Treadwell & Rollo
Date Received: 6/20/16 14:45
Date Prepared: 6/20/16
Project: 731641601; 23rd and Valdez

WorkOrder: 1606892
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
C-13	1606892-013A	Soil	06/20/2016 12:30	GC19	122544
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		1.0	1	06/21/2016 03:05
MTBE	---		0.050	1	06/21/2016 03:05
Benzene	---		0.0050	1	06/21/2016 03:05
Toluene	---		0.0050	1	06/21/2016 03:05
Ethylbenzene	---		0.0050	1	06/21/2016 03:05
Xylenes	---		0.015	1	06/21/2016 03:05
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	109		70-130		06/21/2016 03:05
Analyst(s): IA					

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-14	1606892-014A	Soil	06/20/2016 11:10	GC19	122544
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		1.0	1	06/21/2016 03:36
MTBE	---		0.050	1	06/21/2016 03:36
Benzene	---		0.0050	1	06/21/2016 03:36
Toluene	---		0.0050	1	06/21/2016 03:36
Ethylbenzene	---		0.0050	1	06/21/2016 03:36
Xylenes	---		0.015	1	06/21/2016 03:36
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	108		70-130		06/21/2016 03:36
Analyst(s): IA					



Analytical Report

Client: Treadwell & Rollo
Date Received: 6/20/16 14:45
Date Prepared: 6/20/16
Project: 731641601; 23rd and Valdez

WorkOrder: 1606892
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
C-15	1606892-015A	Soil	06/20/2016 11:15	GC19	122544
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		1.0	1	06/21/2016 04:06
MTBE	---		0.050	1	06/21/2016 04:06
Benzene	---		0.0050	1	06/21/2016 04:06
Toluene	---		0.0050	1	06/21/2016 04:06
Ethylbenzene	---		0.0050	1	06/21/2016 04:06
Xylenes	---		0.015	1	06/21/2016 04:06
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	103		70-130		06/21/2016 04:06
Analyst(s): IA					

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-16	1606892-016A	Soil	06/20/2016 12:15	GC7	122544
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		1.0	1	06/21/2016 04:46
MTBE	---		0.050	1	06/21/2016 04:46
Benzene	---		0.0050	1	06/21/2016 04:46
Toluene	---		0.0050	1	06/21/2016 04:46
Ethylbenzene	---		0.0050	1	06/21/2016 04:46
Xylenes	---		0.015	1	06/21/2016 04:46
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	97		70-130		06/21/2016 04:46
Analyst(s): IA					



Analytical Report

Client: Treadwell & Rollo
Date Received: 6/20/16 14:45
Date Prepared: 6/20/16
Project: 731641601; 23rd and Valdez

WorkOrder: 1606892
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
C-17	1606892-017A	Soil	06/20/2016 13:15	GC7	122544

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	06/21/2016 05:47
MTBE	---	0.050	1	06/21/2016 05:47
Benzene	---	0.0050	1	06/21/2016 05:47
Toluene	---	0.0050	1	06/21/2016 05:47
Ethylbenzene	---	0.0050	1	06/21/2016 05:47
Xylenes	---	0.015	1	06/21/2016 05:47

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	96	70-130	06/21/2016 05:47

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-18	1606892-018A	Soil	06/20/2016 13:20	GC7	122544

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	06/21/2016 06:17
MTBE	---	0.050	1	06/21/2016 06:17
Benzene	---	0.0050	1	06/21/2016 06:17
Toluene	---	0.0050	1	06/21/2016 06:17
Ethylbenzene	---	0.0050	1	06/21/2016 06:17
Xylenes	---	0.015	1	06/21/2016 06:17

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	98	70-130	06/21/2016 06:17

Analyst(s): IA



Analytical Report

Client: Treadwell & Rollo
Date Received: 6/20/16 14:45
Date Prepared: 6/20/16
Project: 731641601; 23rd and Valdez

WorkOrder: 1606892
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
C-19	1606892-019A	Soil	06/20/2016 11:20	GC7	122544

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	06/21/2016 06:47
MTBE	---	0.050	1	06/21/2016 06:47
Benzene	---	0.0050	1	06/21/2016 06:47
Toluene	---	0.0050	1	06/21/2016 06:47
Ethylbenzene	---	0.0050	1	06/21/2016 06:47
Xylenes	---	0.015	1	06/21/2016 06:47

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	98	70-130	06/21/2016 06:47

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-20	1606892-020A	Soil	06/20/2016 12:35	GC7	122544

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	06/21/2016 07:17
MTBE	---	0.050	1	06/21/2016 07:17
Benzene	---	0.0050	1	06/21/2016 07:17
Toluene	---	0.0050	1	06/21/2016 07:17
Ethylbenzene	---	0.0050	1	06/21/2016 07:17
Xylenes	---	0.015	1	06/21/2016 07:17

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	98	70-130	06/21/2016 07:17

Analyst(s): IA



Analytical Report

Client: Treadwell & Rollo
Date Received: 6/20/16 14:45
Date Prepared: 6/20/16
Project: 731641601; 23rd and Valdez

WorkOrder: 1606892
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
C-21	1606892-021A	Soil	06/20/2016 12:40	GC7	122544

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	06/21/2016 09:18
MTBE	---	0.050	1	06/21/2016 09:18
Benzene	---	0.0050	1	06/21/2016 09:18
Toluene	---	0.0050	1	06/21/2016 09:18
Ethylbenzene	---	0.0050	1	06/21/2016 09:18
Xylenes	---	0.015	1	06/21/2016 09:18

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	95	70-130	06/21/2016 09:18

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-22	1606892-022A	Soil	06/20/2016 12:55	GC7	122544

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	06/21/2016 08:48
MTBE	---	0.050	1	06/21/2016 08:48
Benzene	---	0.0050	1	06/21/2016 08:48
Toluene	---	0.0050	1	06/21/2016 08:48
Ethylbenzene	---	0.0050	1	06/21/2016 08:48
Xylenes	---	0.015	1	06/21/2016 08:48

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	97	70-130	06/21/2016 08:48

Analyst(s): IA



Analytical Report

Client: Treadwell & Rollo
Date Received: 6/20/16 14:45
Date Prepared: 6/20/16
Project: 731641601; 23rd and Valdez

WorkOrder: 1606892
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
C-23	1606892-023A	Soil	06/20/2016 13:00	GC7	122544

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	06/21/2016 08:18
MTBE	---	0.050	1	06/21/2016 08:18
Benzene	---	0.0050	1	06/21/2016 08:18
Toluene	---	0.0050	1	06/21/2016 08:18
Ethylbenzene	---	0.0050	1	06/21/2016 08:18
Xylenes	---	0.015	1	06/21/2016 08:18

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	99	70-130	06/21/2016 08:18

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-24	1606892-024A	Soil	06/20/2016 13:05	GC7	122544

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	06/21/2016 07:47
MTBE	---	0.050	1	06/21/2016 07:47
Benzene	---	0.0050	1	06/21/2016 07:47
Toluene	---	0.0050	1	06/21/2016 07:47
Ethylbenzene	---	0.0050	1	06/21/2016 07:47
Xylenes	---	0.015	1	06/21/2016 07:47

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	97	70-130	06/21/2016 07:47

Analyst(s): IA



Analytical Report

Client: Treadwell & Rollo
Date Received: 6/20/16 14:45
Date Prepared: 6/20/16
Project: 731641601; 23rd and Valdez

WorkOrder: 1606892
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/kg

Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-1	1606892-001A	Soil	06/20/2016 10:23	ICP-MS2	122545

Analytes	Result	RL	DF	Date Analyzed
Arsenic	5.5	0.50	1	06/21/2016 17:13
Chromium	50	0.50	1	06/21/2016 17:13
Lead	6.6	0.50	1	06/21/2016 17:13

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	91	70-130	06/21/2016 17:13

Analyst(s): BBO

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-2	1606892-002A	Soil	06/20/2016 10:25	ICP-MS3	122545

Analytes	Result	RL	DF	Date Analyzed
Arsenic	3.3	0.50	1	06/21/2016 11:54
Chromium	41	0.50	1	06/21/2016 11:54
Lead	5.8	0.50	1	06/21/2016 11:54

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	110	70-130	06/21/2016 11:54

Analyst(s): DVH

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-3	1606892-003A	Soil	06/20/2016 10:28	ICP-MS3	122545

Analytes	Result	RL	DF	Date Analyzed
Arsenic	2.6	0.50	1	06/21/2016 12:00
Chromium	36	0.50	1	06/21/2016 12:00
Lead	4.6	0.50	1	06/21/2016 12:00

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	116	70-130	06/21/2016 12:00

Analyst(s): DVH

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Date Received: 6/20/16 14:45
Date Prepared: 6/20/16
Project: 731641601; 23rd and Valdez

WorkOrder: 1606892
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/kg

Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-4	1606892-004A	Soil	06/20/2016 10:30	ICP-MS3	122545

Analytes	Result	RL	DF	Date Analyzed
Arsenic	3.8	0.50	1	06/21/2016 12:06
Chromium	93	0.50	1	06/21/2016 12:06
Lead	16	0.50	1	06/21/2016 12:06

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	113	70-130	06/21/2016 12:06

Analyst(s): DVH

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-5	1606892-005A	Soil	06/20/2016 10:35	ICP-MS3	122545

Analytes	Result	RL	DF	Date Analyzed
Arsenic	5.3	0.50	1	06/21/2016 12:13
Chromium	43	0.50	1	06/21/2016 12:13
Lead	6.1	0.50	1	06/21/2016 12:13

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	113	70-130	06/21/2016 12:13

Analyst(s): DVH

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-6	1606892-006A	Soil	06/20/2016 10:45	ICP-MS3	122545

Analytes	Result	RL	DF	Date Analyzed
Arsenic	0.90	0.50	1	06/21/2016 12:19
Chromium	29	0.50	1	06/21/2016 12:19
Lead	3.8	0.50	1	06/21/2016 12:19

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	110	70-130	06/21/2016 12:19

Analyst(s): DVH

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Date Received: 6/20/16 14:45
Date Prepared: 6/20/16
Project: 731641601; 23rd and Valdez

WorkOrder: 1606892
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/kg

Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-7	1606892-007A	Soil	06/20/2016 10:50	ICP-MS2	122545

Analytes	Result	RL	DF	Date Analyzed
Arsenic	4.8	0.50	1	06/21/2016 11:29
Chromium	36	0.50	1	06/21/2016 11:29
Lead	7.7	0.50	1	06/21/2016 11:29

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	106	70-130	06/21/2016 11:29

Analyst(s): DVH

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-8	1606892-008A	Soil	06/20/2016 10:55	ICP-MS2	122545

Analytes	Result	RL	DF	Date Analyzed
Arsenic	3.3	0.50	1	06/21/2016 11:35
Chromium	31	0.50	1	06/21/2016 11:35
Lead	3.8	0.50	1	06/21/2016 11:35

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	106	70-130	06/21/2016 11:35

Analyst(s): DVH

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-9	1606892-009A	Soil	06/20/2016 11:00	ICP-MS2	122545

Analytes	Result	RL	DF	Date Analyzed
Arsenic	2.2	0.50	1	06/21/2016 11:41
Chromium	40	0.50	1	06/21/2016 11:41
Lead	4.6	0.50	1	06/21/2016 11:41

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	107	70-130	06/21/2016 11:41

Analyst(s): DVH

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Date Received: 6/20/16 14:45
Date Prepared: 6/20/16
Project: 731641601; 23rd and Valdez

WorkOrder: 1606892
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/kg

Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-10	1606892-010A	Soil	06/20/2016 11:05	ICP-MS2	122545

Analytes	Result	RL	DF	Date Analyzed
Arsenic	2.9	0.50	1	06/21/2016 11:47
Chromium	29	0.50	1	06/21/2016 11:47
Lead	4.0	0.50	1	06/21/2016 11:47

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	108	70-130	06/21/2016 11:47

Analyst(s): DVH

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-11	1606892-011A	Soil	06/20/2016 12:10	ICP-MS2	122545

Analytes	Result	RL	DF	Date Analyzed
Arsenic	4.2	0.50	1	06/21/2016 11:53
Chromium	33	0.50	1	06/21/2016 11:53
Lead	6.0	0.50	1	06/21/2016 11:53

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	107	70-130	06/21/2016 11:53

Analyst(s): DVH

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-12	1606892-012A	Soil	06/20/2016 12:25	ICP-MS2	122545

Analytes	Result	RL	DF	Date Analyzed
Arsenic	4.2	0.50	1	06/21/2016 12:50
Chromium	45	0.50	1	06/21/2016 12:50
Lead	9.6	0.50	1	06/21/2016 12:50

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	110	70-130	06/21/2016 12:50

Analyst(s): DVH

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Date Received: 6/20/16 14:45
Date Prepared: 6/20/16
Project: 731641601; 23rd and Valdez

WorkOrder: 1606892
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/kg

Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-13	1606892-013A	Soil	06/20/2016 12:30	ICP-MS2	122545

Analytes	Result	RL	DF	Date Analyzed
Arsenic	4.5	0.50	1	06/21/2016 12:56
Chromium	43	0.50	1	06/21/2016 12:56
Lead	12	0.50	1	06/21/2016 12:56

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	109	70-130	06/21/2016 12:56

Analyst(s): DVH

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-14	1606892-014A	Soil	06/20/2016 11:10	ICP-MS2	122545

Analytes	Result	RL	DF	Date Analyzed
Arsenic	9.6	0.50	1	06/21/2016 13:02
Chromium	83	0.50	1	06/21/2016 13:02
Lead	8.5	0.50	1	06/21/2016 13:02

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	113	70-130	06/21/2016 13:02

Analyst(s): DVH

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-15	1606892-015A	Soil	06/20/2016 11:15	ICP-MS2	122545

Analytes	Result	RL	DF	Date Analyzed
Arsenic	2.6	0.50	1	06/21/2016 13:08
Chromium	46	0.50	1	06/21/2016 13:08
Lead	8.8	0.50	1	06/21/2016 13:08

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	110	70-130	06/21/2016 13:08

Analyst(s): DVH

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Date Received: 6/20/16 14:45
Date Prepared: 6/20/16
Project: 731641601; 23rd and Valdez

WorkOrder: 1606892
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/kg

Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-16	1606892-016A	Soil	06/20/2016 12:15	ICP-MS2	122545

Analytes	Result	RL	DF	Date Analyzed
Arsenic	6.0	0.50	1	06/21/2016 13:14
Chromium	48	0.50	1	06/21/2016 13:14
Lead	7.2	0.50	1	06/21/2016 13:14

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	108	70-130	06/21/2016 13:14

Analyst(s): DVH

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-17	1606892-017A	Soil	06/20/2016 13:15	ICP-MS2	122545

Analytes	Result	RL	DF	Date Analyzed
Arsenic	10	0.50	1	06/21/2016 13:39
Chromium	72	0.50	1	06/21/2016 13:39
Lead	13	0.50	1	06/21/2016 13:39

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	113	70-130	06/21/2016 13:39

Analyst(s): BBO

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-18	1606892-018A	Soil	06/20/2016 13:20	ICP-MS2	122545

Analytes	Result	RL	DF	Date Analyzed
Arsenic	2.5	0.50	1	06/21/2016 13:45
Chromium	31	0.50	1	06/21/2016 13:45
Lead	7.3	0.50	1	06/21/2016 13:45

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	106	70-130	06/21/2016 13:45

Analyst(s): BBO

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Date Received: 6/20/16 14:45
Date Prepared: 6/20/16
Project: 731641601; 23rd and Valdez

WorkOrder: 1606892
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/kg

Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-19	1606892-019A	Soil	06/20/2016 11:20	ICP-MS2	122545

Analytes	Result	RL	DF	Date Analyzed
Arsenic	3.3	0.50	1	06/21/2016 16:18
Chromium	41	0.50	1	06/21/2016 16:18
Lead	9.5	0.50	1	06/21/2016 16:18

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	107	70-130	06/21/2016 16:18

Analyst(s): BBO

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-20	1606892-020A	Soil	06/20/2016 12:35	ICP-MS2	122545

Analytes	Result	RL	DF	Date Analyzed
Arsenic	9.8	0.50	1	06/21/2016 16:24
Chromium	53	0.50	1	06/21/2016 16:24
Lead	6.8	0.50	1	06/21/2016 16:24

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	109	70-130	06/21/2016 16:24

Analyst(s): BBO

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-21	1606892-021A	Soil	06/20/2016 12:40	ICP-MS2	122546

Analytes	Result	RL	DF	Date Analyzed
Arsenic	4.4	0.50	1	06/21/2016 18:14
Chromium	64	0.50	1	06/21/2016 18:14
Lead	6.8	0.50	1	06/21/2016 18:14

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	116	70-130	06/21/2016 18:14

Analyst(s): BBO

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Date Received: 6/20/16 14:45
Date Prepared: 6/20/16
Project: 731641601; 23rd and Valdez

WorkOrder: 1606892
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/kg

Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-22	1606892-022A	Soil	06/20/2016 12:55	ICP-MS2	122546

Analytes	Result	RL	DF	Date Analyzed
Arsenic	3.4	0.50	1	06/21/2016 16:30
Chromium	41	0.50	1	06/21/2016 16:30
Lead	5.0	0.50	1	06/21/2016 16:30

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	113	70-130	06/21/2016 16:30

Analyst(s): BBO

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-23	1606892-023A	Soil	06/20/2016 13:00	ICP-MS2	122546

Analytes	Result	RL	DF	Date Analyzed
Arsenic	3.9	0.50	1	06/21/2016 16:36
Chromium	64	0.50	1	06/21/2016 16:36
Lead	6.9	0.50	1	06/21/2016 16:36

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	111	70-130	06/21/2016 16:36

Analyst(s): BBO

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-24	1606892-024A	Soil	06/20/2016 13:05	ICP-MS2	122546

Analytes	Result	RL	DF	Date Analyzed
Arsenic	3.2	0.50	1	06/21/2016 16:42
Chromium	37	0.50	1	06/21/2016 16:42
Lead	4.6	0.50	1	06/21/2016 16:42

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	109	70-130	06/21/2016 16:42

Analyst(s): BBO



Analytical Report

Client: Treadwell & Rollo
Date Received: 6/20/16 14:45
Date Prepared: 6/20/16-6/21/16
Project: 731641601; 23rd and Valdez

WorkOrder: 1606892
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
C-1	1606892-001A	Soil	06/20/2016 10:23	GC39B	122518
<u>Analytes</u>		<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)		ND	1.0	1	06/20/2016 17:45
TPH-Motor Oil (C18-C36)		ND	5.0	1	06/20/2016 17:45
<u>Surrogates</u>		<u>REC (%)</u>	<u>Limits</u>		
C9		92	70-130		06/20/2016 17:45
<u>Analyst(s):</u> TK					

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-2	1606892-002A	Soil	06/20/2016 10:25	GC11A	122518
<u>Analytes</u>		<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)		ND	1.0	1	06/20/2016 18:44
TPH-Motor Oil (C18-C36)		ND	5.0	1	06/20/2016 18:44
<u>Surrogates</u>		<u>REC (%)</u>	<u>Limits</u>		
C9		91	70-130		06/20/2016 18:44
<u>Analyst(s):</u> TK					

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-3	1606892-003A	Soil	06/20/2016 10:28	GC11A	122518
<u>Analytes</u>		<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)		ND	1.0	1	06/20/2016 20:02
TPH-Motor Oil (C18-C36)		ND	5.0	1	06/20/2016 20:02
<u>Surrogates</u>		<u>REC (%)</u>	<u>Limits</u>		
C9		90	70-130		06/20/2016 20:02
<u>Analyst(s):</u> TK					

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Treadwell & Rollo
Date Received: 6/20/16 14:45
Date Prepared: 6/20/16-6/21/16
Project: 731641601; 23rd and Valdez

WorkOrder: 1606892
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
C-4	1606892-004A	Soil	06/20/2016 10:30	GC11A	122518
<u>Analytes</u>		<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)		ND	1.0	1	06/20/2016 21:20
TPH-Motor Oil (C18-C36)		ND	5.0	1	06/20/2016 21:20
<u>Surrogates</u>		<u>REC (%)</u>	<u>Limits</u>		
C9		91	70-130		06/20/2016 21:20
<u>Analyst(s):</u> TK					

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-5	1606892-005A	Soil	06/20/2016 10:35	GC11A	122518
<u>Analytes</u>		<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)		ND	1.0	1	06/21/2016 00:34
TPH-Motor Oil (C18-C36)		ND	5.0	1	06/21/2016 00:34
<u>Surrogates</u>		<u>REC (%)</u>	<u>Limits</u>		
C9		91	70-130		06/21/2016 00:34
<u>Analyst(s):</u> TK					

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-6	1606892-006A	Soil	06/20/2016 10:45	GC11A	122518
<u>Analytes</u>		<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)		ND	1.0	1	06/21/2016 01:52
TPH-Motor Oil (C18-C36)		ND	5.0	1	06/21/2016 01:52
<u>Surrogates</u>		<u>REC (%)</u>	<u>Limits</u>		
C9		91	70-130		06/21/2016 01:52
<u>Analyst(s):</u> TK					

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Treadwell & Rollo
Date Received: 6/20/16 14:45
Date Prepared: 6/20/16-6/21/16
Project: 731641601; 23rd and Valdez

WorkOrder: 1606892
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
C-7	1606892-007A	Soil	06/20/2016 10:50	GC11A	122518

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	06/21/2016 03:10
TPH-Motor Oil (C18-C36)	ND	5.0	1	06/21/2016 03:10

Surrogates	REC (%)	Limits	Date Analyzed
C9	92	70-130	06/21/2016 03:10

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-8	1606892-008A	Soil	06/20/2016 10:55	GC11A	122518

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	06/21/2016 04:28
TPH-Motor Oil (C18-C36)	ND	5.0	1	06/21/2016 04:28

Surrogates	REC (%)	Limits	Date Analyzed
C9	91	70-130	06/21/2016 04:28

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-9	1606892-009A	Soil	06/20/2016 11:00	GC11A	122518

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	06/21/2016 07:03
TPH-Motor Oil (C18-C36)	ND	5.0	1	06/21/2016 07:03

Surrogates	REC (%)	Limits	Date Analyzed
C9	91	70-130	06/21/2016 07:03

Analyst(s): TK

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 Angela Rydelius, Lab Manager



Analytical Report

Client: Treadwell & Rollo
Date Received: 6/20/16 14:45
Date Prepared: 6/20/16-6/21/16
Project: 731641601; 23rd and Valdez

WorkOrder: 1606892
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
C-10	1606892-010A	Soil	06/20/2016 11:05	GC9a	122518

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	06/21/2016 09:42
TPH-Motor Oil (C18-C36)	ND	5.0	1	06/21/2016 09:42

Surrogates	REC (%)	Limits	Date Analyzed
C9	99	70-130	06/21/2016 09:42

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-11	1606892-011A	Soil	06/20/2016 12:10	GC9a	122518

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	06/21/2016 10:20
TPH-Motor Oil (C18-C36)	ND	5.0	1	06/21/2016 10:20

Surrogates	REC (%)	Limits	Date Analyzed
C9	99	70-130	06/21/2016 10:20

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-12	1606892-012A	Soil	06/20/2016 12:25	GC39B	122542

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	06/20/2016 18:24
TPH-Motor Oil (C18-C36)	ND	5.0	1	06/20/2016 18:24

Surrogates	REC (%)	Limits	Date Analyzed
C9	93	70-130	06/20/2016 18:24

Analyst(s): TK

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 Angela Rydelius, Lab Manager



Analytical Report

Client: Treadwell & Rollo
Date Received: 6/20/16 14:45
Date Prepared: 6/20/16-6/21/16
Project: 731641601; 23rd and Valdez

WorkOrder: 1606892
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
C-13	1606892-013A	Soil	06/20/2016 12:30	GC11B	122542
<u>Analytes</u>		<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)		13	1.0	1	06/20/2016 18:44
TPH-Motor Oil (C18-C36)		140	5.0	1	06/20/2016 18:44
<u>Surrogates</u>		<u>REC (%)</u>	<u>Limits</u>		
C9		94	70-130		06/20/2016 18:44
<u>Analyst(s):</u> TK			<u>Analytical Comments:</u> e7,e2		

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-14	1606892-014A	Soil	06/20/2016 11:10	GC11B	122542
<u>Analytes</u>		<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)		ND	1.0	1	06/20/2016 20:02
TPH-Motor Oil (C18-C36)		ND	5.0	1	06/20/2016 20:02
<u>Surrogates</u>		<u>REC (%)</u>	<u>Limits</u>		
C9		93	70-130		06/20/2016 20:02
<u>Analyst(s):</u> TK					

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-15	1606892-015A	Soil	06/20/2016 11:15	GC11B	122542
<u>Analytes</u>		<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)		ND	1.0	1	06/20/2016 21:20
TPH-Motor Oil (C18-C36)		ND	5.0	1	06/20/2016 21:20
<u>Surrogates</u>		<u>REC (%)</u>	<u>Limits</u>		
C9		95	70-130		06/20/2016 21:20
<u>Analyst(s):</u> TK					

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 Angela Rydelius, Lab Manager



Analytical Report

Client: Treadwell & Rollo
Date Received: 6/20/16 14:45
Date Prepared: 6/20/16-6/21/16
Project: 731641601; 23rd and Valdez

WorkOrder: 1606892
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
C-16	1606892-016A	Soil	06/20/2016 12:15	GC11B	122542
<u>Analytes</u>		<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)		ND	1.0	1	06/20/2016 23:55
TPH-Motor Oil (C18-C36)		ND	5.0	1	06/20/2016 23:55
<u>Surrogates</u>		<u>REC (%)</u>	<u>Limits</u>		
C9		93	70-130		06/20/2016 23:55
<u>Analyst(s):</u> TK					

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-17	1606892-017A	Soil	06/20/2016 13:15	GC11B	122542
<u>Analytes</u>		<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)		ND	1.0	1	06/21/2016 01:13
TPH-Motor Oil (C18-C36)		ND	5.0	1	06/21/2016 01:13
<u>Surrogates</u>		<u>REC (%)</u>	<u>Limits</u>		
C9		93	70-130		06/21/2016 01:13
<u>Analyst(s):</u> TK					

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-18	1606892-018A	Soil	06/20/2016 13:20	GC11A	122542
<u>Analytes</u>		<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)		1.7	1.0	1	06/20/2016 17:12
TPH-Motor Oil (C18-C36)		6.3	5.0	1	06/20/2016 17:12
<u>Surrogates</u>		<u>REC (%)</u>	<u>Limits</u>		
C9		89	70-130		06/20/2016 17:12
<u>Analyst(s):</u> TK					
<u>Analytical Comments:</u> e7,e2					

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 Angela Rydelius, Lab Manager



Analytical Report

Client: Treadwell & Rollo
Date Received: 6/20/16 14:45
Date Prepared: 6/20/16-6/21/16
Project: 731641601; 23rd and Valdez

WorkOrder: 1606892
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
C-19	1606892-019A	Soil	06/20/2016 11:20	GC11B	122558
<u>Analytes</u>		<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)		ND	1.0	1	06/21/2016 13:33
TPH-Motor Oil (C18-C36)		ND	5.0	1	06/21/2016 13:33
<u>Surrogates</u>		<u>REC (%)</u>	<u>Limits</u>		
C9		93	70-130		06/21/2016 13:33
<u>Analyst(s):</u> TK					

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-20	1606892-020A	Soil	06/20/2016 12:35	GC9a	122542
<u>Analytes</u>		<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)		ND	1.0	1	06/21/2016 09:03
TPH-Motor Oil (C18-C36)		ND	5.0	1	06/21/2016 09:03
<u>Surrogates</u>		<u>REC (%)</u>	<u>Limits</u>		
C9		98	70-130		06/21/2016 09:03
<u>Analyst(s):</u> TK					

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-21	1606892-021A	Soil	06/20/2016 12:40	GC39B	122542
<u>Analytes</u>		<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)		ND	1.0	1	06/21/2016 00:14
TPH-Motor Oil (C18-C36)		ND	5.0	1	06/21/2016 00:14
<u>Surrogates</u>		<u>REC (%)</u>	<u>Limits</u>		
C9		92	70-130		06/21/2016 00:14
<u>Analyst(s):</u> TK					

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Treadwell & Rollo
Date Received: 6/20/16 14:45
Date Prepared: 6/20/16-6/21/16
Project: 731641601; 23rd and Valdez

WorkOrder: 1606892
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
C-22	1606892-022A	Soil	06/20/2016 12:55	GC11B	122542
<u>Analytes</u>		<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)		ND	1.0	1	06/21/2016 12:54
TPH-Motor Oil (C18-C36)		ND	5.0	1	06/21/2016 12:54
<u>Surrogates</u>		<u>REC (%)</u>	<u>Limits</u>		
C9		93	70-130		06/21/2016 12:54
<u>Analyst(s):</u> TK					

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-23	1606892-023A	Soil	06/20/2016 13:00	GC39B	122558
<u>Analytes</u>		<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)		ND	1.0	1	06/21/2016 13:34
TPH-Motor Oil (C18-C36)		ND	5.0	1	06/21/2016 13:34
<u>Surrogates</u>		<u>REC (%)</u>	<u>Limits</u>		
C9		93	70-130		06/21/2016 13:34
<u>Analyst(s):</u> TK					

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C-24	1606892-024A	Soil	06/20/2016 13:05	GC11B	122542
<u>Analytes</u>		<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)		15	1.0	1	06/21/2016 14:40
TPH-Motor Oil (C18-C36)		53	5.0	1	06/21/2016 14:40
<u>Surrogates</u>		<u>REC (%)</u>	<u>Limits</u>		
C9		94	70-130		06/21/2016 14:40
<u>Analyst(s):</u> TK					
Analytical Comments: e7,e2					



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 6/20/16
Date Analyzed: 6/21/16
Instrument: GC7
Matrix: Soil
Project: 731641601; 23rd and Valdez

WorkOrder: 1606892
BatchID: 122513
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-122513

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.562	0.40	0.60	-	94	70-130
MTBE	ND	0.0801	0.050	0.10	-	80	70-130
Benzene	ND	0.0929	0.0050	0.10	-	93	70-130
Toluene	ND	0.0798	0.0050	0.10	-	80	70-130
Ethylbenzene	ND	0.0909	0.0050	0.10	-	91	70-130
Xylenes	ND	0.281	0.015	0.30	-	94	70-130
Surrogate Recovery							
2-Fluorotoluene	0.105	0.105		0.10	105	105	70-130



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 6/20/16
Date Analyzed: 6/21/16
Instrument: GC7
Matrix: Soil
Project: 731641601; 23rd and Valdez

WorkOrder: 1606892
BatchID: 122544
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-122544
 1606892-010AMS/MSD

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.536	0.40	0.60	-	89	70-130
MTBE	ND	0.0812	0.050	0.10	-	81	70-130
Benzene	ND	0.0918	0.0050	0.10	-	92	70-130
Toluene	ND	0.0774	0.0050	0.10	-	77	70-130
Ethylbenzene	ND	0.0895	0.0050	0.10	-	90	70-130
Xylenes	ND	0.276	0.015	0.30	-	92	70-130
Surrogate Recovery							
2-Fluorotoluene	0.101	0.103		0.10	101	103	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	0.512	0.553	0.60	ND	85	92	70-130	7.77	20
MTBE	0.0740	0.0790	0.10	ND	74	79	70-130	6.45	20
Benzene	0.0762	0.0826	0.10	ND	76	83	70-130	7.99	20
Toluene	0.0868	0.0870	0.10	ND	87	87	70-130	0	20
Ethylbenzene	0.0925	0.0903	0.10	ND	93	90	70-130	2.43	20
Xylenes	0.280	0.276	0.30	ND	93	92	70-130	1.43	20
Surrogate Recovery									
2-Fluorotoluene	0.0917	0.0907	0.10		92	91	70-130	1.13	20



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 6/20/16
Date Analyzed: 6/21/16
Instrument: ICP-MS3
Matrix: Soil
Project: 731641601; 23rd and Valdez

WorkOrder: 1606892
BatchID: 122545
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-122545
 1606892-001AMS/MSD
 1606892-001APDS

QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Arsenic	ND	51.2	0.50	50	-	102	75-125
Chromium	ND	52.0	0.50	50	-	104	75-125
Lead	ND	49.4	0.50	50	-	99	75-125
Surrogate Recovery							
Terbium	540	553		500	108	111	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Arsenic	59.9	60.3	50	5.476	109	110	75-125	0.649	20
Chromium	115	126	50	49.84	131,F10	152,F10	75-125	8.55	20
Lead	61.0	60.3	50	6.618	109	107	75-125	1.10	20
Surrogate Recovery									
Terbium	555	545	500		111	109	70-130	1.96	20

Analyte	PDS Result	SPK Val	SPKRef Val	PDS %REC	PDS Limits
Chromium	96.3	50	49.84	93	75-125

Analyte	DLT Result	DLTRef Val	%D	%D Limit
Arsenic	5.40	5.476	1.39	-
Chromium	49.7	49.84	0.281	20
Lead	6.47	6.618	2.24	-

%D Control Limit applied to analytes with concentrations greater than 25 times the reporting limits.

(Cont.)



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 6/20/16
Date Analyzed: 6/21/16
Instrument: ICP-MS3
Matrix: Soil
Project: 731641601; 23rd and Valdez

WorkOrder: 1606892
BatchID: 122546
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-122546
 1606892-021AMS/MSD

QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Arsenic	ND	51.2	0.50	50	-	102	75-125
Chromium	ND	52.5	0.50	50	-	105	75-125
Lead	ND	49.8	0.50	50	-	100	75-125
Surrogate Recovery							
Terbium	544	556		500	109	111	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Arsenic	54.8	55.4	50	4.384	101	102	75-125	1.11	20
Chromium	114	107	50	63.51	100	87	75-125	5.80	20
Lead	59.1	61.2	50	6.804	105	109	75-125	3.42	20
Surrogate Recovery									
Terbium	565	584	500		113	117	70-130	3.24	20

Analyte	DLT Result	DLTRef Val	%D	%D Limit
Arsenic	4.27	4.384	2.60	-
Chromium	64.0	63.51	0.772	20
Lead	6.49	6.804	4.61	-

%D Control Limit applied to analytes with concentrations greater than 25 times the reporting limits.



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 6/20/16
Date Analyzed: 6/20/16
Instrument: GC39B
Matrix: Soil
Project: 731641601; 23rd and Valdez

WorkOrder: 1606892
BatchID: 122518
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg
Sample ID: MB/LCS-122518
 1606870-015AMS/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	46.3	1.0	40	-	116	70-130
TPH-Motor Oil (C18-C36)	ND	-	5.0	-	-	-	-
Surrogate Recovery							
C9	23.1	23.2		25	92	93	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)	44.3	43.2	40	ND	111	108	70-130	2.39	30
Surrogate Recovery									
C9	27.3	27.3	25		109	109	70-130	0	30



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 6/20/16
Date Analyzed: 6/20/16
Instrument: GC11A, GC39B
Matrix: Soil
Project: 731641601; 23rd and Valdez

WorkOrder: 1606892
BatchID: 122542
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg
Sample ID: MB/LCS-122542
 1606892-012AMS/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	46.2	1.0	40	-	115	70-130
TPH-Motor Oil (C18-C36)	ND	-	5.0	-	-	-	-
Surrogate Recovery							
C9	23.0	22.6		25	92	90	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)	49.1	48.0	40	ND	120	118	70-130	2.20	30
Surrogate Recovery									
C9	23.3	23.2	25		93	93	70-130	0	30



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 6/20/16
Date Analyzed: 6/21/16
Instrument: GC39A
Matrix: Soil
Project: 731641601; 23rd and Valdez

WorkOrder: 1606892
BatchID: 122558
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg
Sample ID: MB/LCS-122558
 1606913-001AMS/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	40.0	1.0	40	-	100	70-130
TPH-Motor Oil (C18-C36)	ND	-	5.0	-	-	-	-
Surrogate Recovery							
C9	26.9	27.6		25	108	110	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)	44.2	48.6	40	8.620	89	100	70-130	9.70	30
Surrogate Recovery									
C9	27.2	27.2	25		109	109	70-130	0	30

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1606892

ClientCode: TWRF

WaterTrax WriteOn EDF Excel EQUIS Email HardCopy ThirdParty J-flag

Report to:

Peter Cusack
Treadwell & Rollo
555 Montgomery St., Suite 1300
San Francisco, CA 94111
(415) 955-5244 FAX: (415) 955-9041

Email: pcusack@langan.com
cc/3rd Party: rnmilano@treadwellrollo.com;
PO: 731641601
ProjectNo: 731641601; 23rd and Valdez

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: 06/20/2016

Date Logged: 06/20/2016

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	
1606892-001	C-1	Soil	6/20/2016 10:23	<input type="checkbox"/>	A	A	A										
1606892-002	C-2	Soil	6/20/2016 10:25	<input type="checkbox"/>	A	A	A										
1606892-003	C-3	Soil	6/20/2016 10:28	<input type="checkbox"/>	A	A	A										
1606892-004	C-4	Soil	6/20/2016 10:30	<input type="checkbox"/>	A	A	A										
1606892-005	C-5	Soil	6/20/2016 10:35	<input type="checkbox"/>	A	A	A										
1606892-006	C-6	Soil	6/20/2016 10:45	<input type="checkbox"/>	A	A	A										
1606892-007	C-7	Soil	6/20/2016 10:50	<input type="checkbox"/>	A	A	A										
1606892-008	C-8	Soil	6/20/2016 10:55	<input type="checkbox"/>	A	A	A										
1606892-009	C-9	Soil	6/20/2016 11:00	<input type="checkbox"/>	A	A	A										
1606892-010	C-10	Soil	6/20/2016 11:05	<input type="checkbox"/>	A	A	A										
1606892-011	C-11	Soil	6/20/2016 12:10	<input type="checkbox"/>	A	A	A										
1606892-012	C-12	Soil	6/20/2016 12:25	<input type="checkbox"/>	A	A	A										
1606892-013	C-13	Soil	6/20/2016 12:30	<input type="checkbox"/>	A	A	A										
1606892-014	C-14	Soil	6/20/2016 11:10	<input type="checkbox"/>	A	A	A										
1606892-015	C-15	Soil	6/20/2016 11:15	<input type="checkbox"/>	A	A	A										

Test Legend:

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

Prepared by: Jena Alfaro

The following SampIDs: 001A, 002A, 003A, 004A, 005A, 006A, 007A, 008A, 009A, 010A, 011A, 012A, 013A, 014A, 015A, 016A, 017A, 018A, 019A, 020A, 021A, 022A, 023A, 024A contain testgroup.

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.



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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1606892

ClientCode: TWRF

WaterTrax
 WriteOn
 EDF
 Excel
 EQulS
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:
 Peter Cusack
 Treadwell & Rollo
 555 Montgomery St., Suite 1300
 San Francisco, CA 94111
 (415) 955-5244 FAX: (415) 955-9041

Email: pcusack@langan.com
 cc/3rd Party: rnmilano@treadwellrollo.com;
 PO: 731641601
 ProjectNo: 731641601; 23rd and Valdez

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: 06/20/2016
Date Logged: 06/20/2016

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	
1606892-016	C-16	Soil	6/20/2016 12:15	<input type="checkbox"/>	A	A	A										
1606892-017	C-17	Soil	6/20/2016 13:15	<input type="checkbox"/>	A	A	A										
1606892-018	C-18	Soil	6/20/2016 13:20	<input type="checkbox"/>	A	A	A										
1606892-019	C-19	Soil	6/20/2016 11:20	<input type="checkbox"/>	A	A	A										
1606892-020	C-20	Soil	6/20/2016 12:35	<input type="checkbox"/>	A	A	A										
1606892-021	C-21	Soil	6/20/2016 12:40	<input type="checkbox"/>	A	A	A										
1606892-022	C-22	Soil	6/20/2016 12:55	<input type="checkbox"/>	A	A	A										
1606892-023	C-23	Soil	6/20/2016 13:00	<input type="checkbox"/>	A	A	A										
1606892-024	C-24	Soil	6/20/2016 13:05	<input type="checkbox"/>	A	A	A										

Test Legend:

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

Prepared by: Jena Alfaro

The following SamplIDs: 001A, 002A, 003A, 004A, 005A, 006A, 007A, 008A, 009A, 010A, 011A, 012A, 013A, 014A, 015A, 016A, 017A, 018A, 019A, 020A, 021A, 022A, 023A, 024A contain testgroup.

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: 731641601; 23rd and Valdez
Comments:

QC Level: LEVEL 2
Client Contact: Peter Cusack
Contact's Email: pcusack@langan.com

Work Order: 1606892
Date Logged: 6/20/2016

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
1606892-001A	C-1	Soil	SW6020 (Metals) <Arsenic, Chromium, Lead>	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	6/20/2016 10:23	1 day		<input type="checkbox"/>	
			Multi-Range TPH(g,d,mo)			<input type="checkbox"/>					
1606892-002A	C-2	Soil	Multi-Range TPH(g,d,mo)	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	6/20/2016 10:25	1 day		<input type="checkbox"/>	
			SW6020 (Metals) <Arsenic, Chromium, Lead>			<input type="checkbox"/>					
1606892-003A	C-3	Soil	SW6020 (Metals) <Arsenic, Chromium, Lead>	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	6/20/2016 10:28	1 day		<input type="checkbox"/>	
			Multi-Range TPH(g,d,mo)			<input type="checkbox"/>					
1606892-004A	C-4	Soil	SW6020 (Metals) <Arsenic, Chromium, Lead>	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	6/20/2016 10:30	1 day		<input type="checkbox"/>	
			Multi-Range TPH(g,d,mo)			<input type="checkbox"/>					
1606892-005A	C-5	Soil	SW6020 (Metals) <Arsenic, Chromium, Lead>	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	6/20/2016 10:35	1 day		<input type="checkbox"/>	
			Multi-Range TPH(g,d,mo)			<input type="checkbox"/>					
1606892-006A	C-6	Soil	SW6020 (Metals) <Arsenic, Chromium, Lead>	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	6/20/2016 10:45	1 day		<input type="checkbox"/>	
			Multi-Range TPH(g,d,mo)			<input type="checkbox"/>					
1606892-007A	C-7	Soil	SW6020 (Metals) <Arsenic, Chromium, Lead>	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	6/20/2016 10:50	1 day		<input type="checkbox"/>	
			Multi-Range TPH(g,d,mo)			<input type="checkbox"/>					

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.



WORK ORDER SUMMARY

Client Name: TREADWELL & ROLLO
Project: 731641601; 23rd and Valdez
Comments:

QC Level: LEVEL 2
Client Contact: Peter Cusack
Contact's Email: pcusack@langan.com

Work Order: 1606892
Date Logged: 6/20/2016

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
1606892-008A	C-8	Soil	SW6020 (Metals) <Arsenic, Chromium, Lead> Multi-Range TPH(g,d,mo)	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	6/20/2016 10:55	1 day		<input type="checkbox"/>	
1606892-009A	C-9	Soil	SW6020 (Metals) <Arsenic, Chromium, Lead> Multi-Range TPH(g,d,mo)	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	6/20/2016 11:00	1 day		<input type="checkbox"/>	
1606892-010A	C-10	Soil	SW6020 (Metals) <Arsenic, Chromium, Lead> Multi-Range TPH(g,d,mo)	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	6/20/2016 11:05	1 day		<input type="checkbox"/>	
1606892-011A	C-11	Soil	SW6020 (Metals) <Arsenic, Chromium, Lead> Multi-Range TPH(g,d,mo)	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	6/20/2016 12:10	1 day		<input type="checkbox"/>	
1606892-012A	C-12	Soil	SW6020 (Metals) <Arsenic, Chromium, Lead> Multi-Range TPH(g,d,mo)	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	6/20/2016 12:25	1 day		<input type="checkbox"/>	
1606892-013A	C-13	Soil	SW6020 (Metals) <Arsenic, Chromium, Lead> Multi-Range TPH(g,d,mo)	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	6/20/2016 12:30	1 day		<input type="checkbox"/>	
1606892-014A	C-14	Soil	SW6020 (Metals) <Arsenic, Chromium, Lead> Multi-Range TPH(g,d,mo)	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	6/20/2016 11:10	1 day		<input type="checkbox"/>	

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).
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WORK ORDER SUMMARY

Client Name: TREADWELL & ROLLO
Project: 731641601; 23rd and Valdez
Comments:

QC Level: LEVEL 2
Client Contact: Peter Cusack
Contact's Email: pcusack@langan.com

Work Order: 1606892
Date Logged: 6/20/2016

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
1606892-015A	C-15	Soil	SW6020 (Metals) <Arsenic, Chromium, Lead> Multi-Range TPH(g,d,mo)	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	6/20/2016 11:15	1 day		<input type="checkbox"/>	
1606892-016A	C-16	Soil	SW6020 (Metals) <Arsenic, Chromium, Lead> Multi-Range TPH(g,d,mo)	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	6/20/2016 12:15	1 day		<input type="checkbox"/>	
1606892-017A	C-17	Soil	SW6020 (Metals) <Arsenic, Chromium, Lead> Multi-Range TPH(g,d,mo)	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	6/20/2016 13:15	1 day		<input type="checkbox"/>	
1606892-018A	C-18	Soil	SW6020 (Metals) <Arsenic, Chromium, Lead> Multi-Range TPH(g,d,mo)	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	6/20/2016 13:20	1 day		<input type="checkbox"/>	
1606892-019A	C-19	Soil	SW6020 (Metals) <Arsenic, Chromium, Lead> Multi-Range TPH(g,d,mo)	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	6/20/2016 11:20	1 day		<input type="checkbox"/>	
1606892-020A	C-20	Soil	SW6020 (Metals) <Arsenic, Chromium, Lead> Multi-Range TPH(g,d,mo)	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	6/20/2016 12:35	1 day		<input type="checkbox"/>	
1606892-021A	C-21	Soil	SW6020 (Metals) <Arsenic, Chromium, Lead> Multi-Range TPH(g,d,mo)	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	6/20/2016 12:40	1 day		<input type="checkbox"/>	

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).

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WORK ORDER SUMMARY

Client Name: TREADWELL & ROLLO
Project: 731641601; 23rd and Valdez
Comments:

QC Level: LEVEL 2
Client Contact: Peter Cusack
Contact's Email: pcusack@langan.com

Work Order: 1606892
Date Logged: 6/20/2016

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
1606892-022A	C-22	Soil	SW6020 (Metals) <Arsenic, Chromium, Lead>	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	6/20/2016 12:55	1 day		<input type="checkbox"/>	
			Multi-Range TPH(g,d,mo)			<input type="checkbox"/>					
1606892-023A	C-23	Soil	SW6020 (Metals) <Arsenic, Chromium, Lead>	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	6/20/2016 13:00	1 day		<input type="checkbox"/>	
			Multi-Range TPH(g,d,mo)			<input type="checkbox"/>					
1606892-024A	C-24	Soil	SW6020 (Metals) <Arsenic, Chromium, Lead>	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	6/20/2016 13:05	1 day		<input type="checkbox"/>	
			Multi-Range TPH(g,d,mo)			<input type="checkbox"/>					

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.



McC Campbell Analytical, Inc.

1534 Willow Pass Rd. / Pittsburg, Ca. 94565-1701
 www.mcccampbell.com / main@mcccampbell.com
 Telephone: (877) 252-9262 / Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME: RUSH 1 DAY 2 DAY 3 DAY 5 DAY
 GeoTracker EDF PDF EDD Write On (DW) EQuIS 10 DAY
 Effluent Sample Requiring "J" flag UST Clean Up Fund Project ; Claim # _____

Report To: Peter Cusack / Rob Milano Bill To: Peter Cusack
 Company: Langan Trenchwell Rollo
 555 Montgomery St. #1300 SF, CA 94111
 Tele: (415) 955-5236 E-Mail: p.cusack@langan.com
 Project #: 731641601 Project Name: 23rd and Valdez
 Project Location: Oakland Purchase Order# 731641601
 Sampler Signature: *[Signature]*

Analysis Request

SAMPLE ID	Location/ Field Point Name	SAMPLING		# Containers	MATRIX										METHOD PRESERVED	Analysis Request																							
		Date	Time		Ground Water	Waste Water	Drinking Water	Sea Water	Soil	Air	Sludge	Other	HCL	HNO ₃	Other	BTEX & TPH as Gas (8021/ 8015) MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (1664 / 5520 E/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 505/ 608 / 8081 (CI Pesticides)	EPA 608 / 8082 PCB's ; Aroclors only	EPA 507 / 8141 (NP Pesticides)	EPA 515 / 8151 (Acidic CI Herbicides)	EPA 524.2 / 624 / 8260 (VOCs)	EPA 525.2 / 625 / 8270 (SVOCs)	EPA 8270 SIM / 8310 (PAHs / PNAS)	CAM 17 Metals (200.8 / 6020)***	LUFT 5 Metals (200.8 / 6020)***	Metals (200.8 / 6020)***	Lab to Filter sample for Dissolved metals analysis	TPH g/duno	Total Lead	Total Chromium	Arsenic					
C-12		6/20/16	1225							X																										X	X	X	X
C-13			1230							X																									X	X	X	X	
C-14			1110							X																									X	X	X	X	
C-15			1115							X																									X	X	X	X	
C-16			1215							X																									X	X	X	X	
C-17			1315							X																									X	X	X	X	
C-18			1320							X																									X	X	X	X	
C-19			1120							X																									X	X	X	X	
C-20			1235							X																									X	X	X	X	
C-21			1240							X																									X	X	X	X	
C-22			1255							X																									X	X	X	X	

**MAI clients MUST disclose any dangerous chemicals known to be present in their submitted samples in concentrations that may cause immediate harm or serious future health endangerment as a result of brief, gloved, open air, sample handling by MAI staff. Non-disclosure incurs an immediate \$250 surcharge and the client is subject to full legal liability for harm suffered. Thank you for your understanding and for allowing us to work safely.

*** If metals are requested for water samples and the water type is not specified on the chain of custody, then MAI will default to metals by E200.8.

Relinquished By: <i>[Signature]</i>	Date: 6-20-16	Time: 1445	Received By: <i>[Signature]</i>	ICE/t° _____	COMMENTS: 24 Hour TAT
Relinquished By:	Date:	Time:	Received By:	GOOD CONDITION _____	
Relinquished By:	Date:	Time:	Received By:	HEAD SPACE ABSENT _____	
				DECHLORINATED IN LAB _____	
				APPROPRIATE CONTAINERS _____	
				PRESERVED IN LAB _____	
				VOAS O&G METALS OTHER HAZARDOUS:	
				PRESERVATION _____ pH<2 _____	



Sample Receipt Checklist

Client Name: **Treadwell & Rollo**
 Project Name: **731641601; 23rd and Valdez**
 WorkOrder No: **1606892** Matrix: Soil
 Carrier: Client Drop-In

Date and Time Received: **6/20/2016 14:45**
 Date Logged: **6/20/2016**
 Received by: **Maria Venegas**
 Logged by: **Jena Alfaro**

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: 26.5°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

 Comments:



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1604D20

Report Created for: Treadwell & Rollo

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

Project Contact: Peter Cusack

Project P.O.:

Project Name: 731641603; Alta Waverly

Project Received: 04/29/2016

Analytical Report reviewed & approved for release on 05/02/2016 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: 731641603; Alta Waverly
WorkOrder: 1604D20

Glossary Abbreviation

%D	Serial Dilution Percent Difference
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 (Serial Dilution)
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)



Glossary of Terms & Qualifier Definitions

Client: Treadwell & Rollo
Project: 731641603; Alta Waverly
WorkOrder: 1604D20

Analytical Qualifiers

d7 strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram
d9 no recognizable pattern
e2 diesel range compounds are significant; no recognizable pattern
e7 oil range compounds are significant
e8 kerosene/kerosene range/jet fuel range
e11/e4 stoddard solvent/mineral spirit (?); and/or gasoline range compounds are significant.

Quality Control Qualifiers

F1 MS/MSD recovery and/or RPD is out of acceptance criteria; LCS validated the prep batch.



Analytical Report

Client: Treadwell & Rollo
Date Received: 4/29/16 16:20
Date Prepared: 4/29/16
Project: 731641603; Alta Waverly

WorkOrder: 1604D20
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
SP-3-5.5'	1604D20-001A	Soil	04/28/2016 10:40	GC3	120305

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	04/30/2016 06:43
MTBE	---	0.050	1	04/30/2016 06:43
Benzene	---	0.0050	1	04/30/2016 06:43
Toluene	---	0.0050	1	04/30/2016 06:43
Ethylbenzene	---	0.0050	1	04/30/2016 06:43
Xylenes	---	0.015	1	04/30/2016 06:43

Surrogates	REC (%)	Limits
2-Fluorotoluene	91	70-130

Analyst(s): LT

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-10-6'	1604D20-002A	Soil	04/28/2016 10:28	GC3	120305

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	04/30/2016 07:14
MTBE	---	0.050	1	04/30/2016 07:14
Benzene	---	0.0050	1	04/30/2016 07:14
Toluene	---	0.0050	1	04/30/2016 07:14
Ethylbenzene	---	0.0050	1	04/30/2016 07:14
Xylenes	---	0.015	1	04/30/2016 07:14

Surrogates	REC (%)	Limits
2-Fluorotoluene	91	70-130

Analyst(s): LT



Analytical Report

Client: Treadwell & Rollo
Date Received: 4/29/16 16:20
Date Prepared: 4/29/16
Project: 731641603; Alta Waverly

WorkOrder: 1604D20
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
SP-17-7'	1604D20-003A	Soil	04/28/2016 08:50	GC3	120305

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	04/30/2016 08:44
MTBE	---	0.050	1	04/30/2016 08:44
Benzene	---	0.0050	1	04/30/2016 08:44
Toluene	---	0.0050	1	04/30/2016 08:44
Ethylbenzene	---	0.0050	1	04/30/2016 08:44
Xylenes	---	0.015	1	04/30/2016 08:44

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	91	70-130	04/30/2016 08:44

Analyst(s): LT

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-18-10'	1604D20-004A	Soil	04/28/2016 09:02	GC3	120305

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	04/30/2016 09:15
MTBE	---	0.050	1	04/30/2016 09:15
Benzene	---	0.0050	1	04/30/2016 09:15
Toluene	---	0.0050	1	04/30/2016 09:15
Ethylbenzene	---	0.0050	1	04/30/2016 09:15
Xylenes	---	0.015	1	04/30/2016 09:15

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	86	70-130	04/30/2016 09:15

Analyst(s): LT



Analytical Report

Client: Treadwell & Rollo
Date Received: 4/29/16 16:20
Date Prepared: 4/29/16
Project: 731641603; Alta Waverly

WorkOrder: 1604D20
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
SP-19-7'	1604D20-005A	Soil	04/28/2016 09:07	GC3	120305

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	2.4	1.0	1	04/30/2016 09:45
MTBE	---	0.050	1	04/30/2016 09:45
Benzene	---	0.0050	1	04/30/2016 09:45
Toluene	---	0.0050	1	04/30/2016 09:45
Ethylbenzene	---	0.0050	1	04/30/2016 09:45
Xylenes	---	0.015	1	04/30/2016 09:45

Surrogates	REC (%)	Limits
2-Fluorotoluene	83	70-130

Analyst(s): LT Analytical Comments: d7,d9

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-21-7'	1604D20-006A	Soil	04/28/2016 09:14	GC3	120305

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	2.4	1.0	1	04/30/2016 10:16
MTBE	---	0.050	1	04/30/2016 10:16
Benzene	---	0.0050	1	04/30/2016 10:16
Toluene	---	0.0050	1	04/30/2016 10:16
Ethylbenzene	---	0.0050	1	04/30/2016 10:16
Xylenes	---	0.015	1	04/30/2016 10:16

Surrogates	REC (%)	Limits
2-Fluorotoluene	82	70-130

Analyst(s): LT Analytical Comments: d7,d9



Analytical Report

Client: Treadwell & Rollo
Date Received: 4/29/16 16:20
Date Prepared: 4/29/16
Project: 731641603; Alta Waverly

WorkOrder: 1604D20
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
SP-25-7'	1604D20-007A	Soil	04/28/2016 09:44	GC3	120305
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		1.0	1	04/30/2016 13:03
MTBE	---		0.050	1	04/30/2016 13:03
Benzene	---		0.0050	1	04/30/2016 13:03
Toluene	---		0.0050	1	04/30/2016 13:03
Ethylbenzene	---		0.0050	1	04/30/2016 13:03
Xylenes	---		0.015	1	04/30/2016 13:03
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	90		70-130		04/30/2016 13:03
<u>Analyst(s):</u> LT					

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-26-7'	1604D20-008A	Soil	04/28/2016 09:56	GC3	120305
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	200		50	50	05/02/2016 14:12
MTBE	---		2.5	50	05/02/2016 14:12
Benzene	---		0.25	50	05/02/2016 14:12
Toluene	---		0.25	50	05/02/2016 14:12
Ethylbenzene	---		0.25	50	05/02/2016 14:12
Xylenes	---		0.75	50	05/02/2016 14:12
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	108		70-130		05/02/2016 14:12
<u>Analyst(s):</u> LT	<u>Analytical Comments:</u> d7,d9				



Analytical Report

Client: Treadwell & Rollo
Date Received: 4/29/16 16:20
Date Prepared: 4/29/16
Project: 731641603; Alta Waverly

WorkOrder: 1604D20
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
SP-33-7'	1604D20-009A	Soil	04/28/2016 09:24	GC3	120305

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	04/30/2016 13:33
MTBE	---	0.050	1	04/30/2016 13:33
Benzene	---	0.0050	1	04/30/2016 13:33
Toluene	---	0.0050	1	04/30/2016 13:33
Ethylbenzene	---	0.0050	1	04/30/2016 13:33
Xylenes	---	0.015	1	04/30/2016 13:33

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	92	70-130	04/30/2016 13:33

Analyst(s): LT

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-24-7'	1604D20-010A	Soil	04/27/2016 12:22	GC3	120305

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	04/30/2016 14:03
MTBE	---	0.050	1	04/30/2016 14:03
Benzene	---	0.0050	1	04/30/2016 14:03
Toluene	---	0.0050	1	04/30/2016 14:03
Ethylbenzene	---	0.0050	1	04/30/2016 14:03
Xylenes	---	0.015	1	04/30/2016 14:03

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	94	70-130	04/30/2016 14:03

Analyst(s): LT



Analytical Report

Client: Treadwell & Rollo
Date Received: 4/29/16 16:20
Date Prepared: 4/29/16
Project: 731641603; Alta Waverly

WorkOrder: 1604D20
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/kg

Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-3-5.5'	1604D20-001A	Soil	04/28/2016 10:40	ICP-MS1	120297

Analytes	Result	RL	DF	Date Analyzed
Arsenic	2.8	0.50	1	05/02/2016 10:35
Cadmium	ND	0.25	1	05/02/2016 10:35
Chromium	33	0.50	1	05/02/2016 10:35
Lead	4.8	0.50	1	05/02/2016 10:35
Nickel	44	0.50	1	05/02/2016 10:35
Zinc	29	5.0	1	05/02/2016 10:35

Surrogates	REC (%)	Limits
Terbium	110	70-130

Analyst(s): BBO

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-10-6'	1604D20-002A	Soil	04/28/2016 10:28	ICP-MS1	120297

Analytes	Result	RL	DF	Date Analyzed
Arsenic	2.6	0.50	1	05/02/2016 10:41
Cadmium	ND	0.25	1	05/02/2016 10:41
Chromium	34	0.50	1	05/02/2016 10:41
Lead	5.6	0.50	1	05/02/2016 10:41
Nickel	62	0.50	1	05/02/2016 10:41
Zinc	35	5.0	1	05/02/2016 10:41

Surrogates	REC (%)	Limits
Terbium	111	70-130

Analyst(s): BBO

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Date Received: 4/29/16 16:20
Date Prepared: 4/29/16
Project: 731641603; Alta Waverly

WorkOrder: 1604D20
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/kg

Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-17-7'	1604D20-003A	Soil	04/28/2016 08:50	ICP-MS1	120297

Analytes	Result	RL	DF	Date Analyzed
Arsenic	6.2	0.50	1	05/02/2016 10:47
Cadmium	0.26	0.25	1	05/02/2016 10:47
Chromium	59	0.50	1	05/02/2016 10:47
Lead	8.7	0.50	1	05/02/2016 10:47
Nickel	62	0.50	1	05/02/2016 10:47
Zinc	65	5.0	1	05/02/2016 10:47

Surrogates	REC (%)	Limits
Terbium	111	70-130

Analyst(s): BBO

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-18-10'	1604D20-004A	Soil	04/28/2016 09:02	ICP-MS1	120297

Analytes	Result	RL	DF	Date Analyzed
Arsenic	8.4	0.50	1	05/02/2016 10:53
Cadmium	ND	0.25	1	05/02/2016 10:53
Chromium	86	0.50	1	05/02/2016 10:53
Lead	8.9	0.50	1	05/02/2016 10:53
Nickel	74	0.50	1	05/02/2016 10:53
Zinc	31	5.0	1	05/02/2016 10:53

Surrogates	REC (%)	Limits
Terbium	113	70-130

Analyst(s): BBO

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Date Received: 4/29/16 16:20
Date Prepared: 4/29/16
Project: 731641603; Alta Waverly

WorkOrder: 1604D20
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/kg

Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-19-7'	1604D20-005A	Soil	04/28/2016 09:07	ICP-MS1	120297

Analytes	Result	RL	DF	Date Analyzed
Arsenic	3.7	0.50	1	05/02/2016 11:00
Cadmium	0.43	0.25	1	05/02/2016 11:00
Chromium	43	0.50	1	05/02/2016 11:00
Lead	5.6	0.50	1	05/02/2016 11:00
Nickel	61	0.50	1	05/02/2016 11:00
Zinc	46	5.0	1	05/02/2016 11:00

Surrogates	REC (%)	Limits
Terbium	108	70-130

Analyst(s): BBO

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-21-7'	1604D20-006A	Soil	04/28/2016 09:14	ICP-MS1	120297

Analytes	Result	RL	DF	Date Analyzed
Arsenic	3.6	0.50	1	05/02/2016 11:37
Cadmium	0.31	0.25	1	05/02/2016 11:37
Chromium	40	0.50	1	05/02/2016 11:37
Lead	5.9	0.50	1	05/02/2016 11:37
Nickel	60	0.50	1	05/02/2016 11:37
Zinc	40	5.0	1	05/02/2016 11:37

Surrogates	REC (%)	Limits
Terbium	111	70-130

Analyst(s): BBO

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Date Received: 4/29/16 16:20
Date Prepared: 4/29/16
Project: 731641603; Alta Waverly

WorkOrder: 1604D20
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/kg

Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-25-7'	1604D20-007A	Soil	04/28/2016 09:44	ICP-MS1	120297

Analytes	Result	RL	DF	Date Analyzed
Arsenic	2.9	0.50	1	05/02/2016 14:04
Cadmium	ND	0.25	1	05/02/2016 14:04
Chromium	34	0.50	1	05/02/2016 14:04
Lead	4.6	0.50	1	05/02/2016 14:04
Nickel	35	0.50	1	05/02/2016 14:04
Zinc	28	5.0	1	05/02/2016 14:04

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	102	70-130	05/02/2016 14:04

Analyst(s): DB

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-26-7'	1604D20-008A	Soil	04/28/2016 09:56	ICP-MS1	120297

Analytes	Result	RL	DF	Date Analyzed
Arsenic	5.0	0.50	1	05/02/2016 14:11
Cadmium	ND	0.25	1	05/02/2016 14:11
Chromium	45	0.50	1	05/02/2016 14:11
Lead	24	0.50	1	05/02/2016 14:11
Nickel	66	0.50	1	05/02/2016 14:11
Zinc	33	5.0	1	05/02/2016 14:11

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	101	70-130	05/02/2016 14:11

Analyst(s): DB

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Date Received: 4/29/16 16:20
Date Prepared: 4/29/16
Project: 731641603; Alta Waverly

WorkOrder: 1604D20
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/kg

Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-33-7'	1604D20-009A	Soil	04/28/2016 09:24	ICP-MS1	120297

Analytes	Result	RL	DF	Date Analyzed
Arsenic	2.6	0.50	1	05/02/2016 14:17
Cadmium	ND	0.25	1	05/02/2016 14:17
Chromium	45	0.50	1	05/02/2016 14:17
Lead	6.8	0.50	1	05/02/2016 14:17
Nickel	73	0.50	1	05/02/2016 14:17
Zinc	44	5.0	1	05/02/2016 14:17

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	111	70-130	05/02/2016 14:17

Analyst(s): DB

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-24-7'	1604D20-010A	Soil	04/27/2016 12:22	ICP-MS1	120302

Analytes	Result	RL	DF	Date Analyzed
Arsenic	3.2	0.50	1	05/02/2016 14:30
Cadmium	ND	0.25	1	05/02/2016 14:30
Chromium	39	0.50	1	05/02/2016 14:30
Lead	6.4	0.50	1	05/02/2016 14:30
Nickel	53	0.50	1	05/02/2016 14:30
Zinc	32	5.0	1	05/02/2016 14:30

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	102	70-130	05/02/2016 14:30

Analyst(s): DB



Analytical Report

Client: Treadwell & Rollo
Date Received: 4/29/16 16:20
Date Prepared: 4/29/16
Project: 731641603; Alta Waverly

WorkOrder: 1604D20
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
SP-3-5.5'	1604D20-001A	Soil	04/28/2016 10:40	GC9b	120255

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND	1.0	1	04/29/2016 20:17
TPH-Motor Oil (C18-C36)	ND	5.0	1	04/29/2016 20:17

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	<u>Date Analyzed</u>
C9	95	70-130	04/29/2016 20:17

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-10-6'	1604D20-002A	Soil	04/28/2016 10:28	GC9a	120255

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND	1.0	1	04/29/2016 20:17
TPH-Motor Oil (C18-C36)	ND	5.0	1	04/29/2016 20:17

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	<u>Date Analyzed</u>
C9	93	70-130	04/29/2016 20:17

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-17-7'	1604D20-003A	Soil	04/28/2016 08:50	GC9b	120255

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND	1.0	1	04/29/2016 21:35
TPH-Motor Oil (C18-C36)	ND	5.0	1	04/29/2016 21:35

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	<u>Date Analyzed</u>
C9	95	70-130	04/29/2016 21:35

Analyst(s): TK

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Date Received: 4/29/16 16:20
Date Prepared: 4/29/16
Project: 731641603; Alta Waverly

WorkOrder: 1604D20
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
SP-18-10'	1604D20-004A	Soil	04/28/2016 09:02	GC9a	120255

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	04/29/2016 21:35
TPH-Motor Oil (C18-C36)	ND	5.0	1	04/29/2016 21:35

Surrogates	REC (%)	Limits	Date Analyzed
C9	92	70-130	04/29/2016 21:35

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-19-7'	1604D20-005A	Soil	04/28/2016 09:07	GC9b	120255

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	2.8	1.0	1	04/29/2016 22:52
TPH-Motor Oil (C18-C36)	15	5.0	1	04/29/2016 22:52

Surrogates	REC (%)	Limits	Date Analyzed
C9	95	70-130	04/29/2016 22:52

Analyst(s): TK

Analytical Comments: e7,e2,e11/e4,e8

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-21-7'	1604D20-006A	Soil	04/28/2016 09:14	GC9a	120255

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	04/29/2016 22:52
TPH-Motor Oil (C18-C36)	ND	5.0	1	04/29/2016 22:52

Surrogates	REC (%)	Limits	Date Analyzed
C9	91	70-130	04/29/2016 22:52

Analyst(s): TK

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Treadwell & Rollo
Date Received: 4/29/16 16:20
Date Prepared: 4/29/16
Project: 731641603; Alta Waverly

WorkOrder: 1604D20
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
SP-25-7'	1604D20-007A	Soil	04/28/2016 09:44	GC9b	120255
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND		1.0	1	04/30/2016 00:10
TPH-Motor Oil (C18-C36)	ND		5.0	1	04/30/2016 00:10
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
C9	94		70-130		04/30/2016 00:10
<u>Analyst(s):</u> TK					

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-26-7'	1604D20-008A	Soil	04/28/2016 09:56	GC9b	120255
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	760		100	100	05/02/2016 12:43
TPH-Motor Oil (C18-C36)	5800		500	100	05/02/2016 12:43
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
C9	128		70-130		05/02/2016 12:43
<u>Analyst(s):</u> TK		<u>Analytical Comments:</u> e7,e2,e11/e4,e8			

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-33-7'	1604D20-009A	Soil	04/28/2016 09:24	GC9b	120255
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND		1.0	1	04/30/2016 01:27
TPH-Motor Oil (C18-C36)	ND		5.0	1	04/30/2016 01:27
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
C9	94		70-130		04/30/2016 01:27
<u>Analyst(s):</u> TK					

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Date Received: 4/29/16 16:20
Date Prepared: 4/29/16
Project: 731641603; Alta Waverly

WorkOrder: 1604D20
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
SP-24-7'	1604D20-010A	Soil	04/27/2016 12:22	GC9b	120255

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	05/02/2016 12:04
TPH-Motor Oil (C18-C36)	ND	5.0	1	05/02/2016 12:04

Surrogates	REC (%)	Limits	Date Analyzed
C9	94	70-130	05/02/2016 12:04

Analyst(s): TK



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 4/29/16
Date Analyzed: 4/30/16 - 5/2/16
Instrument: GC3, GC7
Matrix: Soil
Project: 731641603; Alta Waverly

WorkOrder: 1604D20
BatchID: 120305
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-120305
 1604D20-010AMS/MSD

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.642	0.40	0.60	-	107	70-130
MTBE	ND	0.0898	0.050	0.10	-	90	70-130
Benzene	ND	0.0908	0.0050	0.10	-	91	70-130
Toluene	ND	0.0975	0.0050	0.10	-	97	70-130
Ethylbenzene	ND	0.0999	0.0050	0.10	-	100	70-130
Xylenes	ND	0.304	0.015	0.30	-	101	70-130
Surrogate Recovery							
2-Fluorotoluene	0.114	0.0963		0.10	115	96	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	0.491	0.497	0.60	ND	82	83	70-130	1.35	20
MTBE	0.0941	0.0932	0.10	ND	94	93	70-130	0.997	20
Benzene	0.0930	0.0928	0.10	ND	93	93	70-130	0	20
Toluene	0.0825	0.0822	0.10	ND	83	82	70-130	0.404	20
Ethylbenzene	0.0955	0.0943	0.10	ND	95	94	70-130	1.20	20
Xylenes	0.298	0.295	0.30	ND	99	98	70-130	1.07	20
Surrogate Recovery									
2-Fluorotoluene	0.113	0.109	0.10		113	109	70-130	3.39	20



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 4/29/16
Date Analyzed: 5/2/16
Instrument: ICP-MS3
Matrix: Soil
Project: 731641603; Alta Waverly

WorkOrder: 1604D20
BatchID: 120297
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-120297

QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Arsenic	ND	53.8	0.50	50	-	108	75-125
Cadmium	ND	52.9	0.25	50	-	106	75-125
Chromium	ND	53.5	0.50	50	-	107	75-125
Lead	ND	56.4	0.50	50	-	113	75-125
Nickel	ND	53.7	0.50	50	-	107	75-125
Zinc	ND	537	5.0	500	-	107	75-125
Surrogate Recovery							
Terbium	579	588		500	116	118	70-130



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 4/29/16
Date Analyzed: 5/2/16
Instrument: ICP-MS3
Matrix: Soil
Project: 731641603; Alta Waverly

WorkOrder: 1604D20
BatchID: 120302
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-120302
 1604D20-010AMS/MSD

QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Arsenic	ND	51.5	0.50	50	-	103	75-125
Cadmium	ND	49.7	0.25	50	-	99	75-125
Chromium	ND	50.1	0.50	50	-	100	75-125
Lead	ND	53.8	0.50	50	-	108	75-125
Nickel	ND	50.9	0.50	50	-	102	75-125
Zinc	ND	513	5.0	500	-	103	75-125

Surrogate Recovery

Terbium	553	564		500	111	113	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Arsenic	54.8	52.4	50	3.157	103	98	75-125	4.55	20
Cadmium	54.6	51.8	50	ND	109	103	75-125	5.19	20
Chromium	101	96.6	50	38.90	123	115	75-125	4.08	20
Lead	58.8	57.0	50	6.369	105	101	75-125	3.13	20
Nickel	112	104	50	52.57	118	102	75-125	7.43	20
Zinc	576	555	500	31.91	109	105	75-125	3.64	20

Surrogate Recovery

Terbium	546	522	500		109	104	70-130	4.44	20
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Analyte	DLT Result	DLTRef Val	%D	%D Limit
Arsenic	2.61	3.157	17.3	-
Cadmium	ND<1.2	ND	-	-
Chromium	41.2	38.90	5.91	10
Lead	6.72	6.369	5.51	-
Nickel	53.9	52.57	2.53	10
Zinc	34.2	31.91	7.18	-

%D Control Limit applied to analytes with concentrations greater than 25 times the reporting limits.



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 4/28/16
Date Analyzed: 4/28/16 - 4/29/16
Instrument: GC39B, GC9a
Matrix: Soil
Project: 731641603; Alta Waverly

WorkOrder: 1604D20
BatchID: 120255
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg
Sample ID: MB/LCS-120255
 1604C63-002AMS/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	48.0	1.0	40	-	120	70-130
TPH-Motor Oil (C18-C36)	ND	-	5.0	-	-	-	-
Surrogate Recovery							
C9	22.4	23.4		25	90	94	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)	73.6	82.0	40	24.36	123	144,F1	70-130	10.8	30
Surrogate Recovery									
C9	23.2	23.7	25		93	95	70-130	2.03	30

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



CHAIN-OF-CUSTODY RECORD

WorkOrder: 1604D20

ClientCode: TWRF

WaterTrax
 WriteOn
 EDF
 Excel
 EquiS
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:
 Peter Cusack
 Treadwell & Rollo
 555 Montgomery St., Suite 1300
 San Francisco, CA 94111
 (415) 955-5244 FAX: (415) 955-9041

Email: pcusack@langan.com
 cc/3rd Party: kstaehlin@langan.com;
 PO:
 ProjectNo: 731641603; Alta Waverly

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

Requested TAT: 1 day;

Date Received: 04/29/2016
Date Logged: 04/29/2016

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	
1604D20-001	SP-3-5.5'	Soil	4/28/2016 10:40	<input type="checkbox"/>	A	A	A										
1604D20-002	SP-10-6'	Soil	4/28/2016 10:28	<input type="checkbox"/>	A	A	A										
1604D20-003	SP-17-7'	Soil	4/28/2016 8:50	<input type="checkbox"/>	A	A	A										
1604D20-004	SP-18-10'	Soil	4/28/2016 9:02	<input type="checkbox"/>	A	A	A										
1604D20-005	SP-19-7'	Soil	4/28/2016 9:07	<input type="checkbox"/>	A	A	A										
1604D20-006	SP-21-7'	Soil	4/28/2016 9:14	<input type="checkbox"/>	A	A	A										
1604D20-007	SP-25-7'	Soil	4/28/2016 9:44	<input type="checkbox"/>	A	A	A										
1604D20-008	SP-26-7'	Soil	4/28/2016 9:56	<input type="checkbox"/>	A	A	A										
1604D20-009	SP-33-7'	Soil	4/28/2016 9:24	<input type="checkbox"/>	A	A	A										
1604D20-010	SP-24-7'	Soil	4/27/2016 12:22	<input type="checkbox"/>	A	A	A										

Test Legend:

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

Prepared by: Maria Venegas

The following SampleIDs: 001A, 002A, 003A, 004A, 005A, 006A, 007A, 008A, 009A, 010A contain testgroup.

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

QC Level: LEVEL 2

Work Order: 1604D20

Project: 731641603; Alta Waverly

Client Contact: Peter Cusack

Date Logged: 4/29/2016

Comments:

Contact's Email: pcusack@langan.com

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
1604D20-001A	SP-3-5.5'	Soil	SW6020 (Metals) <Arsenic, Cadmium, Chromium, Lead, Nickel, Zinc> Multi-Range TPH(g,d,mo)	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	4/28/2016 10:40	1 day		<input type="checkbox"/>	
1604D20-002A	SP-10-6'	Soil	SW6020 (Metals) <Arsenic, Cadmium, Chromium, Lead, Nickel, Zinc> Multi-Range TPH(g,d,mo)	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	4/28/2016 10:28	1 day		<input type="checkbox"/>	
1604D20-003A	SP-17-7'	Soil	SW6020 (Metals) <Arsenic, Cadmium, Chromium, Lead, Nickel, Zinc> Multi-Range TPH(g,d,mo)	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	4/28/2016 8:50	1 day		<input type="checkbox"/>	
1604D20-004A	SP-18-10'	Soil	SW6020 (Metals) <Arsenic, Cadmium, Chromium, Lead, Nickel, Zinc> Multi-Range TPH(g,d,mo)	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	4/28/2016 9:02	1 day		<input type="checkbox"/>	
1604D20-005A	SP-19-7'	Soil	SW6020 (Metals) <Arsenic, Cadmium, Chromium, Lead, Nickel, Zinc> Multi-Range TPH(g,d,mo)	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	4/28/2016 9:07	1 day		<input type="checkbox"/>	
1604D20-006A	SP-21-7'	Soil	SW6020 (Metals) <Arsenic, Cadmium, Chromium, Lead, Nickel, Zinc> Multi-Range TPH(g,d,mo)	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	4/28/2016 9:14	1 day		<input type="checkbox"/>	
1604D20-007A	SP-25-7'	Soil	SW6020 (Metals) <Arsenic, Cadmium, Chromium, Lead, Nickel, Zinc> Multi-Range TPH(g,d,mo)	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	4/28/2016 9:44	1 day		<input type="checkbox"/>	

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.



WORK ORDER SUMMARY

Client Name: TREADWELL & ROLLO

QC Level: LEVEL 2

Work Order: 1604D20

Project: 731641603; Alta Waverly

Client Contact: Peter Cusack

Date Logged: 4/29/2016

Comments:

Contact's Email: pcusack@langan.com

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
1604D20-008A	SP-26-7'	Soil	SW6020 (Metals) <Arsenic, Cadmium, Chromium, Lead, Nickel, Zinc> Multi-Range TPH(g,d,mo)	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	4/28/2016 9:56	1 day		<input type="checkbox"/>	
1604D20-009A	SP-33-7'	Soil	SW6020 (Metals) <Arsenic, Cadmium, Chromium, Lead, Nickel, Zinc> Multi-Range TPH(g,d,mo)	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	4/28/2016 9:24	1 day		<input type="checkbox"/>	
1604D20-010A	SP-24-7'	Soil	SW6020 (Metals) <Arsenic, Cadmium, Chromium, Lead, Nickel, Zinc> Multi-Range TPH(g,d,mo)	1	Stainless Steel tube 2.5"x6"	<input type="checkbox"/>	4/27/2016 12:22	1 day		<input type="checkbox"/>	

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.

1604D20

007991

CHAIN OF CUSTODY RECORD **RUSH**

- 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
- 50 Airport Parkway, Suite 175, San Jose, CA 95110 Ph: 408.437.7708/Fax: 408.437.7709

Site Name: ALTA WAVERLY
 Job Number: 731CA1603
 Project Manager/Contact: PETER CUSACK
 Samplers: KSS
 Recorder (Signature Required): [Signature]

Turnaround Time
~~STANDARD~~
84-HOUR
RUSH

Field Sample Identification No.	Date	Time	Lab Sample No.	Matrix				No. Containers & Preservative				Analysis Requested			Silica gel clean-up	Hold	Remarks
				Soil	Water	Air	Other	HCL	H ₂ SO ₄	HNO ₃	Ice	TPH g.i.d., mo	LUFT 5	TOTAL ARSENIC			
SP-3-5.5'	4/28/16	1040		X													
SP-10-6'	}	1028		X													
SP-17-7'		0850		X													
SP-18-10'		0902		X													
SP-19-7'		0907		X													
SP-21-7'		0914		X													
SP-25-7'		0944		X													
SP-26-7'		0956		X													
SP-33-7'	4/28/16	0924		X													
SP-24-7'	4/27/16	1222		X													

Relinquished by: (Signature) <u>[Signature]</u>	Date <u>4-29-16</u>	Time <u>1020</u>	Received by: (Signature) <u>[Signature]</u>	Date <u>4-29-16</u>	Time <u>1020</u>
Relinquished by: (Signature) <u>[Signature]</u>	Date <u>4-29-16</u>	Time <u>1620</u>	Received by: (Signature) <u>[Signature]</u>	Date <u>4/29/16</u>	Time <u>1620</u>
Relinquished by: (Signature)	Date	Time	Received by Lab: (Signature)	Date	Time

Sent to Laboratory (Name): MCCAMPBELL ANALYTICAL
 Laboratory Comments/Notes: ICE# 5.5
 Method of Shipment: Lab courier Fed Ex Airborne UPS
 Hand Carried Private Courier (Co. Name)

ICE# 5.5
 GOOD CONDITION _____ APPROPRIATE _____
 White Copy Original _____ Yellow Copy - Laboratory _____
 DECHLORINATED IN LAB _____ PRESERVED IN LAB _____
 PRESERVATION VOAS O&G METALS OTHER



Sample Receipt Checklist

Client Name: **Treadwell & Rollo**
 Project Name: **731641603; Alta Waverly**
 WorkOrder No: **1604D20** Matrix: Soil
 Carrier: Bernie Cummins (MAI Courier)

Date and Time Received: **4/29/2016 16:20**
 Date Logged: **4/29/2016**
 Received by: **Maria Venegas**
 Logged by: **Maria 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: 5.5°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

 Comments:



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1605103

Report Created for: Treadwell & Rollo

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

Project Contact: Peter Cusack

Project P.O.: 731641601

Project Name: 23rd and Valdez

Project Received: 05/04/2016

Analytical Report reviewed & approved for release on 05/05/2016 by:

Angela Rydelius,
Laboratory Manager

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Glossary of Terms & Qualifier Definitions

Client: Treadwell & Rollo
Project: 731641601; 23rd and Valdez
WorkOrder: 1605103

Glossary Abbreviation

%D	Serial Dilution Percent Difference
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 (Serial Dilution)
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.



Analytical Report

Client: Treadwell & Rollo
Date Received: 5/4/16 16:04
Date Prepared: 5/4/16
Project: 731641601; 23rd and Valdez

WorkOrder: 1605103
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
SP-40-8	1605103-001A	Soil	05/03/2016	GC3	120443
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		1.0	1	05/05/2016 09:35
MTBE	---		0.050	1	05/05/2016 09:35
Benzene	---		0.0050	1	05/05/2016 09:35
Toluene	---		0.0050	1	05/05/2016 09:35
Ethylbenzene	---		0.0050	1	05/05/2016 09:35
Xylenes	---		0.015	1	05/05/2016 09:35
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	93		70-130		05/05/2016 09:35
<u>Analyst(s):</u> LT					



Analytical Report

Client: Treadwell & Rollo
Date Received: 5/4/16 16:04
Date Prepared: 5/4/16
Project: 731641601; 23rd and Valdez

WorkOrder: 1605103
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/kg

Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-40-8	1605103-001A	Soil	05/03/2016	ICP-MS1	120498
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Arsenic	4.2		0.50	1	05/05/2016 14:50
Cadmium	ND		0.25	1	05/05/2016 14:50
Chromium	56		0.50	1	05/05/2016 14:50
Lead	8.7		0.50	1	05/05/2016 14:50
Nickel	59		0.50	1	05/05/2016 14:50
Zinc	55		5.0	1	05/05/2016 14:50
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	117		70-130		05/05/2016 14:50
<u>Analyst(s):</u> DVH					



Analytical Report

Client: Treadwell & Rollo
Date Received: 5/4/16 16:04
Date Prepared: 5/4/16
Project: 731641601; 23rd and Valdez

WorkOrder: 1605103
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
SP-40-8	1605103-001A	Soil	05/03/2016	GC9b	120448

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	05/05/2016 12:05
TPH-Motor Oil (C18-C36)	ND	5.0	1	05/05/2016 12:05

Surrogates	REC (%)	Limits	Date Analyzed
C9	92	70-130	05/05/2016 12:05

Analyst(s): TK



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 5/3/16
Date Analyzed: 5/4/16
Instrument: GC7
Matrix: Soil
Project: 731641601; 23rd and Valdez

WorkOrder: 1605103
BatchID: 120443
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-120443
 1605059-001AMS/MSD

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.559	0.40	0.60	-	93	70-130
MTBE	ND	0.0944	0.050	0.10	-	94	70-130
Benzene	ND	0.102	0.0050	0.10	-	102	70-130
Toluene	ND	0.0906	0.0050	0.10	-	91	70-130
Ethylbenzene	ND	0.102	0.0050	0.10	-	102	70-130
Xylenes	ND	0.320	0.015	0.30	-	107	70-130
Surrogate Recovery							
2-Fluorotoluene	0.124	0.119		0.10	124	119	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	0.534	0.580	0.60	ND	89	97	70-130	8.40	20
MTBE	0.0693	0.0888	0.10	ND	69,F1	89	70-130	24.6,F1	20
Benzene	0.0698	0.0938	0.10	ND	70	94	70-130	29.3,F1	20
Toluene	0.0821	0.0982	0.10	ND	82	98	70-130	17.8	20
Ethylbenzene	0.0874	0.0969	0.10	ND	87	97	70-130	10.2	20
Xylenes	0.265	0.292	0.30	ND	87	96	70-130	9.80	20
Surrogate Recovery									
2-Fluorotoluene	0.0815	0.0950	0.10		81	95	70-130	15.4	20



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 5/4/16
Date Analyzed: 5/5/16
Instrument: ICP-MS3
Matrix: Soil
Project: 731641601; 23rd and Valdez

WorkOrder: 1605103
BatchID: 120498
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-120498
 1605103-001AMS/MSD

QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Arsenic	ND	50.7	0.50	50	-	101	75-125
Cadmium	ND	50.0	0.25	50	-	100	75-125
Chromium	ND	50.6	0.50	50	-	101	75-125
Lead	ND	51.5	0.50	50	-	103	75-125
Nickel	ND	50.5	0.50	50	-	101	75-125
Zinc	ND	513	5.0	500	-	103	75-125

Surrogate Recovery

Terbium	488	518		500	98	104	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Arsenic	54.7	55.4	50	4.153	101	103	75-125	1.34	20
Cadmium	51.2	50.6	50	ND	102	101	75-125	1.24	20
Chromium	94.9	106	50	55.59	79	101	75-125	11.2	20
Lead	57.4	60.6	50	8.706	97	104	75-125	5.37	20
Nickel	99.6	117	50	59.43	80	115	75-125	16.0	20
Zinc	561	568	500	54.70	101	103	75-125	1.19	20

Surrogate Recovery

Terbium	538	554	500		108	111	70-130	2.98	20
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Analyte	DLT Result	DLTRef Val	%D	%D Limit
Arsenic	4.65	4.153	12.0	
Cadmium	ND<1.2	ND		
Chromium	61.0	55.59	9.73	10
Lead	8.29	8.706	4.78	
Nickel	62.4	59.43	5.00	10
Zinc	46.3	54.70	15.4	

%D Control Limit applied to analytes with concentrations greater than 25 times the reporting limits.



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 5/3/16
Date Analyzed: 5/3/16 - 5/4/16
Instrument: GC11A, GC2B
Matrix: Soil
Project: 731641601; 23rd and Valdez

WorkOrder: 1605103
BatchID: 120448
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg
Sample ID: MB/LCS-120448
 1605066-001AMS/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	41.8	1.0	40	-	105	70-130
TPH-Motor Oil (C18-C36)	ND	-	5.0	-	-	-	-
Surrogate Recovery							
C9	22.4	25.6		25	90	102	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)	NR	NR		2000	NR	NR	-	NR	
Surrogate Recovery									
C9	NR	NR			NR	NR	-	NR	



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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1605103

ClientCode: TWRF

WaterTrax
 WriteOn
 EDF
 Excel
 EQulS
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:
 Peter Cusack
 Treadwell & Rollo
 555 Montgomery St., Suite 1300
 San Francisco, CA 94111
 (415) 955-5244 FAX: (415) 955-9041

Email: pcusack@langan.com
 cc/3rd Party:
 PO:
 ProjectNo: 731641601; 23rd and Valdez

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: 05/04/2016
Date Logged: 05/04/2016

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	
1605103-001	SP-40-8	Soil	5/3/2016	<input type="checkbox"/>	A	A	A										

Test Legend:

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

Prepared by: Briana Cutino

The following SampID: 001A contains testgroup.

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: 731641601; 23rd and Valdez
Comments:

QC Level: LEVEL 2
Client Contact: Peter Cusack
Contact's Email: pcusack@langan.com

Work Order: 1605103
Date Logged: 5/4/2016

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
1605103-001A	SP-40-8	Soil	SW6020 (Metals) <Arsenic, Cadmium, Chromium, Lead, Nickel, Zinc> Multi-Range TPH(g,d,mo)	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	5/3/2016	1 day		<input type="checkbox"/>	
						<input type="checkbox"/>		1 day		<input type="checkbox"/>	

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.

CHAIN OF CUSTODY RECORD

- 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 Rd., Suite 200, Sacramento, CA 95825 Ph: 916.565.7412/Fax: 916.565.7412

Site Name: 23rd and Valdez
Job Number: 231641601
Project Manager/Contact: Peter Cusack
Samplers: Rob Milano
Recorder (Signature Required): [Signature]

Analysis Requested

Turnaround Time
24 Hour

Field Sample Identification No.	Date	Time	Lab Sample No.	Matrix							No. Containers & Preservative					Silica gel clean-up	Hold	Remarks			
				Soil	Water	Other	HCL	H ₂ SO ₄	HNO ₃	Ice	Other										
<u>SP-40-8</u>	<u>5-3-16</u>			<input checked="" type="checkbox"/>							<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			

Relinquished by: (Signature) <u>[Signature]</u>	Date <u>5-4-16</u>	Time <u>1130</u>	Received by: (Signature) <u>[Signature]</u>	Date <u>5-4-16</u>	Time <u>1130</u>
Relinquished by: (Signature) <u>[Signature]</u>	Date <u>5-4-16</u>	Time <u>1540</u>	Received by: (Signature) <u>[Signature]</u>	Date <u>5/4/16</u>	Time <u>1540</u>
Relinquished by: (Signature)	Date	Time	Received by Lab: (Signature)	Date	Time

Sent to Laboratory (Name): McCampbell
Laboratory Comments/Notes:

Method of Shipment: Lab courier Fed Ex Airborne UPS
 Hand Carried Private Courier (Co. Name)



Sample Receipt Checklist

Client Name: **Treadwell & Rollo**
 Project Name: **731641601; 23rd and Valdez**
 WorkOrder No: **1605103** Matrix: Soil
 Carrier: Bernie Cummins (MAI Courier)

Date and Time Received: **5/4/2016 15:40**
 Date Logged: **5/4/2016**
 Received by: **Briana Cutino**
 Logged by: **Briana Cutino**

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°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

 Comments:



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1605242

Report Created for: Treadwell & Rollo

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

Project Contact: Peter Cusack

Project P.O.:

Project Name: 731641601; 23rd and Valdez

Project Received: 05/06/2016

Analytical Report reviewed & approved for release on 05/09/2016 by:

Angela Rydelius,
Laboratory Manager

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Glossary of Terms & Qualifier Definitions

Client: Treadwell & Rollo
Project: 731641601; 23rd and Valdez
WorkOrder: 1605242

Glossary Abbreviation

%D	Serial Dilution Percent Difference
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 (Serial Dilution)
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.



Analytical Report

Client: Treadwell & Rollo
Date Received: 5/6/16 15:50
Date Prepared: 5/6/16
Project: 731641601; 23rd and Valdez

WorkOrder: 1605242
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
SP-47-7'	1605242-001A	Soil	05/05/2016 11:20	GC19	120588

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	05/07/2016 16:28
MTBE	---	0.050	1	05/07/2016 16:28
Benzene	---	0.0050	1	05/07/2016 16:28
Toluene	---	0.0050	1	05/07/2016 16:28
Ethylbenzene	---	0.0050	1	05/07/2016 16:28
Xylenes	---	0.015	1	05/07/2016 16:28

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	91	70-130	05/07/2016 16:28

Analyst(s): HD

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-54-7'	1605242-002A	Soil	05/05/2016 11:30	GC19	120588

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	05/07/2016 16:58
MTBE	---	0.050	1	05/07/2016 16:58
Benzene	---	0.0050	1	05/07/2016 16:58
Toluene	---	0.0050	1	05/07/2016 16:58
Ethylbenzene	---	0.0050	1	05/07/2016 16:58
Xylenes	---	0.015	1	05/07/2016 16:58

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	91	70-130	05/07/2016 16:58

Analyst(s): HD



Analytical Report

Client: Treadwell & Rollo
Date Received: 5/6/16 15:50
Date Prepared: 5/6/16
Project: 731641601; 23rd and Valdez

WorkOrder: 1605242
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/kg

Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-47-7'	1605242-001A	Soil	05/05/2016 11:20	ICP-MS2	120595

Analytes	Result	RL	DF	Date Analyzed
Arsenic	3.1	0.50	1	05/09/2016 10:19
Cadmium	ND	0.25	1	05/09/2016 10:19
Chromium	50	0.50	1	05/09/2016 10:19
Lead	4.8	0.50	1	05/09/2016 10:19
Nickel	52	0.50	1	05/09/2016 10:19
Zinc	32	5.0	1	05/09/2016 10:19

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	110	70-130	05/09/2016 10:19

Analyst(s): DB

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-54-7'	1605242-002A	Soil	05/05/2016 11:30	ICP-MS2	120595

Analytes	Result	RL	DF	Date Analyzed
Arsenic	3.6	0.50	1	05/09/2016 10:25
Cadmium	ND	0.25	1	05/09/2016 10:25
Chromium	60	0.50	1	05/09/2016 10:25
Lead	7.3	0.50	1	05/09/2016 10:25
Nickel	65	0.50	1	05/09/2016 10:25
Zinc	39	5.0	1	05/09/2016 10:25

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	110	70-130	05/09/2016 10:25

Analyst(s): DB



Analytical Report

Client: Treadwell & Rollo
Date Received: 5/6/16 15:50
Date Prepared: 5/6/16
Project: 731641601; 23rd and Valdez

WorkOrder: 1605242
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
SP-47-7'	1605242-001A	Soil	05/05/2016 11:20	GC6A	120612

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	05/07/2016 09:22
TPH-Motor Oil (C18-C36)	ND	5.0	1	05/07/2016 09:22

Surrogates	REC (%)	Limits	Date Analyzed
C9	88	70-130	05/07/2016 09:22

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-54-7'	1605242-002A	Soil	05/05/2016 11:30	GC6B	120612

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	05/07/2016 02:14
TPH-Motor Oil (C18-C36)	ND	5.0	1	05/07/2016 02:14

Surrogates	REC (%)	Limits	Date Analyzed
C9	88	70-130	05/07/2016 02:14

Analyst(s): TK



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 5/5/16
Date Analyzed: 5/7/16 - 5/9/16
Instrument: GC3, GC7
Matrix: Soil
Project: 731641601; 23rd and Valdez

WorkOrder: 1605242
BatchID: 120588
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-120588
 1605197-023AMS/MSD

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.630	0.40	0.60	-	105	70-130
MTBE	ND	0.0932	0.050	0.10	-	93	70-130
Benzene	ND	0.0998	0.0050	0.10	-	100	70-130
Toluene	ND	0.101	0.0050	0.10	-	101	70-130
Ethylbenzene	ND	0.101	0.0050	0.10	-	101	70-130
Xylenes	ND	0.302	0.015	0.30	-	101	70-130
Surrogate Recovery							
2-Fluorotoluene	0.116	0.0960		0.10	116	96	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	0.566	0.585	0.60	ND	94	97	70-130	3.35	20
MTBE	0.0930	0.0906	0.10	ND	93	91	70-130	2.63	20
Benzene	0.0936	0.0948	0.10	ND	94	95	70-130	1.36	20
Toluene	0.0963	0.0979	0.10	ND	96	98	70-130	1.72	20
Ethylbenzene	0.0944	0.0978	0.10	ND	94	98	70-130	3.54	20
Xylenes	0.280	0.293	0.30	ND	93	98	70-130	4.63	20
Surrogate Recovery									
2-Fluorotoluene	0.0930	0.0927	0.10		93	93	70-130	0	20



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 5/5/16
Date Analyzed: 5/9/16
Instrument: ICP-MS3
Matrix: Soil
Project: 731641601; 23rd and Valdez

WorkOrder: 1605242
BatchID: 120595
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-120595

QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Arsenic	ND	54.8	0.50	50	-	110	75-125
Cadmium	ND	50.6	0.25	50	-	101	75-125
Chromium	ND	50.1	0.50	50	-	100	75-125
Lead	ND	53.5	0.50	50	-	107	75-125
Nickel	ND	52.8	0.50	50	-	106	75-125
Zinc	ND	529	5.0	500	-	106	75-125
Surrogate Recovery							
Terbium	539	538		500	108	108	70-130



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 5/6/16
Date Analyzed: 5/7/16
Instrument: GC9b
Matrix: Soil
Project: 731641601; 23rd and Valdez

WorkOrder: 1605242
BatchID: 120612
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg
Sample ID: MB/LCS-120612
 1605221-012AMS/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	45.2	1.0	40	-	113	70-130
TPH-Motor Oil (C18-C36)	ND	-	5.0	-	-	-	-
Surrogate Recovery							
C9	23.2	23.2		25	93	93	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)	54.6	59.5	40	ND	136,F1	149,F1	70-130	8.70	30
Surrogate Recovery									
C9	23.2	23.3	25		93	93	70-130	0	30



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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1605242

ClientCode: TWRF

WaterTrax
 WriteOn
 EDF
 Excel
 EQulS
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:
 Peter Cusack
 Treadwell & Rollo
 555 Montgomery St., Suite 1300
 San Francisco, CA 94111
 (415) 955-5244 FAX: (415) 955-9041

Email: pcusack@langan.com
 cc/3rd Party:
 PO:
 ProjectNo: 731641601; 23rd and Valdez

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: 05/06/2016
Date Logged: 05/06/2016

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	
1605242-001	SP-47-7'	Soil	5/5/2016 11:20	<input type="checkbox"/>	A	A	A										
1605242-002	SP-54-7'	Soil	5/5/2016 11:30	<input type="checkbox"/>	A	A	A										

Test Legend:

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

Prepared by: Valerie Riva

The following SampIDs: 001A, 002A contain testgroup.

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: 731641601; 23rd and Valdez
Comments:

QC Level: LEVEL 2
Client Contact: Peter Cusack
Contact's Email: pcusack@langan.com

Work Order: 1605242
Date Logged: 5/6/2016

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
1605242-001A	SP-47-7'	Soil	SW6020 (Metals) <Arsenic, Cadmium, Chromium, Lead, Nickel, Zinc> Multi-Range TPH(g,d,mo)	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	5/5/2016 11:20	1 day		<input type="checkbox"/>	
1605242-002A	SP-54-7'	Soil	SW6020 (Metals) <Arsenic, Cadmium, Chromium, Lead, Nickel, Zinc> Multi-Range TPH(g,d,mo)	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	5/5/2016 11:30	1 day		<input type="checkbox"/>	

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.

1605242

007954

CHAIN OF CUSTODY RECORD

- 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
- 50 Airport Parkway, Suite 175, San Jose, CA 95110 Ph: 408.437.7708/Fax: 408.437.7709

RUSH

Site Name: 23rd and Valdez
 Job Number: 731641601
 Project Manager/Contact: Peter Cusack
 Samplers: Rob Milano
 Recorder (Signature Required): [Signature]

Turnaround
 Time
24 HR

Field Sample Identification No.	Date	Time	Lab Sample No.	Matrix				No. Containers & Preservative				TPH-gelimo LWETS & AS	Analysis Requested		Silica gel clean-up Hold	Remarks	
				Soil	Water	Air	Other	HCL	H ₂ SO ₄	HNO ₃	Ice						
SP-47-7'	5-5-16	1120		X													
SP-47-7'	5-5-16																
SP-47-7'	5-5-16																
SP-54-7	5-5-16	1130		X													

ICE?
 GOOD CONDITION
 REFRIGERATED
 DECHLORINATED IN LAB.
 PRESERVATION
 APPROPRIATE CONTAINERS
 PRESERVED IN LAB.
 VOAS O&G METALS OTHER

Relinquished by: (Signature) <u>[Signature]</u>	Date <u>5-6-16</u>	Time <u>1020</u>	Received by: (Signature) <u>[Signature]</u>	Date <u>5-6-16</u>	Time <u>1020</u>
Relinquished by: (Signature) <u>[Signature]</u>	Date <u>5-6-16</u>	Time <u>1550</u>	Received by: (Signature) <u>[Signature]</u>	Date <u>5-6-16</u>	Time <u>15:50</u>
Relinquished by: (Signature) <u> </u>	Date <u> </u>	Time <u> </u>	Received by Lab: (Signature) <u> </u>	Date <u> </u>	Time <u> </u>

Sent to Laboratory (Name): McC Campbell
 Laboratory Comments/Notes:
 Method of Shipment Lab courier Fed Ex Airborne UPS
 Hand Carried Private Courier (Co. Name)



Sample Receipt Checklist

Client Name: **Treadwell & Rollo**
 Project Name: **731641601; 23rd and Valdez**
 WorkOrder No: **1605242** Matrix: Soil
 Carrier: Courier

Date and Time Received: **5/6/2016 15:50**
 Date Logged: **5/6/2016**
 Received by: **Bernie Cummins**
 Logged by: **Valerie Riva**

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: 4.1°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

 Comments:



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1605967

Report Created for: Treadwell & Rollo

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

Project Contact: Peter Cusack

Project P.O.:

Project Name: 731641602; Altan & Waverly

Project Received: 05/23/2016

Analytical Report reviewed & approved for release on 05/24/2016 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: 731641602; Altan & Waverly
WorkOrder: 1605967

Glossary Abbreviation

%D	Serial Dilution Percent Difference
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 (Serial Dilution)
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)

Analytical Qualifiers

H samples were analyzed out of holding time



Glossary of Terms & Qualifier Definitions

Client: Treadwell & Rollo
Project: 731641602; Altan & Waverly
WorkOrder: 1605967

Quality Control Qualifiers

F10 MS/MSD outside control limits. Physical or chemical interferences exist due to sample matrix.



Analytical Report

Client: Treadwell & Rollo
Date Received: 5/23/16 16:40
Date Prepared: 5/23/16
Project: 731641602; Altan & Waverly

WorkOrder: 1605967
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
SP-61	1605967-001A	Soil	05/06/2016 13:23	GC19	121314

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
TPH(g)	ND	H	1.0	1	05/24/2016 01:03
MTBE	---		0.050	1	05/24/2016 01:03
Benzene	---		0.0050	1	05/24/2016 01:03
Toluene	---		0.0050	1	05/24/2016 01:03
Ethylbenzene	---		0.0050	1	05/24/2016 01:03
Xylenes	---		0.015	1	05/24/2016 01:03

Surrogates	REC (%)	Qualifiers	Limits	Date Analyzed
2-Fluorotoluene	102	H	70-130	05/24/2016 01:03

Analyst(s): LT

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-68	1605967-002A	Soil	05/09/2016 12:32	GC3	121314

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
TPH(g)	ND	H	1.0	1	05/24/2016 07:19
MTBE	---		0.050	1	05/24/2016 07:19
Benzene	---		0.0050	1	05/24/2016 07:19
Toluene	---		0.0050	1	05/24/2016 07:19
Ethylbenzene	---		0.0050	1	05/24/2016 07:19
Xylenes	---		0.015	1	05/24/2016 07:19

Surrogates	REC (%)	Qualifiers	Limits	Date Analyzed
2-Fluorotoluene	99	H	70-130	05/24/2016 07:19

Analyst(s): LT



Analytical Report

Client: Treadwell & Rollo
Date Received: 5/23/16 16:40
Date Prepared: 5/23/16
Project: 731641602; Altan & Waverly

WorkOrder: 1605967
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
SP-75	1605967-003A	Soil	05/10/2016 12:18	GC19	121314

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	05/24/2016 08:30
MTBE	---	0.050	1	05/24/2016 08:30
Benzene	---	0.0050	1	05/24/2016 08:30
Toluene	---	0.0050	1	05/24/2016 08:30
Ethylbenzene	---	0.0050	1	05/24/2016 08:30
Xylenes	---	0.015	1	05/24/2016 08:30

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	101	70-130	05/24/2016 08:30

Analyst(s): LT

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-83	1605967-004A	Soil	05/12/2016 13:00	GC19	121314

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	05/24/2016 03:03
MTBE	---	0.050	1	05/24/2016 03:03
Benzene	---	0.0050	1	05/24/2016 03:03
Toluene	---	0.0050	1	05/24/2016 03:03
Ethylbenzene	---	0.0050	1	05/24/2016 03:03
Xylenes	---	0.015	1	05/24/2016 03:03

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	99	70-130	05/24/2016 03:03

Analyst(s): LT



Analytical Report

Client: Treadwell & Rollo
Date Received: 5/23/16 16:40
Date Prepared: 5/23/16
Project: 731641602; Altan & Waverly

WorkOrder: 1605967
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/kg

Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-61	1605967-001A	Soil	05/06/2016 13:23	ICP-MS1	121347

Analytes	Result	RL	DF	Date Analyzed
Arsenic	2.0	0.50	1	05/24/2016 12:25
Cadmium	ND	0.25	1	05/24/2016 12:25
Chromium	44	0.50	1	05/24/2016 12:25
Lead	3.5	0.50	1	05/24/2016 12:25
Nickel	52	0.50	1	05/24/2016 12:25
Zinc	41	5.0	1	05/24/2016 12:25

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	105	70-130	05/24/2016 12:25

Analyst(s): BBO

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-68	1605967-002A	Soil	05/09/2016 12:32	ICP-MS1	121347

Analytes	Result	RL	DF	Date Analyzed
Arsenic	2.6	0.50	1	05/24/2016 12:31
Cadmium	ND	0.25	1	05/24/2016 12:31
Chromium	45	0.50	1	05/24/2016 12:31
Lead	5.3	0.50	1	05/24/2016 12:31
Nickel	70	0.50	1	05/24/2016 12:31
Zinc	40	5.0	1	05/24/2016 12:31

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	103	70-130	05/24/2016 12:31

Analyst(s): BBO

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Date Received: 5/23/16 16:40
Date Prepared: 5/23/16
Project: 731641602; Altan & Waverly

WorkOrder: 1605967
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/kg

Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-75	1605967-003A	Soil	05/10/2016 12:18	ICP-MS2	121360
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Arsenic	3.8		0.50	1	05/24/2016 14:51
Cadmium	ND		0.25	1	05/24/2016 14:51
Chromium	32		0.50	1	05/24/2016 14:51
Lead	14		0.50	1	05/24/2016 14:51
Nickel	51		0.50	1	05/24/2016 14:51
Zinc	36		5.0	1	05/24/2016 14:51
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	99		70-130		05/24/2016 14:51

Analyst(s): DVH

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-83	1605967-004A	Soil	05/12/2016 13:00	ICP-MS1	121360
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Arsenic	2.9		0.50	1	05/24/2016 12:37
Cadmium	ND		0.25	1	05/24/2016 12:37
Chromium	40		0.50	1	05/24/2016 12:37
Lead	4.9		0.50	1	05/24/2016 12:37
Nickel	60		0.50	1	05/24/2016 12:37
Zinc	32		5.0	1	05/24/2016 12:37
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	106		70-130		05/24/2016 12:37

Analyst(s): BBO



Analytical Report

Client: Treadwell & Rollo
Date Received: 5/23/16 16:40
Date Prepared: 5/23/16
Project: 731641602; Altan & Waverly

WorkOrder: 1605967
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
SP-61	1605967-001A	Soil	05/06/2016 13:23	GC11A	121338

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	H	1.0	1	05/24/2016 03:08
TPH-Motor Oil (C18-C36)	ND	H	5.0	1	05/24/2016 03:08

Surrogates	REC (%)	Qualifiers	Limits	
C9	89	H	70-130	05/24/2016 03:08

Analyst(s): TD

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-68	1605967-002A	Soil	05/09/2016 12:32	GC11B	121338

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND		1.0	1	05/24/2016 03:08
TPH-Motor Oil (C18-C36)	ND		5.0	1	05/24/2016 03:08

Surrogates	REC (%)	Qualifiers	Limits	
C9	90		70-130	05/24/2016 03:08

Analyst(s): TD

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-75	1605967-003A	Soil	05/10/2016 12:18	GC11A	121338

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND		1.0	1	05/24/2016 04:25
TPH-Motor Oil (C18-C36)	ND		5.0	1	05/24/2016 04:25

Surrogates	REC (%)	Qualifiers	Limits	
C9	89		70-130	05/24/2016 04:25

Analyst(s): TD

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Date Received: 5/23/16 16:40
Date Prepared: 5/23/16
Project: 731641602; Altan & Waverly

WorkOrder: 1605967
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
SP-83	1605967-004A	Soil	05/12/2016 13:00	GC39B	121338

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	05/24/2016 10:52
TPH-Motor Oil (C18-C36)	ND	5.0	1	05/24/2016 10:52

Surrogates	REC (%)	Limits	Date Analyzed
C9	91	70-130	05/24/2016 10:52

Analyst(s): TD



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 5/23/16
Date Analyzed: 5/23/16
Instrument: GC19
Matrix: Soil
Project: 731641602; Altan & Waverly

WorkOrder: 1605967
BatchID: 121314
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-121314

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.622	0.40	0.60	-	104	70-130
MTBE	ND	0.103	0.050	0.10	-	103	70-130
Benzene	ND	0.100	0.0050	0.10	-	100	70-130
Toluene	ND	0.104	0.0050	0.10	-	104	70-130
Ethylbenzene	ND	0.104	0.0050	0.10	-	104	70-130
Xylenes	ND	0.317	0.015	0.30	-	106	70-130
Surrogate Recovery							
2-Fluorotoluene	0.108	0.0994		0.10	108	99	70-130



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 5/23/16
Date Analyzed: 5/24/16
Instrument: ICP-MS2
Matrix: Soil
Project: 731641602; Altan & Waverly

WorkOrder: 1605967
BatchID: 121347
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-121347

QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Arsenic	ND	48.9	0.50	50	-	98	75-125
Cadmium	ND	46.5	0.25	50	-	93	75-125
Chromium	ND	47.3	0.50	50	-	95	75-125
Lead	ND	51.8	0.50	50	-	104	75-125
Nickel	ND	47.3	0.50	50	-	95	75-125
Zinc	ND	487	5.0	500	-	97	75-125
Surrogate Recovery							
Terbium	467	503		500	93	101	70-130



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 5/23/16
Date Analyzed: 5/24/16
Instrument: ICP-MS2
Matrix: Soil
Project: 731641602; Altan & Waverly

WorkOrder: 1605967
BatchID: 121360
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-121360
 1605967-003AMS/MSD
 1605967-003APDS

QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Arsenic	ND	49.7	0.50	50	-	99	75-125
Cadmium	ND	48.0	0.25	50	-	96	75-125
Chromium	ND	48.5	0.50	50	-	97	75-125
Lead	ND	53.8	0.50	50	-	108	75-125
Nickel	ND	49.7	0.50	50	-	99	75-125
Zinc	ND	503	5.0	500	-	101	75-125
Surrogate Recovery							
Terbium	477	505		500	95	101	70-130



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 5/23/16
Date Analyzed: 5/24/16
Instrument: ICP-MS2
Matrix: Soil
Project: 731641602; Altan & Waverly

WorkOrder: 1605967
BatchID: 121360
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-121360
 1605967-003AMS/MSD
 1605967-003APDS

QC Summary Report for Metals

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Arsenic	49.8	53.2	50	3.784	92	99	75-125	6.64	20
Cadmium	44.8	48.7	50	ND	89	97	75-125	8.30	20
Chromium	84.3	82.6	50	32.32	104	100	75-125	2.05	20
Lead	63.2	84.4	50	13.82	99	141,F10	75-125	28.6,F10	20
Nickel	98.7	97.8	50	51.13	95	93	75-125	0.905	20
Zinc	503	554	500	36.40	93	104	75-125	9.78	20

Surrogate Recovery

Terbium	507	519	500		101	104	70-130	2.28	20
---------	-----	-----	-----	--	-----	-----	--------	------	----

Analyte	PDS Result	SPK Val	SPKRef Val	PDS %REC	PDS Limits
Lead	68.7	50	13.82	110	75-125

Analyte	DLT Result	DLTRef Val	%D	%D Limit
Arsenic	3.62	3.784	4.33	-
Cadmium	ND<1.2	ND	-	-
Chromium	31.9	32.32	1.30	20
Lead	13.4	13.82	3.04	20
Nickel	51.4	51.13	0.528	20
Zinc	37.3	36.40	2.47	-

%D Control Limit applied to analytes with concentrations greater than 25 times the reporting limits.



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 5/23/16
Date Analyzed: 5/23/16
Instrument: GC11B
Matrix: Soil
Project: 731641602; Altan & Waverly

WorkOrder: 1605967
BatchID: 121338
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg
Sample ID: MB/LCS-121338
 1605954-001AMS/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	45.5	1.0	40	-	114	70-130
TPH-Motor Oil (C18-C36)	ND	-	5.0	-	-	-	-
Surrogate Recovery							
C9	22.4	21.8		25	90	87	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)	48.2	49.6	40	ND	120	124	70-130	3.04	30
Surrogate Recovery									
C9	23.5	23.5	25		94	94	70-130	0	30



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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1605967

ClientCode: TWRF

WaterTrax
 WriteOn
 EDF
 Excel
 EQulS
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:

Peter Cusack
Treadwell & Rollo
555 Montgomery St., Suite 1300
San Francisco, CA 94111
(415) 955-5244 FAX: (415) 955-9041

Email: pcusack@langan.com
cc/3rd Party:
PO:
ProjectNo: 731641602; Altan & Waverly

Bill to:

Accounts Payable
Treadwell & Rollo
555 Montgomery St., Suite 1300
San Francisco, CA 94111
Langan_InvoiceCapture@concur.solutio

Requested TAT: 1 day;

Date Received: 05/23/2016

Date Logged: 05/23/2016

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	
1605967-001	SP-61	Soil	5/6/2016 13:23	<input type="checkbox"/>	A	A	A										
1605967-002	SP-68	Soil	5/9/2016 12:32	<input type="checkbox"/>	A	A	A										
1605967-003	SP-75	Soil	5/10/2016 12:18	<input type="checkbox"/>	A	A	A										
1605967-004	SP-83	Soil	5/12/2016 13:00	<input type="checkbox"/>	A	A	A										

Test Legend:

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

Prepared by: Alexandra Iniguez

The following SampIDs: 001A, 002A, 003A, 004A contain testgroup.

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: 731641602; Altan & Waverly
Comments:

QC Level: LEVEL 2
Client Contact: Peter Cusack
Contact's Email: pcusack@langan.com

Work Order: 1605967
Date Logged: 5/23/2016

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
1605967-001A	SP-61	Soil	SW6020 (LUFT)	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	5/6/2016 13:23	1 day		<input type="checkbox"/>	
			Multi-Range TPH(g,d,mo)			<input type="checkbox"/>	1 day		<input type="checkbox"/>		
			SW6020 (Arsenic)			<input type="checkbox"/>	1 day		<input type="checkbox"/>		
1605967-002A	SP-68	Soil	SW6020 (LUFT)	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	5/9/2016 12:32	1 day		<input type="checkbox"/>	
			Multi-Range TPH(g,d,mo)			<input type="checkbox"/>	1 day		<input type="checkbox"/>		
			SW6020 (Arsenic)			<input type="checkbox"/>	1 day		<input type="checkbox"/>		
1605967-003A	SP-75	Soil	SW6020 (LUFT)	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	5/10/2016 12:18	1 day		<input type="checkbox"/>	
			Multi-Range TPH(g,d,mo)			<input type="checkbox"/>	1 day		<input type="checkbox"/>		
			SW6020 (Arsenic)			<input type="checkbox"/>	1 day		<input type="checkbox"/>		
1605967-004A	SP-83	Soil	SW6020 (LUFT)	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	5/12/2016 13:00	1 day		<input type="checkbox"/>	
			Multi-Range TPH(g,d,mo)			<input type="checkbox"/>	1 day		<input type="checkbox"/>		
			SW6020 (Arsenic)			<input type="checkbox"/>	1 day		<input type="checkbox"/>		

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.

1605967

RUSH

Treadwell & Rollo
Environmental and Geotechnical Consultant

CHAIN OF CUSTODY RECORD

- 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
- 50 Airport Parkway, Suite 175, San Jose, CA 95110 Ph: 408.437.7708/Fax: 408.437.7709

Site Name: Alameda Water
 Job Number: 731641602
 Project Manager/Contact: Peter Curack
 Samplers: GTK Alameda Nabalski
 Recorder (Signature Required): [Signature]

Turnaround Time
24

Field Sample Identification No.	Date	Time	Lab Sample No.	Matrix			No. Containers & Preservative					Analysis Requested		Silica gel clean-up	Hold	Remarks	
				Soil	Water	Air	Other	HCL	H ₂ SO ₄	HNO ₃	Ice						
SP-61	5/6/16	1323		X													
SP-69	5/9/16	1232		X													
SP-75	5/10/16	1218		X													
SP-83	5/12/16	1300		X													
Relinquished by: (Signature)				Date	Time	Received by: (Signature)				Date	Time						
[Signature]				5-23-16	1130	[Signature]				5-23-16	1130						
Relinquished by: (Signature)				Date	Time	Received by: (Signature)				Date	Time						
[Signature]				5-23-16	1640	[Signature]				5/23/16	16:40						
Relinquished by: (Signature)				Date	Time	Received by Lab: (Signature)				Date	Time						
Sent to Laboratory (Name): <u>McCampbell Analytical</u>						Method of Shipment: <input checked="" type="checkbox"/> Lab courier <input type="checkbox"/> Fed Ex <input type="checkbox"/> Airborne <input type="checkbox"/> UPS											
Laboratory Comments/Notes:						<input type="checkbox"/> Hand Carried <input type="checkbox"/> Private Courier (Co. Name)											



Sample Receipt Checklist

Client Name: Treadwell & Rollo
Project Name: 731641602; Altan & Waverly
WorkOrder No: 1605967 Matrix: Soil
Carrier: Bernie Cummins (MAI Courier)

Date and Time Received: 5/23/2016 16:40
Date Logged: 5/23/2016
Received by: Alexandra Iniguez
Logged by: Alexandra Iniguez

Chain of Custody (COC) Information

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

Sample Receipt Information

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

Sample Preservation and Hold Time (HT) Information

All samples received within holding time? Yes [checked] No []
Sample/Temp Blank temperature Temp: 5.4°C NA []
Water - VOA vials have zero headspace / no bubbles? Yes [] No [] NA [checked]
Sample labels checked for correct preservation? Yes [checked] No []
pH acceptable upon receipt (Metal: <2; 522: <4; 218.7: >8)? Yes [] No [] NA [checked]
Samples Received on Ice? Yes [checked] No []
(Ice Type: WET ICE)

UCMR3 Samples:

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

Comments: Method SW8021B/8015Bm (G/MBTEX) was received passed its 14-day holding time. Method SW8015B (Diesel & Motor Oil) was received passed its 14-day holding time.



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1606011

Report Created for: Treadwell & Rollo

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

Project Contact: Peter Cusack

Project P.O.:

Project Name: 731641602; Alta and Warrly

Project Received: 06/01/2016

Analytical Report reviewed & approved for release on 06/03/2016 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: 731641602; Alta and Warrly
WorkOrder: 1606011

Glossary Abbreviation

%D	Serial Dilution Percent Difference
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 (Serial Dilution)
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

F10 MS/MSD outside control limits. Physical or chemical interferences exist due to sample matrix.



Analytical Report

Client: Treadwell & Rollo
Date Received: 6/1/16 14:50
Date Prepared: 6/1/16
Project: 731641602; Alta and Warrly

WorkOrder: 1606011
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
SP-89-5	1606011-001A	Soil	05/19/2016 16:25	GC19	121671

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	06/02/2016 10:07
MTBE	---	0.050	1	06/02/2016 10:07
Benzene	---	0.0050	1	06/02/2016 10:07
Toluene	---	0.0050	1	06/02/2016 10:07
Ethylbenzene	---	0.0050	1	06/02/2016 10:07
Xylenes	---	0.015	1	06/02/2016 10:07

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	94	70-130	06/02/2016 10:07

Analyst(s): LT

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-96-4.5	1606011-002A	Soil	05/24/2016 12:03	GC19	121671

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	06/02/2016 10:39
MTBE	---	0.050	1	06/02/2016 10:39
Benzene	---	0.0050	1	06/02/2016 10:39
Toluene	---	0.0050	1	06/02/2016 10:39
Ethylbenzene	---	0.0050	1	06/02/2016 10:39
Xylenes	---	0.015	1	06/02/2016 10:39

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	93	70-130	06/02/2016 10:39

Analyst(s): LT



Analytical Report

Client: Treadwell & Rollo
Date Received: 6/1/16 14:50
Date Prepared: 6/1/16
Project: 731641602; Alta and Warrly

WorkOrder: 1606011
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
SP-102-3	1606011-003A	Soil	05/24/2016 15:14	GC19	121671

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	06/02/2016 11:10
MTBE	---	0.050	1	06/02/2016 11:10
Benzene	---	0.0050	1	06/02/2016 11:10
Toluene	---	0.0050	1	06/02/2016 11:10
Ethylbenzene	---	0.0050	1	06/02/2016 11:10
Xylenes	---	0.015	1	06/02/2016 11:10

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	91	70-130	06/02/2016 11:10

Analyst(s): LT

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-108-4	1606011-004A	Soil	05/27/2016 07:58	GC19	121671

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	06/02/2016 11:42
MTBE	---	0.050	1	06/02/2016 11:42
Benzene	---	0.0050	1	06/02/2016 11:42
Toluene	---	0.0050	1	06/02/2016 11:42
Ethylbenzene	---	0.0050	1	06/02/2016 11:42
Xylenes	---	0.015	1	06/02/2016 11:42

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	89	70-130	06/02/2016 11:42

Analyst(s): LT



Analytical Report

Client: Treadwell & Rollo
Date Received: 6/1/16 14:50
Date Prepared: 6/1/16-6/2/16
Project: 731641602; Alta and Warrly

WorkOrder: 1606011
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/kg

Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-89-5	1606011-001A	Soil	05/19/2016 16:25	ICP-MS3	121702

Analytes	Result	RL	DF	Date Analyzed
Arsenic	3.0	0.50	1	06/02/2016 09:57
Cadmium	ND	0.25	1	06/02/2016 09:57
Chromium	44	0.50	1	06/02/2016 09:57
Lead	14	0.50	1	06/02/2016 09:57
Nickel	51	0.50	1	06/02/2016 09:57
Zinc	34	5.0	1	06/02/2016 09:57

Surrogates	REC (%)	Limits
Terbium	118	70-130

Analyst(s): BBO

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-96-4.5	1606011-002A	Soil	05/24/2016 12:03	ICP-MS3	121702

Analytes	Result	RL	DF	Date Analyzed
Arsenic	3.8	0.50	1	06/02/2016 10:03
Cadmium	ND	0.25	1	06/02/2016 10:03
Chromium	47	0.50	1	06/02/2016 10:03
Lead	4.8	0.50	1	06/02/2016 10:03
Nickel	67	0.50	1	06/02/2016 10:03
Zinc	30	5.0	1	06/02/2016 10:03

Surrogates	REC (%)	Limits
Terbium	113	70-130

Analyst(s): BBO

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Date Received: 6/1/16 14:50
Date Prepared: 6/1/16-6/2/16
Project: 731641602; Alta and Warrly

WorkOrder: 1606011
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/kg

Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-102-3	1606011-003A	Soil	05/24/2016 15:14	ICP-MS3	121702

Analytes	Result	RL	DF	Date Analyzed
Arsenic	2.3	0.50	1	06/02/2016 10:09
Cadmium	ND	0.25	1	06/02/2016 10:09
Chromium	41	0.50	1	06/02/2016 10:09
Lead	5.5	0.50	1	06/02/2016 10:09
Nickel	43	0.50	1	06/02/2016 10:09
Zinc	25	5.0	1	06/02/2016 10:09

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	109	70-130	06/02/2016 10:09

Analyst(s): BBO

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-108-4	1606011-004A	Soil	05/27/2016 07:58	ICP-MS2	121733

Analytes	Result	RL	DF	Date Analyzed
Arsenic	2.9	0.50	1	06/03/2016 14:13
Cadmium	ND	0.25	1	06/03/2016 14:13
Chromium	29	0.50	1	06/03/2016 14:13
Lead	7.5	0.50	1	06/03/2016 14:13
Nickel	23	0.50	1	06/03/2016 14:13
Zinc	25	5.0	1	06/03/2016 14:13

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	107	70-130	06/03/2016 14:13

Analyst(s): DVH



Analytical Report

Client: Treadwell & Rollo
Date Received: 6/1/16 14:50
Date Prepared: 6/1/16
Project: 731641602; Alta and Warrly

WorkOrder: 1606011
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
SP-89-5	1606011-001A	Soil	05/19/2016 16:25	GC11B	121666

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	06/01/2016 21:55
TPH-Motor Oil (C18-C36)	ND	5.0	1	06/01/2016 21:55

Surrogates	REC (%)	Limits	Date Analyzed
C9	93	70-130	06/01/2016 21:55

Analyst(s): TD

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-96-4.5	1606011-002A	Soil	05/24/2016 12:03	GC11B	121666

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	06/01/2016 23:12
TPH-Motor Oil (C18-C36)	ND	5.0	1	06/01/2016 23:12

Surrogates	REC (%)	Limits	Date Analyzed
C9	91	70-130	06/01/2016 23:12

Analyst(s): TD

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-102-3	1606011-003A	Soil	05/24/2016 15:14	GC11B	121701

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	06/02/2016 01:48
TPH-Motor Oil (C18-C36)	ND	5.0	1	06/02/2016 01:48

Surrogates	REC (%)	Limits	Date Analyzed
C9	93	70-130	06/02/2016 01:48

Analyst(s): TD

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Date Received: 6/1/16 14:50
Date Prepared: 6/1/16
Project: 731641602; Alta and Warrly

WorkOrder: 1606011
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
SP-108-4	1606011-004A	Soil	05/27/2016 07:58	GC11B	121701

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	06/02/2016 00:30
TPH-Motor Oil (C18-C36)	ND	5.0	1	06/02/2016 00:30

Surrogates	REC (%)	Limits	Date Analyzed
C9	90	70-130	06/02/2016 00:30

Analyst(s): TD



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 5/31/16
Date Analyzed: 6/1/16
Instrument: GC19
Matrix: Soil
Project: 731641602; Alta and Warrly

WorkOrder: 1606011
BatchID: 121671
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-121671
 1605D50-001AMS/MSD

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.637	0.40	0.60	-	106	70-130
MTBE	ND	0.112	0.050	0.10	-	113	70-130
Benzene	ND	0.111	0.0050	0.10	-	111	70-130
Toluene	ND	0.114	0.0050	0.10	-	114	70-130
Ethylbenzene	ND	0.113	0.0050	0.10	-	113	70-130
Xylenes	ND	0.344	0.015	0.30	-	114	70-130
Surrogate Recovery							
2-Fluorotoluene	0.107	0.108		0.10	107	108	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	0.602	0.624	0.60	ND	100	104	70-130	3.59	20
MTBE	0.102	0.0930	0.10	ND	102	93	70-130	9.25	20
Benzene	0.0987	0.0946	0.10	ND	99	95	70-130	4.26	20
Toluene	0.100	0.0981	0.10	ND	99	97	70-130	2.29	20
Ethylbenzene	0.0974	0.0985	0.10	ND	97	99	70-130	1.17	20
Xylenes	0.296	0.303	0.30	ND	99	101	70-130	2.17	20
Surrogate Recovery									
2-Fluorotoluene	0.0943	0.0925	0.10		94	93	70-130	1.86	20



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 6/1/16
Date Analyzed: 6/2/16
Instrument: ICP-MS3
Matrix: Soil
Project: 731641602; Alta and Warrly

WorkOrder: 1606011
BatchID: 121702
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-121702
 1606012-001AMS/MSD

QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Arsenic	ND	53.8	0.50	50	-	108	75-125
Cadmium	ND	53.6	0.25	50	-	107	75-125
Chromium	ND	54.7	0.50	50	-	109	75-125
Lead	ND	53.0	0.50	50	-	106	75-125
Nickel	ND	52.9	0.50	50	-	106	75-125
Zinc	ND	534	5.0	500	-	107	75-125

Surrogate Recovery

Terbium	559	553		500	112	111	70-130
---------	-----	-----	--	-----	-----	-----	--------

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Arsenic	54.8	57.4	50	4.359	101	106	75-125	4.76	20
Cadmium	52.4	52.3	50	ND	105	104	75-125	0.210	20
Chromium	101	135	50	60.59	80	149,F10	75-125	29.3,F10	20
Lead	68.5	74.8	50	15.09	107	120	75-125	8.82	20
Nickel	113	146	50	73.63	79	145,F10	75-125	25.3,F10	20
Zinc	552	575	500	45.03	101	106	75-125	4.08	20

Surrogate Recovery

Terbium	511	558	500		102	112	70-130	8.72	20
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Analyte	DLT Result	DLTRef Val	%D	%D Limit
Arsenic	4.04	4.359	7.32	-
Cadmium	ND<1.2	ND	-	-
Chromium	64.8	60.59	6.95	20
Lead	14.1	15.09	6.56	20
Nickel	74.9	73.63	1.72	20
Zinc	47.3	45.03	5.04	-

%D Control Limit applied to analytes with concentrations greater than 25 times the reporting limits.



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 5/31/16
Date Analyzed: 5/31/16
Instrument: GC11A
Matrix: Soil
Project: 731641602; Alta and Warrly

WorkOrder: 1606011
BatchID: 121666
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg
Sample ID: MB/LCS-121666
 1605A80-001AMS/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	41.7	1.0	40	-	104	70-130
TPH-Motor Oil (C18-C36)	ND	-	5.0	-	-	-	-
Surrogate Recovery							
C9	22.4	22.8		25	90	91	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)	NR	NR		73	NR	NR	-	NR	
Surrogate Recovery									
C9	NR	NR			NR	NR	-	NR	



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 6/1/16
Date Analyzed: 6/1/16
Instrument: GC11A
Matrix: Soil
Project: 731641602; Alta and Warrly

WorkOrder: 1606011
BatchID: 121701
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg
Sample ID: MB/LCS-121701
 1606012-001AMS/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	42.0	1.0	40	-	105	70-130
TPH-Motor Oil (C18-C36)	ND	-	5.0	-	-	-	-
Surrogate Recovery							
C9	22.6	22.9		25	90	92	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)	44.1	43.9	40	2.512	104	103	70-130	0.536	30
Surrogate Recovery									
C9	22.8	22.9	25		91	91	70-130	0	30



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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1606011

ClientCode: TWRF

WaterTrax
 WriteOn
 EDF
 Excel
 EQulS
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:

Peter Cusack
 Treadwell & Rollo
 555 Montgomery St., Suite 1300
 San Francisco, CA 94111
 (415) 955-9040 FAX: (415) 955-9041

Email: pcusack@langan.com
 cc/3rd Party:
 PO:
 ProjectNo: 731641602; Alta and Warrly

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: 06/01/2016

Date Logged: 06/01/2016

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	
1606011-001	SP-89-5	Soil	5/19/2016 16:25	<input type="checkbox"/>	A	A	A										
1606011-002	SP-96-4.5	Soil	5/24/2016 12:03	<input type="checkbox"/>	A	A	A										
1606011-003	SP-102-3	Soil	5/24/2016 15:14	<input type="checkbox"/>	A	A	A										
1606011-004	SP-108-4	Soil	5/27/2016 7:58	<input type="checkbox"/>	A	A	A										

Test Legend:

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

Prepared by: Agustina Venegas

The following SamplIDs: 001A, 002A, 003A, 004A contain testgroup.

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: 731641602; Alta and Warrly
Comments:

QC Level: LEVEL 2
Client Contact: Peter Cusack
Contact's Email: pcusack@langan.com

Work Order: 1606011
Date Logged: 6/1/2016

WaterTrax
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 EDF
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 J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De- chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1606011-001A	SP-89-5	Soil	Multi-Range TPH(g,d,mo)	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	5/19/2016 16:25	1 day		<input type="checkbox"/>	
			SW6020 (Metals) <Arsenic, Cadmium, Chromium, Lead, Nickel, Zinc>			<input type="checkbox"/>		1 day		<input type="checkbox"/>	
1606011-002A	SP-96-4.5	Soil	SW6020 (Metals) <Arsenic, Cadmium, Chromium, Lead, Nickel, Zinc>	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	5/24/2016 12:03	1 day		<input type="checkbox"/>	
			Multi-Range TPH(g,d,mo)			<input type="checkbox"/>		1 day		<input type="checkbox"/>	
1606011-003A	SP-102-3	Soil	SW6020 (Metals) <Arsenic, Cadmium, Chromium, Lead, Nickel, Zinc>	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	5/24/2016 15:14	1 day		<input type="checkbox"/>	
			Multi-Range TPH(g,d,mo)			<input type="checkbox"/>		1 day		<input type="checkbox"/>	
1606011-004A	SP-108-4	Soil	SW6020 (Metals) <Arsenic, Cadmium, Chromium, Lead, Nickel, Zinc>	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	5/27/2016 7:58	1 day		<input type="checkbox"/>	
			Multi-Range TPH(g,d,mo)			<input type="checkbox"/>		1 day		<input type="checkbox"/>	

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.

1606011

RUSH

CHAIN OF CUSTODY RECORD

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: Alta. and Mainly
 Job Number: 731641602
 Project Manager/Contact: Peter Cusack
 Samplers: Gtk
 Recorder (Signature Required): [Signature]

Turnaround Time
24

Field Sample Identification No.	Date	Time	Lab Sample No.	Matrix			No. Containers & Preservative					Analysis Requested		Silica gel clean-up	Hold	Remarks	
				Soil	Water	Other	HCL	H ₂ SO ₄	HNO ₃	Ice	Other						
SP-89-5	5/19/16	1625		X													
SP-96-4.5	5/24/16	1203		X													
SP-102-3	5/24/16	1514		X													
SP-108-4	5/27/16	0758		X													
<p>ICE # <u>61</u> GOOD CONDITION <u>APPROPRIATE</u> HEAD SPACE/ABSENT <u>CONTAINERS</u> DECHLORINATED IN LAB <u>PRESERVED IN LAB</u> PRESERVATION <u>VOAS O&G METALS OTHER</u></p>																	
Relinquished by: (Signature) <u>[Signature]</u>				Date	Time	Received by: (Signature) <u>[Signature]</u>				Date	Time						
Relinquished by: (Signature) <u>[Signature]</u>				Date	Time	Received by: (Signature) <u>[Signature]</u>				Date	Time						
Relinquished by: (Signature) <u>[Signature]</u>				Date	Time	Received by Lab: (Signature) <u>[Signature]</u>				Date	Time						
Sent to Laboratory (Name): <u>McCampbell</u>						Method of Shipment <input checked="" 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: 15414



Sample Receipt Checklist

Client Name: **Treadwell & Rollo**
 Project Name: **731641602; Alta and Warryl**
 WorkOrder No: **1606011** Matrix: Soil
 Carrier: Bernie Cummins (MAI Courier)

Date and Time Received: **6/1/2016 14:50**
 Date Logged: **6/1/2016**
 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: 6.1°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

 Comments:



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Analytical Report

WorkOrder: 1606671 **Amended:** 06/16/2016

Report Created for: Treadwell & Rollo

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

Project Contact: Peter Cusack

Project P.O.:

Project Name: 731641602; Alta and Warrly

Project Received: 06/15/2016

Analytical Report reviewed & approved for release on 06/16/2016 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: 731641602; Alta and Warrly
WorkOrder: 1606671

Glossary Abbreviation

%D	Serial Dilution Percent Difference
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 (Serial Dilution)
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
M	Estimate Maximum Possible Concentration
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)



Glossary of Terms & Qualifier Definitions

Client: Treadwell & Rollo
Project: 731641602; Alta and Warrly
WorkOrder: 1606671

Analytical Qualifiers

e2 diesel range compounds are significant; no recognizable pattern
e7 oil range compounds are significant



Analytical Report

Client: Treadwell & Rollo
Date Received: 6/15/16 15:45
Date Prepared: 6/15/16-6/16/16
Project: 731641602; Alta and Warrly

WorkOrder: 1606671
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
SP-116-3	1606671-001A	Soil	06/02/2016 13:17	GC7	122299

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	06/16/2016 03:30
MTBE	---	0.050	1	06/16/2016 03:30
Benzene	---	0.0050	1	06/16/2016 03:30
Toluene	---	0.0050	1	06/16/2016 03:30
Ethylbenzene	---	0.0050	1	06/16/2016 03:30
Xylenes	---	0.015	1	06/16/2016 03:30

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	100	70-130	06/16/2016 03:30

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-123-2.5	1606671-002A	Soil	06/02/2016 11:51	GC7	122340

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	06/16/2016 02:02
MTBE	---	0.050	1	06/16/2016 02:02
Benzene	---	0.0050	1	06/16/2016 02:02
Toluene	---	0.0050	1	06/16/2016 02:02
Ethylbenzene	---	0.0050	1	06/16/2016 02:02
Xylenes	---	0.015	1	06/16/2016 02:02

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	102	70-130	06/16/2016 02:02

Analyst(s): IA



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Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mcccampbell.com / E-mail: main@mcccampbell.com

Analytical Report

Client: Treadwell & Rollo
Date Received: 6/15/16 15:45
Date Prepared: 6/15/16-6/16/16
Project: 731641602; Alta and Warrly

WorkOrder: 1606671
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
SP-130-1.5	1606671-003A	Soil	06/02/2016 12:54	GC7	122361

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	06/16/2016 13:40
MTBE	---	0.050	1	06/16/2016 13:40
Benzene	---	0.0050	1	06/16/2016 13:40
Toluene	---	0.0050	1	06/16/2016 13:40
Ethylbenzene	---	0.0050	1	06/16/2016 13:40
Xylenes	---	0.015	1	06/16/2016 13:40

Surrogates	REC (%)	Limits	
2-Fluorotoluene	95	70-130	06/16/2016 13:40

Analyst(s): IA



Analytical Report

Client: Treadwell & Rollo
Date Received: 6/15/16 15:45
Date Prepared: 6/15/16
Project: 731641602; Alta and Warrly

WorkOrder: 1606671
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/kg

Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-116-3	1606671-001A	Soil	06/02/2016 13:17	ICP-MS3	122341

Analytes	Result	RL	DF	Date Analyzed
Arsenic	4.7	0.50	1	06/16/2016 12:54
Cadmium	ND	0.25	1	06/16/2016 12:54
Chromium	37	0.50	1	06/16/2016 12:54
Lead	11	0.50	1	06/16/2016 12:54
Nickel	20	0.50	1	06/16/2016 12:54
Zinc	27	5.0	1	06/16/2016 12:54

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	113	70-130	06/16/2016 12:54

Analyst(s): DVH

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-123-2.5	1606671-002A	Soil	06/02/2016 11:51	ICP-MS3	122341

Analytes	Result	RL	DF	Date Analyzed
Arsenic	4.6	0.50	1	06/16/2016 13:01
Cadmium	1.1	0.25	1	06/16/2016 13:01
Chromium	35	0.50	1	06/16/2016 13:01
Lead	230	0.50	1	06/16/2016 13:01
Nickel	32	0.50	1	06/16/2016 13:01
Zinc	490	5.0	1	06/16/2016 13:01

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	111	70-130	06/16/2016 13:01

Analyst(s): DVH

(Cont.)



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Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client: Treadwell & Rollo
Date Received: 6/15/16 15:45
Date Prepared: 6/15/16
Project: 731641602; Alta and Warrly

WorkOrder: 1606671
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/kg

Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-130-1.5	1606671-003A	Soil	06/02/2016 12:54	ICP-MS3	122341

Analytes	Result	RL	DF	Date Analyzed
Arsenic	4.0	0.50	1	06/16/2016 14:58
Cadmium	ND	0.25	1	06/16/2016 14:58
Chromium	37	0.50	1	06/16/2016 14:58
Lead	74	0.50	1	06/16/2016 14:58
Nickel	34	0.50	1	06/16/2016 14:58
Zinc	120	5.0	1	06/16/2016 14:58

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	114	70-130	06/16/2016 14:58

Analyst(s): DVH



Analytical Report

Client: Treadwell & Rollo
Date Received: 6/15/16 15:45
Date Prepared: 6/15/16
Project: 731641602; Alta and Warrly

WorkOrder: 1606671
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
SP-116-3	1606671-001A	Soil	06/02/2016 13:17	GC11A	122309

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	06/16/2016 06:23
TPH-Motor Oil (C18-C36)	ND	5.0	1	06/16/2016 06:23

Surrogates	REC (%)	Limits	Date Analyzed
C9	92	70-130	06/16/2016 06:23

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-123-2.5	1606671-002A	Soil	06/02/2016 11:51	GC11A	122309

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	06/16/2016 03:47
TPH-Motor Oil (C18-C36)	16	5.0	1	06/16/2016 03:47

Surrogates	REC (%)	Limits	Date Analyzed
C9	92	70-130	06/16/2016 03:47

Analyst(s): TK

Analytical Comments: e7

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-130-1.5	1606671-003A	Soil	06/02/2016 12:54	GC11A	122309

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	9.4	5.0	5	06/16/2016 09:37
TPH-Motor Oil (C18-C36)	260	25	5	06/16/2016 09:37

Surrogates	REC (%)	Limits	Date Analyzed
C9	89	70-130	06/16/2016 09:37

Analyst(s): TK

Analytical Comments: e7,e2



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 6/14/16
Date Analyzed: 6/15/16 - 6/16/16
Instrument: GC19
Matrix: Soil
Project: 731641602; Alta and Warrly

WorkOrder: 1606671
BatchID: 122299
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-122299

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.625	0.40	0.60	-	104	70-130
MTBE	ND	0.0737	0.050	0.10	-	74	70-130
Benzene	ND	0.103	0.0050	0.10	-	103	70-130
Toluene	ND	0.114	0.0050	0.10	-	114	70-130
Ethylbenzene	ND	0.125	0.0050	0.10	-	125	70-130
Xylenes	ND	0.379	0.015	0.30	-	126	70-130
Surrogate Recovery							
2-Fluorotoluene	0.108	0.116		0.10	108	116	70-130



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 6/15/16
Date Analyzed: 6/16/16
Instrument: GC7
Matrix: Soil
Project: 731641602; Alta and Warrly

WorkOrder: 1606671
BatchID: 122340
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-122340
 1606671-002AMS/MSD

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.592	0.40	0.60	-	99	70-130
MTBE	ND	0.0706	0.050	0.10	-	71	70-130
Benzene	ND	0.0899	0.0050	0.10	-	90	70-130
Toluene	ND	0.0866	0.0050	0.10	-	87	70-130
Ethylbenzene	ND	0.105	0.0050	0.10	-	105	70-130
Xylenes	ND	0.331	0.015	0.30	-	110	70-130
Surrogate Recovery							
2-Fluorotoluene	0.112	0.111		0.10	112	111	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	0.538	0.548	0.60	ND	90	91	70-130	1.83	20
MTBE	0.0726	0.0759	0.10	ND	73	76	70-130	4.44	20
Benzene	0.0777	0.0798	0.10	ND	78	80	70-130	2.69	20
Toluene	0.0748	0.0752	0.10	ND	72	73	70-130	0.592	20
Ethylbenzene	0.0904	0.0922	0.10	ND	90	92	70-130	1.95	20
Xylenes	0.286	0.288	0.30	ND	92	93	70-130	0.699	20
Surrogate Recovery									
2-Fluorotoluene	0.0952	0.0982	0.10		95	98	70-130	3.09	20



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 6/15/16
Date Analyzed: 6/16/16
Instrument: GC19
Matrix: Soil
Project: 731641602; Alta and Warrly

WorkOrder: 1606671
BatchID: 122361
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-122361

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.612	0.40	0.60	-	102	70-130
MTBE	ND	0.0818	0.050	0.10	-	82	70-130
Benzene	ND	0.107	0.0050	0.10	-	107	70-130
Toluene	ND	0.110	0.0050	0.10	-	110	70-130
Ethylbenzene	ND	0.113	0.0050	0.10	-	113	70-130
Xylenes	ND	0.341	0.015	0.30	-	114	70-130
Surrogate Recovery							
2-Fluorotoluene	0.110	0.110		0.10	110	110	70-130



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 6/15/16
Date Analyzed: 6/16/16
Instrument: ICP-MS1
Matrix: Soil
Project: 731641602; Alta and Warrly

WorkOrder: 1606671
BatchID: 122341
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-122341

QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Arsenic	ND	53.1	0.50	50	-	106	75-125
Cadmium	ND	50.8	0.25	50	-	102	75-125
Chromium	ND	51.4	0.50	50	-	103	75-125
Lead	ND	51.6	0.50	50	-	103	75-125
Nickel	ND	52.6	0.50	50	-	105	75-125
Zinc	ND	524	5.0	500	-	105	75-125
Surrogate Recovery							
Terbium	543	564		500	109	113	70-130



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 6/14/16
Date Analyzed: 6/15/16
Instrument: GC39B
Matrix: Soil
Project: 731641602; Alta and Warrly

WorkOrder: 1606671
BatchID: 122309
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg
Sample ID: MB/LCS-122309
 1606630-006AMS/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	39.6	1.0	40	-	99	70-130
TPH-Motor Oil (C18-C36)	ND	-	5.0	-	-	-	-
Surrogate Recovery							
C9	23.3	23.3		25	93	93	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)	46.5	46.5	40	ND	116	116	70-130	0	30
Surrogate Recovery									
C9	23.5	23.4	25		94	94	70-130	0	30



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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1606671

ClientCode: TWRF

WaterTrax
 WriteOn
 EDF
 Excel
 EQuIS
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:

Peter Cusack
Treadwell & Rollo
555 Montgomery St., Suite 1300
San Francisco, CA 94111
(415) 955-5244 FAX: (415) 955-9041

Email: pcusack@langan.com
cc/3rd Party:
PO:
ProjectNo: 731641602; Alta and Warrly

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: 06/15/2016

Date Logged: 06/15/2016

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	
1606671-001	SP-116-3	Soil	6/2/2016 13:17	<input type="checkbox"/>	A	A	A										
1606671-002	SP-123-2.5	Soil	6/2/2016 11:51	<input type="checkbox"/>	A	A	A										
1606671-003	SP-130-1.5	Soil	6/2/2016 12:54	<input type="checkbox"/>	A	A	A										

Test Legend:

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

Prepared by: Jena Alfaro

The following SamplIDs: 001A, 002A, 003A contain testgroup.

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: 731641602; Alta and Warrly
Comments:

QC Level: LEVEL 2
Client Contact: Peter Cusack
Contact's Email: pcusack@langan.com

Work Order: 1606671
Date Logged: 6/15/2016

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
1606671-001A	SP-116-3	Soil	SW6020 (Metals) <Arsenic, Cadmium, Chromium, Lead, Nickel, Zinc> Multi-Range TPH(g,d,mo)	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	6/2/2016 13:17	1 day		<input type="checkbox"/>	
1606671-002A	SP-123-2.5	Soil	SW6020 (Metals) <Arsenic, Cadmium, Chromium, Lead, Nickel, Zinc> Multi-Range TPH(g,d,mo)	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	6/2/2016 11:51	1 day		<input type="checkbox"/>	
1606671-003A	SP-130-1.5	Soil	SW6020 (Metals) <Arsenic, Cadmium, Chromium, Lead, Nickel, Zinc> Multi-Range TPH(g,d,mo)	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	6/2/2016 12:54	1 day		<input type="checkbox"/>	

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.

RUSH

CHAIN OF CUSTODY RECORD

- 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: Alta and Waverly
 Job Number: 731641602
 Project Manager/Contact: Peter Cusack
 Samplers: G.H.K.
 Recorder (Signature Required): [Signature]

Turnaround
 Time
24

Field Sample Identification No.	Date	Time	Lab Sample No.	No. Containers & Preservative							Analysis Requested		Remarks						
				Soil	Water	Other	HCL	H ₂ SO ₄	HNO ₃	Ice	Other	TPH-g-d-mo		SWP5	Arctic	Silica gel clean-up	Hold		
SP-116-3	6/2/16	1317		X															
SP-123-2.5	6/2/16	1151		X															
SP-130-1.5	6/2/16	1254		X															

Relinquished by: (Signature) <u>[Signature]</u>	Date <u>6-15-16</u>	Time <u>1135</u>	Received by: (Signature) <u>[Signature]</u>	Date <u>6-15-16</u>	Time <u>1135</u>
Relinquished by: (Signature) <u>[Signature]</u>	Date <u>6-15-16</u>	Time <u>1545</u>	Received by: (Signature) <u>[Signature]</u>	Date <u>6/15/16</u>	Time <u>1545</u>
Relinquished by: (Signature)	Date	Time	Received by Lab: (Signature)	Date	Time

Sent to Laboratory (Name): Mc Campbell
 Laboratory Comments/Notes: 318°

Method of Shipment: Lab courier Fed Ex Airborne UPS
 Hand Carried Private Courier (Co. Name)



Sample Receipt Checklist

Client Name: **Treadwell & Rollo**
 Project Name: **731641602; Alta and Warryl**
 WorkOrder No: **1606671** Matrix: Soil
 Carrier: Bernie Cummins (MAI Courier)

Date and Time Received: **6/15/2016 15:45**
 Date Logged: **6/15/2016**
 Received by: **Jena Alfaro**
 Logged by: **Jena Alfaro**

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: 5.8°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

 Comments: