

Appendix M

Hazards Supporting Information

- Phase II Environmental Site Assessment – 700 Innes
- Phase I/II Investigation Targeted Brownfields Assessment – 900 Innes
- Preliminary Study Geotechnical and Environmental Issues
- Foreshore Sediment Sampling Technical Memorandum – 900 Innes
- Analysis of Brownfield Cleanup Alternatives –Shipwright’s Cottage, 900 Innes
- Updated Phase 1 Environmental Site Assessment –700 Innes
- India Basin Shoreline Park Soil Sampling Results
- India Basin Shoreline Park Soil Sampling Proposal
- Site Mitigation Plan – India Basin Shoreline Park, 900 Innes, and India Basin Open Space
- Revised Site Mitigation Plan – 700 Innes
- Conceptual Remedial Action Plan – 900 Innes
- Technical Memorandum – Environmental Testing Rationale at India Basin Redevelopment Project

PHASE II ENVIRONMENTAL SITE ASSESSMENT
India Basin
San Francisco, California

Prepared For:

Build Inc.
San Francisco, California

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2 September 2014
731626702

LANGAN TREADWELL ROLLO

2 September 2014

Mr. Patrick Banks
Build Inc.
1215 Fourth Ave, Suite 2400
Seattle, WA 98161

Subject: Phase II Environmental Site Assessment
Transbay Block 6
San Francisco, California
Langan Project: 731626702

Dear Mr. Banks:

Langan Treadwell Rollo (Langan) is pleased to present this Phase II Environmental Site Assessment, for the India Basin property in San Francisco, California.

In performing this Phase II ESA, we have endeavored to observe that degree of care and skill generally exercised by other consultants undertaking similar studies at the same time, under similar circumstances and conditions, and in the same geographical area.

We appreciate the opportunity to assist you with this project. If you have any questions or need any information clarified, please call Mr. Peter J. Cusack at (415) 955-5244.

Sincerely yours,
Langan Treadwell Rollo

Karianne Staehlin
Staff Scientist

Peter J. Cusack
Senior Associate

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PHASE II ENVIRONMENTAL SITE ASSESSMENT
India Basin
San Francisco, California

1.0 INTRODUCTION

This Phase II Environmental Site Assessment (ESA) was prepared for the proposed project located at India Basin (Site) in San Francisco, California (Figure 1). This Site is bound by Innes Street and Hudson Avenue on the west, Earl Street on the south and San Francisco Bay on the north and east. Arellous Walker Drive runs through the center of the Site from Innes Avenue and terminates at the east end of the Site. The Site is roughly rectangular in shape with average plan dimensions of 1,100 by 1,200 feet. With the exception of the structures fronting Innes Avenue, the Site is mostly vacant. Elevations at the high end of the Site, fronting Innes Avenue, vary from 45 to 30 feet¹; along Hudson Avenue they vary from Elevation 16 to 20 feet; grades slope down to Elevations 6 to 10 feet near the edge of the Site fronting the Bay.

The Site is bayward of the original historic shoreline and subject to the requirements of the City of San Francisco's Article 22A (Maher) Ordinance. Article 22A states that construction projects in San Francisco, which are bayward of the historic 1852 high tide line and disturb more than 50 cubic yards of soil, require assessment of the Site history (Phase I ESA) and subsurface soil quality (Phase II ESA).

Previous investigations of properties bayward of the Article 22A boundary have found fill material with elevated levels of metals and petroleum hydrocarbons as a result of the 1906 earthquake and fire. If fill materials are encountered which contain contaminants that exceed hazardous waste threshold concentrations, they will require special handling and disposal. Site mitigation and health and safety plans will also be required before construction and off-haul of the fill materials to designated landfills.

2.0 PROPOSED PROJECT DESCRIPTION

The proposed development will occupy the entire Site. The proposed structures will be at-grade, with a 1- to 2-level concrete podium and 4 to 6 stories of wood/steel-framed construction. The northeastern portion of the site will be used as open space. Site grading will

¹ Elevations are referenced to San Francisco City datum.

require cuts up to 15 feet adjacent to Innes Avenue. Several feet of fill might be placed near the shoreline to mitigate potential sea rise.

3.0 BACKGROUND

AEI Consultants prepared a Phase I ESA for the Site dated 15 April 2013. Based on their review of regulatory files, the Site history, Site reconnaissance, and Site information obtained during the Phase I ESA, AEI's assessment had revealed the following RECs associated with the subject property or nearby properties:

- The subject property was listed in the regulatory database as a State Hazardous Waste Site (SHWS), a Voluntary Cleanup Program (VCP) site and an "Other" site. The listings pertain to the presence of contaminated fill materials on the land portions of the subject property. Fill materials have the potential to have originated from the dredging of nearby harbor areas and to have elevated levels of metals or petroleum product constituents. A groundwater investigation was conducted in 1994 to assess the potential for subsurface impact of metals, hydrocarbons and volatile organic compounds (VOCs) from the fill materials. Soil and groundwater results showed levels of semi-VOCs (SVOCs) and hydrocarbons in excess of levels of concern, and metals concentrations exceeded both California and US Maximum Contaminant Levels (MCLs) for arsenic, barium, chromium, copper, lead and mercury. The original sampling report was not provided to AEI. However, based on a previous ESA performed for the subject property in 2008, it appears that no further investigation has been performed at the subject property since 1994. Therefore, the presence of elevated concentrations of metals in soil and groundwater at the subject property represents evidence of a recognized environmental condition.

4.0 SCOPE AND PURPOSE OF PHASE II WORK

The objective of the Phase II ESA is to assess the presence of petroleum hydrocarbon and heavy metal contamination in the soil, groundwater, and soil-gas beneath the Site that may be removed and disposed during the proposed construction activities. Concentrations of chemical compounds and metals detected in the soil, groundwater, and soil-gas samples were compared to state and federal criteria for hazardous waste and local landfill requirements for disposal options.

Our work included collecting soil samples from the fifteen geotechnical borings (B-1 through B-15) and the seven exploratory borings (EB-1 through EB-7) that were drilled in areas to supplement the geotechnical boring and to provide additional special coverage throughout the Site, chemical testing of selected soil samples, and evaluating the results. We also collected a grab groundwater sample (EB-2-GW) and four soil-gas samples (EB-3-SG, EB-4-SG, EB-6-SG, and EB-7-SG) from exploratory borings drilled during the investigation.

5.0 FIELD INVESTIGATION

The fifteen geotechnical borings (B-1 through B-15) were drilled In November 2013 and March, April, and June 2014 and the seven environmental borings (EB-1 through EB-7) were drilled in August 2014. The approximate locations of the borings are presented on Figure 2.

Prior to drilling we obtained the necessary drilling permits from the San Francisco Department of Public Health (SFDPH) and San Francisco Department of Public Works (SFDPW). We retained a private utility locating subcontractor to check for underground utilities near the proposed boring and CPT locations. As required by law, we notified Underground Service Alert (USA) at least 48 hours prior to drilling.

Our field exploration and laboratory testing programs are discussed in the remainder of this section.

5.1 Geotechnical Borings

Between 1 and 3 November 2013, three geotechnical borings were drilled along Arellious Walker Street, designated B-1, B-2 and B-5. In March and April 2014, twelve additional geotechnical borings were drilled across the Site, designated B-3, B-4, and B-6 through B-15. Geotechnical borings B-1 through B-7 and B-15 were drilled by Pitcher Drilling Co. of Palo Alto, California, with a rig equipped with rotary wash drilling equipment. The rotary wash borings extended to depths of 95.5 to 151.5 feet below the existing ground surface (bgs). Borings B-8 through B-14, were drilled by Exploration Geoservices, Inc. of San Jose, California with a truck-mounted hollow-stem drill rig, extended to depths of 33 to 84.5 feet bgs. The borings were drilled under the direction of our field engineer who logged the soil/rock encountered and obtained representative samples for laboratory testing. Logs of the borings are presented on Figures A-1 through A-15 in Appendix A. The soil and rock encountered in the borings was classified in accordance with the Classification Chart, presented on Figure A-16 and A-17.

5.2 Environmental Borings

The drilling and sampling was conducted on 5 and 6 August 2014. Seven exploratory borings, EB-1 through EB-7, were drilled to depths of approximately 12 to 16 feet bgs by Gregg Drilling and Testing of Martinez, California at the locations shown on Figure 2. The exploratory drilling was advanced using hydraulically-driven, direct push technology and hand auger equipment. Soil samples collected from the direct push technology were collected using a macrocore sampler, lined with clean acetylene liners driven 48 inches into the soil. Soil samples collected from the hand auger equipment were collected with clean stainless steel liners. Groundwater was encountered in the exploratory boring (EB-2) at approximately 13 feet bgs. Boring logs from this investigation are presented on Figures B-1 through B-7 in Appendix B. The material encountered was classified according to the soil classification system described on Figure B-9.

Soil Sampling

Soil samples were retained from the exploratory borings at depths of approximately 1.5, 2.5, 3.0, 5.0, 6.0, 7.5, 8.0, 10.0, 10.5, 12, 15, and 17.5 feet bgs for laboratory analysis. Sample ends were covered with Teflon, sealed with plastic end caps, labeled and stored on ice until delivery to the analytical laboratory. All samples were delivered under chain-of-custody control to McCampbell Analytical, Inc. (McCampbell), a California Department of Public Health certified analytical laboratory in Pittsburg, California.

Groundwater Sampling

On 6 August 2014, one grab groundwater sample (EB-2-GW) was collected from the exploratory boring. The groundwater sample was decanted into laboratory prepared containers, sealed and stored on ice until delivery to the analytical laboratory. The sample was delivered under chain-of-custody control to McCampbell in Pittsburg, California.

Soil-Gas Sampling

On 6 August 2014, four soil-gas samples (EB-3-SG, EB-4-SG, EB-6-SG, and EB-7-SG) were collected in general accordance with the California Department of Toxic Substances Control's (DTSC) documents titled "*Advisory – Active Soil Gas Investigation*" dated April 2012 and "*Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air*" dated October 2011. The soil gas samples were delivered under chain-of-custody control to McCampbell and analyzed for VOCs by EPA Method TO-15.

6.0 SUBSURFACE CONDITIONS

Subsurface information was obtained from both our environmental and geotechnical investigations at the Site. We used the results of our review and field investigation to summarize the Site surface and subsurface conditions.

The Site is primarily east of the edge of the historic San Francisco shoreline. It was filled between 1946 and 1968; only a small portion of the Site is west of the historic shoreline (Figure 2). In general, the Site is blanketed by fill, underlain by Bay Mud, sand, Old Bay Clay and bedrock.

The Site is blanketed by 16 to 41 feet of fill material and the fill thickness increases towards the bay. The fill consists primarily of loose to medium dense sand with varying amounts of silt, clay, gravel, concrete, brick and wood fragments. The fill includes isolated layers of stiff to hard clay. A weak and compressible marine clay and silt deposit, referred to as Bay Mud, underlies the fill. This layer ranges from 2 to 55 feet in thickness where explored within the project Site and includes occasional layers of clayey sand. Bay Mud was not encountered in the borings west of Hudson Avenue. In general, the Bay Mud is underlain by relatively incompressible dense sand with varying amounts of clay and silt. The sand layer is about 5 to 33 feet thick. The top 5 to 10 feet of the sand layer in some areas of the Site consists of medium dense clayey sand.

A medium stiff to hard clay and silt layer, locally known as Old Bay Clay, is present beneath the native sand. The thickness of the clay layer varies across the site from 9 to 50 feet. The Old Bay Clay slopes down and becomes thicker in the northeast corner of the Site towards the bay. The Old Bay Clay is underlain by strong, relatively incompressible residual soil (completely weather rock) consisting of very stiff to hard clay and very dense sand and gravel. The residual soil is 3 to 14 feet thick. Bedrock of the Franciscan Complex consisting of shale, sandstone and serpentinite, underlies the residual soil. The bedrock surface slopes steeply from the ground surface west of the site to a depth of 23 feet near Inness Avenue and slopes down to a depth of 149 feet near the eastern side of the site. The bedrock encountered is moderately to closely fractured, soft to hard, plastic to moderately strong, and deeply to moderately weathered.

The groundwater at the Site is likely at the elevation of the water in the Bay. Groundwater was measured in several of the boreholes at depths 7 feet (at the northeast area) to 33 feet

(southwest area across Hudson Avenue). The groundwater level at the project Site is anticipated to vary a few feet seasonally and with the fluctuations in the water level of the San Francisco Bay. Given the depth of the proposed excavation activities, groundwater may be encountered during development activities.

7.0 SAMPLE SELECTION AND ANALYTICAL TESTING

The objective of the soil, groundwater, and soil-gas sampling was to assess the presence of hazardous materials and petroleum hydrocarbons in the soil, groundwater, and soil-gas beneath the Site that may be disturbed during the proposed construction activities.

The soil samples were submitted to McCampbell for some or all of the analyses as listed below:

- Total petroleum hydrocarbons (TPH) as gasoline (TPHg), diesel (TPHd), and motor oil (TPHmo) by Modified EPA Method 8015B;
- Volatile organic compounds (VOCs) by EPA Method 8260B;
- Semi-volatile organic compounds (SVOCs) by EPA Method 8270C;
- Polychlorinated biphenyls (PCBs) by EPA Method 8081;
- California administrative manual (CAM) 17 metals by EPA Method 6020;
- Leaking underground fuel tank (LUFT) five metals by EPA Method 6010/200.7 series;
- Total lead by EPA Method 6010/200.7;
- Total cyanide by EPA Method SM4500;
- Acid soluble sulfide by EPA Method 9030A/E376.2;
- pH by EPA Method 9045D; and
- Asbestos by EPA Method 435 California Air Resource Board (CARB).

Analytical results for metals concentrations in soils were compared to the total threshold limit concentration (TTLC). Samples with elevated concentrations of lead and chromium were also

analyzed for soluble metals using the soluble threshold limit concentration (STLC) by California waste extraction test (WET) method and by the Federal toxicity characteristic leaching potential (TCLP) analyses. These analyses were run to assess if metals concentrations in soil were at State and/or Federal hazardous waste levels.

The grab groundwater sample was submitted to McCampbell for the analyses as listed below:

- Total petroleum hydrocarbons (TPH) as gasoline (TPHg), diesel (TPHd), and motor oil (TPHmo) by Modified EPA Method 8015B;
- Volatile organic compounds (VOCs) by EPA Method 8260B; and
- California administrative manual (CAM) 17 metals by EPA Method E200.8.

The soil-gas samples were submitted to McCampbell and analyzed for:

- VOCs by EPA Method TO-15.

8.0 LABORATORY TEST RESULTS AND EVALUATION

The laboratory analytical results for the soil samples are summarized in Tables 1 and 2, for the groundwater samples on Tables 3 and 4, and the soil-gas on Table 5. Copies of the certified laboratory analytical reports are presented in Appendix C. The analytical results are discussed in the following section.

8.1 Soil Analytical Results

Soil analytical results for parameters other than metals are summarized in Table 1. TPHg was detected above the method reporting limit (1.0 milligrams per kilogram (mg/kg)) in 18 of the 74 samples analyzed at concentrations ranging from 1.2 mg/kg to 13 mg/kg. TPHd was detected above the method reporting limits (1.0 and 2.0 mg/kg) in 69 of the 74 samples analyzed at concentrations ranging from 2.3 mg/kg to 210 mg/kg. TPHmo was detected above the method reporting limit in 69 of the 74 samples analyzed at concentrations ranging from 7.1 mg/kg to 2,800 mg/kg.

Low levels of VOCs were detected in 5 of the 30 samples analyzed. Naphthalene was detected at a concentration of 0.0090 mg/kg in sample B-5 at a depth of 7.5 feet bgs, cis-1,2-dichloroethene was detected at a concentration of 0.017 mg/kg in sample B-9 at a depth of

5.5 feet bgs, TCE was detected at a concentration of 0.034 mg/kg in sample EB-2 at a depth of 1.5 feet bgs, naphthalene was detected at a concentration of 0.060 mg/kg in sample EB-5 at a depth of 15 feet bgs and at a concentration of 0.014 mg/kg in sample EB-6 at a depth of 10 feet bgs.

Low levels of the pesticides chlordane was detected at a concentration of 0.011 mg/kg and Dieldrin was detected at a concentration of 0.0081 mg/kg in sample B-8 at a depth of 3 feet bgs. G-chlordane was detected at a concentration of 0.27 mg/kg, a-chlordane was detected at a concentration of 0.023 mg/kg, g-chlordane was detected at a concentration of 0.028 mg/kg, and dieldrin was detected at a concentration of 0.021 mg/kg in sample B-13 at a depth of 5 feet bgs.

The SVOCs acenaphthene was detected at a concentration of 1.0 mg/kg, dibenzofuran was detected at a concentration of 1.0 mg/kg, fluoranthene was detected at a concentration of 1.3 mg/kg, fluorene was detected at a concentration of 0.97 mg/kg, phenanthrene was detected a concentration of 3.7 mg/kg, and pyrene was detected at a concentration of 0.85 mg/kg was detected in sample B-15 at a depth of 10.5 feet bgs. The SVOCs benzo(a)anthracene at a concentration of 2.2 mg/kg, fluoranthene was detected at a concentration of 8.1 mg/kg, phenanthrene was detected at a concentration of 2.5 mg/kg, fluoranthene was detected at a concentration of 8.1 mg/kg, and pyrene was detected at a concentration of 6.7 mg/kg in sample EB-6 at a depth of 10 feet bgs

No other VOCs, SVOCs, pesticides, PCBs, sulfides, or asbestos were detected at or above method reporting limits in the sample analyzed. Total cyanide was detected above the method reporting limits (0.10 mg/kg) in 5 of the 11 samples analyzed at concentrations ranging from 0.13 mg/kg to 0.25 mg/kg.

The metal analytical results are summarized in Table 2. Total lead was detected in all 75 samples analyzed at concentrations ranging from 0.65 mg/kg to 840 mg/kg. None of the samples exceeded the State of California hazardous waste criteria of 1,000 mg/kg for total lead. A total of 27 samples were analyzed for STLC lead by California WET method and concentrations ranged from 0.49 milligrams per liter (mg/L) to 12 mg/L. A total of 16 soil samples exceeded the State of California hazardous waste criteria of 5.0 mg/L. TCLP lead was detected at or above the method reporting limits (0.20 mg/L) in 3 of the 20 samples analyzed at concentrations ranging from 0.28 mg/L to 0.64 mg/L. None of the soil samples analyzed exceeded the Federal hazardous waste criteria of 5.0 mg/L.

Chromium was detected in all of the 58 samples analyzed at concentrations ranging from 30 mg/kg to 330 mg/kg. A total of 30 soil samples were subsequently analyzed for STLC chromium to determine soluble chromium levels. STLC chromium was detected at or above the method reporting limits in all the samples analyzed at concentrations of 0.074 mg/L and 0.99 mg/L. None of the soil samples exceeded the State of California hazardous waste criteria of 5.0 mg/L.

The remaining metal concentrations were within normal² background ranges found in the western United States with the exception of nickel which was detected at a concentration of 2,600 mg/kg in sample EB-1 at a depth of 3 feet bgs.

8.2 Groundwater Analytical Results

The groundwater analytical results are presented in Tables 3 and 4. TPHg and VOCs were not detected above the method reporting limit in the groundwater sample analyzed. TPHd was detected above the method reporting limit a concentration of 510 micrograms per liter (µg/L) and motor oil was detected at a concentration of 4,200 µg/L. The metal concentrations were within normal¹ background ranges found in the western United States.

8.3 Soil Gas Analytical Results

Four soil-gas samples were collected from borings EB-3, EB-4, EB-6, and EB-7. The soil-gas samples were analyzed for VOCs using EPA Method TO-15. Soil gas analytical results are summarized in Table 5. Several VOCs, including tetrachloroethylene (PCE), trichloroethylene (TCE), cis-1,2-dichloroethylene (cis-1,2-DCE), benzene, toluene, ethylbenzene, total xylenes, tetrahydrofuran, carbon disulfide, and other VOCs were detected at concentrations above laboratory reporting limits. Detected soil-gas results were compared to the RWQCB's shallow soil gas vapor intrusion ESLs for residential land use (Table E, RWQCB, 2013). Benzene is the only compound detected above its respective ESL. Benzene was detected above its ESL (42 µg/m³) in EB-4 and EB-6 at concentrations of 67 and 50 µg/m³³, respectively. No other soil gas detections were reported at concentrations exceeding their residential ESLs during this investigation.

² "U.S.G.S. Professional Paper 1270, Element Concentrations in Soils and Other Surficial Materials of the Conterminous United States," 1984.

³ ESL-R – "Regional Water Quality Control Board, San Francisco Bay Region, Environmental Screening Level for Residential Land Use Soil," Revised May 2008.

According to available historical information, the parcels on the Site have been undeveloped in the past. The parcels were reported to be consisting of fill materials that were filled in between 1946 and 1968. Fill materials have the potential to contain elevated petroleum products and VOCs. Therefore, the detection of several VOCs can be attributed to the fill materials present on the Site.

9.0 CONCLUSIONS AND PRELIMINARY RECOMMENDATIONS

This Phase II Environmental Site Assessment (ESA) was prepared for the proposed project located at India Basin in San Francisco, California (Figure 1). This Site is bound by Innes Street and Hudson Avenue on the west, Earl Street on the south and San Francisco Bay on the north and east. Arellous Walker Drive runs through the center of the Site from Innes Avenue and terminates at the east end of the Site. With the exception of the structures fronting Innes Avenue, the Site it is mostly vacant.

AEI Consultants prepared a Phase I ESA for the Site dated 15 April 2013. Based on their review of regulatory files, the Site history, Site reconnaissance, and Site information obtained during the Phase I ESA, AEI's assessment had revealed the following RECs associated with the subject property or nearby properties:

- The subject property was listed in the regulatory database as a State Hazardous Waste Site (SHWS), a Voluntary Cleanup Program (VCP) site and an "Other" site. The listings pertain to the presence of contaminated fill materials on the land portions of the subject property. Fill materials have the potential to have originated from the dredging of nearby harbor areas and to have elevated levels of metals or petroleum product constituents. A groundwater investigation was conducted in 1994 to assess the potential for subsurface impact of metals, hydrocarbons and volatile organic compounds (VOCs) from the fill materials. Soil and groundwater results showed levels of semi-VOCs (SVOCs) and hydrocarbons in excess of levels of concern, and metals concentrations exceeded both California and US Maximum Contaminant Levels (MCLs) for arsenic, barium, chromium, copper, lead and mercury. The original sampling report was not provided to AEI. However, based on a previous ESA performed for the subject property in 2008, it appears that no further investigation has been performed at the subject property since 1994. Therefore, the presence of elevated concentrations of metals in soil and groundwater at the subject property represents evidence of a recognized environmental condition.

The Site is blanketed by 16 to 41 feet of fill material and the fill thickness increases towards the bay. The fill consists primarily of loose to medium dense sand with varying amounts of silt, clay, gravel, concrete, brick and wood fragments. The fill includes isolated layers of stiff to hard clay. A weak and compressible marine clay and silt deposit, referred to as Bay Mud, underlies the fill. This layer ranges from 2 to 55 feet in thickness where explored within the project Site and includes occasional layers of clayey sand. Bay Mud was not encountered in the borings west of Hudson Avenue. In general, the Bay Mud is underlain by relatively incompressible dense sand with varying amounts of clay and silt. The sand layer is about 5 to 33 feet thick. The top 5 to 10 feet of the sand layer in some areas of the Site consists of medium dense clayey sand.

A medium stiff to hard clay and silt layer, locally known as Old Bay Clay, is present beneath the native sand. The thickness of the clay layer varies across the site from 9 to 50 feet. The Old Bay Clay slopes down and becomes thicker in the northeast corner of the Site towards the bay. The Old Bay Clay is underlain by strong, relatively incompressible residual soil (completely weather rock) consisting of very stiff to hard clay and very dense sand and gravel. The residual soil is 3 to 14 feet thick. Bedrock of the Franciscan Complex consisting of shale, sandstone and serpentinite, underlies the residual soil. The bedrock surface slopes steeply from the ground surface west of the site to a depth of 23 feet near Inness Avenue and slopes down to a depth of 149 feet near the eastern side of the site. The bedrock encountered is moderately to closely fractured, soft to hard, plastic to moderately strong, and deeply to moderately weathered.

The groundwater at the Site is likely at the elevation of the water in the Bay. Groundwater was measured in several of the boreholes at depths 7 feet (at the northeast area) to 33 feet (southwest area across Hudson Avenue). The groundwater level at the project Site is anticipated to vary a few feet seasonally and with the fluctuations in the water level of the San Francisco Bay. Given the depth of the proposed excavation activities, groundwater may be encountered during development activities.

Based on the analytical results from this Phase II ESA, some of the fill material at the Site contains petroleum hydrocarbons and heavy metals and in some areas the fill contained soluble lead at concentrations exceeding State of California hazardous waste levels.

The areas of fill material containing soluble lead concentrations exceeding the State of California hazardous waste criteria are located near borings B-6 at depths of 3 feet, 5.5 feet,

and 10 feet bgs, B-7 at a depth of 8 feet, B-8 at a depth of 10.5 feet bgs, B-9 at depths of 3 feet and 10 feet bgs, B-10 at a depth of 2.5 feet, B-12-at a depth of 3 feet bgs, EB-1 at a depth of 10 feet bgs, EB-2 at depths of 1.5 feet and 5 feet bgs, EB-4 at depths of 3 feet and 7.5 feet bgs, EB-6 at a depth of 10 feet bgs, EB-7 at a depth of 3 feet bgs. Total nickel exceeded the State of California hazardous waste criteria in boring EB-1 at a depth of 3 feet bgs.

Based on analytical results of the groundwater sample analyzed that detected low levels of petroleum hydrocarbons, approval of the groundwater discharge from the dewatering system should be granted by San Francisco Public Utilities Commission (SFPUC). A permit will be obtained from SFPUC prior to any groundwater discharge. If petroleum hydrocarbon contamination is detected in the groundwater at levels greater than those established by SFPUC, the groundwater should be properly treated prior to disposal by the contractor.

Benzene is the only compound detected above its respective ESL. Benzene was detected above its ESL ($42 \mu\text{g}/\text{m}^3$) in EB-4 and EB-6 at concentrations of 67 and $50 \mu\text{g}/\text{m}^3$, respectively. No other soil gas detections were reported at concentrations exceeding their residential ESLs during this investigation.

Because hazardous materials were detected at the Site, a Site mitigation plan (SMP) and a health and safety (H&S) plan (prepared by others) will be required prior to construction. The SMP will provide recommended measures to mitigate the long-term environmental or health and safety risks caused by the presence of hazardous materials in the soil. The SMP will also contain contingency plans to be implemented during soil excavation if unanticipated hazardous materials are encountered. The H&S plan will outline proper soil handling procedures and health and safety requirements to minimize worker and public exposure to hazardous materials during construction.

10.0 LIMITATIONS

Descriptions of specific field activities and historical events are based on our observations and on information provided by others. The opinions and information presented in this report apply to Site conditions and the information that was available at the time the work was performed and do not apply to changes of which we are not aware or have not had the opportunity to evaluate. Langan Treadwell Rollo makes no guarantees or warranties with respect to the accuracy or completeness of this information.

TABLES

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Table 1
Non-Metals Analytical Results in Soil
India Basin
San Francisco, California

Sample ID	Depth (feet)	Date Sample	TPHg	TPHd	TPHmo	Total Cyanide	VOCs	SVOCs	OCP +PCBs	Sulfide	pH	Asbestos
(mg/kg)											@25C	%
B-1-2.5	2.5	11/01/13	< 1.0	2.3	10	--	ND	ND	ND	--	--	--
B-1-5	5.0	11/01/13	< 1.0	21	76	--	--	--	--	--	--	--
B-1-7.5	7.5	11/01/13	< 1.0	18	75	--	ND	ND	ND	--	--	--
B-1-10	2.5	11/01/13	< 1.0	11	38	--	--	--	--	--	--	--
B-2-2.5	2.5	11/02/13	< 1.0	52	160	--	--	--	ND ¹⁰	--	--	--
B-2-5	5.0	11/02/13	< 1.0	15	79	--	ND	ND	ND ¹¹	--	--	--
B-2-7.5	7.5	11/02/13	13	23	36	--	--	--	--	--	--	--
B-2-10	10.0	11/02/13	< 1.0	1.6	7.7	--	--	--	--	--	--	--
B-3-3	3.0	05/03/14	< 1.0	170	220	--	--	--	ND	--	--	--
B-3-5.5	5.5	05/03/14	< 1.0	23	100	--	ND	ND	--	--	--	--
B-3-8	8.0	05/03/14	< 1.0	8.8	28	--	--	--	--	--	--	< 0.25
B-4-3	3.0	05/08/14	< 1.0	55	190	0.16	ND	ND	ND	< 10	8.89	--
B-4-6	6.0	05/08/14	< 1.0	57	230	--	--	--	--	--	--	--
B-5-2.5	2.5	11/02/13	< 1.0	24	95	--	ND	ND	ND	--	--	--
B-5-5.0	5.0	11/02/13	< 1.0	84	390	--	--	--	--	--	--	--
B-5-7.5	7.5	11/02/13	< 1.0	26	120	--	ND ¹	ND	--	--	--	--
B-5-10	10.0	11/02/13	< 1.0	12	60	--	--	--	--	--	--	--
B-6-3	3.0	03/31/14	< 1.0	36	150	--	ND	ND	ND	--	--	--
B-6-5.5	5.5	03/31/14	3.5	110	740	--	--	--	--	--	--	--
B-6-10	10.0	03/31/14	< 1.0	45	370	0.25	ND	ND	--	< 10	8.26	--
B-6-15.5	15.5	03/31/14	< 1.0	4.2	9.1	--	--	--	--	--	--	--
B-7-2.5	2.5	04/02/14	< 1.0	130	2,600	--	--	--	ND	--	--	--
B-7-5	7.5	04/02/14	< 1.0	< 2.0	< 5.0	< 0.10	ND	ND	--	< 10	8.4	--
B-7-8	8.0	04/02/14	< 1.0	68	230	--	--	--	--	--	--	--
B-7-15.5	15.5	04/02/14	< 1.0	9.5	38	--	--	--	--	--	--	--
B-8-3	3.0	03/25/14	< 1.0	9.3	22	--	--	--	ND ²	--	--	--
B-8-5	5.0	03/25/14	< 1.0	5.6	34	--	--	--	--	--	--	--
B-8-10.5	10.5	03/25/14	1.2	37	130	--	--	--	--	--	--	--
B-9-3	3.0	03/25/14	4.1	22	230	--	--	--	--	--	--	--
B-9-5.5	5.5	03/25/14	2.0	140	2,800	--	ND ³	ND	--	--	--	--
B-9-8	8.0	03/25/14	< 1.0	17	100	--	--	--	--	--	--	--
B-9-10	10.0	03/25/14	7.0	210	330	--	ND	--	--	--	--	--
B-10-2.5	2.5	03/24/14	< 1.0	48	730	< 0.10	ND	ND	ND	< 10	10.2	--
B-10-5.5	5.5	03/24/14	1.7	40	140	--	--	--	--	--	--	--
B-10-8	8.0	03/24/14	1.1	26	120	--	ND	ND	--	--	--	< 0.25
B-10-10.5	10.5	03/24/14	1.7	16	230	--	--	--	--	--	--	--
B-13-3	3.0	03/25/14	2.9	20	170	--	--	--	--	--	--	--
B-13-5.5	5.5	03/25/14	2.8	38	360	--	ND	ND	ND ⁴	--	--	--
B-13-8	8.0	03/25/14	< 1.0	12	130	--	--	--	--	--	--	--
B-13-10.5	10.5	03/25/14	1.5	36	610	< 0.10	--	--	--	< 10	8.51	--
B-11-3	3.0	03/26/14	< 1.0	34	330	--	ND	ND	ND	--	--	--
B-11-5	5.0	03/26/14	4.2	25	62	< 0.10	--	--	ND	< 10	7.69	--
B-12-3	3.0	03/26/14	1.7	9.5	25	--	--	--	--	--	--	--
B-12-5.5	5.5	03/26/14	< 1.0	< 2.0	< 5.0	--	ND	ND	--	--	--	--
B-12-8	8.0	03/26/14	< 1.0	< 2.0	< 5.0	--	--	--	--	--	--	< 0.25
B-12-10.5	10.5	03/26/14	< 1.0	< 2.0	< 5.0	--	--	--	--	--	--	--
B-14-3	3.0	03/26/14	< 1.0	9.0	46	< 0.10	ND	ND	ND	< 10	8.03	--
B-14-5.5	5.5	03/26/14	2.2	12	57	--	ND	ND	--	--	--	--
B-14-17.5	17.5	03/26/14	1.9	10	53	--	--	--	--	--	--	--
B-15-3	3.0	05/10/14	< 1.0	7.5	56	--	--	--	--	--	--	--
B-15-5.5	5.5	05/10/14	< 1.0	63	510	--	ND	ND	ND	--	--	< 0.25
B-15-8	8.0	05/10/14	< 1.0	39	230	--	--	--	--	--	--	--
B-15-10.5	10.5	05/10/14	< 1.0	< 1.0	< 5.0	0.13	ND	ND ⁵	--	< 10	8.11	--
EB-1-1.5	1.5	08/06/14	< 1.0	6.6	67	--	--	--	--	--	--	--
EB-1-3.0	3.0	08/06/14	< 1.0	12	100	0.21	ND	ND	< 0.050	< 10	8.79	--
EB-1-5.0	5.0	08/06/14	--	--	--	--	--	--	--	--	--	--
EB-1-7.5	7.5	08/06/14	--	--	--	--	--	--	--	--	--	--
EB-1-10	10	08/06/14	3.8	71	190	--	--	--	--	--	--	--

Table 1
Non-Metals Analytical Results in Soil
India Basin
San Francisco, California

Sample ID	Depth (feet)	Date Sample	TPHg	TPHd	TPHmo	Total Cyanide	VOCs	SVOCs	OCP +PCBs	Sulfide	pH	Asbestos
(mg/kg)											@25C	%
EB-2-1.5	1.5	08/06/14	< 1.0	86	260	--	ND ⁶	ND	< 0.10	--	--	--
EB-2-3.0	3.0	08/06/14	--	--	--	--	--	--	--	--	--	--
EB-2-5.0	5.0	08/06/14	--	--	--	--	ND	ND	--	--	--	--
EB-2-7.5	7.5	08/06/14	--	--	--	--	--	--	--	--	--	--
EB-2-10	10	08/06/14	--	--	--	--	--	--	--	--	--	--
EB-2-15	15	08/06/14	< 1.0	2.5	8.9	--	ND	ND	--	--	--	--
EB-3-1.5	1.5	08/05/14	< 1.0	21	180	--	--	--	--	--	--	--
EB-3-3.0	3.0	08/05/14	< 1.0	20	120	--	--	--	--	--	--	--
EB-3-5.0	5.0	08/05/14	< 1.0	7.2	32	< 0.10	ND	ND	--	< 10	9.45	--
EB-3-7.5	7.5	08/05/14	--	--	--	--	--	--	--	--	--	--
EB-3-10	10	08/05/14	--	--	--	--	--	--	--	--	--	--
EB-4-1.5	1.5	08/05/14	< 1.0	20	110	--	--	--	--	--	--	--
EB-4-3.0	3.0	08/05/14	4.3	56	220	--	--	--	--	--	--	--
EB-4-5.0	5.0	08/05/14	--	--	--	--	--	--	--	--	--	--
EB-4-7.5	7.5	08/05/14	< 1.0	55	170	--	ND	ND	< 0.50	--	--	--
EB-4-10	10	08/05/14	--	--	--	--	--	--	--	--	--	--
EB-5-1.5	1.5	08/05/14	< 1.0	17	200	--	--	--	--	--	--	--
EB-5-3.0	3.0	08/05/14	--	--	--	--	--	--	--	--	--	--
EB-5-5.0	5.0	08/05/14	< 1.0	6.1	23	--	--	--	--	--	--	--
EB-5-7.5	7.5	08/05/14	--	--	--	--	--	--	--	--	--	--
EB-5-10	10	08/05/14	< 1.0	48	210	--	--	--	--	--	--	--
EB-5-15	15	08/05/14	< 1.0	34	150	--	ND ⁷	ND	< 0.25	--	--	--
EB-6-1.5	1.5	08/05/14	--	--	--	--	--	--	--	--	--	--
EB-6-3.0	3.0	08/05/14	< 1.0	9.2	75	--	--	--	--	--	--	--
EB-6-5.0	5.0	08/05/14	< 1.0	17	54	--	--	--	--	--	--	--
EB-6-7.5	7.5	08/05/14	--	--	--	--	--	--	--	--	--	--
EB-6-10	10	08/05/14	< 1.0	120	270	0.24	ND ⁸	ND ⁹	< 2.5	< 10	8.02	--
EB-6-15	15	08/05/14	--	--	--	--	--	--	--	--	--	--
EB-7-1.5	1.5	08/05/14	--	--	--	--	--	--	--	--	--	--
EB-7-3.0	3.0	08/05/14	< 1.0	15	130	--	--	--	--	--	--	--
EB-7-5.0	5.0	08/05/14	< 1.0	48	410	--	--	--	--	--	--	--
EB-7-7.5	7.5	08/05/14	--	--	--	--	--	--	--	--	--	--
EB-7-10	10	08/05/14	< 1.0	1.9	7.1	--	ND	ND	< 0.050	--	--	--
EB-7-12	12	08/05/14	--	--	--	--	--	--	--	--	--	--

Notes:

mg/kg - milligrams per kilograms

TPHg - Total Petroleum Hydrocarbons as Gasoline, EPA Method 8015M

TPHd - Total Petroleum Hydrocarbons as Diesel Range, EPA Method 8015M

VOCs - Volatile Organics, EPA Method SW8260B

SVOCs - Semi-Volatile Organics, EPA Method SW8270C

OCPs - Organochlorine Pesticides, EPA Method SW8081A/8082

PCBs - Polychlorinated Biphenyls, EPA Method 8081

ND - Not detected at or above the laboratory reporting limit

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

¹ - Naphthalene was detected at a concentration of 0.0090 mg/kg.

² - g-Chlordane was detected at a concentration of 0.011 mg/kg and Dieldrin was detected at a concentration of 0.0081 mg/kg

³ - cis-1,2-Dichloroethene was detected at a concentration of 0.017 mg/kg

⁴ - Chlordane was detected at a concentration of 0.27 mg/kg, a-Chlordane was detected at a concentration of 0.023 mg/kg, g-Chlordane was detected at a concentration of 0.028 mg/kg, and Dieldrin was detected at a concentration of 0.021 mg/kg

⁵ - Acenaphthene was detected at a concentration of 1.0 mg/kg, Dibenzofuran was detected at a concentration of 1.0 mg/kg, Fluoranthene was detected at a concentration of 1.3 mg/kg, Fluorene was detected at a concentration of 0.97 mg/kg, Phenanthrene was detected at a concentration of 3.7 mg/kg, Pyrene was detected at a concentration of 0.85 mg/kg.

⁶ - a total concentration of 0.034 mg/kg TCE was detected at EB-2-1.5.

⁷ - a total concentration of 0.060 mg/kg Naphthalene was detected at EB-5-15.

⁸ - a total concentration of 0.014 mg/kg Naphthalene was detected at EB-6-10.

⁹ - a total concentration of 2.2 mg/kg Benzo(a)anthracene, a total concentration of 8.1 Fluoranthene, a total concentration of 2.4 mg/kg Phenanthrene, and a total concentration of 6.7 mg/kg Pyrene were detected at EB-6-10.

¹⁰ - B-2-2.5 was analyzed for OCP, not PCBs

¹¹ - B-2-5 was analyzed for PCBs, not OCP

-- not analyzed

Table 2
Metal Analytical Results in Soil
India Basin
San Francisco, California

Sample ID	Depth (feet)	Date Sampled	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Chromium STLC	(mg/kg)			Lead STLC	Lead TCLP	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
										(mg/L)	(mg/kg)	(mg/kg)										
B-1-2.5	2.5	11/01/13	< 0.50	11	290	0.70	< 0.25	28	—	—	15	36	15	—	0.058	0.72	43	< 0.50	< 0.50	< 0.50	34	83
B-1-5	5.0	11/01/13	13	37	390	0.63	0.37	64	—	—	22	920	340	—	3.6	1.7	82	< 0.50	4.4	< 0.50	77	340
B-1-7.5	7.5	11/01/13	—	—	—	—	0.29	52	—	—	—	—	160	—	—	—	54	—	—	—	—	240
B-1-10	2.5	11/01/13	—	—	—	—	—	—	—	—	—	—	35	—	—	—	—	—	—	—	—	—
B-2-2.5	2.5	11/02/13	0.70	8.9	280	0.51	< 0.25	41	—	—	17	78	28	—	0.35	0.71	60	< 0.50	< 0.50	< 0.50	42	130
B-2-5	5.0	11/02/13	—	—	—	—	0.32	58	—	—	—	—	140	—	—	—	73	—	—	—	—	190
B-2-7.5	7.5	11/02/13	—	—	—	—	—	—	—	—	—	—	48	—	—	—	—	—	—	—	—	—
B-2-10	10.0	11/02/13	< 0.50	2.6	43	< 0.50	< 0.25	47	—	—	7.1	8.0	6.2	—	< 0.050	< 0.50	31	< 0.50	< 0.50	< 0.50	40	26
B-3-3	3.0	05/03/14	0.86	5.6	190	0.58	< 0.25	58	—	—	14	34	58	—	1.5	0.58	170	< 0.50	< 0.50	< 0.50	43	100
B-3-5.5	5.5	05/03/14	—	—	—	—	0.30	74	—	—	—	—	98	—	—	—	63	—	—	—	—	150
B-3-8	8.0	05/03/14	—	—	—	—	—	—	—	—	—	—	110	—	—	—	—	—	—	—	—	—
B-4-3	3.0	05/08/14	4.3	18	130	< 0.50	0.40	170	—	—	27	210	130	—	0.57	1.2	270	< 0.50	< 0.50	< 0.50	84	130
B-4-6	6.0	05/08/14	—	—	—	—	1.2	130	—	—	—	—	120	—	—	—	220	—	—	—	—	230
B-5-2.5	2.5	11/02/13	1.4	10	220	0.54	< 0.25	55	—	—	15	59	59	—	0.42	0.64	61	< 0.50	< 0.50	< 0.50	53	110
B-5-5.0	5.0	11/02/13	—	—	—	—	0.38	32	—	—	—	—	120	—	—	—	45	—	—	—	—	120
B-5-7.5	7.5	11/02/13	—	—	—	—	< 0.25	48	—	—	—	—	41	—	—	—	73	—	—	—	—	130
B-5-10	10.0	11/02/13	—	—	—	—	—	—	—	—	—	—	62	—	—	—	—	—	—	—	—	—
B-6-3	3.0	03/31/14	—	—	—	—	—	—	—	—	—	—	140	9.8	—	—	—	—	—	—	—	—
B-6-5.5	5.5	03/31/14	—	—	—	—	1.7	70	0.66	—	—	—	120	7.9	—	—	73	—	—	—	—	120
B-6-10	10.0	03/31/14	1.6	8.0	170	< 0.50	0.49	83	0.34	—	16	59	92	6.0	0.38	0.52	75	< 0.50	< 0.50	< 0.50	66	230
B-6-15.5	15.5	03/31/14	—	—	—	—	< 0.25	59	0.28	—	—	—	48	—	—	—	28	—	—	—	—	55
B-7-2.5	2.5	04/02/14	—	—	—	—	0.39	35	—	—	—	—	29	—	—	—	48	—	—	—	—	93
B-7-5	7.5	04/02/14	< 0.50	3.3	15	< 0.50	< 0.25	30	—	—	4.3	3.4	5.0	—	< 0.050	< 0.50	20	< 0.50	< 0.50	< 0.50	27	15
B-7-8	8.0	04/02/14	—	—	—	—	—	—	—	—	—	—	200	7.7	—	—	—	—	—	—	—	—
B-7-15.5	15.5	04/02/14	—	—	—	—	—	—	—	—	—	—	75	2.1	—	—	—	—	—	—	—	—
B-8-3	3.0	03/25/14	< 0.50	3.8	180	< 0.50	< 0.25	31	—	—	6.3	24	63	0.49	0.087	< 0.50	41	< 0.50	< 0.50	< 0.50	34	72
B-8-5	5.0	03/25/14	—	—	—	—	—	—	—	—	—	—	240	3.7	—	—	—	—	—	—	—	—
B-8-10.5	10.5	03/25/14	—	—	—	—	0.39	53	—	—	—	—	840	9.0	—	—	55	—	—	—	—	250
B-9-3	3.0	03/25/14	0.67	5.2	150	< 0.50	< 0.25	73	0.36	—	16	25	120	10	0.33	1.3	160	< 0.50	< 0.50	< 0.50	44	110
B-9-5.5	5.5	03/25/14	—	—	—	—	< 0.25	43	—	—	—	—	40	—	—	—	46	—	—	—	—	65
B-9-8	8.0	03/25/14	—	—	—	—	—	—	—	—	—	—	57	2.9	—	—	—	—	—	—	—	—
B-9-10	10.0	03/25/14	—	—	—	—	< 0.25	50	0.59	—	—	—	120	10	—	—	43	—	—	—	—	96
B-10-2.5	2.5	03/24/14	1.2	3.8	170	< 0.50	0.26	54	0.33	—	12	32	140	7.5	0.22	< 0.50	100	< 0.50	< 0.50	< 0.50	68	120
B-10-5.5	5.5	03/24/14	—	—	—	—	< 0.25	42	—	—	—	—	16	—	—	—	35	—	—	—	—	66
B-10-8	8.0	03/24/14	—	—	—	—	—	—	—	—	—	—	16	—	—	—	—	—	—	—	—	—
B-10-10.5	10.5	03/24/14	—	—	—	—	< 0.25	57	0.37	—	—	—	21	—	—	—	54	—	—	—	—	44

Table 2
Metal Analytical Results in Soil
India Basin
San Francisco, California

Sample ID	Depth (feet)	Date Sampled	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Chromium STLC	Cobalt	Copper	Lead	Lead STLC	Lead TCLP	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	
			(mg/kg)											(mg/L)									
B-11-3	3.0	03/26/14	—	—	—	—	< 0.25	68	0.54	—	—	21	—	—	—	—	49	—	—	—	—	68	
B-11-5	5.0	03/26/14	1.1	5.8	70	< 0.50	0.32	70	0.34	11	42	65	2.8	—	0.37	0.51	71	< 0.50	< 0.50	< 0.50	49	120	
B-12-3	3.0	03/26/14	—	—	—	—	—	—	—	—	—	120	7.0	< 0.20	—	—	—	—	—	—	—	—	
B-12-5.5	5.5	03/26/14	—	—	—	—	< 0.25	130	0.13	—	—	5.6	—	—	—	—	270	—	—	—	—	41	
B-12-8	8.0	03/26/14	—	—	—	—	< 0.25	180	0.091	—	—	4.9	—	—	—	—	500	—	—	—	—	38	
B-12-10.5	10.5	03/26/14	< 0.50	2.2	40	< 0.50	< 0.25	130	0.074	16	9.9	2.8	—	—	< 0.050	< 0.50	450	< 0.50	< 0.50	< 0.50	43	28	
B-13-3	3.0	03/25/14	—	—	—	—	—	—	—	—	—	42	—	—	—	—	—	—	—	—	—	—	
B-13-5.5	5.5	03/25/14	0.50	3.9	86	< 0.50	< 0.25	40	—	8.4	16	25	—	—	0.14	< 0.50	35	< 0.50	< 0.50	< 0.50	47	58	
B-13-8	8.0	03/25/14	—	—	—	—	< 0.25	39	—	—	—	13	—	—	—	—	37	—	—	—	—	54	
B-13-10.5	10.5	03/25/14	—	—	—	—	—	—	0.51	—	—	59	0.51	—	—	—	—	—	—	—	—	—	
B-14-3	3.0	03/26/14	0.93	2.3	53	< 0.50	< 0.25	330	0.62	77	21	48	—	—	0.16	< 0.50	1,300	< 0.50	< 0.50	< 0.50	32	64	
B-14-5.5	5.5	03/26/14	—	—	—	—	< 0.25	200	—	—	—	92	3.8	—	—	—	760	—	—	—	—	110	
B-14-7.5	17.5	03/26/14	—	—	—	—	—	—	—	—	—	49	—	—	—	—	—	—	—	—	—	—	
B-15-3	3.0	05/10/14	1.4	6.5	120	< 0.50	1.0	87	—	10	67	170	—	—	0.61	0.55	53	< 0.50	0.50	< 0.50	66	180	
B-15-5.5	5.5	05/10/14	—	—	—	—	3.5	120	—	—	—	410	—	—	—	—	110	—	—	—	—	260	
B-15-8	8.0	05/10/14	—	—	—	—	< 0.25	76	—	—	—	110	—	—	—	—	63	—	—	—	—	110	
B-15-10.5	10.5	05/10/14	< 0.50	5.3	130	< 0.50	< 0.25	130	—	14	31	45	—	—	0.26	< 0.50	110	< 0.50	< 0.50	< 0.50	72	87	
EB-1-1.5	1.5	08/06/14	0.50	4.8	180	< 0.50	< 0.25	75	—	9.9	18	35	—	—	0.084	< 0.50	63	< 0.50	< 0.50	< 0.50	55	56	
EB-1-3.0	3.0	08/06/14	—	—	—	—	1,300	—	—	—	—	0.65	—	—	—	—	2,600	—	—	—	—	87	
EB-1-10	10	08/06/14	—	—	—	—	—	—	—	—	—	90	12	< 0.20	—	—	—	—	—	—	—	—	
EB-2-1.5	1.5	08/06/14	2.9	6.8	98	< 0.50	3.9	88	0.99	9.0	110	160	12	< 0.20	4.0	0.74	86	< 0.50	1.4	< 0.50	50	220	
EB-2-5.0	5.0	08/06/14	—	—	—	—	< 0.25	69	0.38	—	—	97	5.5	< 0.20	—	—	67	—	—	—	—	140	
EB-2-15	15	08/06/14	—	—	—	—	< 0.25	85	0.50	—	—	6.3	—	—	—	—	56	—	—	—	—	60	
EB-3-1.5	1.5	08/05/14	—	—	—	—	< 0.25	62	0.58	—	—	25	—	—	—	—	180	—	—	—	—	53	
EB-3-3.0	3.0	08/05/14	0.57	5.1	170	< 0.50	< 0.25	200	0.27	51	33	25	—	—	24	< 0.50	1,400	< 0.50	< 0.50	< 0.50	42	190	
EB-3-5.0	5.0	08/05/14	—	—	—	—	< 0.25	49	—	—	—	19	—	—	—	—	180	—	—	—	—	81	
EB-4-1.5	1.5	08/05/14	—	—	—	—	0.37	82	0.29	—	—	120	4.1	< 0.20	—	—	110	—	—	—	—	130	
EB-4-3.0	3.0	08/05/14	1.5	4.8	110	< 0.50	0.45	110	0.82	13	37	87	6.3	< 0.20	0.54	0.62	150	< 0.50	< 0.50	< 0.50	54	110	
EB-4-7.5	7.5	08/05/14	—	—	—	—	6.0	85	0.96	—	—	180	10	< 0.20	—	—	110	—	—	—	—	270	
EB-5-1.5	1.5	08/05/14	—	—	—	—	—	—	—	—	—	63	2.0	< 0.20	—	—	—	—	—	—	—	—	
EB-5-5.0	5.0	08/05/14	—	—	—	—	< 0.25	51	0.067	—	—	26	—	—	—	—	66	—	—	—	—	83	
EB-5-10	10	08/05/14	—	—	—	—	< 0.25	78	0.34	—	—	150	4.0	< 0.20	—	—	67	—	—	—	—	110	
EB-5-15	15	08/05/14	0.99	5.7	77	< 0.50	< 0.25	72	0.44	9.1	25	72	4.4	< 0.20	0.38	< 0.50	54	< 0.50	< 0.50	< 0.50	48	93	
EB-6-3.0	3.0	08/05/14	—	—	—	—	0.28	97	0.75	—	—	14	—	—	—	—	150	—	—	—	—	48	
EB-6-5.0	5.0	08/05/14	—	—	—	—	< 0.25	96	0.37	—	—	18	—	—	—	—	71	—	—	—	—	52	

Table 2
Metal Analytical Results in Soil
India Basin
San Francisco, California

Sample ID	Depth (feet)	Date Sampled	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Chromium STLC	Cobalt	Copper	Lead	Lead STLC	Lead TCLP	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
						(mg/kg)			(mg/L)		(mg/kg)								(mg/kg)			
EB-6-10	10	08/05/14	1.7	5.4	75	< 0.50	0.97	83	0.56	9.8	50	88	6.3	< 0.20	0.65	0.56	74	< 0.50	< 0.50	< 0.50	59	110
EB-7-3.0	3.0	08/05/14	2.7	5.4	110	< 0.50	0.26	70	0.16	9.6	25	490	11	< 0.20	0.38	< 0.50	35	< 0.50	< 0.50	< 0.50	69	150
EB-7-5.0	5.0	08/05/14	--	--	--	--	< 0.25	54	--	--	--	87	--	--	--	--	84	--	--	--	--	96
EB-7-10	10	08/05/14	< 0.50	< 0.50	6.1	< 0.50	< 0.50	120	0.38	82	2.4	2.0	--	--	< 0.050	< 0.50	1,900	< 0.50	< 0.50	< 0.50	4.2	25
Hazardous Waste Criteria																						
TTLC	(mg/kg)		500	500	10,000	75	100	2,500	--	8,000	2,500	1,000	--	--	20	3,500	2,000	100	500	700	2,400	5,000
STLC	(mg/L)		15	5	100	0.75	1	--	5	80	25	--	5	--	0.2	350	20	1	5	7	24	250
TCLP	(mg/L)		--	5	100	--	1	--	--	--	--	--	--	5	0.2	--	--	1	5	--	--	--

Notes:
mg/kg - milligrams per kilograms
mg/L - milligrams per Liter
< 0.5 - Analyte was not detected above the laboratory reporting limit (0.5 mg/kg).
-- Not analyzed
TTLC - California Total Threshold Limit Concentration - State hazardous waste criterion
STLC - California Soluble Threshold Limit Concentration
TCLP - Federal Toxicity Characteristic Leaching Procedure

Table 3
Metal Analytical Results in Groundwater
India Basin
San Francisco, California

Sample ID	Date Sampled	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Dissolved Sulfide	Thallium	Vanadium	Zinc
EB2-GW	08/06/14	1.3	9.1	340	< 0.50	< 0.25	< 1.0	6.7	< 2.0	< 0.50	< 0.025	9.8	12.0	< 0.50	< 0.19	< 0.50	< 0.50	0.73	58

Notes:
µg/L - micrograms per Liter
< 0.5 - Analyte was not detected above the laboratory reporting limit (0.5 mg/kg).

Table 4
Volatile Organic Compound Analytical Results in Grab Water
Vallejo Station Parking Structure
India Basin
SAn Francisco, California

Sample	Date	TPHg	TPHd	TPHmo	VOC
ID	Sample	mg/L			
EB-2-GW	08/06/14	< 50	510	4,200	ND

Notes:

mg/L - milligrams per Liter

TPHg - Total Petroleum Hydrocarbons as Gasoline, EPA Method 8015M

TPHd - Total Petroleum Hydrocarbons as Diesel Range, EPA Method 8015M

TPHmo - Total Petroleum Hydrocarbons as Motor Oil, EPA Method 8015M

VOC - Volatile Organics Compounds, EPA 8260B

Table 5
Non-Metals Analytical Results in Soil Gas
India Basin
San Francisco, California

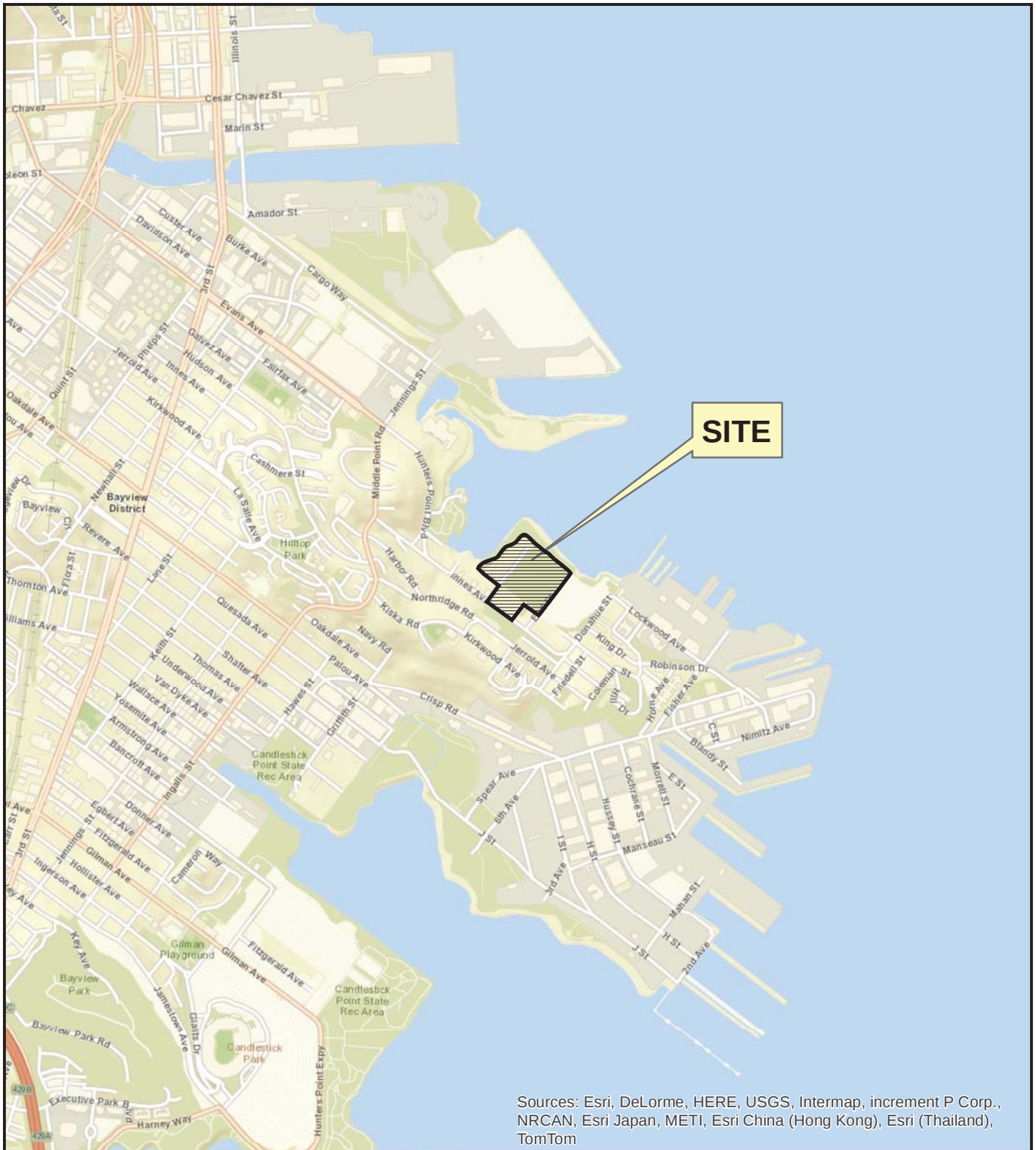
Sample ID	Date Sample	VOCs																				Helium					
		Acetone	Benzene	Bromo-dichloro-methane	1,3-Butadiene	Carbon Disulfide	Chloro-form	Chloro-methane	Cyclohexane	1,1-DCE	dis-1,2-Dichloro-ethene	Ethanol	Ethyl-benzene	Heptane	Hexane	2-Hexanone	MIBK	Methyl Methacrylate	PCE	Tetrahydrofuran	Toluene		1,1,2-TCA	TCE	Trichloro-fluoro-methane	Xylenes, Total	All Other VOCs
µg/m ³																											
EB-3-SG	08/06/14	< 84	26	< 4.9	21	130	< 3.4	< 1.5	44	< 2.8	< 130	< 3.1	33	48	< 3.0	< 3.0	< 2.9	27	< 2.1	49	< 3.9	5.3	< 4.0	10	ND	< 0.0070	
EB-4-SG	08/06/14	210	67	25	< 2.2	190	< 4.9	< 2.1	180	< 4.0	32	< 190	5.4	280	850	9.9	< 4.2	18	< 6.9	< 3.0	26	9.3	34	< 5.7	< 13	ND	< 0.0050
EB-6-SG	08/06/14	260	50	< 7.0	< 2.2	70	< 4.9	< 2.1	< 35	< 4.0	21	320	4.9	100	250	< 4.2	7.3	< 4.2	< 6.9	< 3.0	32	< 5.5	18	< 5.7	14	ND	< 0.0050
EB-7-SG	08/06/14	84	35	< 3.5	7.8	36	8.2	11	< 18	< 2.0	< 96	8.3	27	30	< 2.1	< 2.1	< 2.1	8.5	28	430	< 2.8	< 2.8	22	27	ND	< 0.0050	
ESL-R		1.60E+07	4.20E+01	3.30E+01	NE	NE	2.30E+02	4.70E+04	NE	1.00E+05	NE	NE	4.9E+2	NE	NE	NE	1.60E+06	NE	2.10E+02	NE	1.60E+05	7.60E+01	3.00E+02	NE	5.20E+04	NA	NE

Notes:

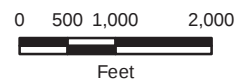
µg/m³ - micrograms per cubic meter
 VOCs - Volatile Organics, EPA Method SW8260B
 1,1-DCE - 1,1-Dichloroethene
 MIBK - 4-Methyl-2-pentanone
 PCE - Tetrachloroethene
 1,1,2-TCA - 1,1,2-Trichloroethane
 TCE - Trichloroethene
 ND - Not detected at or above the laboratory reporting limit
 < 1.0 - Analyte was not detected above the laboratory reporting limit (1.0 mg/kg)
 ESL-R - Regional Water Quality Control Board, Table E-2, Environmental Screening Levels for residential soil gas
 NE - Not established
 NA - Not available

FIGURES

DRAFT



World street basemap is provided through Langan's Esri ArcGIS software licensing and ArcGIS online.
Credits: Sources: Esri, DeLorme, NAVTEQ, USGS, Intermap, IPC, NRCAN.



INDIA BASIN
San Francisco, California

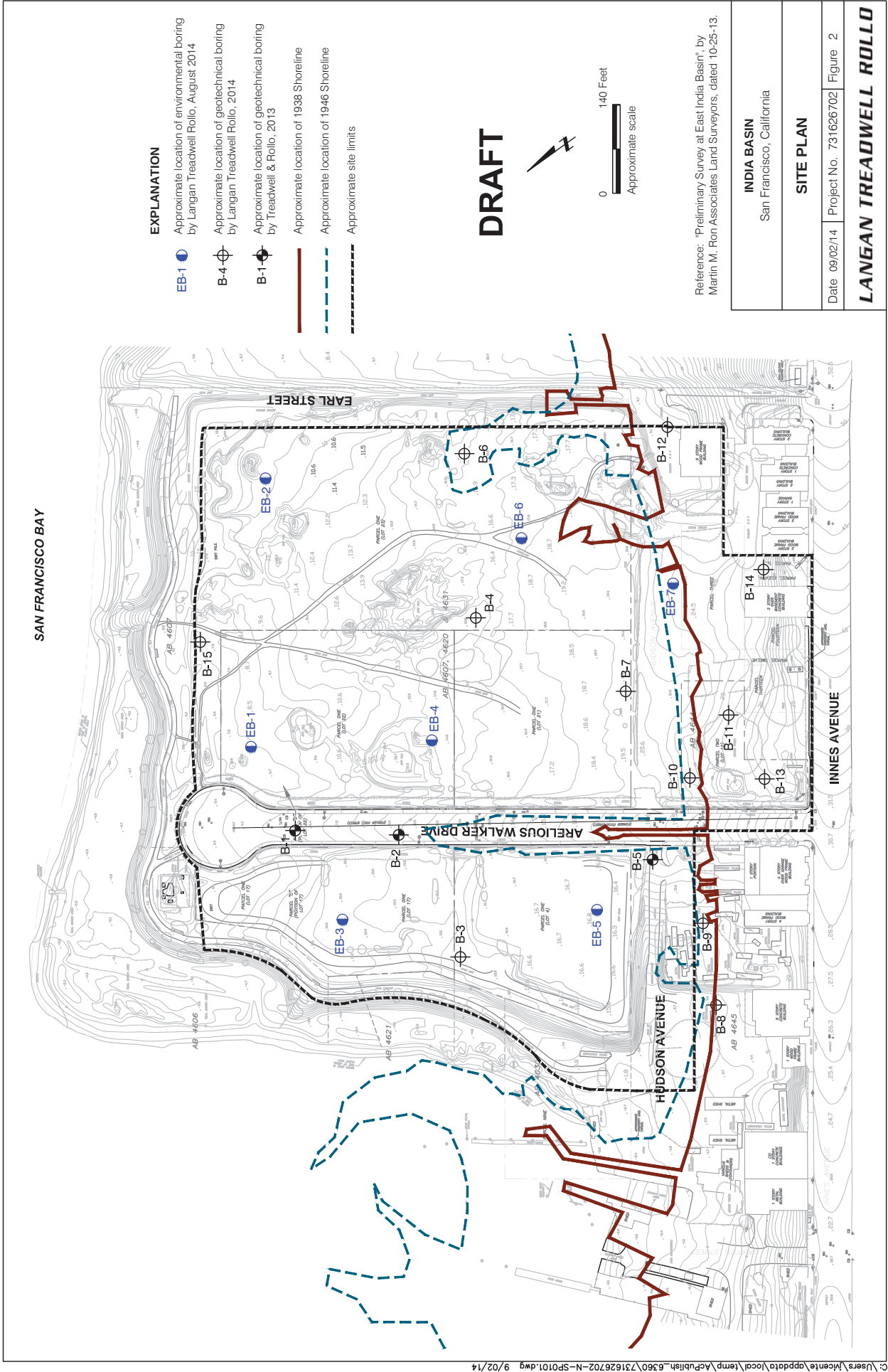
SITE LOCATION MAP

LANGAN TREADWELL ROLLO

Date 06/03/14

Project No. 731626701

Figure 1



APPENDIX A
ENVIRONMENTAL EXPLORATORY BORING LOGS

DRAFT

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

PROJECT:		INDIA BASIN San Francisco, California				Log of Boring B-1							
Boring location: See Site Plan, Figure 2						Logged by: PDB							
Date started: 11/1/13		Date finished: 11/1/13											
Drilling method: Rotary Wash													
Hammer weight/drop: 140 lbs./30 inches		Hammer type: Automatic Safety Hammer				LABORATORY TEST DATA							
Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT), Shelby Tube (ST)													
DEPTH (feet)	SAMPLES			SPT N-value ¹	LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft	
	Sampler Type	Sample	Blows/ 6"										
Ground Surface Elevation: 5.5 feet ²													
1						2 feet Asphalt Concrete (AC)							
2	GRAB					CLAYEY SAND with GRAVEL (SC) brown, medium dense, moist, fine to coarse, subangular to angular gravel							
3													
4	GRAB												
5													
6	S&H		7 10 18	20		brown, olive, and gray							
7					SC								
8	SPT		4 6 6	14		brick debris							
9													
10	SPT		1 2 6	10		loose to medium dense							
11													
12													
13					SC	CLAYEY SAND (SC) brown and red-brown, medium dense, moist, with fine, subangular gravel							
14													
15													
16	S&H		8 11 11	15						28.2	10.4		
17													
18													
19													
20					SC	CLAYEY SAND (SC) dark brown, loose, wet, trace coarse, subangular gravel							
21	SPT		1 3 3	7								22.8	16.0
22													
23					SC	CLAYEY SAND with GRAVEL (SC) dark brown, loose, wet, fine to coarse, subangular to angular gravel @24' obstruction (large gravel, rip-rap) LL = 26, PI = 10, see Figure C-1							
24													
25													
26	SPT		4 4 4	10							21.4	16.8	
27					CH	CLAY (CH) blue-gray, medium stiff, soft, wet Consolidation Test, see Figure C-31							
28													
29	ST		0- 150 psi									64.0	61.6
30													
							LANGAN TREADWELL ROLLO						
							Project No.: 731626701		Figure: A-1a				

BAY MUD

PROJECT:

INDIA BASIN
San Francisco, California

Log of Boring B-1

PAGE 2 OF 6

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA					
	Sampler Type	Sample	Blows/ 6"	SPT N-Value ¹			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
31						CLAY (CH) (continued)						
32												
33												
34												
35												
36	S&H	•	3 4 5	6		no recovery, rock obstruction						
37												
38	S&H	■	0 0 1	1		soft, trace shell fragments					53.2	70
39												
40												
41												
42												
43												
44												
45					CH							
46	S&H	■	0 0 0	0		LL = 56, PI = 27, see Figure C-1					56.3	67
47												
48												
49												
50												
51												
52												
53												
54												
55												
56	S&H	■	0 0 0	0			TxUU	5,100	890		57.3	64
57												
58												
59												
60												
							LANGAN TREADWELL ROLLO					
							Project No.: 731626701		Figure: A-1b			

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

PROJECT:

INDIA BASIN
San Francisco, California

Log of Boring B-1

PAGE 3 OF 6

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA					
	Sampler Type	Sample	Blows/ 6"	SPT N-Value ¹			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
61						CLAY (CH) (continued)						
62												
63												
64												
65												
66	S&H		0 0 1	1	CH	LL = 52, PI = 24, see Figure C-1					48.3	72
67												
68												
69												
70												
71												
72												
73												
74						increased sand content						
75	S&H		5 13 19	22	CL	SANDY CLAY (CL) olive, very stiff, wet, very fine-grained sand	TxUU	6,200	3,000		18.7	114
76												
77												
78						CLAYEY SILTY SAND (SC-SM) olive and blue-gray, medium dense, moist, fine-grained sand, trace organics						
79												
80	S&H		11 13 14	19	SC-SM	LL = 22, PI = 7, see Figure C-1				33.2	18.8	
81												
82												
83												
84						CLAY with SAND (CL) gray, very stiff, wet, fine- to medium-grained sand						
85												
86	SPT		0 6 7	16	CL							
87												
88												
89						SILTY SAND (SM)						
90												

LANGAN TREADWELL ROLLO

Project No.:
731626701Figure:
A-1c

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

PROJECT:

INDIA BASIN
San Francisco, California

Log of Boring B-1

PAGE 4 OF 6

PROJECT: INDIA BASIN San Francisco, California						Log of Boring B-1		PAGE 4 OF 6					
DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA						
	Sampler Type	Sample	Blows/ 6"	SPT N-Value			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft	
91	SPT		11 17 25	50	SM	SILTY SAND (SM) (continued) gray, dense to very dense, wet, very fine- to fine-grained sand							
92													
93													
94					CL	CLAY with SAND (CL) gray-brown, very stiff, wet, fine- to coarse-grained sand							
95	SPT		7 7 12	23									
96													
97					CL								
98													
99													
100					CL								
101													
102													
103					MH	SILT (MH) gray, stiff, wet, trace organics, trace fine-grained sand							
104													
105													
106	SPT		0 4 7	13	MH								
107													
108													
109					MH								
110													
111													
112					MH								
113													
114													
115					MH								
116	SPT		0 0 0	0		soft LL = 75, PI = 38, see Figure C-1					65.6		
117													
118					MH								
119													
120													
							LANGAN TREADWELL ROLLO						
							Project No.: 731626701		Figure: A-1d				

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

PROJECT:

INDIA BASIN
San Francisco, California

Log of Boring B-1

PAGE 5 OF 6

PROJECT: INDIA BASIN San Francisco, California						Log of Boring B-1										
						PAGE 5 OF 6										
DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA									
	Sampler Type	Sample	Blows/ 6"	SPT N-Value ¹			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft				
121	S&H		0 7 11	13	MH	SILT (MH) (continued) stiff	TxUU PP	8,850	1,530 1,500		58.4	65				
122																
123																
124																
125																
126	CL	SANDY CLAY (CL) blue-gray, very stiff, wet, very fine-grained sand to fine gravel and rock														
127																
128																
129																
130																
131		SPT		6 8 14	26											
132																
133																
134																
135																
136																
137																
138																
139																
140																
141																
142																
143		?	?	?	?											
144		RESIDUAL SOIL														
145																
146																
147																
148																
149	SHALE black, intensely fractured, hard															
150																
LANGAN TREADWELL ROLLO							Project No.: 731626701 Figure: A-1e									

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

RESIDUAL SOIL

PROJECT:

INDIA BASIN
San Francisco, California

Log of Boring B-1

PAGE 6 OF 6

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA					
	Sampler Type	Sample	Blows/ 6"	SPT N-Value ¹			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
151	SPT		29 32 36	82		SHALE (continued)						
152												
153												
154												
155												
156												
157												
158												
159												
160												
161												
162												
163												
164												
165												
166												
167												
168												
169												
170												
171												
172												
173												
174												
175												
176												
177												
178												
179												
180												

Boring terminated at a depth of 151.5 feet below ground surface.
Boring backfilled with cement grout.
Groundwater level obscured by rotary wash drilling method.

¹ S&H and SPT blow counts for the last two increments were converted to SPT N-Values using factors of 0.7 and 1.2, respectively to account for sampler type and hammer energy.
² Elevations based on San Francisco City datum.

LANGAN TREADWELL ROLLO
Project No.: 731626701
Figure: A-1f

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

Boring location: See Site Plan, Figure 2

Logged by: PDB

Date started: 11/2/13

Date finished: 11/2/13

Drilling method: Rotary Wash

Hammer weight/drop: 140 lbs./30 inches

Hammer type: Automatic Safety Hammer

Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT), Shelby Tube (ST)

LABORATORY TEST DATA

DEPTH (feet)	SAMPLES					LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
	Sampler Type	Sample	Blows/ 6"	SPT N-Value ¹									
Ground Surface Elevation: 9 feet ²													
1						2 feet Asphalt Concrete (AC)							
2													
3	GRAB					SILTY SAND with GRAVEL (SM) brown, medium dense, dry, fine to coarse, angular to subangular gravel							
4													
5													
6	S&H		10 15 15	21	SM	brown and yellow-brown, moist							
7													
8	S&H		14 15 15	21		red-brown, and yellow-brown, trace brick debris							
9													
10						SILTY SAND (SM) dark brown, medium dense, moist, fine-grained sand							
11	SPT		6 10 12	26	SM								
12													
13													
14						CLAYEY SAND (SC) brown and light brown, medium dense, moist, trace brick debris, trace fine subrounded to subangular gravel							
15													
16	SPT		3 5 11	19							31.5	13.7	
17													
18													
19													
20													
21	SPT		5 4 4	10	SC							37.5	16.0
22													
23													
24													
25													
26	SPT		1 2 4	7		no recovery, spoils observed as yellow-brown, with fine, angular gravel							
27													
28	SPT		50/4"	60/4"		large obstruction at 27.5 feet							
29													
30													
								LANGAN TREADWELL ROLLO					
								Project No.:		Figure:			
								731626701		A-2a			

PROJECT:

INDIA BASIN
San Francisco, California

Log of Boring B-2

PAGE 2 OF 5

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA					
	Sampler Type	Sample	Blows/ 6"	SPT N-Value ¹			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
31	S&H		15	19	SC	CLAYEY SAND with GRAVEL (SC) gray-brown, medium dense, wet, fine to coarse, angular gravel				25.8	14.0	
32			8									
33			19									
34												
35	S&H		4	6	CH	CLAY (CH) blue-gray, medium stiff, wet, trace shell fragments	PP		500		19.5	113
36			4									
37			4									
38												
39												
40	ST			150 psi		stiff Consolidation Test, see Figure C-32	TxUU	4,000	1,400		54.7	68
41												
42												
43												
44												
45												
46												
47												
48												
49												
50	S&H		0	3			TxUU PP	4,800	1,110 500		53.3	68
51			0									
52			4									
53												
54												
55												
56												
57												
58												
59												
60												

FILL

BAY MUD

LANGAN TREADWELL ROLLO

Project No.:
731626701Figure:
A-2b

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

PROJECT:

INDIA BASIN
San Francisco, California

Log of Boring B-2

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DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA					
	Sampler Type	Sample	Blows/ 6"	SPT N-Value ¹			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
61	S&H		31 36 40	53	SP-SM	SAND with SILT (SP-SM) blue-gray with black inclusions, very dense, wet, fine-grained						
62	SPT		5 6 8	17		gray and blue-gray, medium dense				7.2	21.5	
63												
64												
65	S&H		4 11 15	18	SC	CLAYEY SAND (SC) yellow-brown, medium dense, wet, very fine- to fine-grained sand LL = 28, PI = 13, see Figure C-1				32.8	17.8	
66												
67												
68												
69												
70	SPT		6 9 16	30	SC	medium dense to dense						
71												
72												
73												
74												
75	SPT		7 10 11	25	SC-SM	CLAYEY SILTY SAND (SC-SM) gray-brown, medium dense, wet, fine-grained sand				37.2	17.9	
76					SC-SM	CLAYEY SILTY SAND (SC-SM) increased clay content LL = 23, PI = 6, see Figure C-2						
77												
78												
79												
80	SPT		4 5 5	12	CL	CLAY (CL) gray-brown with green-gray mottling, stiff, wet, trace very fine- to coarse-grained sand				86.5	29.0	
81												
82												
83												
84												
85	SPT		0 4 5	11	CL	gray-brown with blue-gray mottling						
86												
87												
88						shells in cuttings						
89												
90												

LANGAN TREADWELL ROLLO

Project No.:
731626701Figure:
A-2c

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

PROJECT:

INDIA BASIN
San Francisco, California

Log of Boring B-2

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DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA					
	Sampler Type	Sample	Blows/ 6"	SPT N-Value ¹			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
91	S&H		6 3 7	7	CL	CLAY (CL) (continued) gray, medium stiff, wet	PP	1,500				
92												
93												
94												
95	S&H		0 4 5	6		trace shells stiff	TxUU PP	7,400	1,380 1,250		59.6	65
96												
97												
98												
99												
100												
101												
102												
103												
104												
105						Consolidation Test, see Figure C-33					59.0	65
106	ST		0- 500 psi				TxUU	10,500	1,500		58.4	65
107												
108												
109												
110												
111												
112												
113												
114												
115												
116	S&H		0 2 4	4	medium stiff, trace organics	TxUU PP	8,550	1,700 1,500		60.9	65	
117												
118												
119												
120												
							LANGAN TREADWELL ROLLO					
							Project No.: 731626701		Figure: A-2d			

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San Francisco, California

Log of Boring B-2

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DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA					
	Sampler Type	Sample	Blows/ 6"	SPT N-Value ¹			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
121					CL	CLAY (CL) (continued)						
122												
123												
124												
125												
126	S&H		15 22 26	34								
127					CL							
128												
129												
130												
131												
132												
133	SPT		8 14 15	35								
134												
135												
136												
137												
138												
139												
140	SPT		50/4"	60/4"								
141												
142												
143												
144												
145												
146												
147												
148												
149												
150												
Boring terminated at a depth of 140.5 feet below ground surface. Boring backfilled with cement grout. Groundwater level obscured by rotary wash drilling method.							LANGAN TREADWELL ROLLO					
¹ S&H and SPT blow counts for the last two increments were converted to SPT N-Values using factors of 0.7 and 1.2, respectively to account for sampler type and hammer energy. ² Elevations based on San Francisco City datum.							Project No.: 731626701		Figure: A-2e			

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

PROJECT:

INDIA BASIN
San Francisco, California

Log of Boring B-3

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Boring location: See Site Plan, Figure 2

Logged by: KLW

Date started: 4/4/14

Date finished: 4/7/14

Drilling method: Mud Rotary Wash

Hammer weight/drop: 140 lbs./30 inches

Hammer type: Automatic Safety Hammer

Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT), Shelby Tube (ST)

LABORATORY TEST DATA

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
	Sampler Type	Sample	Blows/ 6"	SPT N-value ¹								
						Ground Surface Elevation: 13.5 feet ²						
1						CLAYEY SAND with GRAVEL (SC) brown, medium dense, moist, fine to coarse-grained sand, fine to coarse subrounded to subangular gravel, trace brick debris						
2												
3	S&H		14	23						25.5	14.5	
4			16									
5			17									
6	S&H		14	20		gray, fine-grained sand, increase in clay content						
7			14		SC							
8	S&H		10	20								
9			12									
10			17									
11	SPT		10	29		trace brick debris, wood debris						
12			2									
13			17									
14												
15	S&H		15	19		SANDY CLAY with GRAVEL (CL) gray, very stiff, wet, fine-grained sand, fine to coarse subrounded to angular gravel, trace concrete, brick and wood debris						
16			12									
17			15		CL	(04/07/14; 700 AM) trace shell						
18												
19						less gravel, trace shells, wood debris						
20	S&H		5	35								
21			15									
22			35		SC	CLAYEY SAND with GRAVEL (SC) brown, dense, wet, fine to coarse-grained sand, fine subrounded to subangular gravel						
23												
24												
25												
26	SPT		2	26		SAND with SILT (SP-SM) gray brown, medium dense, wet, fine to coarse gavel, fine to coarse gravel LL = 31, PI = 7, see Figure C-2				10.3	24.3	
27			8									
28			14		SP-SM							
29												
30												

LANGAN TREADWELL ROLLO

Project No.:
731626701Figure:
A-3a

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

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San Francisco, California

Log of Boring B-3

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DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA					
	Sampler Type	Sample	Blows/ 6"	SPT N-value ¹			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
31	S&H		14	22	SP-SC	SAND with CLAY and GRAVEL (SP-SC) grades to fine gravel, petroleum odor, trace brick debris LL = 27, PI = 12, see Figure C-2				9.4	26.2	
32			17									
33			14									
34						CLAY (CH) gray, very soft, wet, trace shells, trace coarse gravel						
35												
36	S&H		2	1								
37			0									
38			2									
39												
40											55.5	67
41	ST		0-			Consolidation Test, see Figure C-34 blue-gray, stiff, trace shells	TxUU	4,000	1,350		54.2	69
42			85									
43			50									
44			psi									
45												
46												
47					CH							
48												
49												
50											56.8	67
51	ST		25			Consolidation Test, see Figure C-35	TxUU	5,000	1,570		55.1	68
52			75									
53			75									
54			75									
55			psi									
56												
57												
58												
59												
60												

BAY MUD

FILL

LANGAN TREADWELL ROLLO

Project No.:
731626701Figure:
A-3b

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

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PROJECT: INDIA BASIN San Francisco, California						Log of Boring B-3						PAGE 3 OF 5						
DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA											
	Sampler Type	Sample	Blows/ 6"	SPT N-Value ¹			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft						
61	ST		0	35/2"	CH	CLAY (CH) (continued) Consolidation Test, see Figure C-36 medium stiff, increased sand content	TxUU	6,000	720		28.6	97						
62			0		SP-SM								SAND with SILT (SP-SM) gray-brown, very dense to dense, wet, fine-grained sand				11.9	21.3
63			0															
64																		
65	S&H		27	41	dense													
66			50/2"															
67	SPT		22	32	CLAYEY SAND (SC) blue-gray, dense, wet, fine-grained sand													
68			22															
69			22															
70			12															
71	S&H		15	35	CLAYEY SAND (SC) yellow-brown, dense, wet, fine-grained sand													
72			22															
73			24	7	CLAY (CL) light-brown, medium stiff, wet, trace black inclusions Consolidation Test, see Figure C-37													
74																		
75																		
76																		
77	SPT		4	28	gray-brown with yellow-brown and blue-gray mottling, very stiff, trace fine to coarse-grained sand													
78			14															
79			15															
80																		
81	S&H		0		CLAY (CL) blue-gray, very stiff, wet, with shells													
82			5															
83			5															
84																		
85																		
86	S&H		14															
87			18															
88			22															
89																		
90																		
LANGAN TREADWELL ROLLO							Project No.: 731626701						Figure: A-3c					

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San Francisco, California

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DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA					
	Sampler Type	Sample	Blows/ 6"	SPT N-Value '			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
91	S&H		11	17	CL	CLAY (CL) (continued)						
92			12									
93												
94												
95												
96												
97												
98												
99												
100	S&H		2	7		medium stiff						
101			4									
102			6									
103												
104												
105	ST		0-25		Consolidation Test, see Figure C-38					59.6	64	
106			50-125		very stiff	TxUU	10,500	2,880		57.0	66	
107			psi									
108												
109												
110												
111												
112												
113												
114												
115	S&H		0	14	stiff							
116			8									
117			12									
118												
119												
120												
							LANGAN TREADWELL ROLLO					
							Project No.: 731626701			Figure: A-3d		

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INDIA BASIN
San Francisco, California

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DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA					
	Sampler Type	Sample	Blows/ 6"	SPT N-Value ¹			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
121						CLAY (CL) (continued)						
122												
123					CL							
124												
125						hard, trace sand						
126	S&H		17 29	43								
127	SPT		32 27 40 16	67		SANDY CLAY with GRAVEL (CL) blue-gray, hard, wet, fine to coarse, rock fragments						
128												
129												
130												
131	SPT		11 14 20	41								
132												
133					CL							
134												
135												
136	SPT		27 14 17	37								
137												
138												
139												
140	SPT		50/6"	60/6"		SERPENTINITE/SHALE black/green, intensely fractured, low hardness, low strength, deeply weathered						
141												
142												
143												
144												
145	SPT		20 50/6"	60/6"								
146												
147												
148												
149												
150												

Boring terminated at a depth of 146 feet below ground surface.
Boring backfilled with cement grout.
Groundwater encountered at 18 feet below ground surface during
drilling.

¹ S&H and SPT blow counts for the last two increments were
converted to SPT N-Values using factors of 0.7 and 1.2,
respectively to account for sampler type and hammer energy.
² Elevations based on San Francisco City datum.

LANGAN TREADWELL ROLLO

Project No.:
731626701Figure:
A-3e

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

PROJECT: INDIA BASIN San Francisco, California		Log of Boring B-4 PAGE 1 OF 5										
Boring location: See Site Plan, Figure 2			Logged by: K LW									
Date started: 4/8/14		Date finished: 4/9/14										
Drilling method: Mud Rotary Wash												
Hammer weight/drop: 140 lbs./30 inches		Hammer type: Automatic Safety Hammer										
Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT), Shelby Tube (ST)												
DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
	Sampler Type	Sample	Blows/ 6"	SPT N-value ¹								
Ground Surface Elevation: 16 feet ²												
1	GRAB	•			SC	CLAYEY SAND with GRAVEL (SC) dark brown, medium dense, wet, fine-grained sand, fine to coarse subangular gravel, wood debris and brick debris				31.6	17.5	
2												
3	S&H		12	22								
4			12		GP	GRAVEL (GP) dark brown, medium dense, moist, subangular to angular gravel						
5			10									
6	S&H		14	24								
7			20		SC	CLAYEY SAND with GRAVEL (SC) dark brown, medium dense, moist, subangular to angular gravel, trace asphalt						
8												
9												
10					SC	CLAYEY SAND (SC) dark brown, medium dense, wet, fine-grained sand, trace coarse-grained sad, trace brick fragments (04/09/14; 700 AM)				19.5	14.8	
11	S&H		4	22								
12			15									
13			17		SP-SM	SAND with SILT (SP-SM) dark brown, medium dense, fine-grained sand, trace subangular gravel				6.5	15.5	
14												
15	S&H		2	29								
16			14		GC	concrete in cuttings from 18 to 23 feet bgs CLAYEY GRAVEL (GC) dark brown, very dense, wet, subangular to angular gravel, trace concrete						
17			27									
18												
19					SC	CLAYEY SAND with GRAVEL (SC) yellow-brown, medium dense, wet, fine-grained sand, subangular to angular gravel				29.4	11.5	
20												
21												
22	S&H		50/	35/								
23			0.5"	0.5"								
24												
25												
26	S&H		5	20								
27			14									
28			15									
29												
30												
LANGAN TREADWELL ROLLO												
Project No.: 731626701							Figure: A-4a					

PROJECT:

INDIA BASIN
San Francisco, California

Log of Boring B-4

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DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA						
	Sampler Type	Sample	Blows/ 6"	SPT N-Value			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft	
31	S&H		4	11	SC	CLAYEY SAND (SC) red-yellow, medium dense, wet, fine-grained sand, trace subrounded gravel LL = 22, PI = 8, see Figure C-2				30.0	17.9		
32			8										
33			7										
34	S&H			13	SC	CLAYEY SAND (SC) red-brown, medium dense, wet, fine-grained sand, trace fine to coarse gravel, trace concrete debris LL = 27, PI = 12, see Figure C-2				40.5	16.0		
35			4										
36			4										
37			14										
38													
39													
40	S&H		8	15									
41			10										
42			12										
43													
44													
45	ST				CH	Consolidation Test, see Figure C-39	TxUU	4,500	1,700		37.5	82	
46			0-25									37.1	84
47			50-100										
48			psi										
49													
50													
51													
52													
53													
54						CLAYEY SAND (SC) green-gray, stiff, wet, fine-grained sand, trace coarse gravel, trace black inclusions LL = 26, PI = 10, see Figure C-2							
55	S&H		4	11	SC					31.3	24.0		
56			4										
57			12										
58													
59					SM	SILTY SAND (SM)							
60													

LANGAN TREADWELL ROLLO

Project No.:

731626701

Figure:

A-4b

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

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INDIA BASIN
San Francisco, California

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PROJECT: INDIA BASIN San Francisco, California						Log of Boring B-4 PAGE 3 OF 5						
DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA					
	Sampler Type	Sample	Blows/ 6"	SPT N-Value			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
61	SPT		17 20 18	46	SM	SILTY SAND (SM) (continued) yellow-brown with orange mottling, dense, wet, fine-grained sand				20.4	16.1	
62												
63												
64												
65	SPT		20 24 30	65		very dense						
66												
67												
68												
69												
70	S&H		50/3"	35/3"								
71												
72												
73												
74						CLAY (CL) light brown, hard, very stiff, wet, trace fine-grained sand, black inclusions						
75	S&H		12 17 65	57	CL							
76												
77												
78												
79												
80	S&H		10 10 15	18		very stiff, olive-gray						
81												
82												
83												
84												
85	S&H		7 14 14	20	CL	CLAY (CL) gray-brown with yellow-brown mottling, very stiff, wet						
86												
87												
88												
89												
90												
							LANGAN TREADWELL ROLLO					
							Project No.: 731626701		Figure: A-4c			

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

PROJECT:

INDIA BASIN
San Francisco, California

Log of Boring B-4

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DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA					
	Sampler Type	Sample	Blows/ 6"	SPT N-Value ¹			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
91	S&H		4	13	CL	CLAY (CL)	TxUU	10,000	2,630		47.9	73
			5			gray, stiff, wet						
			14									
92												
93												
94												
95												
96	S&H		0	11	CL	trace black inclusions						
			7									
			9									
97												
98												
99												
100						Consolidation Test, see Figure B-40						
101	ST		0-50		CL	very stiff					47.2	74
			50-150									
			psi									
102												
103												
104												
105												
106												
107												
108												
109												
110												
111	SPT		9	38	CL	GRAVELLY CLAY (CL)						
			12			blue-green, hard, wet, fine subangular, black						
			20			rock fragments, some coarse-grained sand						
112												
113												
114												
115	SPT		50/5"	60/5"	CL	SHALE						
						black deeply weathered, moderately fractured,						
						low hardness, fractured						
116												
117												
118												
119												
120												
							LANGAN TREADWELL ROLLO					
							Project No.: 731626701		Figure: A-4d			

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RESIDUAL SOIL

PROJECT:

INDIA BASIN
San Francisco, California

Log of Boring B-4

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DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA					
	Sampler Type	Sample	Blows/ 6"	SPT N-Value ¹			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
121	SPT		50/3"	60/3"								
122												
123												
124												
125												
126												
127												
128												
129												
130												
131												
132												
133												
134												
135												
136												
137												
138												
139												
140												
141												
142												
143												
144												
145												
146												
147												
148												
149												
150												
Boring terminated at a depth of 120.5 feet below ground surface. Boring backfilled with cement grout. Groundwater encountered at 10 feet below ground surface during drilling.							LANGAN TREADWELL ROLLO					
							Project No.: 731626701		Figure: A-4e			

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

¹ S&H and SPT blow counts for the last two increments were converted to SPT N-Values using factors of 0.7 and 1.2, respectively to account for sampler type and hammer energy.
² Elevations based on San Francisco City datum.

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

PROJECT:		INDIA BASIN San Francisco, California				Log of Boring B-5						PAGE 1 OF 4	
Boring location: See Site Plan, Figure 2						Logged by: EAB							
Date started: 11/2/13		Date finished: 11/2/13											
Drilling method: Mud Rotary Wash													
Hammer weight/drop: 140 lbs./30 inches		Hammer type: Automatic Safety Hammer				LABORATORY TEST DATA							
Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT)													
DEPTH (feet)	SAMPLES			SPT N-value ¹	LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft	
	Sampler Type	Sample	Blows/ 6"										
Ground Surface Elevation: 18 feet ²													
1						2-inch Asphalt Concrete (AC)							
2						22-inch Aggregate Base (AB)							
3	BULK					CLAYEY SAND with GRAVEL (SC) brown, dense, moist, fine sand, fine to coarse gravel, brick debris, trace silt							
4													
5						coarse gravel, no brick							
6	SPT		17 14 14	34									
7													
8	BULK				SC	dark brown, increased clay content, trace brick debris, wood debris							
9													
10	BULK												
11	SPT		8 14 10	29		medium dense, increased silt content				25.6	7.5		
12						increased clay content							
13						with concrete debris, wood							
14													
15						SAND (SP-SM) gray-brown, medium dense, moist, very fine- to fine-grained sand, trace silt				13.1	11.1		
16	SPT		3 5 5	12		some blue gray clay mottling							
17					SP-SM								
18						coarse sand and fine gravel							
19													
20													
21	S&H		10 10 11	15		CLAYEY SAND with GRAVEL (SC) mottled red-brown and olive-gray, medium dense, moist, fine sand, fine, subangular to subrounded gravel LL = 27, PI = 12, see Figure C-3				27.0	14.0		
22					SC								
23													
24													
25						GRAVEL (GP) green, medium dense, wet, serpentinite fragments, with fine- to medium-grained sand				3.8	3.2		
26	SPT		8 8 10	22									
27					GP	Non-plastic							
28													
29													
30													
							LANGAN TREADWELL ROLLO						
							Project No.: 731626701		Figure: A-5a				

PROJECT:

INDIA BASIN
San Francisco, California

Log of Boring B-5

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PROJECT:					INDIA BASIN San Francisco, California		Log of Boring B-5		PAGE 2 OF 4						
DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA								
	Sampler Type	Sample	Blows/ 6"	SPT N-Value			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft			
31	SPT		10	13	GP	GRAVEL (GP) (continued) medium dense, with nails and debris	TxUU	3,500	1,020	30.5	19.5	113			
32			5												
33			6												
34					CL	CLAY (CL) blue-gray, stiff, wet, some shells									
35	SPT		500			LL = 29, PI = 18, see Figure C-3									
36			6	25	SC	CLAYEY SAND (SC) yellow-brown, medium dense, wet, fine sand				30.5	22.0				
37	SPT		9			LL = 27, PI = 12, see Figure C-3									
38			12		SC-SM	CLAYEY SILTY SAND (SC-SM) red-brown and yellow-brown, dense, decreased fines content				16.7	17.9				
39						LL = 23, PI = 5, see Figure C-3									
40			7	35											
41	SPT		14												
42			15												
43					SM	SILTY SAND (SM) yellow-brown, very dense, wet, fine sand									
44															
45			27	79											
46	SPT		29		SC	CLAYEY SAND (SC) yellow-brown and red-brown, medium dense, wet, very fine- to fine-grained sand				26.0	20.8				
47			37			LL = 27, PI = 11, see Figure C-3									
48															
49															
50			17	26											
51	SPT		10												
52			12												
53															
54															
55			4	16		decreased clay content, increased silt content				30.8	24.5				
56	SPT		8			LL = 25, PI = 11, see Figure C-3									
57			5												
58															
59															
60															
							LANGAN TREADWELL ROLLO								
							Project No.: 731626701		Figure: A-5b						

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San Francisco, California

Log of Boring B-5

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PROJECT: INDIA BASIN San Francisco, California						Log of Boring B-5						PAGE 3 OF 4		
DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA							
	Sampler Type	Sample	Blows/ 6"	SPT N-Value			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft		
61	SPT		15	59	SM	SILTY SAND (SM) yellow-brown, dense, wet, very fine- to fine-sand, trace clay								
62			22											
63			27											
64														
65	SPT		7	24	SC	CLAYEY SAND (SC) yellow-brown, medium dense, wet, very fine- to fine sand LL = 32, PI = 16, see Figure C-3				45.6	20.7			
66			8											
67			12											
68														
69	S&H		9	27	CL	CLAY with SAND (CL) gray-brown, very stiff, wet, very fine sand, trace sand, trace silt	PP		7,000					
70			15											
71			23											
72														
73	S&H		10	23	CL		TxUU	6,250	3,260		33.4	89		
74			15											
75			18											
76														
77	S&H		8	11	CL	CLAY (CL) gray with yellow mottling, stiff, wet, trace very fine sand, trace silt	TxUU	6,550	1,880		48.2	74		
78			4											
79			11											
80														
81					CL									
82														
83														
84														
85														
86														
87														
88														
89														
90														
LANGAN TREADWELL ROLLO							Project No.: 731626701						Figure: A-5c	

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DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA					
	Sampler Type	Sample	Blows/ 6"	SPT N-Value ¹			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
91	S&H		19 41 50/ 1.5"	64/ 7.5"	SC	CLAYEY SAND with GRAVEL (SC) dark gray and yellow-brown, very dense, wet, fine sand, fine angular to subangular gravel						
92												
93												
94												
95	SPT		36 50/ 5.5"	60/ 5.5"	SHALE	with fine to coarse bedrock fragments						
96												
97												
98												
99					no recovery	SHALE black, intensely fractured, hard, moderately strong						
100	SPT		50/ 0.5"	60/ 0.5"								
101												
102												
103	SPT		50/ 0"	60/ 0"		no recovery						
104												
105												
106												
107												
108												
109												
110												
111												
112												
113												
114												
115												
116												
117												
118												
119												
120												

Boring terminated at a depth of 103 feet below ground surface.
Boring backfilled with cement grout.
Groundwater level obscured by rotary wash drilling method.

¹ S&H and SPT blow counts for the last two increments were converted to SPT N-Values using factors of 0.7 and 1.2, respectively to account for sampler type and hammer energy.
² Elevations based on San Francisco City datum.

LANGAN TREADWELL ROLLO

Project No.:
731626701Figure:
A-5d

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

PROJECT:		INDIA BASIN San Francisco, California		Log of Boring B-6		PAGE 1 OF 4					
Boring location: See Site Plan, Figure 2					Logged by: KLV						
Date started: 3/31/14		Date finished: 4/1/14									
Drilling method: Mud Rotary Wash											
Hammer weight/drop: 140 lbs./30 inches		Hammer type: Automatic Safety Hammer			LABORATORY TEST DATA						
Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT), Shelby Tube (ST)											
DEPTH (feet)	SAMPLES			LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
	Sampler Type	Sample	Blows/ 6" SPT N-value ¹								
					Ground Surface Elevation: 16.5 feet ²						
1				SM	SILTY SAND (SM) light brown, medium dense, dry to moist, large concrete debris (up to 6 inches in diameter) trace brick debris						
2											
3	S&H		10	CL	SANDY CLAY (CL) gray-brown, very stiff, moist, fine-grained sand, trace coarse gravel, brick, debris, wood debris						
4			14								
5			12								
6	S&H		15		CLAYEY SILTY SAND (SM) dark gray-brown, medium dense, moist, increase in sand, trace glass and brick debris LL = 18, PI = 5, see Figure C-3				21.0	10.6	
7			12								
8	S&H		16								
9			17	SC-SM	trace brick and glass debris, trace coarse gravel						
10			5								
11	S&H		2								
12			12								
13											
14					CLAYEY SILTY SAND (SC-SM) gray-brown, medium dense, moist, fine-grained sand, trace shells, trace brick debris, trace glass debris LL = 17, PI = 4, see Figure C-3						
15	S&H		6	SC-SM					18.7	12.3	
16			5								
17			17								
18	GRAB			SC	CLAYEY SAND with GRAVEL (SC) brown, medium dense, moist, fine-grained sand, subangular-fine gravel LL = 24, PI = 10, see Figure C-3				23.7	9.1	
19											
20											
21	S&H		4		SANDY CLAY with GRAVEL (CL) brown, medium stiff, moist, fine-grained sand, rounded to subangular gravel						
22			5	CL							
23			7								
24											
25					CLAYEY SAND with GRAVEL (SC) gray to blue-gray, loose, wet, increase in angular gravel (09/01/14; 04/14/14) LL = 33, PI = 16, see Figure C-3						
26	S&H		2						35.3	16.3	
27			3								
28			7	SC							
29											
30											
						LANGAN TREADWELL ROLLO					
						Project No.: 731626701		Figure: A-6a			

PROJECT:

INDIA BASIN
San Francisco, California

Log of Boring B-6

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PROJECT:					INDIA BASIN San Francisco, California		Log of Boring B-6		PAGE 2 OF 4					
DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA							
	Sampler Type	Sample	Blows/ 6"	SPT N-Value			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft		
31	S&H		3	8	SC	CLAYEY SAND with GRAVEL (SC) wet, red-brown to brown LL = 33, PI = 17, see Figure C-3	TxUU	3,500	560	40.0	17.6			
32			4											
33		7												
34														
35	ST		25	CH	CLAY (CH) blue-gray, medium stiff, wet, trace shells Consolidation Test, see Figure C-41	BAY MUD							29.3	98
36			psi											
37														
38														
39					SP	SAND (SP) yellow-brown, very dense, wet, fine-grained sand						3.5	20.4	
40														
41														
42														
43					SC	CLAYEY SAND (SC) yellow-brown, medium dense, wet								
44														
45	S&H		30	35/6"										
46			50/6"											
47	SPT		10	26	SC	light brown with dark brown inclusions LL = 23, PI = 8, see Figure C-3							28.5	17.2
48			10											
49			12											
50														
51	S&H		12	29	SP	SAND with CLAY (SP) red-brown, very dense, wet							10.4	19.5
52			18											
53			23											
54														
55	S&H		23	35/6"										
56			50/6"											
57														
58														
59														
60														

LANGAN TREADWELL ROLLO

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Figure: A-6b

LANGAN TREADWELL ROLLO

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San Francisco, California

Log of Boring B-6

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DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA					
	Sampler Type	Sample	Blows/ 6"	SPT N-value ¹			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
61	S&H		12 45 27	50	SC	CLAYEY SAND (SC) lightly brown, hard, wet, fine-grained sand				37.8	16.8	
62												
63												
64												
65												
66												
67												
68					CL	SANDY CLAY with GRAVEL (CL) brown, hard, wet, coarse gravel						
69												
70												
71	S&H		11 17 28	32						51.2	21.9	
72												
73												
74					CL	gravel lens at 74 to 74.5 feet CLAY with SAND (CL) light brown, very stiff, wet, fine-grained sand, trace coarse gravel						
75												
76	S&H		3 14 15	20								
77												
78												
79					CL	GRAVELLY CLAY (CL) light brown, very stiff, wet, grained sand, abundant shells						
80												
81	S&H		10 20 20	28								
82												
83												
84					CL	color change to blue-gray CLAY with GRAVEL (CL) gray, very stiff, wet, trace shells, coarse gravel						
85												
86	S&H		13 13 16	20								
87												
88												
89												
90												
							LANGAN TREADWELL ROLLO					
							Project No.: 731626701		Figure: A-6c			

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PROJECT:

INDIA BASIN
San Francisco, California

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DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA					
	Sampler Type	Sample	Blows/ 6"	SPT N-Value ¹			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
91	ST		100			CLAY with GRAVEL (CL) (continued)						
92					CL							
93												
94												
95			9			CLAY with GRAVEL (CL)						
96	S&H		23	33	CL	blue-gray, hard, wet, fine to coarse bedrock fragments						
97			25									
98												
99						SHALE						
100						black with green mottling, intensely fractured, hard, weak, deeply weathered						
101	S&H		14	41								
102			34									
103			25									
104												
105												
106	SPT		17	60/6"								
107			50/6"									
108												
109												
110												
111												
112												
113												
114												
115												
116												
117												
118												
119												
120												

Boring terminated at a depth of 106 feet below ground surface.
Boring backfilled with cement grout.
Groundwater encountered at 25 feet below ground surface during drilling.

¹ S&H and SPT blow counts for the last two increments were converted to SPT N-Values using factors of 0.7 and 1.2, respectively to account for sampler type and hammer energy.
² Elevations based on San Francisco City datum.

LANGAN TREADWELL ROLLO

Project No.:
731626701Figure:
A-6d

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

PROJECT:

INDIA BASIN
San Francisco, California

Log of Boring B-7

PAGE 1 OF 4

Boring location: See Site Plan, Figure 2

Logged by: KIW

Date started: 3/31/14

Date finished: 4/1/14

Drilling method: Mud Rotary Wash

Hammer weight/drop: 140 lbs./30 inches

Hammer type: Automatic Safety Hammer

Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT), Shelby Tube (ST)

LABORATORY TEST DATA

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
	Sampler Type	Sample	Blows/ 6"	SPT N-Value ¹								
						Ground Surface Elevation: 19.5 feet ²						
1	GRAB				SP	SAND with GRAVEL (SP) light brown, very dense, moist, trace brick and clay				4.2	7.8	
2												
3	S&H		9 50/3"	35/3"								
4					SP	SAND (SP) yellow-brown, dense, moist, fine-grained, trace fine gravel						
5												
6	S&H		10 26 29	39								
7					CL	SANDY CLAY with GRAVEL (CL) dark brown, hard, moist, fine to coarse-grained sand, fine gravel, trace brick debris, trace serpentinite						
8	S&H		19 19 22	29		very stiff, trace coarse gravel, trace wood debris						
9												
10					CL	angular gravel 3" in diameter						
11	S&H		10 12 15	19								
12												
13					SM							
14												
15						trace glass debris						
16	S&H		4 5 7	8	SM	SILTY SAND (SM) gray-brown, loose, moist trace fine gravel, trace fines Non-plastic ▽ (04/05/14; 700 AM)				24.9	14.4	
17												
18												
19					SP							
20												
21	S&H		5 10 15	18		SAND (SP) gray, medium dense, wet trace gravel				2.4	20.8	
22					CL							
23	SPT		9 20 32	62		SANDY CLAY with GRAVEL (CL) brown, hard, wet, angular gravel						
24												
25					CL							
26	S&H		0 0 3	2		SANDY CLAY (CL) yellow-brown with red-brown mottling, soft, wet, fine-grained sand Consolidation Test, see Figure C-42					18.8	111
27												
28												
29												
30												

LANGAN TREADWELL ROLLO

Project No.:
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A-7a

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

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PROJECT: INDIA BASIN San Francisco, California						Log of Boring B-7 PAGE 2 OF 4						
DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA					
	Sampler Type	Sample	Blows/ 6"	SPT N-Value			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
31	S&H		0	3	CL	SANDY CLAY (CL) (continued) medium stiff, blue-gray mottling, trace subangular gravel	TxUU	3,100	750		18.3	111
32			2									
33			2									
34												
35	ST		0-50	59	CH	SANDY CLAY (CH) blue-gray, medium stiff, wet, fine-grained sand, trace shells Consolidation Test, see Figure C-43	TxUU	3,500	630		30.3	96
36			300-400									
37			psi									
38				SC	CLAYEY SAND (SC) olive-gray, medium dense, fine-grained sand							
39												
40	SPT		20	59	SP-SC	SAND with CLAY (SP-SC) yellow-brown, very dense, wet, fine-grained sand				6.2	22.4	
41			21									
42			28									
43												
44												
45	SPT		19	74		CLAYEY SAND (SC) yellow-brown, very dense, wet, fine-grained sand						
46			28									
47			34									
48												
49												
50	SPT		17	52	SC							
51			21									
52			22									
53												
54												
55	S&H		14	35		dense				21.8	18.8	
56			20									
57			30									
58												
59												
60												
							LANGAN TREADWELL ROLLO					
							Project No.: 731626701		Figure: A-7b			

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San Francisco, California

Log of Boring B-7

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PROJECT:						INDIA BASIN San Francisco, California		Log of Boring B-7				PAGE 3 OF 4	
DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA						
	Sampler Type	Sample	Blows/ 6"	SPT N-Value ¹			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft	
61	SPT		19 27 37	77	SC	CLAYEY SAND (SC) (continued) very dense							
62													
63													
64					CL	SANDY CLAY (CL) yellow-brown, very stiff, wet, fine-grained sand, trace fine gravel							
65													
66	SPT		2 8 10	22									
67					CL								
68													
69													
70					CL	CLAY (CL) olive-gray, hard, wet, trace fine-grained sand, trace fine gravel, trace orange inclusions							
71	S&H		14 24 25	34									
72													
73					CL	olive-gray with black inclusions							
74													
75													
76	S&H		8 11 14	18	CL	CLAY with SAND (CL) brown with olive-gray mottling, very stiff, wet, fine-grained sand, trace coarse-grained sand							
77													
78													
79					CL								
80													
81	S&H		8 12 13	18		olive-gray							
82					CL								
83													
84													
85					CL	CLAY (CL) olive-gray with yellow mottling, very stiff, wet, trace black inclusions, trace fine-grained sand							
86	S&H		8 11 14	18									
87													
88					GC	CLAYEY GRAVEL (GC) gray-brown, very dense, wet, fine to coarse-grained sand, fine subangular gravel							
89													
90													
							LANGAN TREADWELL ROLLO						
							Project No.:		Figure:				
							731626701		A-7c				

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DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA					
	Sampler Type	Sample	Blows/ 6"	SPT N-Value ¹			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
91	SPT		50/0.5"	60/0.5"	GC	CLAYEY GRAVEL (GC) (continued)						
92												
93												
94						SHALE						
95	SPT		50/2"	60/2"		dark gray, intensely to closely fractured, low hardness, weak, moderately weathered						
96												
97												
98												
99												
100												
101												
102												
103												
104												
105												
106												
107												
108												
109												
110												
111												
112												
113												
114												
115												
116												
117												
118												
119												
120												

Boring terminated at a depth of 95.5 feet below ground surface.
Boring backfilled with cement grout.
Groundwater encountered at 19 feet below ground surface during drilling.

¹ S&H and SPT blow counts for the last two increments were converted to SPT N-Values using factors of 0.7 and 1.2, respectively to account for sampler type and hammer energy.
² Elevations based on San Francisco City datum.

LANGAN TREADWELL ROLLO
Project No.: 731626701
Figure: A-7d

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

PROJECT:				INDIA BASIN San Francisco, California		Log of Boring B-8				PAGE 1 OF 2			
Boring location: See Site Plan, Figure 2						Logged by: KLV							
Date started: 3/25/14			Date finished: 3/25/14										
Drilling method: Hollow Stem Auger													
Hammer weight/drop: 140 lbs./30 inches			Hammer type: Wireline Down Hole Safety Hammer			LABORATORY TEST DATA							
Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT)													
DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft	
	Sampler Type	Sample	Blows/ 6"	SPT N-Value ¹									
						Ground Surface Elevation: 4 feet ²							
1						Dirt Lot/Storage Yard							
2						CLAYEY SAND with GRAVEL (SC) brown, dense, moist, fine to coarse-grained sand, subrounded to angular gravel, large brick debris				10.8	10.8		
3	S&H		7	25	SC								
4			22	19									
5	S&H		25	30/5"		increased clay content							
6			50/5"			red-brown, with concrete debris							
7													
8	S&H		9	22		GRAVEL with SILT and SAND (GP-GP) red-brown, medium dense, wet, subrounded to angular, coarse gravel, with brick debris							
9			15	21									
10	S&H		7	17	GP- GM	dark brown (0819, 3/25/14) non-plastic				7.8	14.7		
11			13	16		light brown							
12													
13						SAND with CLAY (SP-SC) olive-brown, medium dense, wet, fine trace gravel, shells, trace clay							
14	SPT		9	25	SP- SC								
15			11	14		SAND (SP) yellow-brown, medium dense, wet, trace clay							
16													
17													
18													
19	SPT		21	78	SP	very dense							
20			36	42									
21													
22													
23													
24	SPT		25	53		trace dark brown fillings							
25			27										
26			26										
27													
28					SC	CLAYEY SAND (SC) olive-brown with red lense, dense, wet							
29	S&H		17	30									
30			18										
			32										
							LANGAN TREADWELL ROLLO						
							Project No.: 731626701		Figure: A-8a				

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

PROJECT:

INDIA BASIN
San Francisco, California

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DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA					
	Sampler Type	Sample	Blows/ 6"	SPT N-Value ¹			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
31						CLAYEY SAND (SC) (continued)						
32												
33												
34	SPT		16 26 29	55								
35												
36						very dense						
37												
38						SANDY CLAY (CL) olive-brown, very stiff, wet, trace red fragments						
39	SPT		9 10 11	21								
40												
41												
42												
43					CL							
44	S&H		12 13 15	17		trace fine gravel						
45												
46												
47												
48	S&H		50/2"	30/2"		SERPENTINITE dark gray-green, intensely fractured, moderately hard, moderately strong, wet						
49	SPT		50/1"	50/1"								
50												
51												
52												
53												
54	S&H		23 26 27	32		with clay seams						
55												
56												
57												
58												
59	S&H		27	30/5"		gray-green, intensely fractured, low hardness, friable						
60												
Boring terminated at a depth of 59.5 feet below ground surface. Boring backfilled with cement grout. Groundwater encountered at 10 feet below ground surface during drilling.							LANGAN TREADWELL ROLLO Project No.: 731626701 Figure: A-8b					

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

¹ S&H and SPT blow counts for the last two increments were converted to SPT N-Values using factors of 0.6 and 1.0, respectively to account for sampler type and hammer energy.
² Elevations based on San Francisco City datum.

PROJECT:

INDIA BASIN
San Francisco, California

Log of Boring B-9

PAGE 1 OF 3

Boring location: See Site Plan, Figure 2

Logged by: KLW

Date started: 3/25/14

Date finished: 3/25/14

Drilling method: Hollow Stem Auger

Hammer weight/drop: 140 lbs./30 inches

Hammer type: Wireline Down Hole Safety Hammer

Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT)

LABORATORY TEST DATA

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
	Sampler Type	Sample	Blows/ 6"	SPT N-value ¹								
						Ground Surface Elevation: 14.5 feet ²						
1						Dirt Lot/Storage Yard						
2						SANDY CLAY with GRAVEL (CL) dark brown, very stiff, moist, fine-grained sand, fine to coarse gravel, some brick debris						
3	S&H		16	27								
4			19									
5			26									
6	S&H		15	27		red-brown						
7			21									
8			24			dark-brown						
9	S&H		7	21	CL							
10			16			with cobbles						
11			19									
12	S&H		7	24						23.8	12.8	
13			11									
14			29									
15	SPT		16	39		brown						
16			18									
17			21									
18												
19	SPT		7	57	SC	CLAYEY SAND (SC) gray-brown, very dense, wet, with gravel (2:30, 03/25/14)				20.8	15.3	
20			31									
21			26									
22												
23												
24	SPT		17	18	GP-GM	GRAVEL with SILT and SAND (GP-GM) gray-brown, medium dense, wet, coarse gravel non-plastic				5.6	13.5	
25			11									
26			7									
27												
28												
29	SPT		13	46	SP-SC	SAND with CLAY (SP-SC) olive-brown, dense, wet						
30			17									
			29		SP	SAND (SP)						
							LANGAN TREADWELL ROLLO					
							Project No.:	Figure:				
							731626701	A-9a				

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DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA					
	Sampler Type	Sample	Blows/ 6"	SPT N-Value ¹			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
31						SAND (SP) (continued) yellow-brown, dense, wet						
32												
33												
34	SPT		17 39 56/12"	89/10"		very dense						
35												
36												
37												
38					SP	olive-brown, mottled red-brown, dense, with clay						
39	SPT		13 17 30/12"	38								
40												
41												
42												
43												
44	SPT		7 11 18/12"	24		medium dense				9.4	20.6	
45						SANDY CLAY (CL) olive-brown with red fillings, very stiff, wet						
46												
47												
48												
49	SPT		7 11 18/12"	24	CL							
50												
51												
52						CLAYEY SAND (SC) yellow-brown, dense, wet						
53												
54	S&H		11 26 37/12"	34	SC							
55												
56												
57												
58						SANDY CLAY (CL) yellow-brown, hard, wet, trace fine, black gravel						
59	S&H		17 27 44/12"	37	CL							
60					CL							
							LANGAN TREADWELL ROLLO					
							Project No.:	Figure:				
							731626701	A-9b				

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

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INDIA BASIN
San Francisco, California

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DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA					
	Sampler Type	Sample	Blows/ 6"	SPT N-Value ¹			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
61						SANDY CLAY (CL) blue-gray, hard, wet						
62						CLAY (CL) blue-gray, hard, wet, with angular rock fragments						
63												
64	S&H		21	45								
65			33									
66			42		CL							
67												
68												
69	S&H		31	29								
70			27									
71			22									
72												
73												
74	S&H		50/2"	30/2"		SANDSTONE intensely fractured, moderately hard, moderately strong, deeply weathered						
75	SPT		36	94								
76			44									
77			50/6"									
78	SPT		50/2"	50/2"								
79												
80												
81												
82												
83												
84												
85												
86												
87												
88												
89												
90												

Boring terminated at a depth of 77.5 feet below ground surface.
Boring backfilled with cement grout.
Groundwater encountered at 19.5 feet below ground surface during drilling.

¹ S&H and SPT blow counts for the last two increments were converted to SPT N-Values using factors of 0.6 and 1.0, respectively to account for sampler type and hammer energy.
² Elevations based on San Francisco City datum.

LANGAN TREADWELL ROLLO

Project No.:
731626701Figure:
A-9c

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

PROJECT:		INDIA BASIN San Francisco, California				Log of Boring B-10 PAGE 1 OF 3						
Boring location: See Site Plan, Figure 2						Logged by: KLV						
Date started: 3/24/14			Date finished: 3/24/14									
Drilling method: Hollow Stem Auger												
Hammer weight/drop: 140 lbs./30 inches			Hammer type: Wireline Down Hole Safety Hammer			LABORATORY TEST DATA						
Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT)												
DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
	Sampler Type	Sample	Blows/ 6"	SPT N-value ¹								
Ground Surface Elevation: 24 feet ²												
1						Field, wild plants, sand with gravel						
2						CLAYEY SAND with GRAVEL (SC)						
3	S&H		11 50/6"	30/6"		brown, very dense, moist, fine-grained sand, fine to coarse gravel						
4												
5												
6	S&H		13 15 16	19	SC	medium dense, fine-gravel, trace brick						
7												
8	S&H		11 12 15	16								
9												
10												
11	S&H		22 47 33	48		CLAYEY SAND with GRAVEL (SC)						
12						dark brown, dense, moist, subangular to angular gravel, fine to coarse gravel, trace brick						
13												
14	S&H		27 38 44	49	SC							
15												
16												
17												
18												
19	S&H		6 9 15	14		CLAYEY SILTY SAND (SC-SM)				19.8	12.4	
20						gray-brown, medium dense, moist, with blue-gray clay mottling, trace coarse gravel						
21					SC - SM	LL = 20, PI = 5, see Figure C-4						
22												
23												
24	SPT		50/1"	50/1"		concrete debris						
25												
26					SC	CLAYEY SAND (SC)						
27	SPT		50/4"	50/4"		gray-brown, medium dense, moist, with blue-gray clay mottling, trace coarse gravel						
28						concrete debris						
29												
30					SP	(9:00, 03/24/14)						
						LANGAN TREADWELL ROLLO						
						Project No.: 731626701		Figure: A-10a				

PROJECT:

INDIA BASIN
San Francisco, California

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PROJECT: INDIA BASIN San Francisco, California						Log of Boring B-10							
						PAGE 2 OF 3							
DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA						
	Sampler Type	Sample	Blows/ 6"	SPT N-Value			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft	
31						SAND (SP) dark brown, very dense, wet, fine to coarse-grained sand, 1 to 2 inch fine gravel lenses, trace silt							
32													
33													
34	SPT		22 26 33	59	SP								
35													
36													
37													
38						SAND with SILT (SP-SM) yellow-brown, very dense, wet, fine-grained sand, trace dark brown, clay mottling and trace gravel							
39	SPT		19 32 34	66									
40													
41													
42													
43													
44	SPT		20 37 40	77	SP-SM				9.6	17.8			
45													
46													
47													
48													
49	SPT		17 27 38	65									
50													
51													
52						CLAYEY SILTY SAND (SC-SM) yellow-brown, medium dense, wet LL = 18, PI = 4, see Figure C-4							
53													
54	SPT		5 7 8	15	SC-SM					25.6	19.7		
55													
56													
57													
58						CLAY with SAND (CL) olive-brown, very stiff, wet, fine-grained sand, trace serpentine fragments							
59	S&H		16 21 26	28	CL								
60													
							LANGAN TREADWELL ROLLO						
							Project No.: 731626701		Figure: A-10b				

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

PROJECT:

INDIA BASIN
San Francisco, California

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DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA					
	Sampler Type	Sample	Blows/ 6"	SPT N-Value ¹			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
61						CLAY with SAND (CL) (continued)						
62												
63												
64	S&H		11 26 38	38	CL							
65												
66												
67												
68												
69	S&H		17 27 32	35								
70						CLAY with SAND and GRAVEL (CL) brown, hard, wet, angular to subangular gravel, with rock fragments greater than 3 inches in diameter						
71												
72												
73					CL							
74	S&H		13 19 26	27		dark brown, very stiff, fine-grained sand						
75												
76												
77						CLAY (CL) green-blue with dark brown mottling, very stiff, wet, trace fine gravel						
78												
79	S&H		7 11 15	16	CL							
80												
81												
82	SPT		50/3"	50/3"		SANDSTONE dark brown, intensely fractured, hard, moderately strong, with clay seams						
83												
84	SPT		40 50/2"	50/2"								
85												
86												
87												
88												
89												
90												

Boring terminated at a depth of 84.5 feet below ground surface.
Boring backfilled with cement grout.
Groundwater encountered at 30 feet below ground surface during drilling.

¹ S&H and SPT blow counts for the last two increments were converted to SPT N-Values using factors of 0.6 and 1.0, respectively to account for sampler type and hammer energy.
² Elevations based on San Francisco City datum.

LANGAN TREADWELL ROLLOProject No.:
731626701Figure:
A-10c

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

PROJECT:

INDIA BASIN
San Francisco, California

Log of Boring B-11

PAGE 1 OF 2

Boring location: See Site Plan, Figure 2

Logged by: KIW

Date started: 3/26/14

Date finished: 3/26/14

Drilling method: Hollow Stem Auger

Hammer weight/drop: 140 lbs./30 inches

Hammer type: Wireline Down Hole Safety Hammer

Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT)

LABORATORY TEST DATA

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
	Sampler Type	Sample	Blows/ 6"	SPT N-Value ¹								
	Ground Surface Elevation: 26 feet ²											
1	S&H		8 33 41	44	SC	CLAYEY SAND (SC) brown, very dense, moist, trace brick debris, trace organics, rounded to subangular gravel						
2												
3												
4	S&H		19 29 31	36	CL	increased in sand content SANDY CLAY (CL) dark brown, hard, moist, trace fine to coarse gravel, trace brick debris						
5												
6												
7	S&H		50/4"	30/4"	SC	CLAYEY SAND (SC) dark brown, very dense, moist, trace subangular to angular gravel, trace concrete debris						
8												
9												
10	S&H		11 19 25	26	CL	SANDY CLAY with GRAVEL (CL) dark brown, very stiff, moist, rounded to subangular gravel, increase in sand content						
11												
12												
13	SPT		13 19 16	35	CL	SANDY CLAY (CL) brown to red-brown, hard, moist, trace organics, trace gravel, trace brick debris	FILL					
14												
15												
16	SPT		4 4 5	9	CL	SANDY CLAY (CL) dark brown mottled blue-gray, medium stiff, moist, trace wood debris, trace coarse gravel						
18												
19												
20	S&H		7 10 10	12	CL	CLAY with SAND (CL) gray, stiff, moist, trace shells						
22												
23												
24	SPT		4 7 14	21	CL	CLAY with GRAVEL (CL) dark brown, very stiff, moist, subangular to angular gravel						
26												
27												
28												
29												
30												
							LANGAN TREADWELL ROLLO					
							Project No.: 731626701 Figure: A-11a					

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

PROJECT:

INDIA BASIN
San Francisco, California

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DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA					
	Sampler Type	Sample	Blows/ 6"	SPT N-Value ¹			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
31						CLAY with GRAVEL (CL) (continued)						
32					CL							
33						▽ (03/26/14)						
34	SPT		7 11 15	26		wood from 33.5 to 34 feet bgs				5.7	21.2	
35						SAND with SILT (SP)						
36						yellow-brown, dense, wet, fine-grained sand						
37												
38					SP							
39	SPT		19 27 34	61		very dense, trace wood debris						
40												
41												
42						SANDY CLAY (CL)						
43						yellow-brown, very stiff, wet, trace fine gravel						
44	SPT		5 7 11	18								
45												
46					CL							
47												
48												
49	S&H		11 50/6"	30/6"		increase in fine and coarse gravel						
50												
51						SERPENTINITE						
52						intensely fractured, moderately hard, moderately strong, deeply weathered						
53												
54	SPT		39 50/5"	50/5"								
55												
56												
57												
58												
59	SPT		50/3"	50/3"								
60												
Boring terminated at a depth of 59 feet below ground surface. Boring backfilled with cement grout. Groundwater encountered at 33 feet below ground surface during drilling.							LANGAN TREADWELL ROLLO Project No.: 731626701 Figure: A-11b					

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

¹ S&H and SPT blow counts for the last two increments were converted to SPT N-Values using factors of 0.6 and 1.0, respectively to account for sampler type and hammer energy.
² Elevations based on San Francisco City datum.

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

PROJECT:		INDIA BASIN San Francisco, California				Log of Boring B-12 PAGE 1 OF 2						
Boring location: See Site Plan, Figure 2						Logged by: KLV						
Date started: 3/26/14			Date finished: 3/26/14									
Drilling method: Hollow Stem Auger												
Hammer weight/drop: 140 lbs./30 inches			Hammer type: Wireline Down Hole Safety Hammer			LABORATORY TEST DATA						
Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT)												
DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
	Sampler Type	Sample	Blows/ 6"	SPT N-value ¹								
Ground Surface Elevation: 10 feet ²												
1						Gravel						
2						SANDY CLAY with GRAVEL (CL) dark brown, medium stiff, moist fine to coarse-grained sand, fine to coarse gravel						
3	S&H		4	5	CL							
4			4	5								
5	S&H		4	7	CL	SANDY CLAY (CL) yellow-brown, medium stiff, moist fine-grained sand						
6			5	7								
7												
8	S&H		9	22	CL	SANDY CLAY (CL) brown, very stiff, fine-grained sand, trace charcoal						
9			4	20								
10	S&H		10	20		increased sand content						
11			15	17								
12												
13	SPT		4	25	SM	SILTY SAND (SM) brown, medium dense, wet, fine-grained sand (03/26/14) Non-plastic				12.7	20.2	
14			12									
15			13									
16												
17												
18						SANDY CLAY (CL) brown, very stiff, wet, fine-grained sand						
19	SPT		7	17								
20			8									
21			9									
22												
23												
24	SPT		7	20	CL	brown with yellow-brown mottling, trace coarse gravel						
25			9									
26			11									
27												
28						trace angular gravel						
29	S&H		9	17								
30			13									
			15									
						LANGAN TREADWELL ROLLO						
						Project No.: 731626701		Figure: A-12a				

PROJECT:

INDIA BASIN
San Francisco, California

Log of Boring B-12

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DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA									
	Sampler Type	Sample	Blows/ 6"	SPT N-Value ¹			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft				
31	SPT		17 31 50/6"	81		SANDSTONE intensely fractured, moderately hard, moderately strong, deep weathered										
32																
33																
34	SPT		15 23 31	54												
35																
36																
37	SPT		36 50/3"	50/3"												
38																
39																
40																
41																
42																
43																
44																
45																
46																
47																
48																
49																
50																
51																
52																
53																
54																
55																
56																
57																
58																
59																
60																

Boring terminated at a depth of 44.5 feet below ground surface.
Boring backfilled with cement grout.
Groundwater encountered at 13 feet below ground surface during drilling.

¹ S&H and SPT blow counts for the last two increments were converted to SPT N-Values using factors of 0.6 and 1.0, respectively to account for sampler type and hammer energy.
² Elevations based on San Francisco City datum.

LANGAN TREADWELL ROLLO

Project No.: 731626701

Figure: A-12b

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

¹ S&H and SPT blow counts for the last two increments were converted to SPT N-Values using factors of 0.6 and 1.0, respectively to account for sampler type and hammer energy.
² Elevations based on San Francisco City datum.

PROJECT:

INDIA BASIN
San Francisco, California

Log of Boring B-13

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Boring location: See Site Plan, Figure 2

Logged by: KIW

Date started: 3/25/14

Date finished: 3/25/14

Drilling method: Hollow Stem Auger

Hammer weight/drop: 140 lbs./30 inches

Hammer type: Wireline Down Hole Safety Hammer

Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT)

LABORATORY TEST DATA

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
	Sampler Type	Sample	Blows/ 6"	SPT N-Value ¹								
						Ground Surface Elevation: 31 feet ²						
1						Brush and topsoil						
2						SAND with CLAY and GRAVEL (SC) brown, dense, dry to moist, fine to coarse sand, fine gravel						
3	S&H		16	44								
4			29									
5			44									
6	S&H		17	22		medium dense						
7			20									
8			17									
9	S&H		7	7		loose						
10			6									
11			5									
12	S&H		4	8	SC	trace brick debris						
13			5									
14			9									
15	SPT		17	42		dense						
16			19									
17			23									
18												
19	SPT		8	6	GP	GRAVEL with SAND and CLAY (GP) brown, loose, moist, subangular to angular, gravel greater than 2 inches						
20			3									
21			3									
22												
23						SANDY CLAY (CL) dark brown, hard, moist, fine to coarse-grained sand with serpentinite fragments						
24	SPT		9	36	CL							
25			15									
26			21									
27												
28						CLAYEY SAND (SC) yellow-brown, medium dense, moist, fine-grained sand, some fine to coarse gravel						
29	S&H		12	20	SC							
30			16									
			17									

LANGAN TREADWELL ROLLO

Project No.:
731626701Figure:
A-13a

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

PROJECT:

INDIA BASIN
San Francisco, California

Log of Boring B-13

PAGE 2 OF 2

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA					
	Sampler Type	Sample	Blows/ 6"	SPT N-Value ¹			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
31					SC	CLAYEY SAND (SC) (continued)						
32												
33					CL	SANDY CLAY (CL) yellow-brown, stiff, moist, fine-grained sand, fine gravel						
34	SPT		6 6 7	13		trace gravel, some black fillings (03/25/14)						
35												
36												
37					CL							
38												
39	S&H		8 11 14	15		Consolidation Test, see Figure C-44					24.7	101
40												
41												
42					CL							
43												
44	SPT		9 11 15	26		with serpentinite fragments and fine to coarse sand lenses						
45												
46					CL							
47												
48												
49	SPT		50/6"	50/6"		SERPENTINITE green-gray, intensely fractured, hard, friable to strong, deeply weathered						
50					CL							
51						(15 minutes drilling to advance 2 feet)						
52	SPT		50/6"	50/6"								
53												
54												
55												
56												
57												
58												
59												
60												

Boring terminated at a depth of 59.5 feet below ground surface.
Boring backfilled with cement grout.
Groundwater encountered at 36 feet below ground surface during drilling.

¹ S&H and SPT blow counts for the last two increments were converted to SPT N-Values using factors of 0.6 and 1.0, respectively to account for sampler type and hammer energy.
² Elevations based on San Francisco City datum.

LANGAN TREADWELL ROLLO

Project No.:
731626701Figure:
A-13b

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

PROJECT:

INDIA BASIN
San Francisco, California

Log of Boring B-14

PAGE 1 OF 2

Boring location: See Site Plan, Figure 2

Logged by: K LW

Date started: 3/26/14

Date finished: 3/26/14

Drilling method: Hollow Stem Auger

Hammer weight/drop: 140 lbs./30 inches

Hammer type: Wireline Down Hole Safety Hammer

Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT)

LABORATORY TEST DATA

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
	Sampler Type	Sample	Blows/ 6"	SPT N-Value ¹								
	Ground Surface Elevation: 31 feet ²											
1					CL	SANDY CLAY with GRAVEL (CL) gray-brown, stiff, moist, fine to coarse-grained sand, fine to coarse gravel, subrounded to angular gravel, trace brick debris	↑ 					

LANGAN TREADWELL ROLLO

Project No.:
731626701Figure:
A-14a

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

PROJECT:

INDIA BASIN
San Francisco, California

Log of Boring B-14

PAGE 2 OF 2

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA					
	Sampler Type	Sample	Blows/ 6"	SPT N-Value ¹			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
31						SERPENTINITE (continued)						
32												
33												
34	SPT		50/3"	50/3"								
35												
36												
37												
38												
39												
40												
41												
42												
43												
44												
45												
46												
47												
48												
49												
50												
51												
52												
53												
54												
55												
56												
57												
58												
59												
60												
Boring terminated at a depth of 34 feet below ground surface. Boring backfilled with cement grout. Groundwater not encountered during drilling.							¹ S&H and SPT blow counts for the last two increments were converted to SPT N-Values using factors of 0.6 and 1.0, respectively to account for sampler type and hammer energy. ² Elevations based on San Francisco City datum.					
							LANGAN TREADWELL ROLLO					
							Project No.: 731626701		Figure: A-14b			

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

PROJECT:		INDIA BASIN San Francisco, California				Log of Boring B-15 PAGE 1 OF 6						
Boring location: See Site Plan, Figure 2						Logged by: KLW						
Date started: 4/10/14			Date finished: 4/11/14									
Drilling method: Mud Rotary Wash												
Hammer weight/drop: 140 lbs./30 inches			Hammer type: Automatic Safety Hammer			LABORATORY TEST DATA						
Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT), Shelby Tube (ST)												
DEPTH (feet)	SAMPLES			SPT N-Value ¹	LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
	Sampler Type	Sample	Blows/ 6"									
Ground Surface Elevation: 7 feet ²												
1					SC	CLAYEY SAND with GRAVEL (SC) yellow-brown, medium dense, moist, fine-grained sand, fine to coarse subrounded to subangular gravel, trace wood debris, trace brick debris						
2												
3	S&H		17	29								
4			20	22								
5					SC	dark brown, increased clay content, trace brick debris						
6	S&H		20	31								
7			20	24								
8	S&H		15	34								
9			18	30		(04/11/14; 630 AM) trace shells and angular gravel						
10			5	25								
11	S&H		17	19								
12			5	19								
13					CL	SANDY CLAY with GRAVEL (CL) brown, very stiff, wet, fine to medium grained sand, fine to coarse subangular gravel, trace wood debris, brick debris						
14												
15												
16	S&H		15	20								
17			15	14	SM	SILTY SAND (SM) yellow-brown, medium dense, wet, fine-grained sand, trace fine gravel				14.5	18.2	
18												
19												
20												
21	S&H		7	12	CL	SANDY CLAY with GRAVEL (CL) brown, stiff, wet, fine to coarse-grained sand, fine subrounded to subangular gravel, trace brick LL = 18, PI = 5, see Figure C-5						
22			8									
23			9									
24												
25					SC-SM	CLAYEY SILTY SAND (SC-SM) red-brown, medium dense, wet, fine-grained sand				28.4	13.0	
26	S&H		1	1								
27			1									
28			0									
29					CH	loose LL = 17, PI = 5, see Figure C-5				24.9	16.6	
30												
						CLAY (CH) blue-gray, soft, wet, trace shells						
						LANGAN TREADWELL ROLLO						
						Project No.: 731626701		Figure: A-15a				

PROJECT:

INDIA BASIN
San Francisco, California

Log of Boring B-15

PAGE 2 OF 6

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA					
	Sampler Type	Sample	Blows/ 6"	SPT N-Value ¹			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
31	S&H		2	3		CLAY (CH) (continued)						
32			2									
33			2									
34												
35												
36	ST		25 psi			blue-gray, medium stiff Consolidation Test, see Figure C-45	TxUU	3,500	820		46.2	73
37												
38												
39												
40												
41												
42												
43												
44												
45					CH							
46	S&H		0	1		gray, very soft						
47			0									
48			2									
49												
50												
51												
52												
53												
54												
55												
56	ST		50- 200 psi			stiff Consolidation Test, see Figure C-46	TxUU	5,500	1,300		43.0	75
57												
58												
59												
60												
							LANGAN TREADWELL ROLLO					
							Project No.: 731626701		Figure: A-15b			

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

BAY MUD

PROJECT:

INDIA BASIN
San Francisco, California

Log of Boring B-15

PAGE 3 OF 6

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA					
	Sampler Type	Sample	Blows/ 6"	SPT N-Value ¹			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
61						CLAY (CH) (continued)						
62												
63												
64												
65	S&H		0	4								
66			0									
67			5									
68												
69												
70												
71												
72					CH							
73												
74												
75												
76	ST		0-200			stiff	TxUU	7,500	1,640		45.7	72
77			psi			Consolidation Test, see Figure C-47						
78												
79												
80												
81												
82												
83												
84						SANDY CLAY (CL)						
85						blue-gray, hard, wet, fine-grained sand						
86	S&H		14	56	CL					59.4	17.1	
87			30									
88			50/6"									
89					SC	CLAYEY SAND (SC)						
90						olive-gray with yellow-brown mottling, very stiff, wet, fine-grained sand, trace black inclusions						
							LANGAN TREADWELL ROLLO					
							Project No.:	Figure:				
							731626701	A-15c				

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

PROJECT:

INDIA BASIN
San Francisco, California

Log of Boring B-15

PAGE 4 OF 6

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA						
	Sampler Type	Sample	Blows/ 6"	SPT N-Value ¹			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft	
91	S&H		8 14 15	20	SC	CLAYEY SAND (SC) (continued) LL = 28, PI = 12, see Figure C-5				49.7	19.5		
92													
93													
94													
95	S&H		7 17 41	41		yellow-brown and red-yellow increased sand content				21.5	22.4		
96													
97													
98					CL	SANDY CLAY (CL) blue-gray, very stiff, wet, fine-grained sand and trace orange inclusions							
99													
100	S&H		8 15 19	24					60.9	21.0			
101													
102													
103													
104													
105													
106						sand lense							
107													
108													
109					CL	CLAY with SAND (CL) blue-gray, stiff, wet, fine-grained sand, some orange inclusions							
110	S&H		3 10 10	14									
111													
112													
113													
114													
115													
116													
117													
118													
119													
120													
							LANGAN TREADWELL ROLLO						
							Project No.: 731626701		Figure: A-15d				

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

PROJECT:

INDIA BASIN
San Francisco, California

Log of Boring B-15

PAGE 5 OF 6

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA					
	Sampler Type	Sample	Blows/ 6"	SPT N-Value ¹			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
121	S&H		2 7 9	11	CL	CLAY (CL) gray, stiff, wet						
122												
123												
124												
125												
126												
127												
128												
129												
130	S&H		14 24 24	34	CL	CLAY with SAND (CL) blue-gray, hard, wet, fine-grained sand						
131												
132												
133												
134												
135												
136												
137												
138												
139												
140	SPT		9 10 12	26		very stiff, trace angular gravel						
141												
142												
143					SHALE BEDROCK	gray-black, intensely fractured, low hardness, weak, moderately weathered						
144												
145	SPT		60/2"	72/2"		green-black						
146												
147												
148												
149												
150												

RESIDUAL SOIL

LANGAN TREADWELL ROLLO

Project No.:
731626701Figure:
A-15e

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

PROJECT:

INDIA BASIN
San Francisco, California

Log of Boring B-15

PAGE 6 OF 6

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA					
	Sampler Type	Sample	Blows/ 6"	SPT N-Value ¹			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
151	SPT		50/6"	60/6"								
152												
153												
154												
155												
156												
157												
158												
159												
160												
161												
162												
163												
164												
165												
166												
167												
168												
169												
170												
171												
172												
173												
174												
175												
176												
177												
178												
179												
180												

Boring terminated at a depth of 150.5 feet below ground surface.
Boring backfilled with cement grout.
Groundwater encountered at 1 foot and 7 feet below ground surface during drilling.

¹ S&H and SPT blow counts for the last two increments were converted to SPT N-Values using factors of 0.7 and 1.2, respectively to account for sampler type and hammer energy.
² Elevations based on San Francisco City datum.

LANGAN TREADWELL ROLLO
Project No.: 731626701
Figure: A-15f

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

UNIFIED SOIL CLASSIFICATION SYSTEM			
Major Divisions		Symbols	Typical Names
Coarse-Grained Soils (more than half of soil > no. 200 sieve size)	Gravels (More than half of coarse fraction > no. 4 sieve size)	GW	Well-graded gravels or gravel-sand mixtures, little or no fines
		GP	Poorly-graded gravels or gravel-sand mixtures, little or no fines
		GM	Silty gravels, gravel-sand-silt mixtures
		GC	Clayey gravels, gravel-sand-clay mixtures
	Sands (More than half of coarse fraction < no. 4 sieve size)	SW	Well-graded sands or gravelly sands, little or no fines
		SP	Poorly-graded sands or gravelly sands, little or no fines
		SM	Silty sands, sand-silt mixtures
		SC	Clayey sands, sand-clay mixtures
Fine -Grained Soils (more than half of soil < no. 200 sieve size)	Silts and Clays LL = < 50	ML	Inorganic silts and clayey silts of low plasticity, sandy silts, gravelly silts
		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, lean clays
		OL	Organic silts and organic silt-clays of low plasticity
	Silts and Clays LL = > 50	MH	Inorganic silts of high plasticity
		CH	Inorganic clays of high plasticity, fat clays
		OH	Organic silts and clays of high plasticity
Highly Organic Soils		PT	Peat and other highly organic soils

GRAIN SIZE CHART

Classification	Range of Grain Sizes	
	U.S. Standard Sieve Size	Grain Size in Millimeters
Boulders	Above 12"	Above 305
Cobbles	12" to 3"	305 to 76.2
Gravel coarse fine	3" to No. 4	76.2 to 4.76
	3" to 3/4"	76.2 to 19.1
	3/4" to No. 4	19.1 to 4.76
Sand coarse medium fine	No. 4 to No. 200	4.76 to 0.075
	No. 4 to No. 10	4.76 to 2.00
	No. 10 to No. 40	2.00 to 0.420
	No. 40 to No. 200	0.420 to 0.075
Silt and Clay	Below No. 200	Below 0.075

Unstabilized groundwater level

Stabilized groundwater level

Sample taken with Sprague & Henwood split-barrel sampler with a 3.0-inch outside diameter and a 2.43-inch inside diameter. Darkened area indicates soil recovered

Classification sample taken with Standard Penetration Test sampler

Undisturbed sample taken with thin-walled tube

Disturbed sample

Sampling attempted with no recovery

Core sample

Analytical laboratory sample

Sample taken with Direct Push or Drive sampler

I FRACTURING

Intensity	Size of Pieces in Feet
Very little fractured	Greater than 4.0
Occasionally fractured	1.0 to 4.0
Moderately fractured	0.5 to 1.0
Closely fractured	0.1 to 0.5
Intensely fractured	0.05 to 0.1
Crushed	Less than 0.05

II HARDNESS

1. **Soft** - reserved for plastic material alone.
2. **Low hardness** - can be gouged deeply or carved easily with a knife blade.
3. **Moderately hard** - can be readily scratched by a knife blade; scratch leaves a heavy trace of dust and is readily visible after the powder has been blown away.
4. **Hard** - can be scratched with difficulty; scratch produced a little powder and is often faintly visible.
5. **Very hard** - cannot be scratched with knife blade; leaves a metallic streak.

III STRENGTH

1. **Plastic** or very low strength.
2. **Friable** - crumbles easily by rubbing with fingers.
3. **Weak** - an unfractured specimen of such material will crumble under light hammer blows.
4. **Moderately strong** - specimen will withstand a few heavy hammer blows before breaking.
5. **Strong** - specimen will withstand a few heavy ringing hammer blows and will yield with difficulty only dust and small flying fragments.
6. **Very strong** - specimen will resist heavy ringing hammer blows and will yield with difficulty only dust and small flying fragments.

IV WEATHERING - The physical and chemical disintegration and decomposition of rocks and minerals by natural processes such as oxidation, reduction, hydration, solution, carbonation, and freezing and thawing.

- D. Deep** - moderate to complete mineral decomposition; extensive disintegration; deep and thorough discoloration; many fractures, all extensively coated or filled with oxides, carbonates and/or clay or silt.
- M. Moderate** - slight change or partial decomposition of minerals; little disintegration; cementation little to unaffected. Moderate to occasionally intense discoloration. Moderately coated fractures.
- L. Little** - no megascopic decomposition of minerals; little of no effect on normal cementation. Slight and intermittent, or localized discoloration. Few stains on fracture surfaces.
- F. Fresh** - unaffected by weathering agents. No disintegration or discoloration. Fractures usually less numerous than joints.

ADDITIONAL COMMENTS:

V CONSOLIDATION OF SEDIMENTARY ROCKS: usually determined from unweathered samples. Largely dependent on cementation.

U = unconsolidated
P = poorly consolidated
M = moderately consolidated
W = well consolidated

VI BEDDING OF SEDIMENTARY ROCKS

Splitting Property	Thickness	Stratification
Massive	Greater than 4.0 ft.	very thick-bedded
Blocky	2.0 to 4.0 ft.	thick bedded
Slabby	0.2 to 2.0 ft.	thin bedded
Flaggy	0.05 to 0.2 ft.	very thin-bedded
Shaly or platy	0.01 to 0.05 ft.	laminated
Papery	less than 0.01	thinly laminated

INDIA BASIN
San Francisco, California

LANGAN TREADWELL ROLLO

PHYSICAL PROPERTIES CRITERIA FOR ROCK DESCRIPTIONS

Date 03/20/08 Project No. 731626701 Figure A-17

APPENDIX B
GEOTECHNICAL EXPLORATORY BORING LOGS

DRAFT

PROJECT:

INDIA BASIN
San Francisco, California

Log of Boring EB-1

PAGE 1 OF 1

Boring location:

Logged by: K. Staehlin

Date started: 8/6/14

Date finished: 8/6/14

Drilled By: Gregg

Drilling method: Direct Push

Hammer weight/drop: NA

Hammer type: NA

Sampler:

DEPTH (feet)	SAMPLES				OVM (ppm)	LITHOLOGY	MATERIAL DESCRIPTION
	Sample Number	Sample	Blow Count	Recovery (Inches)			
1							SILTY SAND (SM) gray, dense, moist, no odor
2				48/48		SM	burn layer with brick and wood debris
3							
4							
5							
6				32/48			
7						CL	SANDY CLAY (CL) gray, stiff, moist, slight hydrocarbon odor, brick and wood debris
8							
9							
10				32/48			
11							SILTY SAND (SM) black, moist, slight hydrocarbon odor, brick and wood debris
12						SM	
13							
14				36/48			
15						CL	SANDY CLAY (CL) black, medium stiff to stiff, moist, weak hydrocarbon odor, brick, wood, and burn debris
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

Boring terminated at a depth of 16 feet below ground surface.
Boring backfilled with cement grout.
Groundwater not encountered during drilling.

LANGAN TREADWELL ROLLO

Project No.:
731626702Figure:
B-1

TEST ENVIRONMENTAL INCHES 731626702.GPJ T&R.GDT 9/2/14

PROJECT:

INDIA BASIN
San Francisco, California

Log of Boring EB-2

PAGE 1 OF 1

Boring location:

Date started: 8/6/14

Date finished: 8/6/14

Logged by: K. Staehlin

Drilled By: Gregg

Drilling method: Direct Push

Hammer weight/drop: NA

Hammer type: NA

Sampler:

DEPTH (feet)	SAMPLES				OVM (ppm)	LITHOLOGY	MATERIAL DESCRIPTION
	Sample Number	Sample	Blow Count	Recovery (Inches)			
1							SILTY SAND (SM) gray, dense, moist, no odor, wood and brick debris
2				42/48			
3							
4						SM	slight hydrocarbon odor
5							
6				38/48			
7							
8							SANDY CLAY (CL) dark gray, medium stiff to stiff, moist, plastic, slight hydrocarbon odor, wood and brick debris
9						CL	
10				30/48			
11							
12							CLAYEY SAND (SC) dark gray brown, moderately dense, moist, no odor
13						SC	
14				42/48			
15						SP	SAND (SP) dark gray, moderately dense, wet, no odor
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

Boring terminated at a depth of 16 feet below ground surface.
Boring backfilled with cement grout.
Groundwater encountered at a depth of 13 feet during drilling.

LANGAN TREADWELL ROLLO

Project No.:
731626702Figure:
B-2

TEST ENVIRONMENTAL INCHES 731626702.GPJ T&R.GDT 9/2/14

PROJECT:

INDIA BASIN
San Francisco, California

Log of Boring EB-3

PAGE 1 OF 1

Boring location:

Date started: 8/5/14

Date finished: 8/5/14

Logged by: K. Staehlin

Drilled By: Gregg

Drilling method: Direct Push

Hammer weight/drop: NA

Hammer type: NA

Sampler:

DEPTH (feet)	SAMPLES				OVM (ppm)	LITHOLOGY	MATERIAL DESCRIPTION
	Sample Number	Sample	Blow Count	Recovery (Inches)			
1						SW	GRAVELLY SAND (SW) gray, loose, dry, subangular <1.0" diameter, no odor
2				38/48		CH	SILTY CLAY with GRAVEL (CH) yellow brown, soft to medium stiff, moist, subangular <1.0" diameter, no odor, brick and wood debris
3							
4							
5						SM	SILTY SAND (SM) gray to brown, loose to moderately dense, moist, subangular <0.5" diameter, no odor, brick debris
6				38/48		SC	CLAYEY SAND with GRAVEL (SC) brown, moderately dense, moist, subangular <1.0" diameter, wet, slight hydrocarbon odor, wood and brick debris
7							
8							
9							
10				48/48		CL	SANDY CLAY (CL) dark brown, medium stiff, moist, weak hydrocarbon odor, wood and brick debris
11							
12							
13				36/36			
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

Boring terminated at a depth of 15 feet below ground surface.
Boring backfilled with cement grout.
Groundwater not encountered during drilling.

LANGAN TREADWELL ROLLO

Project No.:
731626702Figure:
B-3

TEST ENVIRONMENTAL INCHES 731626702.GPJ T&R.GDT 9/2/14

PROJECT:

INDIA BASIN
San Francisco, California

Log of Boring EB-4

PAGE 1 OF 1

Boring location:

Logged by: K. Staehlin

Date started: 8/5/14

Date finished: 8/5/14

Drilled By: Gregg

Drilling method: Direct Push

Hammer weight/drop: NA

Hammer type: NA

Sampler:

DEPTH (feet)	SAMPLES				OVM (ppm)	LITHOLOGY	MATERIAL DESCRIPTION
	Sample Number	Sample	Blow Count	Recovery (Inches)			
1						ML	SANDY SILT (ML) yellow brown, soft to medium stiff, dense
2				24/48			SILTY SAND (SM) gray to black, moderately dense, moist, wood and brick debris
3							
4							
5						SM	slight hydrocarbon odor
6				12/48			
7							
8							
9							
10				48/48			
11						SM	SILTY SAND (SM) light brown, loose, dry, no odor
12						SC	CLAYEY SAND (SC) gray, moderately dense, moist, weak hydrocarbon odor, brick and wood debris
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

Boring terminated at a depth of 12 feet below ground surface.
Boring backfilled with cement grout.
Groundwater not encountered during drilling.

LANGAN TREADWELL ROLLO

Project No.:
731626702

Figure:

B-4

TEST ENVIRONMENTAL INCHES 731626702.GPJ T&R.GDT 9/2/14

PROJECT:

INDIA BASIN
San Francisco, California

Log of Boring EB-5

PAGE 1 OF 1

Boring location:

Logged by: K. Staehlin

Date started: 8/5/14

Date finished: 8/5/14

Drilled By: Gregg

Drilling method: Direct Push

Hammer weight/drop: NA

Hammer type: NA

Sampler:

DEPTH (feet)	SAMPLES				OVM (ppm)	LITHOLOGY	MATERIAL DESCRIPTION
	Sample Number	Sample	Blow Count	Recovery (Inches)			
1		•				SM	SILTY SAND (SM) brown, loose, dry to moist, no odor
2							
3		•					SILTY CLAY (CL) gray brown, medium stiff, moist, no odor, brick debris
4						CL	brown
5		•					
6							
7		•		32/48			
8							SILTY SAND (SM) black, moderately dense to dense, moist, slight hydrocarbon odor, brick and wood debris
9							
10		•					
11				48/48		SM	
12							
13							
14							
15		•		36/36			
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

Boring terminated at a depth of 16 feet below ground surface.
Boring backfilled with cement grout.
Groundwater not encountered during drilling.

LANGAN TREADWELL ROLLO

Project No.:
731626702

Figure:

B-5

TEST ENVIRONMENTAL INCHES 731626702.GPJ T&R.GDT 9/2/14

PROJECT:

INDIA BASIN
San Francisco, California

Log of Boring EB-6

PAGE 1 OF 1

Boring location:

Date started: 8/5/14

Date finished: 8/5/14

Logged by: K. Staehlin

Drilled By: Gregg

Drilling method: Direct Push

Hammer weight/drop: NA

Hammer type: NA

Sampler:

DEPTH (feet)	SAMPLES				OVM (ppm)	LITHOLOGY	MATERIAL DESCRIPTION
	Sample Number	Sample	Blow Count	Recovery (Inches)			
1							SANDY CLAY with GRAVEL (CL) brown to black, very stiff, moist, no odor, gravel up to 1" diameter, brick debris
2				48/48			
3							
4							
5						CL	
6				48/48			
7							
8							
9							
10				48/48			
11						SM	SILTY SAND (SM) brown, dense, moist, no odor, brick debris
12							CLAY with GRAVEL (CL) brown to black, stiff, moist, no odor, gravel up to 1" diameter, brick debris
13				36/36		CL	
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

Boring terminated at a depth of 15 feet below ground surface.
Boring backfilled with cement grout.
Groundwater not encountered during drilling.

LANGAN TREADWELL ROLLO

Project No.:
731626702

Figure:

B-6

TEST ENVIRONMENTAL INCHES 731626702.GPJ T&R.GDT 9/2/14

PROJECT:

INDIA BASIN
San Francisco, California

Log of Boring EB-7

PAGE 1 OF 1

Boring location:

Logged by: K. Staehlin

Date started: 8/5/14

Date finished: 8/5/14

Drilled By: Gregg

Drilling method: Direct Push

Hammer weight/drop: NA

Hammer type: NA

Sampler:

DEPTH (feet)	SAMPLES				OVM (ppm)	LITHOLOGY	MATERIAL DESCRIPTION
	Sample Number	Sample	Blow Count	Recovery (Inches)			
1							SANDY SILT (ML) yellow brown, soft to medium stiff, dry, no odor
2				48/48		ML	
3							
4							
5							brown, increasing sand content
6				48/48		CL	
7							SILTY CLAY (CL) gray brown, medium stiff, moist, no odor, wood, brick and burn debris
8							
9							SILTY CLAY with GRAVEL (CL) gray, medium stiff, moist, subangular <0.5" diameter, no odor, brick, wood and burn debris
10				48/48		CL	
11							Refusal at 12' - fractured serpentinite
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

Boring terminated at a depth of 12 feet below ground surface.
Boring backfilled with cement grout.
Groundwater not encountered during drilling.

LANGAN TREADWELL ROLLO

Project No.:
731626702Figure:
B-7

TEST ENVIRONMENTAL INCHES 731626702.GPJ T&R.GDT 9/2/14

UNIFIED SOIL CLASSIFICATION SYSTEM			
Major Divisions		Symbols	Typical Names
Coarse-Grained Soils (more than half of soil > no. 200 sieve size)	Gravels (More than half of coarse fraction > no. 4 sieve size)	GW	Well-graded gravels or gravel-sand mixtures, little or no fines
		GP	Poorly-graded gravels or gravel-sand mixtures, little or no fines
		GM	Silty gravels, gravel-sand-silt mixtures
		GC	Clayey gravels, gravel-sand-clay mixtures
	Sands (More than half of coarse fraction < no. 4 sieve size)	SW	Well-graded sands or gravelly sands, little or no fines
		SP	Poorly-graded sands or gravelly sands, little or no fines
		SM	Silty sands, sand-silt mixtures
		SC	Clayey sands, sand-clay mixtures
Fine -Grained Soils (more than half of soil < no. 200 sieve size)	Silts and Clays LL = < 50	ML	Inorganic silts and clayey silts of low plasticity, sandy silts, gravelly silts
		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, lean clays
		OL	Organic silts and organic silt-clays of low plasticity
	Silts and Clays LL = > 50	MH	Inorganic silts of high plasticity
		CH	Inorganic clays of high plasticity, fat clays
		OH	Organic silts and clays of high plasticity
Highly Organic Soils		PT	Peat and other highly organic soils

GRAIN SIZE CHART

Classification	Range of Grain Sizes	
	U.S. Standard Sieve Size	Grain Size in Millimeters
Boulders	Above 12"	Above 305
Cobbles	12" to 3"	305 to 76.2
Gravel coarse fine	3" to No. 4	76.2 to 4.76
	3" to 3/4"	76.2 to 19.1
	3/4" to No. 4	19.1 to 4.76
Sand coarse medium fine	No. 4 to No. 200	4.76 to 0.075
	No. 4 to No. 10	4.76 to 2.00
	No. 10 to No. 40	2.00 to 0.420
	No. 40 to No. 200	0.420 to 0.075
Silt and Clay	Below No. 200	Below 0.075

Unstabilized groundwater level

Stabilized groundwater level

SAMPLER TYPE

C

Core barrel

CA

California split-barrel sampler with 2.5-inch outside diameter and a 1.93-inch inside diameter

D&M

Dames & Moore piston sampler using 2.5-inch outside diameter, thin-walled tube

O

Osterberg piston sampler using 3.0-inch outside diameter, thin-walled Shelby tube

PT

Pitcher tube sampler using 3.0-inch outside diameter, thin-walled Shelby tube

S&H

Sprague & Henwood split-barrel sampler with a 3.0-inch outside diameter and a 2.43-inch inside diameter

SPT

Standard Penetration Test (SPT) split-barrel sampler with a 2.0-inch outside diameter and a 1.5-inch inside diameter

ST

Shelby Tube (3.0-inch outside diameter, thin-walled tube) advanced with hydraulic pressure

CLASSIFICATION CHART

Date 09/02/14

Project No. 731626702

Figure B-8

INDIA BASIN

San Francisco, California

LANGAN TREADWELL ROLLO

APPENDIX C

**CERTIFIED ANALYTICAL RESULTS AND
CHAIN-OF-CUSTODY RECORDS**



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1408242

Report Created for: Treadwell & Rollo
555 Montgomery St., Suite 1300
San Francisco, CA 94111

Project Contact: Peter Cusack
Project P.O.:
Project Name: #731626702; India Basin

Project Received: 08/07/2014

Analytical Report reviewed & approved for release on 08/21/2014 by:

Question about
your data?

[Click here to email
McC Campbell](#)

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: #731626702; India Basin
WorkOrder: 1408242

Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
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
ND	Not detected at or above the indicated MDL or RL
NR	Matrix interferences, or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix; or sample diluted due to high matrix or analyte content.
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
TEQ	Toxicity Equivalence

Analytical Qualifiers

S	spike recovery outside accepted recovery limits
a1	sample diluted due to matrix interference
a4	the reporting limits were raised due to the sample's matrix prohibiting a full volume extraction.
c4	surrogate recovery outside of the control limits due to coelution with another peak(s) / cluttered chromatogram.
d1	weakly modified or unmodified gasoline is significant
e2	diesel range compounds are significant; no recognizable pattern
e7	oil range compounds are significant
h4	sulfuric acid permanganate (EPA 3665) cleanup



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/7/14

WorkOrder: 1408242
Extraction Method: SW3550B
Analytical Method: SW8082
Unit: mg/kg

Polychlorinated Biphenyls (PCBs) Aroclors

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-1-3.0	1408242-002A	Soil	08/06/2014 08:25	GC5A	93753

Analytes	Result	RL	DF	Date Analyzed
Aroclor1016	ND	0.050	1	08/09/2014 19:22
Aroclor1221	ND	0.050	1	08/09/2014 19:22
Aroclor1232	ND	0.050	1	08/09/2014 19:22
Aroclor1242	ND	0.050	1	08/09/2014 19:22
Aroclor1248	ND	0.050	1	08/09/2014 19:22
Aroclor1254	ND	0.050	1	08/09/2014 19:22
Aroclor1260	ND	0.050	1	08/09/2014 19:22
PCBs, total	ND	0.050	1	08/09/2014 19:22
Surrogates	REC (%)	Limits		
Decachlorobiphenyl	103	70-130		08/09/2014 19:22

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-1.5	1408242-006A	Soil	08/06/2014 09:20	GC5A	93753

Analytes	Result	RL	DF	Date Analyzed
Aroclor1016	ND	0.10	2	08/11/2014 14:37
Aroclor1221	ND	0.10	2	08/11/2014 14:37
Aroclor1232	ND	0.10	2	08/11/2014 14:37
Aroclor1242	ND	0.10	2	08/11/2014 14:37
Aroclor1248	ND	0.10	2	08/11/2014 14:37
Aroclor1254	ND	0.10	2	08/11/2014 14:37
Aroclor1260	ND	0.10	2	08/11/2014 14:37
PCBs, total	ND	0.10	2	08/11/2014 14:37
Surrogates	REC (%)	Limits	Analytical Comments: h4,a1	
Decachlorobiphenyl	105	70-130		08/11/2014 14:37

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/7/14

WorkOrder: 1408242
Extraction Method: SW3550B
Analytical Method: SW8082
Unit: mg/kg

Polychlorinated Biphenyls (PCBs) Aroclors

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-4-7.5	1408242-020A	Soil	08/05/2014 11:05	GC5A	93753

Analytes	Result	RL	DF	Date Analyzed
Aroclor1016	ND	0.50	10	08/11/2014 13:59
Aroclor1221	ND	0.50	10	08/11/2014 13:59
Aroclor1232	ND	0.50	10	08/11/2014 13:59
Aroclor1242	ND	0.50	10	08/11/2014 13:59
Aroclor1248	ND	0.50	10	08/11/2014 13:59
Aroclor1254	ND	0.50	10	08/11/2014 13:59
Aroclor1260	ND	0.50	10	08/11/2014 13:59
PCBs, total	ND	0.50	10	08/11/2014 13:59
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	Analytical Comments: h4,a1	
Decachlorobiphenyl	71	70-130		08/11/2014 13:59

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-5-15	1408242-027A	Soil	08/05/2014 14:40	GC5A	93753

Analytes	Result	RL	DF	Date Analyzed
Aroclor1016	ND	0.25	5	08/11/2014 12:43
Aroclor1221	ND	0.25	5	08/11/2014 12:43
Aroclor1232	ND	0.25	5	08/11/2014 12:43
Aroclor1242	ND	0.25	5	08/11/2014 12:43
Aroclor1248	ND	0.25	5	08/11/2014 12:43
Aroclor1254	ND	0.25	5	08/11/2014 12:43
Aroclor1260	ND	0.25	5	08/11/2014 12:43
PCBs, total	ND	0.25	5	08/11/2014 12:43
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	Analytical Comments: h4,a1	
Decachlorobiphenyl	114	70-130		08/11/2014 12:43

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/7/14

WorkOrder: 1408242
Extraction Method: SW3550B
Analytical Method: SW8082
Unit: mg/kg

Polychlorinated Biphenyls (PCBs) Aroclors

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-6-10	1408242-032A	Soil	08/05/2014 09:00	GC5A	93753

Analytes	Result	RL	DF	Date Analyzed
Aroclor1016	ND	2.5	50	08/11/2014 13:21
Aroclor1221	ND	2.5	50	08/11/2014 13:21
Aroclor1232	ND	2.5	50	08/11/2014 13:21
Aroclor1242	ND	2.5	50	08/11/2014 13:21
Aroclor1248	ND	2.5	50	08/11/2014 13:21
Aroclor1254	ND	2.5	50	08/11/2014 13:21
Aroclor1260	ND	2.5	50	08/11/2014 13:21
PCBs, total	ND	2.5	50	08/11/2014 13:21
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	Analytical Comments: h4,a1,c4
Decachlorobiphenyl	136	S	70-130	08/11/2014 13:21

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-7-10	1408242-038A	Soil	08/05/2014 10:15	GC5A	93753

Analytes	Result	RL	DF	Date Analyzed
Aroclor1016	ND	0.050	1	08/09/2014 14:59
Aroclor1221	ND	0.050	1	08/09/2014 14:59
Aroclor1232	ND	0.050	1	08/09/2014 14:59
Aroclor1242	ND	0.050	1	08/09/2014 14:59
Aroclor1248	ND	0.050	1	08/09/2014 14:59
Aroclor1254	ND	0.050	1	08/09/2014 14:59
Aroclor1260	ND	0.050	1	08/09/2014 14:59
PCBs, total	ND	0.050	1	08/09/2014 14:59
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	Analytical Comments: h4	
Decachlorobiphenyl	95	70-130		08/09/2014 14:59



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/7/14-8/13/14

WorkOrder: 1408242
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-1-3.0	1408242-002A	Soil	08/06/2014 08:25	GC16	93720
Analytes	Result	RL	DF	Date Analyzed	
Acetone	ND	0.10	1	08/12/2014 13:44	
tert-Amyl methyl ether (TAME)	ND	0.0050	1	08/12/2014 13:44	
Benzene	ND	0.0050	1	08/12/2014 13:44	
Bromobenzene	ND	0.0050	1	08/12/2014 13:44	
Bromochloromethane	ND	0.0050	1	08/12/2014 13:44	
Bromodichloromethane	ND	0.0050	1	08/12/2014 13:44	
Bromoform	ND	0.0050	1	08/12/2014 13:44	
Bromomethane	ND	0.0050	1	08/12/2014 13:44	
2-Butanone (MEK)	ND	0.020	1	08/12/2014 13:44	
t-Butyl alcohol (TBA)	ND	0.050	1	08/12/2014 13:44	
n-Butyl benzene	ND	0.0050	1	08/12/2014 13:44	
sec-Butyl benzene	ND	0.0050	1	08/12/2014 13:44	
tert-Butyl benzene	ND	0.0050	1	08/12/2014 13:44	
Carbon Disulfide	ND	0.0050	1	08/12/2014 13:44	
Carbon Tetrachloride	ND	0.0050	1	08/12/2014 13:44	
Chlorobenzene	ND	0.0050	1	08/12/2014 13:44	
Chloroethane	ND	0.0050	1	08/12/2014 13:44	
Chloroform	ND	0.0050	1	08/12/2014 13:44	
Chloromethane	ND	0.0050	1	08/12/2014 13:44	
2-Chlorotoluene	ND	0.0050	1	08/12/2014 13:44	
4-Chlorotoluene	ND	0.0050	1	08/12/2014 13:44	
Dibromochloromethane	ND	0.0050	1	08/12/2014 13:44	
1,2-Dibromo-3-chloropropane	ND	0.0040	1	08/12/2014 13:44	
1,2-Dibromoethane (EDB)	ND	0.0040	1	08/12/2014 13:44	
Dibromomethane	ND	0.0050	1	08/12/2014 13:44	
1,2-Dichlorobenzene	ND	0.0050	1	08/12/2014 13:44	
1,3-Dichlorobenzene	ND	0.0050	1	08/12/2014 13:44	
1,4-Dichlorobenzene	ND	0.0050	1	08/12/2014 13:44	
Dichlorodifluoromethane	ND	0.0050	1	08/12/2014 13:44	
1,1-Dichloroethane	ND	0.0050	1	08/12/2014 13:44	
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	08/12/2014 13:44	
1,1-Dichloroethene	ND	0.0050	1	08/12/2014 13:44	
cis-1,2-Dichloroethene	ND	0.0050	1	08/12/2014 13:44	
trans-1,2-Dichloroethene	ND	0.0050	1	08/12/2014 13:44	
1,2-Dichloropropane	ND	0.0050	1	08/12/2014 13:44	
1,3-Dichloropropane	ND	0.0050	1	08/12/2014 13:44	
2,2-Dichloropropane	ND	0.0050	1	08/12/2014 13:44	
1,1-Dichloropropene	ND	0.0050	1	08/12/2014 13:44	

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/7/14-8/13/14

WorkOrder: 1408242
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-1-3.0	1408242-002A	Soil	08/06/2014 08:25	GC16	93720

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.0050	1	08/12/2014 13:44
trans-1,3-Dichloropropene	ND	0.0050	1	08/12/2014 13:44
Diisopropyl ether (DIPE)	ND	0.0050	1	08/12/2014 13:44
Ethylbenzene	ND	0.0050	1	08/12/2014 13:44
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	08/12/2014 13:44
Freon 113	ND	0.10	1	08/12/2014 13:44
Hexachlorobutadiene	ND	0.0050	1	08/12/2014 13:44
Hexachloroethane	ND	0.0050	1	08/12/2014 13:44
2-Hexanone	ND	0.0050	1	08/12/2014 13:44
Isopropylbenzene	ND	0.0050	1	08/12/2014 13:44
4-Isopropyl toluene	ND	0.0050	1	08/12/2014 13:44
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	08/12/2014 13:44
Methylene chloride	ND	0.0050	1	08/12/2014 13:44
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	08/12/2014 13:44
Naphthalene	ND	0.0050	1	08/12/2014 13:44
n-Propyl benzene	ND	0.0050	1	08/12/2014 13:44
Styrene	ND	0.0050	1	08/12/2014 13:44
1,1,1,2-Tetrachloroethane	ND	0.0050	1	08/12/2014 13:44
1,1,2,2-Tetrachloroethane	ND	0.0050	1	08/12/2014 13:44
Tetrachloroethene	ND	0.0050	1	08/12/2014 13:44
Toluene	ND	0.0050	1	08/12/2014 13:44
1,2,3-Trichlorobenzene	ND	0.0050	1	08/12/2014 13:44
1,2,4-Trichlorobenzene	ND	0.0050	1	08/12/2014 13:44
1,1,1-Trichloroethane	ND	0.0050	1	08/12/2014 13:44
1,1,2-Trichloroethane	ND	0.0050	1	08/12/2014 13:44
Trichloroethene	ND	0.0050	1	08/12/2014 13:44
Trichlorofluoromethane	ND	0.0050	1	08/12/2014 13:44
1,2,3-Trichloropropane	ND	0.0050	1	08/12/2014 13:44
1,2,4-Trimethylbenzene	ND	0.0050	1	08/12/2014 13:44
1,3,5-Trimethylbenzene	ND	0.0050	1	08/12/2014 13:44
Vinyl Chloride	ND	0.0050	1	08/12/2014 13:44
Xylenes, Total	ND	0.0050	1	08/12/2014 13:44
Surrogates	REC (%)	Limits		
Dibromofluoromethane	91	70-130		08/12/2014 13:44
Toluene-d8	106	70-130		08/12/2014 13:44
4-BFB	81	70-130		08/12/2014 13:44

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/7/14-8/13/14

WorkOrder: 1408242
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-1.5	1408242-006A	Soil	08/06/2014 09:20	GC16	93720
Analytes	Result	RL	DF	Date Analyzed	
Acetone	ND	0.10	1	08/12/2014 14:27	
tert-Amyl methyl ether (TAME)	ND	0.0050	1	08/12/2014 14:27	
Benzene	ND	0.0050	1	08/12/2014 14:27	
Bromobenzene	ND	0.0050	1	08/12/2014 14:27	
Bromochloromethane	ND	0.0050	1	08/12/2014 14:27	
Bromodichloromethane	ND	0.0050	1	08/12/2014 14:27	
Bromoform	ND	0.0050	1	08/12/2014 14:27	
Bromomethane	ND	0.0050	1	08/12/2014 14:27	
2-Butanone (MEK)	ND	0.020	1	08/12/2014 14:27	
t-Butyl alcohol (TBA)	ND	0.050	1	08/12/2014 14:27	
n-Butyl benzene	ND	0.0050	1	08/12/2014 14:27	
sec-Butyl benzene	ND	0.0050	1	08/12/2014 14:27	
tert-Butyl benzene	ND	0.0050	1	08/12/2014 14:27	
Carbon Disulfide	ND	0.0050	1	08/12/2014 14:27	
Carbon Tetrachloride	ND	0.0050	1	08/12/2014 14:27	
Chlorobenzene	ND	0.0050	1	08/12/2014 14:27	
Chloroethane	ND	0.0050	1	08/12/2014 14:27	
Chloroform	ND	0.0050	1	08/12/2014 14:27	
Chloromethane	ND	0.0050	1	08/12/2014 14:27	
2-Chlorotoluene	ND	0.0050	1	08/12/2014 14:27	
4-Chlorotoluene	ND	0.0050	1	08/12/2014 14:27	
Dibromochloromethane	ND	0.0050	1	08/12/2014 14:27	
1,2-Dibromo-3-chloropropane	ND	0.0040	1	08/12/2014 14:27	
1,2-Dibromoethane (EDB)	ND	0.0040	1	08/12/2014 14:27	
Dibromomethane	ND	0.0050	1	08/12/2014 14:27	
1,2-Dichlorobenzene	ND	0.0050	1	08/12/2014 14:27	
1,3-Dichlorobenzene	ND	0.0050	1	08/12/2014 14:27	
1,4-Dichlorobenzene	ND	0.0050	1	08/12/2014 14:27	
Dichlorodifluoromethane	ND	0.0050	1	08/12/2014 14:27	
1,1-Dichloroethane	ND	0.0050	1	08/12/2014 14:27	
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	08/12/2014 14:27	
1,1-Dichloroethene	ND	0.0050	1	08/12/2014 14:27	
cis-1,2-Dichloroethene	ND	0.0050	1	08/12/2014 14:27	
trans-1,2-Dichloroethene	ND	0.0050	1	08/12/2014 14:27	
1,2-Dichloropropane	ND	0.0050	1	08/12/2014 14:27	
1,3-Dichloropropane	ND	0.0050	1	08/12/2014 14:27	
2,2-Dichloropropane	ND	0.0050	1	08/12/2014 14:27	
1,1-Dichloropropene	ND	0.0050	1	08/12/2014 14:27	

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Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/7/14-8/13/14

WorkOrder: 1408242
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-1.5	1408242-006A	Soil	08/06/2014 09:20	GC16	93720
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND		0.0050	1	08/12/2014 14:27
trans-1,3-Dichloropropene	ND		0.0050	1	08/12/2014 14:27
Diisopropyl ether (DIPE)	ND		0.0050	1	08/12/2014 14:27
Ethylbenzene	ND		0.0050	1	08/12/2014 14:27
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	08/12/2014 14:27
Freon 113	ND		0.10	1	08/12/2014 14:27
Hexachlorobutadiene	ND		0.0050	1	08/12/2014 14:27
Hexachloroethane	ND		0.0050	1	08/12/2014 14:27
2-Hexanone	ND		0.0050	1	08/12/2014 14:27
Isopropylbenzene	ND		0.0050	1	08/12/2014 14:27
4-Isopropyl toluene	ND		0.0050	1	08/12/2014 14:27
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	08/12/2014 14:27
Methylene chloride	ND		0.0050	1	08/12/2014 14:27
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	08/12/2014 14:27
Naphthalene	ND		0.0050	1	08/12/2014 14:27
n-Propyl benzene	ND		0.0050	1	08/12/2014 14:27
Styrene	ND		0.0050	1	08/12/2014 14:27
1,1,1,2-Tetrachloroethane	ND		0.0050	1	08/12/2014 14:27
1,1,2,2-Tetrachloroethane	ND		0.0050	1	08/12/2014 14:27
Tetrachloroethene	ND		0.0050	1	08/12/2014 14:27
Toluene	ND		0.0050	1	08/12/2014 14:27
1,2,3-Trichlorobenzene	ND		0.0050	1	08/12/2014 14:27
1,2,4-Trichlorobenzene	ND		0.0050	1	08/12/2014 14:27
1,1,1-Trichloroethane	ND		0.0050	1	08/12/2014 14:27
1,1,2-Trichloroethane	ND		0.0050	1	08/12/2014 14:27
Trichloroethene	0.034		0.0050	1	08/12/2014 14:27
Trichlorofluoromethane	ND		0.0050	1	08/12/2014 14:27
1,2,3-Trichloropropane	ND		0.0050	1	08/12/2014 14:27
1,2,4-Trimethylbenzene	ND		0.0050	1	08/12/2014 14:27
1,3,5-Trimethylbenzene	ND		0.0050	1	08/12/2014 14:27
Vinyl Chloride	ND		0.0050	1	08/12/2014 14:27
Xylenes, Total	ND		0.0050	1	08/12/2014 14:27
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	92		70-130		08/12/2014 14:27
Toluene-d8	105		70-130		08/12/2014 14:27
4-BFB	85		70-130		08/12/2014 14:27

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Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/7/14-8/13/14

WorkOrder: 1408242
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-5.0	1408242-008A	Soil	08/06/2014 09:35	GC16	93770
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	08/09/2014 02:40
tert-Amyl methyl ether (TAME)	ND		0.0050	1	08/09/2014 02:40
Benzene	ND		0.0050	1	08/09/2014 02:40
Bromobenzene	ND		0.0050	1	08/09/2014 02:40
Bromochloromethane	ND		0.0050	1	08/09/2014 02:40
Bromodichloromethane	ND		0.0050	1	08/09/2014 02:40
Bromoform	ND		0.0050	1	08/09/2014 02:40
Bromomethane	ND		0.0050	1	08/09/2014 02:40
2-Butanone (MEK)	ND		0.020	1	08/09/2014 02:40
t-Butyl alcohol (TBA)	ND		0.050	1	08/09/2014 02:40
n-Butyl benzene	ND		0.0050	1	08/09/2014 02:40
sec-Butyl benzene	ND		0.0050	1	08/09/2014 02:40
tert-Butyl benzene	ND		0.0050	1	08/09/2014 02:40
Carbon Disulfide	ND		0.0050	1	08/09/2014 02:40
Carbon Tetrachloride	ND		0.0050	1	08/09/2014 02:40
Chlorobenzene	ND		0.0050	1	08/09/2014 02:40
Chloroethane	ND		0.0050	1	08/09/2014 02:40
Chloroform	ND		0.0050	1	08/09/2014 02:40
Chloromethane	ND		0.0050	1	08/09/2014 02:40
2-Chlorotoluene	ND		0.0050	1	08/09/2014 02:40
4-Chlorotoluene	ND		0.0050	1	08/09/2014 02:40
Dibromochloromethane	ND		0.0050	1	08/09/2014 02:40
1,2-Dibromo-3-chloropropane	ND		0.0040	1	08/09/2014 02:40
1,2-Dibromoethane (EDB)	ND		0.0040	1	08/09/2014 02:40
Dibromomethane	ND		0.0050	1	08/09/2014 02:40
1,2-Dichlorobenzene	ND		0.0050	1	08/09/2014 02:40
1,3-Dichlorobenzene	ND		0.0050	1	08/09/2014 02:40
1,4-Dichlorobenzene	ND		0.0050	1	08/09/2014 02:40
Dichlorodifluoromethane	ND		0.0050	1	08/09/2014 02:40
1,1-Dichloroethane	ND		0.0050	1	08/09/2014 02:40
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	08/09/2014 02:40
1,1-Dichloroethene	ND		0.0050	1	08/09/2014 02:40
cis-1,2-Dichloroethene	ND		0.0050	1	08/09/2014 02:40
trans-1,2-Dichloroethene	ND		0.0050	1	08/09/2014 02:40
1,2-Dichloropropane	ND		0.0050	1	08/09/2014 02:40
1,3-Dichloropropane	ND		0.0050	1	08/09/2014 02:40
2,2-Dichloropropane	ND		0.0050	1	08/09/2014 02:40
1,1-Dichloropropene	ND		0.0050	1	08/09/2014 02:40

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Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/7/14-8/13/14

WorkOrder: 1408242
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-5.0	1408242-008A	Soil	08/06/2014 09:35	GC16	93770

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.0050	1	08/09/2014 02:40
trans-1,3-Dichloropropene	ND	0.0050	1	08/09/2014 02:40
Diisopropyl ether (DIPE)	ND	0.0050	1	08/09/2014 02:40
Ethylbenzene	ND	0.0050	1	08/09/2014 02:40
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	08/09/2014 02:40
Freon 113	ND	0.10	1	08/09/2014 02:40
Hexachlorobutadiene	ND	0.0050	1	08/09/2014 02:40
Hexachloroethane	ND	0.0050	1	08/09/2014 02:40
2-Hexanone	ND	0.0050	1	08/09/2014 02:40
Isopropylbenzene	ND	0.0050	1	08/09/2014 02:40
4-Isopropyl toluene	ND	0.0050	1	08/09/2014 02:40
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	08/09/2014 02:40
Methylene chloride	ND	0.0050	1	08/09/2014 02:40
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	08/09/2014 02:40
Naphthalene	ND	0.0050	1	08/09/2014 02:40
n-Propyl benzene	ND	0.0050	1	08/09/2014 02:40
Styrene	ND	0.0050	1	08/09/2014 02:40
1,1,1,2-Tetrachloroethane	ND	0.0050	1	08/09/2014 02:40
1,1,2,2-Tetrachloroethane	ND	0.0050	1	08/09/2014 02:40
Tetrachloroethene	ND	0.0050	1	08/09/2014 02:40
Toluene	ND	0.0050	1	08/09/2014 02:40
1,2,3-Trichlorobenzene	ND	0.0050	1	08/09/2014 02:40
1,2,4-Trichlorobenzene	ND	0.0050	1	08/09/2014 02:40
1,1,1-Trichloroethane	ND	0.0050	1	08/09/2014 02:40
1,1,2-Trichloroethane	ND	0.0050	1	08/09/2014 02:40
Trichloroethene	ND	0.0050	1	08/09/2014 02:40
Trichlorofluoromethane	ND	0.0050	1	08/09/2014 02:40
1,2,3-Trichloropropane	ND	0.0050	1	08/09/2014 02:40
1,2,4-Trimethylbenzene	ND	0.0050	1	08/09/2014 02:40
1,3,5-Trimethylbenzene	ND	0.0050	1	08/09/2014 02:40
Vinyl Chloride	ND	0.0050	1	08/09/2014 02:40
Xylenes, Total	ND	0.0050	1	08/09/2014 02:40
Surrogates	REC (%)	Limits		
Dibromofluoromethane	94	70-130		08/09/2014 02:40
Toluene-d8	100	70-130		08/09/2014 02:40
4-BFB	88	70-130		08/09/2014 02:40

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Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/7/14-8/13/14

WorkOrder: 1408242
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-15	1408242-011A	Soil	08/06/2014 09:55	GC10	93770
Analytes	Result	RL	DF	Date Analyzed	
Acetone	ND	0.10	1	08/13/2014 10:26	
tert-Amyl methyl ether (TAME)	ND	0.0050	1	08/13/2014 10:26	
Benzene	ND	0.0050	1	08/13/2014 10:26	
Bromobenzene	ND	0.0050	1	08/13/2014 10:26	
Bromochloromethane	ND	0.0050	1	08/13/2014 10:26	
Bromodichloromethane	ND	0.0050	1	08/13/2014 10:26	
Bromoform	ND	0.0050	1	08/13/2014 10:26	
Bromomethane	ND	0.0050	1	08/13/2014 10:26	
2-Butanone (MEK)	ND	0.020	1	08/13/2014 10:26	
t-Butyl alcohol (TBA)	ND	0.050	1	08/13/2014 10:26	
n-Butyl benzene	ND	0.0050	1	08/13/2014 10:26	
sec-Butyl benzene	ND	0.0050	1	08/13/2014 10:26	
tert-Butyl benzene	ND	0.0050	1	08/13/2014 10:26	
Carbon Disulfide	ND	0.0050	1	08/13/2014 10:26	
Carbon Tetrachloride	ND	0.0050	1	08/13/2014 10:26	
Chlorobenzene	ND	0.0050	1	08/13/2014 10:26	
Chloroethane	ND	0.0050	1	08/13/2014 10:26	
Chloroform	ND	0.0050	1	08/13/2014 10:26	
Chloromethane	ND	0.0050	1	08/13/2014 10:26	
2-Chlorotoluene	ND	0.0050	1	08/13/2014 10:26	
4-Chlorotoluene	ND	0.0050	1	08/13/2014 10:26	
Dibromochloromethane	ND	0.0050	1	08/13/2014 10:26	
1,2-Dibromo-3-chloropropane	ND	0.0040	1	08/13/2014 10:26	
1,2-Dibromoethane (EDB)	ND	0.0040	1	08/13/2014 10:26	
Dibromomethane	ND	0.0050	1	08/13/2014 10:26	
1,2-Dichlorobenzene	ND	0.0050	1	08/13/2014 10:26	
1,3-Dichlorobenzene	ND	0.0050	1	08/13/2014 10:26	
1,4-Dichlorobenzene	ND	0.0050	1	08/13/2014 10:26	
Dichlorodifluoromethane	ND	0.0050	1	08/13/2014 10:26	
1,1-Dichloroethane	ND	0.0050	1	08/13/2014 10:26	
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	08/13/2014 10:26	
1,1-Dichloroethene	ND	0.0050	1	08/13/2014 10:26	
cis-1,2-Dichloroethene	ND	0.0050	1	08/13/2014 10:26	
trans-1,2-Dichloroethene	ND	0.0050	1	08/13/2014 10:26	
1,2-Dichloropropane	ND	0.0050	1	08/13/2014 10:26	
1,3-Dichloropropane	ND	0.0050	1	08/13/2014 10:26	
2,2-Dichloropropane	ND	0.0050	1	08/13/2014 10:26	
1,1-Dichloropropene	ND	0.0050	1	08/13/2014 10:26	

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Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/7/14-8/13/14

WorkOrder: 1408242
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-15	1408242-011A	Soil	08/06/2014 09:55	GC10	93770

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.0050	1	08/13/2014 10:26
trans-1,3-Dichloropropene	ND	0.0050	1	08/13/2014 10:26
Diisopropyl ether (DIPE)	ND	0.0050	1	08/13/2014 10:26
Ethylbenzene	ND	0.0050	1	08/13/2014 10:26
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	08/13/2014 10:26
Freon 113	ND	0.10	1	08/13/2014 10:26
Hexachlorobutadiene	ND	0.0050	1	08/13/2014 10:26
Hexachloroethane	ND	0.0050	1	08/13/2014 10:26
2-Hexanone	ND	0.0050	1	08/13/2014 10:26
Isopropylbenzene	ND	0.0050	1	08/13/2014 10:26
4-Isopropyl toluene	ND	0.0050	1	08/13/2014 10:26
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	08/13/2014 10:26
Methylene chloride	ND	0.0050	1	08/13/2014 10:26
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	08/13/2014 10:26
Naphthalene	ND	0.0050	1	08/13/2014 10:26
n-Propyl benzene	ND	0.0050	1	08/13/2014 10:26
Styrene	ND	0.0050	1	08/13/2014 10:26
1,1,1,2-Tetrachloroethane	ND	0.0050	1	08/13/2014 10:26
1,1,2,2-Tetrachloroethane	ND	0.0050	1	08/13/2014 10:26
Tetrachloroethene	ND	0.0050	1	08/13/2014 10:26
Toluene	ND	0.0050	1	08/13/2014 10:26
1,2,3-Trichlorobenzene	ND	0.0050	1	08/13/2014 10:26
1,2,4-Trichlorobenzene	ND	0.0050	1	08/13/2014 10:26
1,1,1-Trichloroethane	ND	0.0050	1	08/13/2014 10:26
1,1,2-Trichloroethane	ND	0.0050	1	08/13/2014 10:26
Trichloroethene	ND	0.0050	1	08/13/2014 10:26
Trichlorofluoromethane	ND	0.0050	1	08/13/2014 10:26
1,2,3-Trichloropropane	ND	0.0050	1	08/13/2014 10:26
1,2,4-Trimethylbenzene	ND	0.0050	1	08/13/2014 10:26
1,3,5-Trimethylbenzene	ND	0.0050	1	08/13/2014 10:26
Vinyl Chloride	ND	0.0050	1	08/13/2014 10:26
Xylenes, Total	ND	0.0050	1	08/13/2014 10:26
Surrogates	REC (%)	Limits		
Dibromofluoromethane	94	70-130		08/13/2014 10:26
Toluene-d8	103	70-130		08/13/2014 10:26
4-BFB	100	70-130		08/13/2014 10:26

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Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/7/14-8/13/14

WorkOrder: 1408242
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-3-5.0	1408242-014A	Soil	08/05/2014 12:00	GC10	93770
Analytes	Result	RL	DF	Date Analyzed	
Acetone	ND	0.10	1	08/13/2014 11:07	
tert-Amyl methyl ether (TAME)	ND	0.0050	1	08/13/2014 11:07	
Benzene	ND	0.0050	1	08/13/2014 11:07	
Bromobenzene	ND	0.0050	1	08/13/2014 11:07	
Bromochloromethane	ND	0.0050	1	08/13/2014 11:07	
Bromodichloromethane	ND	0.0050	1	08/13/2014 11:07	
Bromoform	ND	0.0050	1	08/13/2014 11:07	
Bromomethane	ND	0.0050	1	08/13/2014 11:07	
2-Butanone (MEK)	ND	0.020	1	08/13/2014 11:07	
t-Butyl alcohol (TBA)	ND	0.050	1	08/13/2014 11:07	
n-Butyl benzene	ND	0.0050	1	08/13/2014 11:07	
sec-Butyl benzene	ND	0.0050	1	08/13/2014 11:07	
tert-Butyl benzene	ND	0.0050	1	08/13/2014 11:07	
Carbon Disulfide	ND	0.0050	1	08/13/2014 11:07	
Carbon Tetrachloride	ND	0.0050	1	08/13/2014 11:07	
Chlorobenzene	ND	0.0050	1	08/13/2014 11:07	
Chloroethane	ND	0.0050	1	08/13/2014 11:07	
Chloroform	ND	0.0050	1	08/13/2014 11:07	
Chloromethane	ND	0.0050	1	08/13/2014 11:07	
2-Chlorotoluene	ND	0.0050	1	08/13/2014 11:07	
4-Chlorotoluene	ND	0.0050	1	08/13/2014 11:07	
Dibromochloromethane	ND	0.0050	1	08/13/2014 11:07	
1,2-Dibromo-3-chloropropane	ND	0.0040	1	08/13/2014 11:07	
1,2-Dibromoethane (EDB)	ND	0.0040	1	08/13/2014 11:07	
Dibromomethane	ND	0.0050	1	08/13/2014 11:07	
1,2-Dichlorobenzene	ND	0.0050	1	08/13/2014 11:07	
1,3-Dichlorobenzene	ND	0.0050	1	08/13/2014 11:07	
1,4-Dichlorobenzene	ND	0.0050	1	08/13/2014 11:07	
Dichlorodifluoromethane	ND	0.0050	1	08/13/2014 11:07	
1,1-Dichloroethane	ND	0.0050	1	08/13/2014 11:07	
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	08/13/2014 11:07	
1,1-Dichloroethene	ND	0.0050	1	08/13/2014 11:07	
cis-1,2-Dichloroethene	ND	0.0050	1	08/13/2014 11:07	
trans-1,2-Dichloroethene	ND	0.0050	1	08/13/2014 11:07	
1,2-Dichloropropane	ND	0.0050	1	08/13/2014 11:07	
1,3-Dichloropropane	ND	0.0050	1	08/13/2014 11:07	
2,2-Dichloropropane	ND	0.0050	1	08/13/2014 11:07	
1,1-Dichloropropene	ND	0.0050	1	08/13/2014 11:07	

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Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/7/14-8/13/14

WorkOrder: 1408242
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-3-5.0	1408242-014A	Soil	08/05/2014 12:00	GC10	93770

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.0050	1	08/13/2014 11:07
trans-1,3-Dichloropropene	ND	0.0050	1	08/13/2014 11:07
Diisopropyl ether (DIPE)	ND	0.0050	1	08/13/2014 11:07
Ethylbenzene	ND	0.0050	1	08/13/2014 11:07
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	08/13/2014 11:07
Freon 113	ND	0.10	1	08/13/2014 11:07
Hexachlorobutadiene	ND	0.0050	1	08/13/2014 11:07
Hexachloroethane	ND	0.0050	1	08/13/2014 11:07
2-Hexanone	ND	0.0050	1	08/13/2014 11:07
Isopropylbenzene	ND	0.0050	1	08/13/2014 11:07
4-Isopropyl toluene	ND	0.0050	1	08/13/2014 11:07
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	08/13/2014 11:07
Methylene chloride	ND	0.0050	1	08/13/2014 11:07
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	08/13/2014 11:07
Naphthalene	ND	0.0050	1	08/13/2014 11:07
n-Propyl benzene	ND	0.0050	1	08/13/2014 11:07
Styrene	ND	0.0050	1	08/13/2014 11:07
1,1,1,2-Tetrachloroethane	ND	0.0050	1	08/13/2014 11:07
1,1,2,2-Tetrachloroethane	ND	0.0050	1	08/13/2014 11:07
Tetrachloroethene	ND	0.0050	1	08/13/2014 11:07
Toluene	ND	0.0050	1	08/13/2014 11:07
1,2,3-Trichlorobenzene	ND	0.0050	1	08/13/2014 11:07
1,2,4-Trichlorobenzene	ND	0.0050	1	08/13/2014 11:07
1,1,1-Trichloroethane	ND	0.0050	1	08/13/2014 11:07
1,1,2-Trichloroethane	ND	0.0050	1	08/13/2014 11:07
Trichloroethene	ND	0.0050	1	08/13/2014 11:07
Trichlorofluoromethane	ND	0.0050	1	08/13/2014 11:07
1,2,3-Trichloropropane	ND	0.0050	1	08/13/2014 11:07
1,2,4-Trimethylbenzene	ND	0.0050	1	08/13/2014 11:07
1,3,5-Trimethylbenzene	ND	0.0050	1	08/13/2014 11:07
Vinyl Chloride	ND	0.0050	1	08/13/2014 11:07
Xylenes, Total	ND	0.0050	1	08/13/2014 11:07
Surrogates	REC (%)	Limits		
Dibromofluoromethane	94	70-130		08/13/2014 11:07
Toluene-d8	104	70-130		08/13/2014 11:07
4-BFB	104	70-130		08/13/2014 11:07

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Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/7/14-8/13/14

WorkOrder: 1408242
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-4-7.5	1408242-020A	Soil	08/05/2014 11:05	GC10	93996
Analytes	Result	RL	DF	Date Analyzed	
Acetone	ND	0.10	1	08/13/2014 21:49	
tert-Amyl methyl ether (TAME)	ND	0.0050	1	08/13/2014 21:49	
Benzene	ND	0.0050	1	08/13/2014 21:49	
Bromobenzene	ND	0.0050	1	08/13/2014 21:49	
Bromochloromethane	ND	0.0050	1	08/13/2014 21:49	
Bromodichloromethane	ND	0.0050	1	08/13/2014 21:49	
Bromoform	ND	0.0050	1	08/13/2014 21:49	
Bromomethane	ND	0.0050	1	08/13/2014 21:49	
2-Butanone (MEK)	ND	0.020	1	08/13/2014 21:49	
t-Butyl alcohol (TBA)	ND	0.050	1	08/13/2014 21:49	
n-Butyl benzene	ND	0.0050	1	08/13/2014 21:49	
sec-Butyl benzene	ND	0.0050	1	08/13/2014 21:49	
tert-Butyl benzene	ND	0.0050	1	08/13/2014 21:49	
Carbon Disulfide	ND	0.0050	1	08/13/2014 21:49	
Carbon Tetrachloride	ND	0.0050	1	08/13/2014 21:49	
Chlorobenzene	ND	0.0050	1	08/13/2014 21:49	
Chloroethane	ND	0.0050	1	08/13/2014 21:49	
Chloroform	ND	0.0050	1	08/13/2014 21:49	
Chloromethane	ND	0.0050	1	08/13/2014 21:49	
2-Chlorotoluene	ND	0.0050	1	08/13/2014 21:49	
4-Chlorotoluene	ND	0.0050	1	08/13/2014 21:49	
Dibromochloromethane	ND	0.0050	1	08/13/2014 21:49	
1,2-Dibromo-3-chloropropane	ND	0.0040	1	08/13/2014 21:49	
1,2-Dibromoethane (EDB)	ND	0.0040	1	08/13/2014 21:49	
Dibromomethane	ND	0.0050	1	08/13/2014 21:49	
1,2-Dichlorobenzene	ND	0.0050	1	08/13/2014 21:49	
1,3-Dichlorobenzene	ND	0.0050	1	08/13/2014 21:49	
1,4-Dichlorobenzene	ND	0.0050	1	08/13/2014 21:49	
Dichlorodifluoromethane	ND	0.0050	1	08/13/2014 21:49	
1,1-Dichloroethane	ND	0.0050	1	08/13/2014 21:49	
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	08/13/2014 21:49	
1,1-Dichloroethene	ND	0.0050	1	08/13/2014 21:49	
cis-1,2-Dichloroethene	ND	0.0050	1	08/13/2014 21:49	
trans-1,2-Dichloroethene	ND	0.0050	1	08/13/2014 21:49	
1,2-Dichloropropane	ND	0.0050	1	08/13/2014 21:49	
1,3-Dichloropropane	ND	0.0050	1	08/13/2014 21:49	
2,2-Dichloropropane	ND	0.0050	1	08/13/2014 21:49	
1,1-Dichloropropene	ND	0.0050	1	08/13/2014 21:49	

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Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/7/14-8/13/14

WorkOrder: 1408242
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-4-7.5	1408242-020A	Soil	08/05/2014 11:05	GC10	93996
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND		0.0050	1	08/13/2014 21:49
trans-1,3-Dichloropropene	ND		0.0050	1	08/13/2014 21:49
Diisopropyl ether (DIPE)	ND		0.0050	1	08/13/2014 21:49
Ethylbenzene	ND		0.0050	1	08/13/2014 21:49
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	08/13/2014 21:49
Freon 113	ND		0.10	1	08/13/2014 21:49
Hexachlorobutadiene	ND		0.0050	1	08/13/2014 21:49
Hexachloroethane	ND		0.0050	1	08/13/2014 21:49
2-Hexanone	ND		0.0050	1	08/13/2014 21:49
Isopropylbenzene	ND		0.0050	1	08/13/2014 21:49
4-Isopropyl toluene	ND		0.0050	1	08/13/2014 21:49
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	08/13/2014 21:49
Methylene chloride	ND		0.0050	1	08/13/2014 21:49
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	08/13/2014 21:49
Naphthalene	ND		0.0050	1	08/13/2014 21:49
n-Propyl benzene	ND		0.0050	1	08/13/2014 21:49
Styrene	ND		0.0050	1	08/13/2014 21:49
1,1,1,2-Tetrachloroethane	ND		0.0050	1	08/13/2014 21:49
1,1,2,2-Tetrachloroethane	ND		0.0050	1	08/13/2014 21:49
Tetrachloroethene	ND		0.0050	1	08/13/2014 21:49
Toluene	ND		0.0050	1	08/13/2014 21:49
1,2,3-Trichlorobenzene	ND		0.0050	1	08/13/2014 21:49
1,2,4-Trichlorobenzene	ND		0.0050	1	08/13/2014 21:49
1,1,1-Trichloroethane	ND		0.0050	1	08/13/2014 21:49
1,1,2-Trichloroethane	ND		0.0050	1	08/13/2014 21:49
Trichloroethene	ND		0.0050	1	08/13/2014 21:49
Trichlorofluoromethane	ND		0.0050	1	08/13/2014 21:49
1,2,3-Trichloropropane	ND		0.0050	1	08/13/2014 21:49
1,2,4-Trimethylbenzene	ND		0.0050	1	08/13/2014 21:49
1,3,5-Trimethylbenzene	ND		0.0050	1	08/13/2014 21:49
Vinyl Chloride	ND		0.0050	1	08/13/2014 21:49
Xylenes, Total	ND		0.0050	1	08/13/2014 21:49
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	94		70-130		08/13/2014 21:49
Toluene-d8	103		70-130		08/13/2014 21:49
4-BFB	103		70-130		08/13/2014 21:49

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Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/7/14-8/13/14

WorkOrder: 1408242
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-5-15	1408242-027A	Soil	08/05/2014 14:40	GC10	93770
Analytes	Result	RL	DF	Date Analyzed	
Acetone	ND	0.10	1	08/13/2014 12:31	
tert-Amyl methyl ether (TAME)	ND	0.0050	1	08/13/2014 12:31	
Benzene	ND	0.0050	1	08/13/2014 12:31	
Bromobenzene	ND	0.0050	1	08/13/2014 12:31	
Bromochloromethane	ND	0.0050	1	08/13/2014 12:31	
Bromodichloromethane	ND	0.0050	1	08/13/2014 12:31	
Bromoform	ND	0.0050	1	08/13/2014 12:31	
Bromomethane	ND	0.0050	1	08/13/2014 12:31	
2-Butanone (MEK)	ND	0.020	1	08/13/2014 12:31	
t-Butyl alcohol (TBA)	ND	0.050	1	08/13/2014 12:31	
n-Butyl benzene	ND	0.0050	1	08/13/2014 12:31	
sec-Butyl benzene	ND	0.0050	1	08/13/2014 12:31	
tert-Butyl benzene	ND	0.0050	1	08/13/2014 12:31	
Carbon Disulfide	ND	0.0050	1	08/13/2014 12:31	
Carbon Tetrachloride	ND	0.0050	1	08/13/2014 12:31	
Chlorobenzene	ND	0.0050	1	08/13/2014 12:31	
Chloroethane	ND	0.0050	1	08/13/2014 12:31	
Chloroform	ND	0.0050	1	08/13/2014 12:31	
Chloromethane	ND	0.0050	1	08/13/2014 12:31	
2-Chlorotoluene	ND	0.0050	1	08/13/2014 12:31	
4-Chlorotoluene	ND	0.0050	1	08/13/2014 12:31	
Dibromochloromethane	ND	0.0050	1	08/13/2014 12:31	
1,2-Dibromo-3-chloropropane	ND	0.0040	1	08/13/2014 12:31	
1,2-Dibromoethane (EDB)	ND	0.0040	1	08/13/2014 12:31	
Dibromomethane	ND	0.0050	1	08/13/2014 12:31	
1,2-Dichlorobenzene	ND	0.0050	1	08/13/2014 12:31	
1,3-Dichlorobenzene	ND	0.0050	1	08/13/2014 12:31	
1,4-Dichlorobenzene	ND	0.0050	1	08/13/2014 12:31	
Dichlorodifluoromethane	ND	0.0050	1	08/13/2014 12:31	
1,1-Dichloroethane	ND	0.0050	1	08/13/2014 12:31	
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	08/13/2014 12:31	
1,1-Dichloroethene	ND	0.0050	1	08/13/2014 12:31	
cis-1,2-Dichloroethene	ND	0.0050	1	08/13/2014 12:31	
trans-1,2-Dichloroethene	ND	0.0050	1	08/13/2014 12:31	
1,2-Dichloropropane	ND	0.0050	1	08/13/2014 12:31	
1,3-Dichloropropane	ND	0.0050	1	08/13/2014 12:31	
2,2-Dichloropropane	ND	0.0050	1	08/13/2014 12:31	
1,1-Dichloropropene	ND	0.0050	1	08/13/2014 12:31	

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Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/7/14-8/13/14

WorkOrder: 1408242
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-5-15	1408242-027A	Soil	08/05/2014 14:40	GC10	93770
<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>	
cis-1,3-Dichloropropene	ND	0.0050	1	08/13/2014 12:31	
trans-1,3-Dichloropropene	ND	0.0050	1	08/13/2014 12:31	
Diisopropyl ether (DIPE)	ND	0.0050	1	08/13/2014 12:31	
Ethylbenzene	ND	0.0050	1	08/13/2014 12:31	
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	08/13/2014 12:31	
Freon 113	ND	0.10	1	08/13/2014 12:31	
Hexachlorobutadiene	ND	0.0050	1	08/13/2014 12:31	
Hexachloroethane	ND	0.0050	1	08/13/2014 12:31	
2-Hexanone	ND	0.0050	1	08/13/2014 12:31	
Isopropylbenzene	ND	0.0050	1	08/13/2014 12:31	
4-Isopropyl toluene	ND	0.0050	1	08/13/2014 12:31	
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	08/13/2014 12:31	
Methylene chloride	ND	0.0050	1	08/13/2014 12:31	
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	08/13/2014 12:31	
Naphthalene	0.060	0.0050	1	08/13/2014 12:31	
n-Propyl benzene	ND	0.0050	1	08/13/2014 12:31	
Styrene	ND	0.0050	1	08/13/2014 12:31	
1,1,1,2-Tetrachloroethane	ND	0.0050	1	08/13/2014 12:31	
1,1,2,2-Tetrachloroethane	ND	0.0050	1	08/13/2014 12:31	
Tetrachloroethene	ND	0.0050	1	08/13/2014 12:31	
Toluene	ND	0.0050	1	08/13/2014 12:31	
1,2,3-Trichlorobenzene	ND	0.0050	1	08/13/2014 12:31	
1,2,4-Trichlorobenzene	ND	0.0050	1	08/13/2014 12:31	
1,1,1-Trichloroethane	ND	0.0050	1	08/13/2014 12:31	
1,1,2-Trichloroethane	ND	0.0050	1	08/13/2014 12:31	
Trichloroethene	ND	0.0050	1	08/13/2014 12:31	
Trichlorofluoromethane	ND	0.0050	1	08/13/2014 12:31	
1,2,3-Trichloropropane	ND	0.0050	1	08/13/2014 12:31	
1,2,4-Trimethylbenzene	ND	0.0050	1	08/13/2014 12:31	
1,3,5-Trimethylbenzene	ND	0.0050	1	08/13/2014 12:31	
Vinyl Chloride	ND	0.0050	1	08/13/2014 12:31	
Xylenes, Total	ND	0.0050	1	08/13/2014 12:31	
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>			
Dibromofluoromethane	98	70-130		08/13/2014 12:31	
Toluene-d8	104	70-130		08/13/2014 12:31	
4-BFB	101	70-130		08/13/2014 12:31	

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Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/7/14-8/13/14

WorkOrder: 1408242
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-6-10	1408242-032A	Soil	08/05/2014 09:00	GC10	93770
Analytes	Result	RL	DF	Date Analyzed	
Acetone	ND	0.10	1	08/13/2014 13:13	
tert-Amyl methyl ether (TAME)	ND	0.0050	1	08/13/2014 13:13	
Benzene	ND	0.0050	1	08/13/2014 13:13	
Bromobenzene	ND	0.0050	1	08/13/2014 13:13	
Bromochloromethane	ND	0.0050	1	08/13/2014 13:13	
Bromodichloromethane	ND	0.0050	1	08/13/2014 13:13	
Bromoform	ND	0.0050	1	08/13/2014 13:13	
Bromomethane	ND	0.0050	1	08/13/2014 13:13	
2-Butanone (MEK)	ND	0.020	1	08/13/2014 13:13	
t-Butyl alcohol (TBA)	ND	0.050	1	08/13/2014 13:13	
n-Butyl benzene	ND	0.0050	1	08/13/2014 13:13	
sec-Butyl benzene	ND	0.0050	1	08/13/2014 13:13	
tert-Butyl benzene	ND	0.0050	1	08/13/2014 13:13	
Carbon Disulfide	ND	0.0050	1	08/13/2014 13:13	
Carbon Tetrachloride	ND	0.0050	1	08/13/2014 13:13	
Chlorobenzene	ND	0.0050	1	08/13/2014 13:13	
Chloroethane	ND	0.0050	1	08/13/2014 13:13	
Chloroform	ND	0.0050	1	08/13/2014 13:13	
Chloromethane	ND	0.0050	1	08/13/2014 13:13	
2-Chlorotoluene	ND	0.0050	1	08/13/2014 13:13	
4-Chlorotoluene	ND	0.0050	1	08/13/2014 13:13	
Dibromochloromethane	ND	0.0050	1	08/13/2014 13:13	
1,2-Dibromo-3-chloropropane	ND	0.0040	1	08/13/2014 13:13	
1,2-Dibromoethane (EDB)	ND	0.0040	1	08/13/2014 13:13	
Dibromomethane	ND	0.0050	1	08/13/2014 13:13	
1,2-Dichlorobenzene	ND	0.0050	1	08/13/2014 13:13	
1,3-Dichlorobenzene	ND	0.0050	1	08/13/2014 13:13	
1,4-Dichlorobenzene	ND	0.0050	1	08/13/2014 13:13	
Dichlorodifluoromethane	ND	0.0050	1	08/13/2014 13:13	
1,1-Dichloroethane	ND	0.0050	1	08/13/2014 13:13	
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	08/13/2014 13:13	
1,1-Dichloroethene	ND	0.0050	1	08/13/2014 13:13	
cis-1,2-Dichloroethene	ND	0.0050	1	08/13/2014 13:13	
trans-1,2-Dichloroethene	ND	0.0050	1	08/13/2014 13:13	
1,2-Dichloropropane	ND	0.0050	1	08/13/2014 13:13	
1,3-Dichloropropane	ND	0.0050	1	08/13/2014 13:13	
2,2-Dichloropropane	ND	0.0050	1	08/13/2014 13:13	
1,1-Dichloropropene	ND	0.0050	1	08/13/2014 13:13	

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Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/7/14-8/13/14

WorkOrder: 1408242
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-6-10	1408242-032A	Soil	08/05/2014 09:00	GC10	93770

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.0050	1	08/13/2014 13:13
trans-1,3-Dichloropropene	ND	0.0050	1	08/13/2014 13:13
Diisopropyl ether (DIPE)	ND	0.0050	1	08/13/2014 13:13
Ethylbenzene	ND	0.0050	1	08/13/2014 13:13
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	08/13/2014 13:13
Freon 113	ND	0.10	1	08/13/2014 13:13
Hexachlorobutadiene	ND	0.0050	1	08/13/2014 13:13
Hexachloroethane	ND	0.0050	1	08/13/2014 13:13
2-Hexanone	ND	0.0050	1	08/13/2014 13:13
Isopropylbenzene	ND	0.0050	1	08/13/2014 13:13
4-Isopropyl toluene	ND	0.0050	1	08/13/2014 13:13
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	08/13/2014 13:13
Methylene chloride	ND	0.0050	1	08/13/2014 13:13
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	08/13/2014 13:13
Naphthalene	0.014	0.0050	1	08/13/2014 13:13
n-Propyl benzene	ND	0.0050	1	08/13/2014 13:13
Styrene	ND	0.0050	1	08/13/2014 13:13
1,1,1,2-Tetrachloroethane	ND	0.0050	1	08/13/2014 13:13
1,1,2,2-Tetrachloroethane	ND	0.0050	1	08/13/2014 13:13
Tetrachloroethene	ND	0.0050	1	08/13/2014 13:13
Toluene	ND	0.0050	1	08/13/2014 13:13
1,2,3-Trichlorobenzene	ND	0.0050	1	08/13/2014 13:13
1,2,4-Trichlorobenzene	ND	0.0050	1	08/13/2014 13:13
1,1,1-Trichloroethane	ND	0.0050	1	08/13/2014 13:13
1,1,2-Trichloroethane	ND	0.0050	1	08/13/2014 13:13
Trichloroethene	ND	0.0050	1	08/13/2014 13:13
Trichlorofluoromethane	ND	0.0050	1	08/13/2014 13:13
1,2,3-Trichloropropane	ND	0.0050	1	08/13/2014 13:13
1,2,4-Trimethylbenzene	ND	0.0050	1	08/13/2014 13:13
1,3,5-Trimethylbenzene	ND	0.0050	1	08/13/2014 13:13
Vinyl Chloride	ND	0.0050	1	08/13/2014 13:13
Xylenes, Total	ND	0.0050	1	08/13/2014 13:13
Surrogates	REC (%)	Limits		
Dibromofluoromethane	97	70-130		08/13/2014 13:13
Toluene-d8	105	70-130		08/13/2014 13:13
4-BFB	107	70-130		08/13/2014 13:13

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/7/14-8/13/14

WorkOrder: 1408242
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-7-10	1408242-038A	Soil	08/05/2014 10:15	GC10	93770
Analytes	Result	RL	DF	Date Analyzed	
Acetone	ND	0.10	1	08/13/2014 13:55	
tert-Amyl methyl ether (TAME)	ND	0.0050	1	08/13/2014 13:55	
Benzene	ND	0.0050	1	08/13/2014 13:55	
Bromobenzene	ND	0.0050	1	08/13/2014 13:55	
Bromochloromethane	ND	0.0050	1	08/13/2014 13:55	
Bromodichloromethane	ND	0.0050	1	08/13/2014 13:55	
Bromoform	ND	0.0050	1	08/13/2014 13:55	
Bromomethane	ND	0.0050	1	08/13/2014 13:55	
2-Butanone (MEK)	ND	0.020	1	08/13/2014 13:55	
t-Butyl alcohol (TBA)	ND	0.050	1	08/13/2014 13:55	
n-Butyl benzene	ND	0.0050	1	08/13/2014 13:55	
sec-Butyl benzene	ND	0.0050	1	08/13/2014 13:55	
tert-Butyl benzene	ND	0.0050	1	08/13/2014 13:55	
Carbon Disulfide	ND	0.0050	1	08/13/2014 13:55	
Carbon Tetrachloride	ND	0.0050	1	08/13/2014 13:55	
Chlorobenzene	ND	0.0050	1	08/13/2014 13:55	
Chloroethane	ND	0.0050	1	08/13/2014 13:55	
Chloroform	ND	0.0050	1	08/13/2014 13:55	
Chloromethane	ND	0.0050	1	08/13/2014 13:55	
2-Chlorotoluene	ND	0.0050	1	08/13/2014 13:55	
4-Chlorotoluene	ND	0.0050	1	08/13/2014 13:55	
Dibromochloromethane	ND	0.0050	1	08/13/2014 13:55	
1,2-Dibromo-3-chloropropane	ND	0.0040	1	08/13/2014 13:55	
1,2-Dibromoethane (EDB)	ND	0.0040	1	08/13/2014 13:55	
Dibromomethane	ND	0.0050	1	08/13/2014 13:55	
1,2-Dichlorobenzene	ND	0.0050	1	08/13/2014 13:55	
1,3-Dichlorobenzene	ND	0.0050	1	08/13/2014 13:55	
1,4-Dichlorobenzene	ND	0.0050	1	08/13/2014 13:55	
Dichlorodifluoromethane	ND	0.0050	1	08/13/2014 13:55	
1,1-Dichloroethane	ND	0.0050	1	08/13/2014 13:55	
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	08/13/2014 13:55	
1,1-Dichloroethene	ND	0.0050	1	08/13/2014 13:55	
cis-1,2-Dichloroethene	ND	0.0050	1	08/13/2014 13:55	
trans-1,2-Dichloroethene	ND	0.0050	1	08/13/2014 13:55	
1,2-Dichloropropane	ND	0.0050	1	08/13/2014 13:55	
1,3-Dichloropropane	ND	0.0050	1	08/13/2014 13:55	
2,2-Dichloropropane	ND	0.0050	1	08/13/2014 13:55	
1,1-Dichloropropene	ND	0.0050	1	08/13/2014 13:55	

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Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/7/14-8/13/14

WorkOrder: 1408242
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-7-10	1408242-038A	Soil	08/05/2014 10:15	GC10	93770

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.0050	1	08/13/2014 13:55
trans-1,3-Dichloropropene	ND	0.0050	1	08/13/2014 13:55
Diisopropyl ether (DIPE)	ND	0.0050	1	08/13/2014 13:55
Ethylbenzene	ND	0.0050	1	08/13/2014 13:55
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	08/13/2014 13:55
Freon 113	ND	0.10	1	08/13/2014 13:55
Hexachlorobutadiene	ND	0.0050	1	08/13/2014 13:55
Hexachloroethane	ND	0.0050	1	08/13/2014 13:55
2-Hexanone	ND	0.0050	1	08/13/2014 13:55
Isopropylbenzene	ND	0.0050	1	08/13/2014 13:55
4-Isopropyl toluene	ND	0.0050	1	08/13/2014 13:55
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	08/13/2014 13:55
Methylene chloride	ND	0.0050	1	08/13/2014 13:55
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	08/13/2014 13:55
Naphthalene	ND	0.0050	1	08/13/2014 13:55
n-Propyl benzene	ND	0.0050	1	08/13/2014 13:55
Styrene	ND	0.0050	1	08/13/2014 13:55
1,1,1,2-Tetrachloroethane	ND	0.0050	1	08/13/2014 13:55
1,1,2,2-Tetrachloroethane	ND	0.0050	1	08/13/2014 13:55
Tetrachloroethene	ND	0.0050	1	08/13/2014 13:55
Toluene	ND	0.0050	1	08/13/2014 13:55
1,2,3-Trichlorobenzene	ND	0.0050	1	08/13/2014 13:55
1,2,4-Trichlorobenzene	ND	0.0050	1	08/13/2014 13:55
1,1,1-Trichloroethane	ND	0.0050	1	08/13/2014 13:55
1,1,2-Trichloroethane	ND	0.0050	1	08/13/2014 13:55
Trichloroethene	ND	0.0050	1	08/13/2014 13:55
Trichlorofluoromethane	ND	0.0050	1	08/13/2014 13:55
1,2,3-Trichloropropane	ND	0.0050	1	08/13/2014 13:55
1,2,4-Trimethylbenzene	ND	0.0050	1	08/13/2014 13:55
1,3,5-Trimethylbenzene	ND	0.0050	1	08/13/2014 13:55
Vinyl Chloride	ND	0.0050	1	08/13/2014 13:55
Xylenes, Total	ND	0.0050	1	08/13/2014 13:55
Surrogates	REC (%)	Limits		
Dibromofluoromethane	93	70-130		08/13/2014 13:55
Toluene-d8	105	70-130		08/13/2014 13:55
4-BFB	104	70-130		08/13/2014 13:55



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/12/14

WorkOrder: 1408242
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-GW	1408242-040B	Water	08/06/2014 10:15	GC10	93921

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	10	1	08/12/2014 02:59
tert-Amyl methyl ether (TAME)	ND	0.50	1	08/12/2014 02:59
Benzene	ND	0.50	1	08/12/2014 02:59
Bromobenzene	ND	0.50	1	08/12/2014 02:59
Bromochloromethane	ND	0.50	1	08/12/2014 02:59
Bromodichloromethane	ND	0.50	1	08/12/2014 02:59
Bromoform	ND	0.50	1	08/12/2014 02:59
Bromomethane	ND	0.50	1	08/12/2014 02:59
2-Butanone (MEK)	ND	2.0	1	08/12/2014 02:59
t-Butyl alcohol (TBA)	ND	2.0	1	08/12/2014 02:59
n-Butyl benzene	ND	0.50	1	08/12/2014 02:59
sec-Butyl benzene	ND	0.50	1	08/12/2014 02:59
tert-Butyl benzene	ND	0.50	1	08/12/2014 02:59
Carbon Disulfide	ND	0.50	1	08/12/2014 02:59
Carbon Tetrachloride	ND	0.50	1	08/12/2014 02:59
Chlorobenzene	ND	0.50	1	08/12/2014 02:59
Chloroethane	ND	0.50	1	08/12/2014 02:59
Chloroform	ND	0.50	1	08/12/2014 02:59
Chloromethane	ND	0.50	1	08/12/2014 02:59
2-Chlorotoluene	ND	0.50	1	08/12/2014 02:59
4-Chlorotoluene	ND	0.50	1	08/12/2014 02:59
Dibromochloromethane	ND	0.50	1	08/12/2014 02:59
1,2-Dibromo-3-chloropropane	ND	0.20	1	08/12/2014 02:59
1,2-Dibromoethane (EDB)	ND	0.50	1	08/12/2014 02:59
Dibromomethane	ND	0.50	1	08/12/2014 02:59
1,2-Dichlorobenzene	ND	0.50	1	08/12/2014 02:59
1,3-Dichlorobenzene	ND	0.50	1	08/12/2014 02:59
1,4-Dichlorobenzene	ND	0.50	1	08/12/2014 02:59
Dichlorodifluoromethane	ND	0.50	1	08/12/2014 02:59
1,1-Dichloroethane	ND	0.50	1	08/12/2014 02:59
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	08/12/2014 02:59
1,1-Dichloroethene	ND	0.50	1	08/12/2014 02:59
cis-1,2-Dichloroethene	ND	0.50	1	08/12/2014 02:59
trans-1,2-Dichloroethene	ND	0.50	1	08/12/2014 02:59
1,2-Dichloropropane	ND	0.50	1	08/12/2014 02:59
1,3-Dichloropropane	ND	0.50	1	08/12/2014 02:59
2,2-Dichloropropane	ND	0.50	1	08/12/2014 02:59
1,1-Dichloropropene	ND	0.50	1	08/12/2014 02:59

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Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/12/14

WorkOrder: 1408242
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-GW	1408242-040B	Water	08/06/2014 10:15	GC10	93921

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.50	1	08/12/2014 02:59
trans-1,3-Dichloropropene	ND	0.50	1	08/12/2014 02:59
Diisopropyl ether (DIPE)	ND	0.50	1	08/12/2014 02:59
Ethylbenzene	ND	0.50	1	08/12/2014 02:59
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	08/12/2014 02:59
Freon 113	ND	0.50	1	08/12/2014 02:59
Hexachlorobutadiene	ND	0.50	1	08/12/2014 02:59
Hexachloroethane	ND	0.50	1	08/12/2014 02:59
2-Hexanone	ND	0.50	1	08/12/2014 02:59
Isopropylbenzene	ND	0.50	1	08/12/2014 02:59
4-Isopropyl toluene	ND	0.50	1	08/12/2014 02:59
Methyl-t-butyl ether (MTBE)	ND	0.50	1	08/12/2014 02:59
Methylene chloride	ND	0.50	1	08/12/2014 02:59
4-Methyl-2-pentanone (MIBK)	ND	0.50	1	08/12/2014 02:59
Naphthalene	ND	0.50	1	08/12/2014 02:59
n-Propyl benzene	ND	0.50	1	08/12/2014 02:59
Styrene	ND	0.50	1	08/12/2014 02:59
1,1,1,2-Tetrachloroethane	ND	0.50	1	08/12/2014 02:59
1,1,2,2-Tetrachloroethane	ND	0.50	1	08/12/2014 02:59
Tetrachloroethene	ND	0.50	1	08/12/2014 02:59
Toluene	ND	0.50	1	08/12/2014 02:59
1,2,3-Trichlorobenzene	ND	0.50	1	08/12/2014 02:59
1,2,4-Trichlorobenzene	ND	0.50	1	08/12/2014 02:59
1,1,1-Trichloroethane	ND	0.50	1	08/12/2014 02:59
1,1,2-Trichloroethane	ND	0.50	1	08/12/2014 02:59
Trichloroethene	ND	0.50	1	08/12/2014 02:59
Trichlorofluoromethane	ND	0.50	1	08/12/2014 02:59
1,2,3-Trichloropropane	ND	0.50	1	08/12/2014 02:59
1,2,4-Trimethylbenzene	ND	0.50	1	08/12/2014 02:59
1,3,5-Trimethylbenzene	ND	0.50	1	08/12/2014 02:59
Vinyl Chloride	ND	0.50	1	08/12/2014 02:59
Xylenes, Total	ND	0.50	1	08/12/2014 02:59
Surrogates	REC (%)	Limits		
Dibromofluoromethane	99	70-130		08/12/2014 02:59
Toluene-d8	99	70-130		08/12/2014 02:59
4-BFB	98	70-130		08/12/2014 02:59



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/8/14

WorkOrder: 1408242
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-1-3.0	1408242-002A	Soil	08/06/2014 08:25	GC21	93771
Analytes	Result	RL	DF	Date Analyzed	
Acenaphthene	ND	4.0	2	08/08/2014 20:14	
Acenaphthylene	ND	4.0	2	08/08/2014 20:14	
Acetochlor	ND	4.0	2	08/08/2014 20:14	
Anthracene	ND	4.0	2	08/08/2014 20:14	
Benzidine	ND	21	2	08/08/2014 20:14	
Benzo (a) anthracene	ND	4.0	2	08/08/2014 20:14	
Benzo (b) fluoranthene	ND	4.0	2	08/08/2014 20:14	
Benzo (k) fluoranthene	ND	4.0	2	08/08/2014 20:14	
Benzo (g,h,i) perylene	ND	4.0	2	08/08/2014 20:14	
Benzo (a) pyrene	ND	4.0	2	08/08/2014 20:14	
Benzyl Alcohol	ND	21	2	08/08/2014 20:14	
1,1-Biphenyl	ND	4.0	2	08/08/2014 20:14	
Bis (2-chloroethoxy) Methane	ND	4.0	2	08/08/2014 20:14	
Bis (2-chloroethyl) Ether	ND	4.0	2	08/08/2014 20:14	
Bis (2-chloroisopropyl) Ether	ND	4.0	2	08/08/2014 20:14	
Bis (2-ethylhexyl) Adipate	ND	4.0	2	08/08/2014 20:14	
Bis (2-ethylhexyl) Phthalate	ND	4.0	2	08/08/2014 20:14	
4-Bromophenyl Phenyl Ether	ND	4.0	2	08/08/2014 20:14	
Butylbenzyl Phthalate	ND	4.0	2	08/08/2014 20:14	
4-Chloroaniline	ND	4.0	2	08/08/2014 20:14	
4-Chloro-3-methylphenol	ND	4.0	2	08/08/2014 20:14	
2-Chloronaphthalene	ND	4.0	2	08/08/2014 20:14	
2-Chlorophenol	ND	4.0	2	08/08/2014 20:14	
4-Chlorophenyl Phenyl Ether	ND	4.0	2	08/08/2014 20:14	
Chrysene	ND	4.0	2	08/08/2014 20:14	
Dibenzo (a,h) anthracene	ND	4.0	2	08/08/2014 20:14	
Dibenzofuran	ND	4.0	2	08/08/2014 20:14	
Di-n-butyl Phthalate	ND	4.0	2	08/08/2014 20:14	
1,2-Dichlorobenzene	ND	4.0	2	08/08/2014 20:14	
1,3-Dichlorobenzene	ND	4.0	2	08/08/2014 20:14	
1,4-Dichlorobenzene	ND	4.0	2	08/08/2014 20:14	
3,3-Dichlorobenzidine	ND	8.0	2	08/08/2014 20:14	
2,4-Dichlorophenol	ND	4.0	2	08/08/2014 20:14	
Diethyl Phthalate	ND	4.0	2	08/08/2014 20:14	
2,4-Dimethylphenol	ND	4.0	2	08/08/2014 20:14	
Dimethyl Phthalate	ND	4.0	2	08/08/2014 20:14	
4,6-Dinitro-2-methylphenol	ND	21	2	08/08/2014 20:14	
2,4-Dinitrophenol	ND	100	2	08/08/2014 20:14	

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Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/8/14

WorkOrder: 1408242
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-1-3.0	1408242-002A	Soil	08/06/2014 08:25	GC21	93771
<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>	
2,4-Dinitrotoluene	ND	4.0	2	08/08/2014 20:14	
2,6-Dinitrotoluene	ND	4.0	2	08/08/2014 20:14	
Di-n-octyl Phthalate	ND	8.0	2	08/08/2014 20:14	
1,2-Diphenylhydrazine	ND	4.0	2	08/08/2014 20:14	
Fluoranthene	ND	4.0	2	08/08/2014 20:14	
Fluorene	ND	4.0	2	08/08/2014 20:14	
Hexachlorobenzene	ND	4.0	2	08/08/2014 20:14	
Hexachlorobutadiene	ND	4.0	2	08/08/2014 20:14	
Hexachlorocyclopentadiene	ND	21	2	08/08/2014 20:14	
Hexachloroethane	ND	4.0	2	08/08/2014 20:14	
Indeno (1,2,3-cd) pyrene	ND	4.0	2	08/08/2014 20:14	
Isophorone	ND	4.0	2	08/08/2014 20:14	
2-Methylnaphthalene	ND	4.0	2	08/08/2014 20:14	
2-Methylphenol (o-Cresol)	ND	4.0	2	08/08/2014 20:14	
3 &/or 4-Methylphenol (m,p-Cresol)	ND	4.0	2	08/08/2014 20:14	
Naphthalene	ND	4.0	2	08/08/2014 20:14	
2-Nitroaniline	ND	21	2	08/08/2014 20:14	
3-Nitroaniline	ND	21	2	08/08/2014 20:14	
4-Nitroaniline	ND	21	2	08/08/2014 20:14	
Nitrobenzene	ND	4.0	2	08/08/2014 20:14	
2-Nitrophenol	ND	21	2	08/08/2014 20:14	
4-Nitrophenol	ND	21	2	08/08/2014 20:14	
N-Nitrosodiphenylamine	ND	4.0	2	08/08/2014 20:14	
N-Nitrosodi-n-propylamine	ND	4.0	2	08/08/2014 20:14	
Pentachlorophenol	ND	21	2	08/08/2014 20:14	
Phenanthrene	ND	4.0	2	08/08/2014 20:14	
Phenol	ND	4.0	2	08/08/2014 20:14	
Pyrene	ND	4.0	2	08/08/2014 20:14	
1,2,4-Trichlorobenzene	ND	4.0	2	08/08/2014 20:14	
2,4,5-Trichlorophenol	ND	4.0	2	08/08/2014 20:14	
2,4,6-Trichlorophenol	ND	4.0	2	08/08/2014 20:14	

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Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/8/14

WorkOrder: 1408242
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-1-3.0	1408242-002A	Soil	08/06/2014 08:25	GC21	93771

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits	Analytical Comments: a4	
2-Fluorophenol	107	30-130		08/08/2014 20:14
Phenol-d5	100	30-130		08/08/2014 20:14
Nitrobenzene-d5	99	30-130		08/08/2014 20:14
2-Fluorobiphenyl	93	30-130		08/08/2014 20:14
2,4,6-Tribromophenol	84	16-130		08/08/2014 20:14
4-Terphenyl-d14	103	30-130		08/08/2014 20:14

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Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/8/14

WorkOrder: 1408242
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-1.5	1408242-006A	Soil	08/06/2014 09:20	GC21	93771
Analytes	Result	RL	DF	Date Analyzed	
Acenaphthene	ND	2.0	1	08/08/2014 17:55	
Acenaphthylene	ND	2.0	1	08/08/2014 17:55	
Acetochlor	ND	2.0	1	08/08/2014 17:55	
Anthracene	ND	2.0	1	08/08/2014 17:55	
Benzidine	ND	10	1	08/08/2014 17:55	
Benzo (a) anthracene	ND	2.0	1	08/08/2014 17:55	
Benzo (b) fluoranthene	ND	2.0	1	08/08/2014 17:55	
Benzo (k) fluoranthene	ND	2.0	1	08/08/2014 17:55	
Benzo (g,h,i) perylene	ND	2.0	1	08/08/2014 17:55	
Benzo (a) pyrene	ND	2.0	1	08/08/2014 17:55	
Benzyl Alcohol	ND	10	1	08/08/2014 17:55	
1,1-Biphenyl	ND	2.0	1	08/08/2014 17:55	
Bis (2-chloroethoxy) Methane	ND	2.0	1	08/08/2014 17:55	
Bis (2-chloroethyl) Ether	ND	2.0	1	08/08/2014 17:55	
Bis (2-chloroisopropyl) Ether	ND	2.0	1	08/08/2014 17:55	
Bis (2-ethylhexyl) Adipate	ND	2.0	1	08/08/2014 17:55	
Bis (2-ethylhexyl) Phthalate	ND	2.0	1	08/08/2014 17:55	
4-Bromophenyl Phenyl Ether	ND	2.0	1	08/08/2014 17:55	
Butylbenzyl Phthalate	ND	2.0	1	08/08/2014 17:55	
4-Chloroaniline	ND	2.0	1	08/08/2014 17:55	
4-Chloro-3-methylphenol	ND	2.0	1	08/08/2014 17:55	
2-Chloronaphthalene	ND	2.0	1	08/08/2014 17:55	
2-Chlorophenol	ND	2.0	1	08/08/2014 17:55	
4-Chlorophenyl Phenyl Ether	ND	2.0	1	08/08/2014 17:55	
Chrysene	ND	2.0	1	08/08/2014 17:55	
Dibenzo (a,h) anthracene	ND	2.0	1	08/08/2014 17:55	
Dibenzofuran	ND	2.0	1	08/08/2014 17:55	
Di-n-butyl Phthalate	ND	2.0	1	08/08/2014 17:55	
1,2-Dichlorobenzene	ND	2.0	1	08/08/2014 17:55	
1,3-Dichlorobenzene	ND	2.0	1	08/08/2014 17:55	
1,4-Dichlorobenzene	ND	2.0	1	08/08/2014 17:55	
3,3-Dichlorobenzidine	ND	4.0	1	08/08/2014 17:55	
2,4-Dichlorophenol	ND	2.0	1	08/08/2014 17:55	
Diethyl Phthalate	ND	2.0	1	08/08/2014 17:55	
2,4-Dimethylphenol	ND	2.0	1	08/08/2014 17:55	
Dimethyl Phthalate	ND	2.0	1	08/08/2014 17:55	
4,6-Dinitro-2-methylphenol	ND	10	1	08/08/2014 17:55	
2,4-Dinitrophenol	ND	50	1	08/08/2014 17:55	

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/8/14

WorkOrder: 1408242
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-1.5	1408242-006A	Soil	08/06/2014 09:20	GC21	93771
Analytes	Result	RL	DF	Date Analyzed	
2,4-Dinitrotoluene	ND	2.0	1	08/08/2014 17:55	
2,6-Dinitrotoluene	ND	2.0	1	08/08/2014 17:55	
Di-n-octyl Phthalate	ND	4.0	1	08/08/2014 17:55	
1,2-Diphenylhydrazine	ND	2.0	1	08/08/2014 17:55	
Fluoranthene	ND	2.0	1	08/08/2014 17:55	
Fluorene	ND	2.0	1	08/08/2014 17:55	
Hexachlorobenzene	ND	2.0	1	08/08/2014 17:55	
Hexachlorobutadiene	ND	2.0	1	08/08/2014 17:55	
Hexachlorocyclopentadiene	ND	10	1	08/08/2014 17:55	
Hexachloroethane	ND	2.0	1	08/08/2014 17:55	
Indeno (1,2,3-cd) pyrene	ND	2.0	1	08/08/2014 17:55	
Isophorone	ND	2.0	1	08/08/2014 17:55	
2-Methylnaphthalene	ND	2.0	1	08/08/2014 17:55	
2-Methylphenol (o-Cresol)	ND	2.0	1	08/08/2014 17:55	
3 &/or 4-Methylphenol (m,p-Cresol)	ND	2.0	1	08/08/2014 17:55	
Naphthalene	ND	2.0	1	08/08/2014 17:55	
2-Nitroaniline	ND	10	1	08/08/2014 17:55	
3-Nitroaniline	ND	10	1	08/08/2014 17:55	
4-Nitroaniline	ND	10	1	08/08/2014 17:55	
Nitrobenzene	ND	2.0	1	08/08/2014 17:55	
2-Nitrophenol	ND	10	1	08/08/2014 17:55	
4-Nitrophenol	ND	10	1	08/08/2014 17:55	
N-Nitrosodiphenylamine	ND	2.0	1	08/08/2014 17:55	
N-Nitrosodi-n-propylamine	ND	2.0	1	08/08/2014 17:55	
Pentachlorophenol	ND	10	1	08/08/2014 17:55	
Phenanthrene	ND	2.0	1	08/08/2014 17:55	
Phenol	ND	2.0	1	08/08/2014 17:55	
Pyrene	ND	2.0	1	08/08/2014 17:55	
1,2,4-Trichlorobenzene	ND	2.0	1	08/08/2014 17:55	
2,4,5-Trichlorophenol	ND	2.0	1	08/08/2014 17:55	
2,4,6-Trichlorophenol	ND	2.0	1	08/08/2014 17:55	

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Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/8/14

WorkOrder: 1408242
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-1.5	1408242-006A	Soil	08/06/2014 09:20	GC21	93771

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits	Analytical Comments: a4	
2-Fluorophenol	104	30-130		08/08/2014 17:55
Phenol-d5	98	30-130		08/08/2014 17:55
Nitrobenzene-d5	93	30-130		08/08/2014 17:55
2-Fluorobiphenyl	87	30-130		08/08/2014 17:55
2,4,6-Tribromophenol	92	16-130		08/08/2014 17:55
4-Terphenyl-d14	91	30-130		08/08/2014 17:55

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Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/8/14

WorkOrder: 1408242
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-5.0	1408242-008A	Soil	08/06/2014 09:35	GC21	93771
Analytes	Result	RL	DF	Date Analyzed	
Acenaphthene	ND	2.0	1	08/08/2014 18:23	
Acenaphthylene	ND	2.0	1	08/08/2014 18:23	
Acetochlor	ND	2.0	1	08/08/2014 18:23	
Anthracene	ND	2.0	1	08/08/2014 18:23	
Benzidine	ND	10	1	08/08/2014 18:23	
Benzo (a) anthracene	ND	2.0	1	08/08/2014 18:23	
Benzo (b) fluoranthene	ND	2.0	1	08/08/2014 18:23	
Benzo (k) fluoranthene	ND	2.0	1	08/08/2014 18:23	
Benzo (g,h,i) perylene	ND	2.0	1	08/08/2014 18:23	
Benzo (a) pyrene	ND	2.0	1	08/08/2014 18:23	
Benzyl Alcohol	ND	10	1	08/08/2014 18:23	
1,1-Biphenyl	ND	2.0	1	08/08/2014 18:23	
Bis (2-chloroethoxy) Methane	ND	2.0	1	08/08/2014 18:23	
Bis (2-chloroethyl) Ether	ND	2.0	1	08/08/2014 18:23	
Bis (2-chloroisopropyl) Ether	ND	2.0	1	08/08/2014 18:23	
Bis (2-ethylhexyl) Adipate	ND	2.0	1	08/08/2014 18:23	
Bis (2-ethylhexyl) Phthalate	ND	2.0	1	08/08/2014 18:23	
4-Bromophenyl Phenyl Ether	ND	2.0	1	08/08/2014 18:23	
Butylbenzyl Phthalate	ND	2.0	1	08/08/2014 18:23	
4-Chloroaniline	ND	2.0	1	08/08/2014 18:23	
4-Chloro-3-methylphenol	ND	2.0	1	08/08/2014 18:23	
2-Chloronaphthalene	ND	2.0	1	08/08/2014 18:23	
2-Chlorophenol	ND	2.0	1	08/08/2014 18:23	
4-Chlorophenyl Phenyl Ether	ND	2.0	1	08/08/2014 18:23	
Chrysene	ND	2.0	1	08/08/2014 18:23	
Dibenzo (a,h) anthracene	ND	2.0	1	08/08/2014 18:23	
Dibenzofuran	ND	2.0	1	08/08/2014 18:23	
Di-n-butyl Phthalate	ND	2.0	1	08/08/2014 18:23	
1,2-Dichlorobenzene	ND	2.0	1	08/08/2014 18:23	
1,3-Dichlorobenzene	ND	2.0	1	08/08/2014 18:23	
1,4-Dichlorobenzene	ND	2.0	1	08/08/2014 18:23	
3,3-Dichlorobenzidine	ND	4.0	1	08/08/2014 18:23	
2,4-Dichlorophenol	ND	2.0	1	08/08/2014 18:23	
Diethyl Phthalate	ND	2.0	1	08/08/2014 18:23	
2,4-Dimethylphenol	ND	2.0	1	08/08/2014 18:23	
Dimethyl Phthalate	ND	2.0	1	08/08/2014 18:23	
4,6-Dinitro-2-methylphenol	ND	10	1	08/08/2014 18:23	
2,4-Dinitrophenol	ND	50	1	08/08/2014 18:23	

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Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/8/14

WorkOrder: 1408242
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-5.0	1408242-008A	Soil	08/06/2014 09:35	GC21	93771
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrotoluene	ND		2.0	1	08/08/2014 18:23
2,6-Dinitrotoluene	ND		2.0	1	08/08/2014 18:23
Di-n-octyl Phthalate	ND		4.0	1	08/08/2014 18:23
1,2-Diphenylhydrazine	ND		2.0	1	08/08/2014 18:23
Fluoranthene	ND		2.0	1	08/08/2014 18:23
Fluorene	ND		2.0	1	08/08/2014 18:23
Hexachlorobenzene	ND		2.0	1	08/08/2014 18:23
Hexachlorobutadiene	ND		2.0	1	08/08/2014 18:23
Hexachlorocyclopentadiene	ND		10	1	08/08/2014 18:23
Hexachloroethane	ND		2.0	1	08/08/2014 18:23
Indeno (1,2,3-cd) pyrene	ND		2.0	1	08/08/2014 18:23
Isophorone	ND		2.0	1	08/08/2014 18:23
2-Methylnaphthalene	ND		2.0	1	08/08/2014 18:23
2-Methylphenol (o-Cresol)	ND		2.0	1	08/08/2014 18:23
3 &/or 4-Methylphenol (m,p-Cresol)	ND		2.0	1	08/08/2014 18:23
Naphthalene	ND		2.0	1	08/08/2014 18:23
2-Nitroaniline	ND		10	1	08/08/2014 18:23
3-Nitroaniline	ND		10	1	08/08/2014 18:23
4-Nitroaniline	ND		10	1	08/08/2014 18:23
Nitrobenzene	ND		2.0	1	08/08/2014 18:23
2-Nitrophenol	ND		10	1	08/08/2014 18:23
4-Nitrophenol	ND		10	1	08/08/2014 18:23
N-Nitrosodiphenylamine	ND		2.0	1	08/08/2014 18:23
N-Nitrosodi-n-propylamine	ND		2.0	1	08/08/2014 18:23
Pentachlorophenol	ND		10	1	08/08/2014 18:23
Phenanthrene	ND		2.0	1	08/08/2014 18:23
Phenol	ND		2.0	1	08/08/2014 18:23
Pyrene	ND		2.0	1	08/08/2014 18:23
1,2,4-Trichlorobenzene	ND		2.0	1	08/08/2014 18:23
2,4,5-Trichlorophenol	ND		2.0	1	08/08/2014 18:23
2,4,6-Trichlorophenol	ND		2.0	1	08/08/2014 18:23

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Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/8/14

WorkOrder: 1408242
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-5.0	1408242-008A	Soil	08/06/2014 09:35	GC21	93771

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits	Analytical Comments: a4	
2-Fluorophenol	104	30-130		08/08/2014 18:23
Phenol-d5	100	30-130		08/08/2014 18:23
Nitrobenzene-d5	97	30-130		08/08/2014 18:23
2-Fluorobiphenyl	91	30-130		08/08/2014 18:23
2,4,6-Tribromophenol	89	16-130		08/08/2014 18:23
4-Terphenyl-d14	98	30-130		08/08/2014 18:23

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Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/8/14

WorkOrder: 1408242
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-15	1408242-011A	Soil	08/06/2014 09:55	GC21	93771
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	ND		0.25	1	08/08/2014 20:42
Acenaphthylene	ND		0.25	1	08/08/2014 20:42
Acetochlor	ND		0.25	1	08/08/2014 20:42
Anthracene	ND		0.25	1	08/08/2014 20:42
Benzidine	ND		1.3	1	08/08/2014 20:42
Benzo (a) anthracene	ND		0.25	1	08/08/2014 20:42
Benzo (b) fluoranthene	ND		0.25	1	08/08/2014 20:42
Benzo (k) fluoranthene	ND		0.25	1	08/08/2014 20:42
Benzo (g,h,i) perylene	ND		0.25	1	08/08/2014 20:42
Benzo (a) pyrene	ND		0.25	1	08/08/2014 20:42
Benzyl Alcohol	ND		1.3	1	08/08/2014 20:42
1,1-Biphenyl	ND		0.25	1	08/08/2014 20:42
Bis (2-chloroethoxy) Methane	ND		0.25	1	08/08/2014 20:42
Bis (2-chloroethyl) Ether	ND		0.25	1	08/08/2014 20:42
Bis (2-chloroisopropyl) Ether	ND		0.25	1	08/08/2014 20:42
Bis (2-ethylhexyl) Adipate	ND		0.25	1	08/08/2014 20:42
Bis (2-ethylhexyl) Phthalate	ND		0.25	1	08/08/2014 20:42
4-Bromophenyl Phenyl Ether	ND		0.25	1	08/08/2014 20:42
Butylbenzyl Phthalate	ND		0.25	1	08/08/2014 20:42
4-Chloroaniline	ND		0.25	1	08/08/2014 20:42
4-Chloro-3-methylphenol	ND		0.25	1	08/08/2014 20:42
2-Chloronaphthalene	ND		0.25	1	08/08/2014 20:42
2-Chlorophenol	ND		0.25	1	08/08/2014 20:42
4-Chlorophenyl Phenyl Ether	ND		0.25	1	08/08/2014 20:42
Chrysene	ND		0.25	1	08/08/2014 20:42
Dibenzo (a,h) anthracene	ND		0.25	1	08/08/2014 20:42
Dibenzofuran	ND		0.25	1	08/08/2014 20:42
Di-n-butyl Phthalate	ND		0.25	1	08/08/2014 20:42
1,2-Dichlorobenzene	ND		0.25	1	08/08/2014 20:42
1,3-Dichlorobenzene	ND		0.25	1	08/08/2014 20:42
1,4-Dichlorobenzene	ND		0.25	1	08/08/2014 20:42
3,3-Dichlorobenzidine	ND		0.50	1	08/08/2014 20:42
2,4-Dichlorophenol	ND		0.25	1	08/08/2014 20:42
Diethyl Phthalate	ND		0.25	1	08/08/2014 20:42
2,4-Dimethylphenol	ND		0.25	1	08/08/2014 20:42
Dimethyl Phthalate	ND		0.25	1	08/08/2014 20:42
4,6-Dinitro-2-methylphenol	ND		1.3	1	08/08/2014 20:42
2,4-Dinitrophenol	ND		6.3	1	08/08/2014 20:42

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Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/8/14

WorkOrder: 1408242
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-15	1408242-011A	Soil	08/06/2014 09:55	GC21	93771
Analytes	Result	RL	DF	Date Analyzed	
2,4-Dinitrotoluene	ND	0.25	1	08/08/2014 20:42	
2,6-Dinitrotoluene	ND	0.25	1	08/08/2014 20:42	
Di-n-octyl Phthalate	ND	0.50	1	08/08/2014 20:42	
1,2-Diphenylhydrazine	ND	0.25	1	08/08/2014 20:42	
Fluoranthene	ND	0.25	1	08/08/2014 20:42	
Fluorene	ND	0.25	1	08/08/2014 20:42	
Hexachlorobenzene	ND	0.25	1	08/08/2014 20:42	
Hexachlorobutadiene	ND	0.25	1	08/08/2014 20:42	
Hexachlorocyclopentadiene	ND	1.3	1	08/08/2014 20:42	
Hexachloroethane	ND	0.25	1	08/08/2014 20:42	
Indeno (1,2,3-cd) pyrene	ND	0.25	1	08/08/2014 20:42	
Isophorone	ND	0.25	1	08/08/2014 20:42	
2-Methylnaphthalene	ND	0.25	1	08/08/2014 20:42	
2-Methylphenol (o-Cresol)	ND	0.25	1	08/08/2014 20:42	
3 &/or 4-Methylphenol (m,p-Cresol)	ND	0.25	1	08/08/2014 20:42	
Naphthalene	ND	0.25	1	08/08/2014 20:42	
2-Nitroaniline	ND	1.3	1	08/08/2014 20:42	
3-Nitroaniline	ND	1.3	1	08/08/2014 20:42	
4-Nitroaniline	ND	1.3	1	08/08/2014 20:42	
Nitrobenzene	ND	0.25	1	08/08/2014 20:42	
2-Nitrophenol	ND	1.3	1	08/08/2014 20:42	
4-Nitrophenol	ND	1.3	1	08/08/2014 20:42	
N-Nitrosodiphenylamine	ND	0.25	1	08/08/2014 20:42	
N-Nitrosodi-n-propylamine	ND	0.25	1	08/08/2014 20:42	
Pentachlorophenol	ND	1.3	1	08/08/2014 20:42	
Phenanthrene	ND	0.25	1	08/08/2014 20:42	
Phenol	ND	0.25	1	08/08/2014 20:42	
Pyrene	ND	0.25	1	08/08/2014 20:42	
1,2,4-Trichlorobenzene	ND	0.25	1	08/08/2014 20:42	
2,4,5-Trichlorophenol	ND	0.25	1	08/08/2014 20:42	
2,4,6-Trichlorophenol	ND	0.25	1	08/08/2014 20:42	

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Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/8/14

WorkOrder: 1408242
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-15	1408242-011A	Soil	08/06/2014 09:55	GC21	93771

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
2-Fluorophenol	89	30-130		08/08/2014 20:42
Phenol-d5	84	30-130		08/08/2014 20:42
Nitrobenzene-d5	84	30-130		08/08/2014 20:42
2-Fluorobiphenyl	72	30-130		08/08/2014 20:42
2,4,6-Tribromophenol	80	16-130		08/08/2014 20:42
4-Terphenyl-d14	85	30-130		08/08/2014 20:42

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Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/8/14

WorkOrder: 1408242
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-3-5.0	1408242-014A	Soil	08/05/2014 12:00	GC21	93771
Analytes	Result	RL	DF	Date Analyzed	
Acenaphthene	ND	0.25	1	08/08/2014 21:09	
Acenaphthylene	ND	0.25	1	08/08/2014 21:09	
Acetochlor	ND	0.25	1	08/08/2014 21:09	
Anthracene	ND	0.25	1	08/08/2014 21:09	
Benzidine	ND	1.3	1	08/08/2014 21:09	
Benzo (a) anthracene	ND	0.25	1	08/08/2014 21:09	
Benzo (b) fluoranthene	ND	0.25	1	08/08/2014 21:09	
Benzo (k) fluoranthene	ND	0.25	1	08/08/2014 21:09	
Benzo (g,h,i) perylene	ND	0.25	1	08/08/2014 21:09	
Benzo (a) pyrene	ND	0.25	1	08/08/2014 21:09	
Benzyl Alcohol	ND	1.3	1	08/08/2014 21:09	
1,1-Biphenyl	ND	0.25	1	08/08/2014 21:09	
Bis (2-chloroethoxy) Methane	ND	0.25	1	08/08/2014 21:09	
Bis (2-chloroethyl) Ether	ND	0.25	1	08/08/2014 21:09	
Bis (2-chloroisopropyl) Ether	ND	0.25	1	08/08/2014 21:09	
Bis (2-ethylhexyl) Adipate	ND	0.25	1	08/08/2014 21:09	
Bis (2-ethylhexyl) Phthalate	ND	0.25	1	08/08/2014 21:09	
4-Bromophenyl Phenyl Ether	ND	0.25	1	08/08/2014 21:09	
Butylbenzyl Phthalate	ND	0.25	1	08/08/2014 21:09	
4-Chloroaniline	ND	0.25	1	08/08/2014 21:09	
4-Chloro-3-methylphenol	ND	0.25	1	08/08/2014 21:09	
2-Chloronaphthalene	ND	0.25	1	08/08/2014 21:09	
2-Chlorophenol	ND	0.25	1	08/08/2014 21:09	
4-Chlorophenyl Phenyl Ether	ND	0.25	1	08/08/2014 21:09	
Chrysene	ND	0.25	1	08/08/2014 21:09	
Dibenzo (a,h) anthracene	ND	0.25	1	08/08/2014 21:09	
Dibenzofuran	ND	0.25	1	08/08/2014 21:09	
Di-n-butyl Phthalate	ND	0.25	1	08/08/2014 21:09	
1,2-Dichlorobenzene	ND	0.25	1	08/08/2014 21:09	
1,3-Dichlorobenzene	ND	0.25	1	08/08/2014 21:09	
1,4-Dichlorobenzene	ND	0.25	1	08/08/2014 21:09	
3,3-Dichlorobenzidine	ND	0.50	1	08/08/2014 21:09	
2,4-Dichlorophenol	ND	0.25	1	08/08/2014 21:09	
Diethyl Phthalate	ND	0.25	1	08/08/2014 21:09	
2,4-Dimethylphenol	ND	0.25	1	08/08/2014 21:09	
Dimethyl Phthalate	ND	0.25	1	08/08/2014 21:09	
4,6-Dinitro-2-methylphenol	ND	1.3	1	08/08/2014 21:09	
2,4-Dinitrophenol	ND	6.3	1	08/08/2014 21:09	

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Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/8/14

WorkOrder: 1408242
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-3-5.0	1408242-014A	Soil	08/05/2014 12:00	GC21	93771
Analytes	Result	RL	DF	Date Analyzed	
2,4-Dinitrotoluene	ND	0.25	1	08/08/2014 21:09	
2,6-Dinitrotoluene	ND	0.25	1	08/08/2014 21:09	
Di-n-octyl Phthalate	ND	0.50	1	08/08/2014 21:09	
1,2-Diphenylhydrazine	ND	0.25	1	08/08/2014 21:09	
Fluoranthene	ND	0.25	1	08/08/2014 21:09	
Fluorene	ND	0.25	1	08/08/2014 21:09	
Hexachlorobenzene	ND	0.25	1	08/08/2014 21:09	
Hexachlorobutadiene	ND	0.25	1	08/08/2014 21:09	
Hexachlorocyclopentadiene	ND	1.3	1	08/08/2014 21:09	
Hexachloroethane	ND	0.25	1	08/08/2014 21:09	
Indeno (1,2,3-cd) pyrene	ND	0.25	1	08/08/2014 21:09	
Isophorone	ND	0.25	1	08/08/2014 21:09	
2-Methylnaphthalene	ND	0.25	1	08/08/2014 21:09	
2-Methylphenol (o-Cresol)	ND	0.25	1	08/08/2014 21:09	
3 &/or 4-Methylphenol (m,p-Cresol)	ND	0.25	1	08/08/2014 21:09	
Naphthalene	ND	0.25	1	08/08/2014 21:09	
2-Nitroaniline	ND	1.3	1	08/08/2014 21:09	
3-Nitroaniline	ND	1.3	1	08/08/2014 21:09	
4-Nitroaniline	ND	1.3	1	08/08/2014 21:09	
Nitrobenzene	ND	0.25	1	08/08/2014 21:09	
2-Nitrophenol	ND	1.3	1	08/08/2014 21:09	
4-Nitrophenol	ND	1.3	1	08/08/2014 21:09	
N-Nitrosodiphenylamine	ND	0.25	1	08/08/2014 21:09	
N-Nitrosodi-n-propylamine	ND	0.25	1	08/08/2014 21:09	
Pentachlorophenol	ND	1.3	1	08/08/2014 21:09	
Phenanthrene	ND	0.25	1	08/08/2014 21:09	
Phenol	ND	0.25	1	08/08/2014 21:09	
Pyrene	ND	0.25	1	08/08/2014 21:09	
1,2,4-Trichlorobenzene	ND	0.25	1	08/08/2014 21:09	
2,4,5-Trichlorophenol	ND	0.25	1	08/08/2014 21:09	
2,4,6-Trichlorophenol	ND	0.25	1	08/08/2014 21:09	

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/8/14

WorkOrder: 1408242
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-3-5.0	1408242-014A	Soil	08/05/2014 12:00	GC21	93771

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
2-Fluorophenol	96	30-130		08/08/2014 21:09
Phenol-d5	91	30-130		08/08/2014 21:09
Nitrobenzene-d5	92	30-130		08/08/2014 21:09
2-Fluorobiphenyl	81	30-130		08/08/2014 21:09
2,4,6-Tribromophenol	81	16-130		08/08/2014 21:09
4-Terphenyl-d14	96	30-130		08/08/2014 21:09

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Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/8/14

WorkOrder: 1408242
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-4-7.5	1408242-020A	Soil	08/05/2014 11:05	GC21	93771
Analytes	Result	RL	DF	Date Analyzed	
Acenaphthene	ND	2.0	1	08/08/2014 18:51	
Acenaphthylene	ND	2.0	1	08/08/2014 18:51	
Acetochlor	ND	2.0	1	08/08/2014 18:51	
Anthracene	ND	2.0	1	08/08/2014 18:51	
Benzidine	ND	10	1	08/08/2014 18:51	
Benzo (a) anthracene	ND	2.0	1	08/08/2014 18:51	
Benzo (b) fluoranthene	ND	2.0	1	08/08/2014 18:51	
Benzo (k) fluoranthene	ND	2.0	1	08/08/2014 18:51	
Benzo (g,h,i) perylene	ND	2.0	1	08/08/2014 18:51	
Benzo (a) pyrene	ND	2.0	1	08/08/2014 18:51	
Benzyl Alcohol	ND	10	1	08/08/2014 18:51	
1,1-Biphenyl	ND	2.0	1	08/08/2014 18:51	
Bis (2-chloroethoxy) Methane	ND	2.0	1	08/08/2014 18:51	
Bis (2-chloroethyl) Ether	ND	2.0	1	08/08/2014 18:51	
Bis (2-chloroisopropyl) Ether	ND	2.0	1	08/08/2014 18:51	
Bis (2-ethylhexyl) Adipate	ND	2.0	1	08/08/2014 18:51	
Bis (2-ethylhexyl) Phthalate	ND	2.0	1	08/08/2014 18:51	
4-Bromophenyl Phenyl Ether	ND	2.0	1	08/08/2014 18:51	
Butylbenzyl Phthalate	ND	2.0	1	08/08/2014 18:51	
4-Chloroaniline	ND	2.0	1	08/08/2014 18:51	
4-Chloro-3-methylphenol	ND	2.0	1	08/08/2014 18:51	
2-Chloronaphthalene	ND	2.0	1	08/08/2014 18:51	
2-Chlorophenol	ND	2.0	1	08/08/2014 18:51	
4-Chlorophenyl Phenyl Ether	ND	2.0	1	08/08/2014 18:51	
Chrysene	ND	2.0	1	08/08/2014 18:51	
Dibenzo (a,h) anthracene	ND	2.0	1	08/08/2014 18:51	
Dibenzofuran	ND	2.0	1	08/08/2014 18:51	
Di-n-butyl Phthalate	ND	2.0	1	08/08/2014 18:51	
1,2-Dichlorobenzene	ND	2.0	1	08/08/2014 18:51	
1,3-Dichlorobenzene	ND	2.0	1	08/08/2014 18:51	
1,4-Dichlorobenzene	ND	2.0	1	08/08/2014 18:51	
3,3-Dichlorobenzidine	ND	4.0	1	08/08/2014 18:51	
2,4-Dichlorophenol	ND	2.0	1	08/08/2014 18:51	
Diethyl Phthalate	ND	2.0	1	08/08/2014 18:51	
2,4-Dimethylphenol	ND	2.0	1	08/08/2014 18:51	
Dimethyl Phthalate	ND	2.0	1	08/08/2014 18:51	
4,6-Dinitro-2-methylphenol	ND	10	1	08/08/2014 18:51	
2,4-Dinitrophenol	ND	50	1	08/08/2014 18:51	

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Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/8/14

WorkOrder: 1408242
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-4-7.5	1408242-020A	Soil	08/05/2014 11:05	GC21	93771
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrotoluene	ND		2.0	1	08/08/2014 18:51
2,6-Dinitrotoluene	ND		2.0	1	08/08/2014 18:51
Di-n-octyl Phthalate	ND		4.0	1	08/08/2014 18:51
1,2-Diphenylhydrazine	ND		2.0	1	08/08/2014 18:51
Fluoranthene	ND		2.0	1	08/08/2014 18:51
Fluorene	ND		2.0	1	08/08/2014 18:51
Hexachlorobenzene	ND		2.0	1	08/08/2014 18:51
Hexachlorobutadiene	ND		2.0	1	08/08/2014 18:51
Hexachlorocyclopentadiene	ND		10	1	08/08/2014 18:51
Hexachloroethane	ND		2.0	1	08/08/2014 18:51
Indeno (1,2,3-cd) pyrene	ND		2.0	1	08/08/2014 18:51
Isophorone	ND		2.0	1	08/08/2014 18:51
2-Methylnaphthalene	ND		2.0	1	08/08/2014 18:51
2-Methylphenol (o-Cresol)	ND		2.0	1	08/08/2014 18:51
3 &/or 4-Methylphenol (m,p-Cresol)	ND		2.0	1	08/08/2014 18:51
Naphthalene	ND		2.0	1	08/08/2014 18:51
2-Nitroaniline	ND		10	1	08/08/2014 18:51
3-Nitroaniline	ND		10	1	08/08/2014 18:51
4-Nitroaniline	ND		10	1	08/08/2014 18:51
Nitrobenzene	ND		2.0	1	08/08/2014 18:51
2-Nitrophenol	ND		10	1	08/08/2014 18:51
4-Nitrophenol	ND		10	1	08/08/2014 18:51
N-Nitrosodiphenylamine	ND		2.0	1	08/08/2014 18:51
N-Nitrosodi-n-propylamine	ND		2.0	1	08/08/2014 18:51
Pentachlorophenol	ND		10	1	08/08/2014 18:51
Phenanthrene	ND		2.0	1	08/08/2014 18:51
Phenol	ND		2.0	1	08/08/2014 18:51
Pyrene	ND		2.0	1	08/08/2014 18:51
1,2,4-Trichlorobenzene	ND		2.0	1	08/08/2014 18:51
2,4,5-Trichlorophenol	ND		2.0	1	08/08/2014 18:51
2,4,6-Trichlorophenol	ND		2.0	1	08/08/2014 18:51

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Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/8/14

WorkOrder: 1408242
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-4-7.5	1408242-020A	Soil	08/05/2014 11:05	GC21	93771

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits	Analytical Comments: a4	
2-Fluorophenol	103	30-130		08/08/2014 18:51
Phenol-d5	94	30-130		08/08/2014 18:51
Nitrobenzene-d5	96	30-130		08/08/2014 18:51
2-Fluorobiphenyl	90	30-130		08/08/2014 18:51
2,4,6-Tribromophenol	87	16-130		08/08/2014 18:51
4-Terphenyl-d14	97	30-130		08/08/2014 18:51

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Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/8/14

WorkOrder: 1408242
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-5-15	1408242-027A	Soil	08/05/2014 14:40	GC21	93771
Analytes	Result	RL	DF	Date Analyzed	
Acenaphthene	ND	2.0	1	08/08/2014 19:19	
Acenaphthylene	ND	2.0	1	08/08/2014 19:19	
Acetochlor	ND	2.0	1	08/08/2014 19:19	
Anthracene	ND	2.0	1	08/08/2014 19:19	
Benzidine	ND	10	1	08/08/2014 19:19	
Benzo (a) anthracene	ND	2.0	1	08/08/2014 19:19	
Benzo (b) fluoranthene	ND	2.0	1	08/08/2014 19:19	
Benzo (k) fluoranthene	ND	2.0	1	08/08/2014 19:19	
Benzo (g,h,i) perylene	ND	2.0	1	08/08/2014 19:19	
Benzo (a) pyrene	ND	2.0	1	08/08/2014 19:19	
Benzyl Alcohol	ND	10	1	08/08/2014 19:19	
1,1-Biphenyl	ND	2.0	1	08/08/2014 19:19	
Bis (2-chloroethoxy) Methane	ND	2.0	1	08/08/2014 19:19	
Bis (2-chloroethyl) Ether	ND	2.0	1	08/08/2014 19:19	
Bis (2-chloroisopropyl) Ether	ND	2.0	1	08/08/2014 19:19	
Bis (2-ethylhexyl) Adipate	ND	2.0	1	08/08/2014 19:19	
Bis (2-ethylhexyl) Phthalate	ND	2.0	1	08/08/2014 19:19	
4-Bromophenyl Phenyl Ether	ND	2.0	1	08/08/2014 19:19	
Butylbenzyl Phthalate	ND	2.0	1	08/08/2014 19:19	
4-Chloroaniline	ND	2.0	1	08/08/2014 19:19	
4-Chloro-3-methylphenol	ND	2.0	1	08/08/2014 19:19	
2-Chloronaphthalene	ND	2.0	1	08/08/2014 19:19	
2-Chlorophenol	ND	2.0	1	08/08/2014 19:19	
4-Chlorophenyl Phenyl Ether	ND	2.0	1	08/08/2014 19:19	
Chrysene	ND	2.0	1	08/08/2014 19:19	
Dibenzo (a,h) anthracene	ND	2.0	1	08/08/2014 19:19	
Dibenzofuran	ND	2.0	1	08/08/2014 19:19	
Di-n-butyl Phthalate	ND	2.0	1	08/08/2014 19:19	
1,2-Dichlorobenzene	ND	2.0	1	08/08/2014 19:19	
1,3-Dichlorobenzene	ND	2.0	1	08/08/2014 19:19	
1,4-Dichlorobenzene	ND	2.0	1	08/08/2014 19:19	
3,3-Dichlorobenzidine	ND	4.0	1	08/08/2014 19:19	
2,4-Dichlorophenol	ND	2.0	1	08/08/2014 19:19	
Diethyl Phthalate	ND	2.0	1	08/08/2014 19:19	
2,4-Dimethylphenol	ND	2.0	1	08/08/2014 19:19	
Dimethyl Phthalate	ND	2.0	1	08/08/2014 19:19	
4,6-Dinitro-2-methylphenol	ND	10	1	08/08/2014 19:19	
2,4-Dinitrophenol	ND	50	1	08/08/2014 19:19	

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/8/14

WorkOrder: 1408242
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-5-15	1408242-027A	Soil	08/05/2014 14:40	GC21	93771
Analytes	Result	RL	DF	Date Analyzed	
2,4-Dinitrotoluene	ND	2.0	1	08/08/2014 19:19	
2,6-Dinitrotoluene	ND	2.0	1	08/08/2014 19:19	
Di-n-octyl Phthalate	ND	4.0	1	08/08/2014 19:19	
1,2-Diphenylhydrazine	ND	2.0	1	08/08/2014 19:19	
Fluoranthene	ND	2.0	1	08/08/2014 19:19	
Fluorene	ND	2.0	1	08/08/2014 19:19	
Hexachlorobenzene	ND	2.0	1	08/08/2014 19:19	
Hexachlorobutadiene	ND	2.0	1	08/08/2014 19:19	
Hexachlorocyclopentadiene	ND	10	1	08/08/2014 19:19	
Hexachloroethane	ND	2.0	1	08/08/2014 19:19	
Indeno (1,2,3-cd) pyrene	ND	2.0	1	08/08/2014 19:19	
Isophorone	ND	2.0	1	08/08/2014 19:19	
2-Methylnaphthalene	ND	2.0	1	08/08/2014 19:19	
2-Methylphenol (o-Cresol)	ND	2.0	1	08/08/2014 19:19	
3 &/or 4-Methylphenol (m,p-Cresol)	ND	2.0	1	08/08/2014 19:19	
Naphthalene	ND	2.0	1	08/08/2014 19:19	
2-Nitroaniline	ND	10	1	08/08/2014 19:19	
3-Nitroaniline	ND	10	1	08/08/2014 19:19	
4-Nitroaniline	ND	10	1	08/08/2014 19:19	
Nitrobenzene	ND	2.0	1	08/08/2014 19:19	
2-Nitrophenol	ND	10	1	08/08/2014 19:19	
4-Nitrophenol	ND	10	1	08/08/2014 19:19	
N-Nitrosodiphenylamine	ND	2.0	1	08/08/2014 19:19	
N-Nitrosodi-n-propylamine	ND	2.0	1	08/08/2014 19:19	
Pentachlorophenol	ND	10	1	08/08/2014 19:19	
Phenanthrene	ND	2.0	1	08/08/2014 19:19	
Phenol	ND	2.0	1	08/08/2014 19:19	
Pyrene	ND	2.0	1	08/08/2014 19:19	
1,2,4-Trichlorobenzene	ND	2.0	1	08/08/2014 19:19	
2,4,5-Trichlorophenol	ND	2.0	1	08/08/2014 19:19	
2,4,6-Trichlorophenol	ND	2.0	1	08/08/2014 19:19	

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Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/8/14

WorkOrder: 1408242
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-5-15	1408242-027A	Soil	08/05/2014 14:40	GC21	93771

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits	Analytical Comments: a4	
2-Fluorophenol	107	30-130		08/08/2014 19:19
Phenol-d5	101	30-130		08/08/2014 19:19
Nitrobenzene-d5	97	30-130		08/08/2014 19:19
2-Fluorobiphenyl	94	30-130		08/08/2014 19:19
2,4,6-Tribromophenol	71	16-130		08/08/2014 19:19
4-Terphenyl-d14	100	30-130		08/08/2014 19:19

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Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/8/14

WorkOrder: 1408242
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-6-10	1408242-032A	Soil	08/05/2014 09:00	GC21	93771
Analytes	Result	RL	DF	Date Analyzed	
Acenaphthene	ND	2.0	1	08/08/2014 19:47	
Acenaphthylene	ND	2.0	1	08/08/2014 19:47	
Acetochlor	ND	2.0	1	08/08/2014 19:47	
Anthracene	ND	2.0	1	08/08/2014 19:47	
Benzidine	ND	10	1	08/08/2014 19:47	
Benzo (a) anthracene	2.2	2.0	1	08/08/2014 19:47	
Benzo (b) fluoranthene	ND	2.0	1	08/08/2014 19:47	
Benzo (k) fluoranthene	ND	2.0	1	08/08/2014 19:47	
Benzo (g,h,i) perylene	ND	2.0	1	08/08/2014 19:47	
Benzo (a) pyrene	ND	2.0	1	08/08/2014 19:47	
Benzyl Alcohol	ND	10	1	08/08/2014 19:47	
1,1-Biphenyl	ND	2.0	1	08/08/2014 19:47	
Bis (2-chloroethoxy) Methane	ND	2.0	1	08/08/2014 19:47	
Bis (2-chloroethyl) Ether	ND	2.0	1	08/08/2014 19:47	
Bis (2-chloroisopropyl) Ether	ND	2.0	1	08/08/2014 19:47	
Bis (2-ethylhexyl) Adipate	ND	2.0	1	08/08/2014 19:47	
Bis (2-ethylhexyl) Phthalate	ND	2.0	1	08/08/2014 19:47	
4-Bromophenyl Phenyl Ether	ND	2.0	1	08/08/2014 19:47	
Butylbenzyl Phthalate	ND	2.0	1	08/08/2014 19:47	
4-Chloroaniline	ND	2.0	1	08/08/2014 19:47	
4-Chloro-3-methylphenol	ND	2.0	1	08/08/2014 19:47	
2-Chloronaphthalene	ND	2.0	1	08/08/2014 19:47	
2-Chlorophenol	ND	2.0	1	08/08/2014 19:47	
4-Chlorophenyl Phenyl Ether	ND	2.0	1	08/08/2014 19:47	
Chrysene	ND	2.0	1	08/08/2014 19:47	
Dibenzo (a,h) anthracene	ND	2.0	1	08/08/2014 19:47	
Dibenzofuran	ND	2.0	1	08/08/2014 19:47	
Di-n-butyl Phthalate	ND	2.0	1	08/08/2014 19:47	
1,2-Dichlorobenzene	ND	2.0	1	08/08/2014 19:47	
1,3-Dichlorobenzene	ND	2.0	1	08/08/2014 19:47	
1,4-Dichlorobenzene	ND	2.0	1	08/08/2014 19:47	
3,3-Dichlorobenzidine	ND	4.0	1	08/08/2014 19:47	
2,4-Dichlorophenol	ND	2.0	1	08/08/2014 19:47	
Diethyl Phthalate	ND	2.0	1	08/08/2014 19:47	
2,4-Dimethylphenol	ND	2.0	1	08/08/2014 19:47	
Dimethyl Phthalate	ND	2.0	1	08/08/2014 19:47	
4,6-Dinitro-2-methylphenol	ND	10	1	08/08/2014 19:47	
2,4-Dinitrophenol	ND	50	1	08/08/2014 19:47	

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/8/14

WorkOrder: 1408242
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-6-10	1408242-032A	Soil	08/05/2014 09:00	GC21	93771
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrotoluene	ND		2.0	1	08/08/2014 19:47
2,6-Dinitrotoluene	ND		2.0	1	08/08/2014 19:47
Di-n-octyl Phthalate	ND		4.0	1	08/08/2014 19:47
1,2-Diphenylhydrazine	ND		2.0	1	08/08/2014 19:47
Fluoranthene	8.1		2.0	1	08/08/2014 19:47
Fluorene	ND		2.0	1	08/08/2014 19:47
Hexachlorobenzene	ND		2.0	1	08/08/2014 19:47
Hexachlorobutadiene	ND		2.0	1	08/08/2014 19:47
Hexachlorocyclopentadiene	ND		10	1	08/08/2014 19:47
Hexachloroethane	ND		2.0	1	08/08/2014 19:47
Indeno (1,2,3-cd) pyrene	ND		2.0	1	08/08/2014 19:47
Isophorone	ND		2.0	1	08/08/2014 19:47
2-Methylnaphthalene	ND		2.0	1	08/08/2014 19:47
2-Methylphenol (o-Cresol)	ND		2.0	1	08/08/2014 19:47
3 &/or 4-Methylphenol (m,p-Cresol)	ND		2.0	1	08/08/2014 19:47
Naphthalene	ND		2.0	1	08/08/2014 19:47
2-Nitroaniline	ND		10	1	08/08/2014 19:47
3-Nitroaniline	ND		10	1	08/08/2014 19:47
4-Nitroaniline	ND		10	1	08/08/2014 19:47
Nitrobenzene	ND		2.0	1	08/08/2014 19:47
2-Nitrophenol	ND		10	1	08/08/2014 19:47
4-Nitrophenol	ND		10	1	08/08/2014 19:47
N-Nitrosodiphenylamine	ND		2.0	1	08/08/2014 19:47
N-Nitrosodi-n-propylamine	ND		2.0	1	08/08/2014 19:47
Pentachlorophenol	ND		10	1	08/08/2014 19:47
Phenanthrene	2.4		2.0	1	08/08/2014 19:47
Phenol	ND		2.0	1	08/08/2014 19:47
Pyrene	6.7		2.0	1	08/08/2014 19:47
1,2,4-Trichlorobenzene	ND		2.0	1	08/08/2014 19:47
2,4,5-Trichlorophenol	ND		2.0	1	08/08/2014 19:47
2,4,6-Trichlorophenol	ND		2.0	1	08/08/2014 19:47

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/8/14

WorkOrder: 1408242
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-6-10	1408242-032A	Soil	08/05/2014 09:00	GC21	93771

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
2-Fluorophenol	106	30-130		08/08/2014 19:47
Phenol-d5	98	30-130		08/08/2014 19:47
Nitrobenzene-d5	97	30-130		08/08/2014 19:47
2-Fluorobiphenyl	92	30-130		08/08/2014 19:47
2,4,6-Tribromophenol	96	16-130		08/08/2014 19:47
4-Terphenyl-d14	99	30-130		08/08/2014 19:47

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Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/8/14

WorkOrder: 1408242
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-7-10	1408242-038A	Soil	08/05/2014 10:15	GC21	93771
Analytes	Result	RL	DF	Date Analyzed	
Acenaphthene	ND	0.25	1	08/08/2014 16:02	
Acenaphthylene	ND	0.25	1	08/08/2014 16:02	
Acetochlor	ND	0.25	1	08/08/2014 16:02	
Anthracene	ND	0.25	1	08/08/2014 16:02	
Benzidine	ND	1.3	1	08/08/2014 16:02	
Benzo (a) anthracene	ND	0.25	1	08/08/2014 16:02	
Benzo (b) fluoranthene	ND	0.25	1	08/08/2014 16:02	
Benzo (k) fluoranthene	ND	0.25	1	08/08/2014 16:02	
Benzo (g,h,i) perylene	ND	0.25	1	08/08/2014 16:02	
Benzo (a) pyrene	ND	0.25	1	08/08/2014 16:02	
Benzyl Alcohol	ND	1.3	1	08/08/2014 16:02	
1,1-Biphenyl	ND	0.25	1	08/08/2014 16:02	
Bis (2-chloroethoxy) Methane	ND	0.25	1	08/08/2014 16:02	
Bis (2-chloroethyl) Ether	ND	0.25	1	08/08/2014 16:02	
Bis (2-chloroisopropyl) Ether	ND	0.25	1	08/08/2014 16:02	
Bis (2-ethylhexyl) Adipate	ND	0.25	1	08/08/2014 16:02	
Bis (2-ethylhexyl) Phthalate	ND	0.25	1	08/08/2014 16:02	
4-Bromophenyl Phenyl Ether	ND	0.25	1	08/08/2014 16:02	
Butylbenzyl Phthalate	ND	0.25	1	08/08/2014 16:02	
4-Chloroaniline	ND	0.25	1	08/08/2014 16:02	
4-Chloro-3-methylphenol	ND	0.25	1	08/08/2014 16:02	
2-Chloronaphthalene	ND	0.25	1	08/08/2014 16:02	
2-Chlorophenol	ND	0.25	1	08/08/2014 16:02	
4-Chlorophenyl Phenyl Ether	ND	0.25	1	08/08/2014 16:02	
Chrysene	ND	0.25	1	08/08/2014 16:02	
Dibenzo (a,h) anthracene	ND	0.25	1	08/08/2014 16:02	
Dibenzofuran	ND	0.25	1	08/08/2014 16:02	
Di-n-butyl Phthalate	ND	0.25	1	08/08/2014 16:02	
1,2-Dichlorobenzene	ND	0.25	1	08/08/2014 16:02	
1,3-Dichlorobenzene	ND	0.25	1	08/08/2014 16:02	
1,4-Dichlorobenzene	ND	0.25	1	08/08/2014 16:02	
3,3-Dichlorobenzidine	ND	0.50	1	08/08/2014 16:02	
2,4-Dichlorophenol	ND	0.25	1	08/08/2014 16:02	
Diethyl Phthalate	ND	0.25	1	08/08/2014 16:02	
2,4-Dimethylphenol	ND	0.25	1	08/08/2014 16:02	
Dimethyl Phthalate	ND	0.25	1	08/08/2014 16:02	
4,6-Dinitro-2-methylphenol	ND	1.3	1	08/08/2014 16:02	
2,4-Dinitrophenol	ND	6.3	1	08/08/2014 16:02	

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Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/8/14

WorkOrder: 1408242
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-7-10	1408242-038A	Soil	08/05/2014 10:15	GC21	93771
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrotoluene	ND		0.25	1	08/08/2014 16:02
2,6-Dinitrotoluene	ND		0.25	1	08/08/2014 16:02
Di-n-octyl Phthalate	ND		0.50	1	08/08/2014 16:02
1,2-Diphenylhydrazine	ND		0.25	1	08/08/2014 16:02
Fluoranthene	ND		0.25	1	08/08/2014 16:02
Fluorene	ND		0.25	1	08/08/2014 16:02
Hexachlorobenzene	ND		0.25	1	08/08/2014 16:02
Hexachlorobutadiene	ND		0.25	1	08/08/2014 16:02
Hexachlorocyclopentadiene	ND		1.3	1	08/08/2014 16:02
Hexachloroethane	ND		0.25	1	08/08/2014 16:02
Indeno (1,2,3-cd) pyrene	ND		0.25	1	08/08/2014 16:02
Isophorone	ND		0.25	1	08/08/2014 16:02
2-Methylnaphthalene	ND		0.25	1	08/08/2014 16:02
2-Methylphenol (o-Cresol)	ND		0.25	1	08/08/2014 16:02
3 &/or 4-Methylphenol (m,p-Cresol)	ND		0.25	1	08/08/2014 16:02
Naphthalene	ND		0.25	1	08/08/2014 16:02
2-Nitroaniline	ND		1.3	1	08/08/2014 16:02
3-Nitroaniline	ND		1.3	1	08/08/2014 16:02
4-Nitroaniline	ND		1.3	1	08/08/2014 16:02
Nitrobenzene	ND		0.25	1	08/08/2014 16:02
2-Nitrophenol	ND		1.3	1	08/08/2014 16:02
4-Nitrophenol	ND		1.3	1	08/08/2014 16:02
N-Nitrosodiphenylamine	ND		0.25	1	08/08/2014 16:02
N-Nitrosodi-n-propylamine	ND		0.25	1	08/08/2014 16:02
Pentachlorophenol	ND		1.3	1	08/08/2014 16:02
Phenanthrene	ND		0.25	1	08/08/2014 16:02
Phenol	ND		0.25	1	08/08/2014 16:02
Pyrene	ND		0.25	1	08/08/2014 16:02
1,2,4-Trichlorobenzene	ND		0.25	1	08/08/2014 16:02
2,4,5-Trichlorophenol	ND		0.25	1	08/08/2014 16:02
2,4,6-Trichlorophenol	ND		0.25	1	08/08/2014 16:02

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Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/8/14

WorkOrder: 1408242
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-7-10	1408242-038A	Soil	08/05/2014 10:15	GC21	93771

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
2-Fluorophenol	83	30-130		08/08/2014 16:02
Phenol-d5	77	30-130		08/08/2014 16:02
Nitrobenzene-d5	80	30-130		08/08/2014 16:02
2-Fluorobiphenyl	70	30-130		08/08/2014 16:02
2,4,6-Tribromophenol	79	16-130		08/08/2014 16:02
4-Terphenyl-d14	78	30-130		08/08/2014 16:02



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/7/14

WorkOrder: 1408242
Extraction Method: E200.8
Analytical Method: E200.8
Unit: µg/L

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-GW	1408242-040C	Water/TOTAL	08/06/2014 10:15	ICP-MS2	93732
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Antimony	1.3		0.50	1	08/09/2014 01:01
Arsenic	9.1		0.50	1	08/09/2014 01:01
Barium	340		5.0	1	08/09/2014 01:01
Beryllium	ND		0.50	1	08/09/2014 01:01
Cadmium	ND		0.25	1	08/09/2014 01:01
Chromium	ND		1.0	1	08/09/2014 01:01
Cobalt	6.7		0.50	1	08/09/2014 01:01
Copper	ND		2.0	1	08/09/2014 01:01
Lead	ND		0.50	1	08/09/2014 01:01
Mercury	ND		0.025	1	08/09/2014 01:01
Molybdenum	9.8		0.50	1	08/09/2014 01:01
Nickel	12		0.50	1	08/09/2014 01:01
Selenium	ND		0.50	1	08/09/2014 01:01
Silver	ND		0.19	1	08/09/2014 01:01
Thallium	ND		0.50	1	08/09/2014 01:01
Vanadium	0.73		0.50	1	08/09/2014 01:01
Zinc	58		15	1	08/09/2014 01:01
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	101		70-130		08/09/2014 01:01



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/7/14

WorkOrder: 1408242
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-1-1.5	1408242-001A	Soil/TOTAL	08/06/2014 08:20	ICP-MS2	93752
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Antimony	0.50		0.50	1	08/09/2014 03:05
Arsenic	4.8		0.50	1	08/09/2014 03:05
Barium	180		5.0	1	08/09/2014 03:05
Beryllium	ND		0.50	1	08/09/2014 03:05
Cadmium	ND		0.25	1	08/09/2014 03:05
Chromium	75		0.50	1	08/09/2014 03:05
Cobalt	9.9		0.50	1	08/09/2014 03:05
Copper	18		0.50	1	08/09/2014 03:05
Lead	35		0.50	1	08/09/2014 03:05
Mercury	0.084		0.050	1	08/09/2014 03:05
Molybdenum	ND		0.50	1	08/09/2014 03:05
Nickel	63		0.50	1	08/09/2014 03:05
Selenium	ND		0.50	1	08/09/2014 03:05
Silver	ND		0.50	1	08/09/2014 03:05
Thallium	ND		0.50	1	08/09/2014 03:05
Vanadium	55		0.50	1	08/09/2014 03:05
Zinc	56		5.0	1	08/09/2014 03:05
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	100		70-130		08/09/2014 03:05

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/7/14

WorkOrder: 1408242
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-1.5	1408242-006A	Soil/TOTAL	08/06/2014 09:20	ICP-MS2	93752
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Antimony	2.9		0.50	1	08/09/2014 03:11
Arsenic	6.8		0.50	1	08/09/2014 03:11
Barium	98		5.0	1	08/09/2014 03:11
Beryllium	ND		0.50	1	08/09/2014 03:11
Cadmium	3.9		0.25	1	08/09/2014 03:11
Chromium	88		0.50	1	08/09/2014 03:11
Cobalt	9.0		0.50	1	08/09/2014 03:11
Copper	110		5.0	10	08/12/2014 23:35
Lead	160		5.0	10	08/12/2014 23:35
Mercury	4.0		0.50	10	08/12/2014 23:35
Molybdenum	0.74		0.50	1	08/09/2014 03:11
Nickel	86		0.50	1	08/09/2014 03:11
Selenium	ND		0.50	1	08/09/2014 03:11
Silver	1.4		0.50	1	08/09/2014 03:11
Thallium	ND		0.50	1	08/09/2014 03:11
Vanadium	50		0.50	1	08/09/2014 03:11
Zinc	220		5.0	1	08/09/2014 03:11
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	97		70-130		08/09/2014 03:11

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Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/7/14

WorkOrder: 1408242
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-3-3.0	1408242-013A	Soil/TOTAL	08/05/2014 11:55	ICP-MS2	93752
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Antimony	0.57		0.50	1	08/09/2014 03:23
Arsenic	5.1		0.50	1	08/09/2014 03:23
Barium	170		5.0	1	08/09/2014 03:23
Beryllium	ND		0.50	1	08/09/2014 03:23
Cadmium	ND		0.25	1	08/09/2014 03:23
Chromium	200		10	20	08/15/2014 02:41
Cobalt	51		0.50	1	08/09/2014 03:23
Copper	33		0.50	1	08/09/2014 03:23
Lead	25		0.50	1	08/09/2014 03:23
Mercury	24		1.0	20	08/15/2014 02:41
Molybdenum	ND		0.50	1	08/09/2014 03:23
Nickel	1400		0.50	1	08/09/2014 03:23
Selenium	ND		0.50	1	08/09/2014 03:23
Silver	ND		0.50	1	08/09/2014 03:23
Thallium	ND		0.50	1	08/09/2014 03:23
Vanadium	42		0.50	1	08/09/2014 03:23
Zinc	190		5.0	1	08/09/2014 03:23
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	98		70-130		08/09/2014 03:23

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/7/14

WorkOrder: 1408242
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-4-3.0	1408242-018A	Soil/TOTAL	08/05/2014 10:50	ICP-MS2	93752
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Antimony	1.5		0.50	1	08/09/2014 03:29
Arsenic	4.8		0.50	1	08/09/2014 03:29
Barium	110		5.0	1	08/09/2014 03:29
Beryllium	ND		0.50	1	08/09/2014 03:29
Cadmium	0.45		0.25	1	08/09/2014 03:29
Chromium	110		5.0	10	08/13/2014 00:06
Cobalt	13		0.50	1	08/09/2014 03:29
Copper	37		0.50	1	08/09/2014 03:29
Lead	87		0.50	1	08/09/2014 03:29
Mercury	0.54		0.050	1	08/09/2014 03:29
Molybdenum	0.62		0.50	1	08/09/2014 03:29
Nickel	150		0.50	1	08/09/2014 03:29
Selenium	ND		0.50	1	08/09/2014 03:29
Silver	ND		0.50	1	08/09/2014 03:29
Thallium	ND		0.50	1	08/09/2014 03:29
Vanadium	54		0.50	1	08/09/2014 03:29
Zinc	110		5.0	1	08/09/2014 03:29
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	98		70-130		08/09/2014 03:29

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/7/14

WorkOrder: 1408242
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-5-15	1408242-027A	Soil/TOTAL	08/05/2014 14:40	ICP-MS1	93769
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Antimony	0.99		0.50	1	08/12/2014 22:07
Arsenic	5.7		0.50	1	08/12/2014 22:07
Barium	77		5.0	1	08/12/2014 22:07
Beryllium	ND		0.50	1	08/12/2014 22:07
Cadmium	ND		0.25	1	08/12/2014 22:07
Chromium	72		0.50	1	08/12/2014 22:07
Cobalt	9.1		0.50	1	08/12/2014 22:07
Copper	25		0.50	1	08/12/2014 22:07
Lead	72		0.50	1	08/12/2014 22:07
Mercury	0.38		0.050	1	08/12/2014 22:07
Molybdenum	ND		0.50	1	08/12/2014 22:07
Nickel	54		0.50	1	08/12/2014 22:07
Selenium	ND		0.50	1	08/12/2014 22:07
Silver	ND		0.50	1	08/12/2014 22:07
Thallium	ND		0.50	1	08/12/2014 22:07
Vanadium	48		0.50	1	08/12/2014 22:07
Zinc	93		5.0	1	08/12/2014 22:07
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	101		70-130		08/12/2014 22:07

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/7/14

WorkOrder: 1408242
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-6-10	1408242-032A	Soil/TOTAL	08/05/2014 09:00	ICP-MS2	93769
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Antimony	1.7		0.50	1	08/09/2014 04:18
Arsenic	5.4		0.50	1	08/09/2014 04:18
Barium	75		5.0	1	08/09/2014 04:18
Beryllium	ND		0.50	1	08/09/2014 04:18
Cadmium	0.97		0.25	1	08/09/2014 04:18
Chromium	83		0.50	1	08/09/2014 04:18
Cobalt	9.8		0.50	1	08/09/2014 04:18
Copper	50		0.50	1	08/09/2014 04:18
Lead	88		0.50	1	08/09/2014 04:18
Mercury	0.65		0.050	1	08/09/2014 04:18
Molybdenum	0.56		0.50	1	08/09/2014 04:18
Nickel	74		0.50	1	08/09/2014 04:18
Selenium	ND		0.50	1	08/09/2014 04:18
Silver	ND		0.50	1	08/09/2014 04:18
Thallium	ND		0.50	1	08/09/2014 04:18
Vanadium	59		0.50	1	08/09/2014 04:18
Zinc	110		5.0	1	08/09/2014 04:18
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	102		70-130		08/09/2014 04:18

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/7/14

WorkOrder: 1408242
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-7-3.0	1408242-035A	Soil/TOTAL	08/05/2014 10:00	ICP-MS2	93769
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Antimony	2.7		0.50	1	08/09/2014 04:24
Arsenic	5.4		0.50	1	08/09/2014 04:24
Barium	110		5.0	1	08/09/2014 04:24
Beryllium	ND		0.50	1	08/09/2014 04:24
Cadmium	0.26		0.25	1	08/09/2014 04:24
Chromium	70		0.50	1	08/09/2014 04:24
Cobalt	9.6		0.50	1	08/09/2014 04:24
Copper	25		0.50	1	08/09/2014 04:24
Lead	490		5.0	10	08/12/2014 00:42
Mercury	0.38		0.050	1	08/09/2014 04:24
Molybdenum	ND		0.50	1	08/09/2014 04:24
Nickel	35		0.50	1	08/09/2014 04:24
Selenium	ND		0.50	1	08/09/2014 04:24
Silver	ND		0.50	1	08/09/2014 04:24
Thallium	ND		0.50	1	08/09/2014 04:24
Vanadium	69		0.50	1	08/09/2014 04:24
Zinc	150		5.0	1	08/09/2014 04:24
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	106		70-130		08/09/2014 04:24

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/7/14

WorkOrder: 1408242
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-7-10	1408242-038A	Soil/TOTAL	08/05/2014 10:15	ICP-MS2	93769

Analytes	Result	RL	DF	Date Analyzed
Antimony	ND	0.50	1	08/09/2014 04:37
Arsenic	ND	0.50	1	08/09/2014 04:37
Barium	6.1	5.0	1	08/09/2014 04:37
Beryllium	ND	0.50	1	08/09/2014 04:37
Cadmium	ND	0.25	1	08/09/2014 04:37
Chromium	120	5.0	10	08/12/2014 00:48
Cobalt	82	0.50	1	08/09/2014 04:37
Copper	2.4	0.50	1	08/09/2014 04:37
Lead	2.0	0.50	1	08/09/2014 04:37
Mercury	ND	0.050	1	08/09/2014 04:37
Molybdenum	ND	0.50	1	08/09/2014 04:37
Nickel	1900	50	100	08/12/2014 00:54
Selenium	ND	0.50	1	08/09/2014 04:37
Silver	ND	0.50	1	08/09/2014 04:37
Thallium	ND	0.50	1	08/09/2014 04:37
Vanadium	4.2	0.50	1	08/09/2014 04:37
Zinc	25	5.0	1	08/09/2014 04:37

Surrogates	REC (%)	Limits	
Tb 350.917	121	70-130	08/09/2014 04:37



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/11/14

WorkOrder: 1408242
Extraction Method: SM4500-CN⁻ E
Analytical Method: SM4500-CN⁻ ABCE
Unit: mg/Kg

Cyanide, Total

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-1-3.0	1408242-002A	Soil	08/06/2014 08:25	SKALAR	93874

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Total Cyanide	0.21	0.10	1	08/11/2014 15:16

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-3-5.0	1408242-014A	Soil	08/05/2014 12:00	SKALAR	93874

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Total Cyanide	ND	0.10	1	08/11/2014 15:20

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-6-10	1408242-032A	Soil	08/05/2014 09:00	SKALAR	93874

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Total Cyanide	0.24	0.10	1	08/11/2014 15:24



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/7/14-8/13/14

WorkOrder: 1408242
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/ExtType	Date Collected	Instrument	Batch ID
EB-1-1.5	1408242-001A	Soil	08/06/2014 08:20	GC7	93890

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	08/11/2014 21:58
MTBE	---	0.050	1	08/11/2014 21:58
Benzene	---	0.0050	1	08/11/2014 21:58
Toluene	---	0.0050	1	08/11/2014 21:58
Ethylbenzene	---	0.0050	1	08/11/2014 21:58
Xylenes	---	0.0050	1	08/11/2014 21:58
Surrogates	REC (%)	Limits		
2-Fluorotoluene	104	70-130		08/11/2014 21:58

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-1-3.0	1408242-002A	Soil	08/06/2014 08:25	GC19	93744

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	08/08/2014 19:44
MTBE	---	0.050	1	08/08/2014 19:44
Benzene	---	0.0050	1	08/08/2014 19:44
Toluene	---	0.0050	1	08/08/2014 19:44
Ethylbenzene	---	0.0050	1	08/08/2014 19:44
Xylenes	---	0.0050	1	08/08/2014 19:44
Surrogates	REC (%)	Limits		
2-Fluorotoluene	109	70-130		08/08/2014 19:44

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-1-10	1408242-005A	Soil	08/06/2014 08:40	GC19	93890

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	3.8	1.0	1	08/12/2014 15:10
MTBE	---	0.050	1	08/12/2014 15:10
Benzene	---	0.0050	1	08/12/2014 15:10
Toluene	---	0.0050	1	08/12/2014 15:10
Ethylbenzene	---	0.0050	1	08/12/2014 15:10
Xylenes	---	0.0050	1	08/12/2014 15:10
Surrogates	REC (%)	Limits	Analytical Comments: d1	
2-Fluorotoluene	95	70-130		08/12/2014 15:10

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/7/14-8/13/14

WorkOrder: 1408242
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/ExtType	Date Collected	Instrument	Batch ID
EB-2-1.5	1408242-006A	Soil	08/06/2014 09:20	GC7	93890

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	08/11/2014 22:28
MTBE	---	0.050	1	08/11/2014 22:28
Benzene	---	0.0050	1	08/11/2014 22:28
Toluene	---	0.0050	1	08/11/2014 22:28
Ethylbenzene	---	0.0050	1	08/11/2014 22:28
Xylenes	---	0.0050	1	08/11/2014 22:28
Surrogates	REC (%)	Limits		
2-Fluorotoluene	103	70-130		08/11/2014 22:28

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-15	1408242-011A	Soil	08/06/2014 09:55	GC19	93744

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	08/08/2014 22:18
MTBE	---	0.050	1	08/08/2014 22:18
Benzene	---	0.0050	1	08/08/2014 22:18
Toluene	---	0.0050	1	08/08/2014 22:18
Ethylbenzene	---	0.0050	1	08/08/2014 22:18
Xylenes	---	0.0050	1	08/08/2014 22:18
Surrogates	REC (%)	Limits		
2-Fluorotoluene	91	70-130		08/08/2014 22:18

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-3-1.5	1408242-012A	Soil	08/05/2014 11:50	GC19	93744

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	08/08/2014 22:48
MTBE	---	0.050	1	08/08/2014 22:48
Benzene	---	0.0050	1	08/08/2014 22:48
Toluene	---	0.0050	1	08/08/2014 22:48
Ethylbenzene	---	0.0050	1	08/08/2014 22:48
Xylenes	---	0.0050	1	08/08/2014 22:48
Surrogates	REC (%)	Limits		
2-Fluorotoluene	99	70-130		08/08/2014 22:48

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/7/14-8/13/14

WorkOrder: 1408242
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/ExtType	Date Collected	Instrument	Batch ID
EB-3-3.0	1408242-013A	Soil	08/05/2014 11:55	GC19	93744

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	08/08/2014 23:49
MTBE	---	0.050	1	08/08/2014 23:49
Benzene	---	0.0050	1	08/08/2014 23:49
Toluene	---	0.0050	1	08/08/2014 23:49
Ethylbenzene	---	0.0050	1	08/08/2014 23:49
Xylenes	---	0.0050	1	08/08/2014 23:49
Surrogates	REC (%)	Limits		
2-Fluorotoluene	98	70-130		08/08/2014 23:49

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-3-5.0	1408242-014A	Soil	08/05/2014 12:00	GC19	93744

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	08/09/2014 00:19
MTBE	---	0.050	1	08/09/2014 00:19
Benzene	---	0.0050	1	08/09/2014 00:19
Toluene	---	0.0050	1	08/09/2014 00:19
Ethylbenzene	---	0.0050	1	08/09/2014 00:19
Xylenes	---	0.0050	1	08/09/2014 00:19
Surrogates	REC (%)	Limits		
2-Fluorotoluene	102	70-130		08/09/2014 00:19

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-4-1.5	1408242-017A	Soil	08/05/2014 10:45	GC19	93744

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	08/09/2014 01:50
MTBE	---	0.050	1	08/09/2014 01:50
Benzene	---	0.0050	1	08/09/2014 01:50
Toluene	---	0.0050	1	08/09/2014 01:50
Ethylbenzene	---	0.0050	1	08/09/2014 01:50
Xylenes	---	0.0050	1	08/09/2014 01:50
Surrogates	REC (%)	Limits		
2-Fluorotoluene	101	70-130		08/09/2014 01:50

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/7/14-8/13/14

WorkOrder: 1408242
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/ExtType	Date Collected	Instrument	Batch ID
EB-4-3.0	1408242-018A	Soil	08/05/2014 10:50	GC19	93744

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	4.3	1.0	1	08/11/2014 15:19
MTBE	---	0.050	1	08/11/2014 15:19
Benzene	---	0.0050	1	08/11/2014 15:19
Toluene	---	0.0050	1	08/11/2014 15:19
Ethylbenzene	---	0.0050	1	08/11/2014 15:19
Xylenes	---	0.0050	1	08/11/2014 15:19
Surrogates	REC (%)	Limits	Analytical Comments: d1	
2-Fluorotoluene	98	70-130		08/11/2014 15:19

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-4-7.5	1408242-020A	Soil	08/05/2014 11:05	GC7	93890

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	08/11/2014 22:58
MTBE	---	0.050	1	08/11/2014 22:58
Benzene	---	0.0050	1	08/11/2014 22:58
Toluene	---	0.0050	1	08/11/2014 22:58
Ethylbenzene	---	0.0050	1	08/11/2014 22:58
Xylenes	---	0.0050	1	08/11/2014 22:58
Surrogates	REC (%)	Limits		
2-Fluorotoluene	104	70-130		08/11/2014 22:58

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-5-1.5	1408242-022A	Soil	08/05/2014 13:25	GC19	93744

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	08/09/2014 03:20
MTBE	---	0.050	1	08/09/2014 03:20
Benzene	---	0.0050	1	08/09/2014 03:20
Toluene	---	0.0050	1	08/09/2014 03:20
Ethylbenzene	---	0.0050	1	08/09/2014 03:20
Xylenes	---	0.0050	1	08/09/2014 03:20
Surrogates	REC (%)	Limits		
2-Fluorotoluene	98	70-130		08/09/2014 03:20

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/7/14-8/13/14

WorkOrder: 1408242
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/ExtType	Date Collected	Instrument	Batch ID
EB-5-5.0	1408242-024A	Soil	08/05/2014 14:15	GC19	93744

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	08/09/2014 03:50
MTBE	---	0.050	1	08/09/2014 03:50
Benzene	---	0.0050	1	08/09/2014 03:50
Toluene	---	0.0050	1	08/09/2014 03:50
Ethylbenzene	---	0.0050	1	08/09/2014 03:50
Xylenes	---	0.0050	1	08/09/2014 03:50
Surrogates	REC (%)	Limits		
2-Fluorotoluene	101	70-130		08/09/2014 03:50

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-5-10	1408242-026A	Soil	08/05/2014 14:35	GC19	93768

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	08/08/2014 12:07
MTBE	---	0.050	1	08/08/2014 12:07
Benzene	---	0.0050	1	08/08/2014 12:07
Toluene	---	0.0050	1	08/08/2014 12:07
Ethylbenzene	---	0.0050	1	08/08/2014 12:07
Xylenes	---	0.0050	1	08/08/2014 12:07
Surrogates	REC (%)	Limits		
2-Fluorotoluene	96	70-130		08/08/2014 12:07

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-5-15	1408242-027A	Soil	08/05/2014 14:40	GC19	93768

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	08/09/2014 05:20
MTBE	---	0.050	1	08/09/2014 05:20
Benzene	---	0.0050	1	08/09/2014 05:20
Toluene	---	0.0050	1	08/09/2014 05:20
Ethylbenzene	---	0.0050	1	08/09/2014 05:20
Xylenes	---	0.0050	1	08/09/2014 05:20
Surrogates	REC (%)	Limits		
2-Fluorotoluene	97	70-130		08/09/2014 05:20

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/7/14-8/13/14

WorkOrder: 1408242
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/ExtType	Date Collected	Instrument	Batch ID
EB-6-3.0	1408242-029A	Soil	08/05/2014 08:45	GC19	93768

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	08/09/2014 05:50
MTBE	---	0.050	1	08/09/2014 05:50
Benzene	---	0.0050	1	08/09/2014 05:50
Toluene	---	0.0050	1	08/09/2014 05:50
Ethylbenzene	---	0.0050	1	08/09/2014 05:50
Xylenes	---	0.0050	1	08/09/2014 05:50
Surrogates	REC (%)	Limits		
2-Fluorotoluene	92	70-130		08/09/2014 05:50

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-6-5.0	1408242-030A	Soil	08/05/2014 08:50	GC19	93768

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	08/09/2014 06:20
MTBE	---	0.050	1	08/09/2014 06:20
Benzene	---	0.0050	1	08/09/2014 06:20
Toluene	---	0.0050	1	08/09/2014 06:20
Ethylbenzene	---	0.0050	1	08/09/2014 06:20
Xylenes	---	0.0050	1	08/09/2014 06:20
Surrogates	REC (%)	Limits		
2-Fluorotoluene	97	70-130		08/09/2014 06:20

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-6-10	1408242-032A	Soil	08/05/2014 09:00	GC19	93768

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	08/09/2014 06:50
MTBE	---	0.050	1	08/09/2014 06:50
Benzene	---	0.0050	1	08/09/2014 06:50
Toluene	---	0.0050	1	08/09/2014 06:50
Ethylbenzene	---	0.0050	1	08/09/2014 06:50
Xylenes	---	0.0050	1	08/09/2014 06:50
Surrogates	REC (%)	Limits		
2-Fluorotoluene	97	70-130		08/09/2014 06:50

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/7/14-8/13/14

WorkOrder: 1408242
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/ExtType	Date Collected	Instrument	Batch ID
EB-7-3.0	1408242-035A	Soil	08/05/2014 10:00	GC19	93768

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	08/09/2014 07:20
MTBE	---	0.050	1	08/09/2014 07:20
Benzene	---	0.0050	1	08/09/2014 07:20
Toluene	---	0.0050	1	08/09/2014 07:20
Ethylbenzene	---	0.0050	1	08/09/2014 07:20
Xylenes	---	0.0050	1	08/09/2014 07:20
Surrogates	REC (%)	Limits		
2-Fluorotoluene	103	70-130		08/09/2014 07:20

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-7-5.0	1408242-036A	Soil	08/05/2014 10:05	GC7	93966

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	08/14/2014 13:09
MTBE	---	0.050	1	08/14/2014 13:09
Benzene	---	0.0050	1	08/14/2014 13:09
Toluene	---	0.0050	1	08/14/2014 13:09
Ethylbenzene	---	0.0050	1	08/14/2014 13:09
Xylenes	---	0.0050	1	08/14/2014 13:09
Surrogates	REC (%)	Limits		
2-Fluorotoluene	116	70-130		08/14/2014 13:09

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-7-10	1408242-038A	Soil	08/05/2014 10:15	GC19	93768

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	08/09/2014 08:20
MTBE	---	0.050	1	08/09/2014 08:20
Benzene	---	0.0050	1	08/09/2014 08:20
Toluene	---	0.0050	1	08/09/2014 08:20
Ethylbenzene	---	0.0050	1	08/09/2014 08:20
Xylenes	---	0.0050	1	08/09/2014 08:20
Surrogates	REC (%)	Limits		
2-Fluorotoluene	83	70-130		08/09/2014 08:20



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/8/14

WorkOrder: 1408242
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: µg/L

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

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-GW	1408242-040A	Water	08/06/2014 10:15	GC3	93866
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		50	1	08/08/2014 18:55
MTBE	---		5.0	1	08/08/2014 18:55
Benzene	---		0.50	1	08/08/2014 18:55
Toluene	---		0.50	1	08/08/2014 18:55
Ethylbenzene	---		0.50	1	08/08/2014 18:55
Xylenes	---		0.50	1	08/08/2014 18:55
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
aaa-TFT_2	99		70-130		08/08/2014 18:55



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/7/14

WorkOrder: 1408242
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

LUFT 5 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-1-3.0	1408242-002A	Soil/TOTAL	08/06/2014 08:25	ICP-MS1	93752

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	08/12/2014 21:22
Chromium	1300	50	100	08/14/2014 16:07
Lead	0.65	0.50	1	08/12/2014 21:22
Nickel	2600	50	100	08/14/2014 16:07
Zinc	87	5.0	1	08/12/2014 21:22
Surrogates	REC (%)	Limits		
Tb 350.917	113	70-130		08/12/2014 21:22

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-5.0	1408242-008A	Soil/TOTAL	08/06/2014 09:35	ICP-MS1	93752

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	08/12/2014 21:28
Chromium	69	0.50	1	08/12/2014 21:28
Lead	97	5.0	10	08/14/2014 16:20
Nickel	67	0.50	1	08/12/2014 21:28
Zinc	140	5.0	1	08/12/2014 21:28
Surrogates	REC (%)	Limits		
Tb 350.917	112	70-130		08/12/2014 21:28

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-15	1408242-011A	Soil/TOTAL	08/06/2014 09:55	ICP-MS1	93752

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	08/12/2014 21:34
Chromium	85	0.50	1	08/12/2014 21:34
Lead	6.3	0.50	1	08/12/2014 21:34
Nickel	56	0.50	1	08/12/2014 21:34
Zinc	60	5.0	1	08/12/2014 21:34
Surrogates	REC (%)	Limits		
Tb 350.917	103	70-130		08/12/2014 21:34

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/7/14

WorkOrder: 1408242
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

LUFT 5 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-3-1.5	1408242-012A	Soil/TOTAL	08/05/2014 11:50	ICP-MS2	93752

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	08/09/2014 03:17
Chromium	62	0.50	1	08/09/2014 03:17
Lead	25	0.50	1	08/09/2014 03:17
Nickel	180	5.0	10	08/20/2014 17:42
Zinc	53	5.0	1	08/09/2014 03:17
Surrogates	REC (%)	Limits		
Tb 350.917	97	70-130		08/09/2014 03:17

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-3-5.0	1408242-014A	Soil/TOTAL	08/05/2014 12:00	ICP-MS1	93752

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	08/12/2014 21:41
Chromium	49	0.50	1	08/12/2014 21:41
Lead	19	0.50	1	08/12/2014 21:41
Nickel	180	5.0	10	08/14/2014 16:26
Zinc	81	5.0	1	08/12/2014 21:41
Surrogates	REC (%)	Limits		
Tb 350.917	107	70-130		08/12/2014 21:41

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-4-1.5	1408242-017A	Soil/TOTAL	08/05/2014 10:45	ICP-MS1	93752

Analytes	Result	RL	DF	Date Analyzed
Cadmium	0.37	0.25	1	08/12/2014 22:01
Chromium	82	0.50	1	08/12/2014 22:01
Lead	120	5.0	10	08/14/2014 16:32
Nickel	110	5.0	10	08/14/2014 16:32
Zinc	130	5.0	1	08/12/2014 22:01
Surrogates	REC (%)	Limits		
Tb 350.917	99	70-130		08/12/2014 22:01

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/7/14

WorkOrder: 1408242
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

LUFT 5 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-4-7.5	1408242-020A	Soil/TOTAL	08/05/2014 11:05	ICP-MS1	93769

Analytes	Result	RL	DF	Date Analyzed
Cadmium	6.0	0.25	1	08/12/2014 22:13
Chromium	85	0.50	1	08/12/2014 22:13
Lead	180	5.0	10	08/14/2014 16:38
Nickel	110	5.0	10	08/14/2014 16:38
Zinc	270	5.0	1	08/12/2014 22:13
Surrogates	REC (%)	Limits		
Tb 350.917	106	70-130		08/12/2014 22:13

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-5-5.0	1408242-024A	Soil/TOTAL	08/05/2014 14:15	ICP-MS2	93769

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	08/09/2014 03:35
Chromium	51	0.50	1	08/09/2014 03:35
Lead	26	0.50	1	08/09/2014 03:35
Nickel	66	0.50	1	08/09/2014 03:35
Zinc	83	5.0	1	08/09/2014 03:35
Surrogates	REC (%)	Limits		
Tb 350.917	106	70-130		08/09/2014 03:35

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-5-10	1408242-026A	Soil/TOTAL	08/05/2014 14:35	ICP-MS2	93769

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	08/09/2014 03:41
Chromium	78	0.50	1	08/09/2014 03:41
Lead	150	5.0	10	08/12/2014 00:30
Nickel	67	0.50	1	08/09/2014 03:41
Zinc	110	5.0	1	08/09/2014 03:41
Surrogates	REC (%)	Limits		
Tb 350.917	105	70-130		08/09/2014 03:41

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/7/14

WorkOrder: 1408242
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

LUFT 5 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-6-3.0	1408242-029A	Soil/TOTAL	08/05/2014 08:45	ICP-MS2	93769

Analytes	Result	RL	DF	Date Analyzed
Cadmium	0.28	0.25	1	08/09/2014 04:06
Chromium	97	5.0	10	08/20/2014 17:48
Lead	14	0.50	1	08/09/2014 04:06
Nickel	150	5.0	10	08/20/2014 17:48
Zinc	48	5.0	1	08/09/2014 04:06
Surrogates	REC (%)	Limits		
Tb 350.917	105	70-130		08/09/2014 04:06

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-6-5.0	1408242-030A	Soil/TOTAL	08/05/2014 08:50	ICP-MS2	93769

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	08/09/2014 04:12
Chromium	96	5.0	10	08/12/2014 00:36
Lead	18	0.50	1	08/09/2014 04:12
Nickel	71	0.50	1	08/09/2014 04:12
Zinc	52	5.0	1	08/09/2014 04:12
Surrogates	REC (%)	Limits		
Tb 350.917	103	70-130		08/09/2014 04:12

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-7-5.0	1408242-036A	Soil/TOTAL	08/05/2014 10:05	ICP-MS2	93769

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	08/09/2014 04:31
Chromium	54	0.50	1	08/09/2014 04:31
Lead	87	0.50	1	08/09/2014 04:31
Nickel	84	0.50	1	08/09/2014 04:31
Zinc	96	5.0	1	08/09/2014 04:31
Surrogates	REC (%)	Limits		
Tb 350.917	106	70-130		08/09/2014 04:31



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/7/14

WorkOrder: 1408242
Extraction Method: SW3050B
Analytical Method: SW6010B
Unit: mg/Kg

Lead

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-1-10	1408242-005A	Soil/TOTAL	08/06/2014 08:40	ICP-JY	93772

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	90	5.0	1	08/08/2014 13:52
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Tb 350.917	102	70-130		08/08/2014 13:52

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-5-1.5	1408242-022A	Soil/TOTAL	08/05/2014 13:25	ICP-JY	93772

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	63	5.0	1	08/08/2014 14:00
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Tb 350.917	102	70-130		08/08/2014 14:00



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/14/14

WorkOrder: 1408242
Extraction Method: SW9045D
Analytical Method: SW9045D
Unit: $\pm$, pH units @ 25°C

pH

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-1-3.0	1408242-002A	Soil	08/06/2014 08:25	WetChem	93997

<u>Analytes</u>	<u>Result</u>	<u>Accuracy</u>	<u>DF</u>	<u>Date Analyzed</u>
pH	8.79	0.1	1	08/14/2014 15:33

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-3-5.0	1408242-014A	Soil	08/05/2014 12:00	WetChem	93997

<u>Analytes</u>	<u>Result</u>	<u>Accuracy</u>	<u>DF</u>	<u>Date Analyzed</u>
pH	9.45	0.1	1	08/14/2014 15:39

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-6-10	1408242-032A	Soil	08/05/2014 09:00	WetChem	93997

<u>Analytes</u>	<u>Result</u>	<u>Accuracy</u>	<u>DF</u>	<u>Date Analyzed</u>
pH	8.02	0.1	1	08/14/2014 15:42



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/12/14

WorkOrder: 1408242
Extraction Method: SW9030A/E376.2
Analytical Method: SW9030A/E376.2
Unit: mg/Kg

Acid Soluble Sulfide

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-1-3.0	1408242-002A	Soil	08/06/2014 08:25	SPECTROPHOTOMETER	93929

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Sulfide	ND	10	1	08/12/2014 15:00

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-3-5.0	1408242-014A	Soil	08/05/2014 12:00	SPECTROPHOTOMETER	93929

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Sulfide	ND	10	1	08/12/2014 14:50

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-6-10	1408242-032A	Soil	08/05/2014 09:00	SPECTROPHOTOMETER	93929

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Sulfide	ND	10	1	08/12/2014 14:40



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/7/14-8/11/14

WorkOrder: 1408242
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-1-1.5	1408242-001A	Soil	08/06/2014 08:20	GC9b	93721

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	6.6	2.0	2	08/13/2014 18:35
TPH-Motor Oil (C18-C36)	67	10	2	08/13/2014 18:35

Surrogates	REC (%)	Limits	Analytical Comments: e7,e2
C9	90	70-130	08/13/2014 18:35

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-1-3.0	1408242-002A	Soil	08/06/2014 08:25	GC9b	93721

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	12	5.0	5	08/14/2014 22:11
TPH-Motor Oil (C18-C36)	100	25	5	08/14/2014 22:11

Surrogates	REC (%)	Limits	Analytical Comments: e7,e2
C9	93	70-130	08/14/2014 22:11

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-1-10	1408242-005A	Soil	08/06/2014 08:40	GC9b	93882

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	71	5.0	5	08/15/2014 05:17
TPH-Motor Oil (C18-C36)	190	25	5	08/15/2014 05:17

Surrogates	REC (%)	Limits	Analytical Comments: e7,e2
C9	89	70-130	08/15/2014 05:17

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-1.5	1408242-006A	Soil	08/06/2014 09:20	GC11A	93721

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	86	10	10	08/11/2014 21:50
TPH-Motor Oil (C18-C36)	260	50	10	08/11/2014 21:50

Surrogates	REC (%)	Limits	Analytical Comments: e7,e2
C9	104	70-130	08/11/2014 21:50

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/7/14-8/11/14

WorkOrder: 1408242
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-15	1408242-011A	Soil	08/06/2014 09:55	GC6A	93721

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	2.5	1.0	1	08/11/2014 20:58
TPH-Motor Oil (C18-C36)	8.9	5.0	1	08/11/2014 20:58

Surrogates	REC (%)	Limits	Analytical Comments: e7,e2
C9	86	70-130	08/11/2014 20:58

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-3-1.5	1408242-012A	Soil	08/05/2014 11:50	GC9b	93721

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	21	5.0	5	08/08/2014 20:13
TPH-Motor Oil (C18-C36)	180	25	5	08/08/2014 20:13

Surrogates	REC (%)	Limits	Analytical Comments: e7,e2
C9	103	70-130	08/08/2014 20:13

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-3-3.0	1408242-013A	Soil	08/05/2014 11:55	GC9a	93721

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	20	5.0	5	08/08/2014 20:13
TPH-Motor Oil (C18-C36)	120	25	5	08/08/2014 20:13

Surrogates	REC (%)	Limits	Analytical Comments: e7,e2
C9	106	70-130	08/08/2014 20:13

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-3-5.0	1408242-014A	Soil	08/05/2014 12:00	GC11A	93721

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	7.2	2.0	2	08/13/2014 22:02
TPH-Motor Oil (C18-C36)	32	10	2	08/13/2014 22:02

Surrogates	REC (%)	Limits	Analytical Comments: e7,e2
C9	99	70-130	08/13/2014 22:02

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/7/14-8/11/14

WorkOrder: 1408242
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-4-1.5	1408242-017A	Soil	08/05/2014 10:45	GC11B	93767

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	20	5.0	5	08/10/2014 15:14
TPH-Motor Oil (C18-C36)	110	25	5	08/10/2014 15:14

Surrogates	REC (%)	Limits	Analytical Comments: e7,e2
C9	108	70-130	08/10/2014 15:14

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-4-3.0	1408242-018A	Soil	08/05/2014 10:50	GC9b	93767

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	56	5.0	5	08/10/2014 06:36
TPH-Motor Oil (C18-C36)	220	25	5	08/10/2014 06:36

Surrogates	REC (%)	Limits	Analytical Comments: e7,e2
C9	91	70-130	08/10/2014 06:36

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-4-7.5	1408242-020A	Soil	08/05/2014 11:05	GC9a	93767

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	55	2.0	2	08/10/2014 11:20
TPH-Motor Oil (C18-C36)	170	10	2	08/10/2014 11:20

Surrogates	REC (%)	Limits	Analytical Comments: e7,e2
C9	100	70-130	08/10/2014 11:20

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-5-1.5	1408242-022A	Soil	08/05/2014 13:25	GC11B	93767

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	17	10	10	08/10/2014 09:31
TPH-Motor Oil (C18-C36)	200	50	10	08/10/2014 09:31

Surrogates	REC (%)	Limits	Analytical Comments: e7,e2
C9	108	70-130	08/10/2014 09:31

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Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/7/14-8/11/14

WorkOrder: 1408242
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-5-5.0	1408242-024A	Soil	08/05/2014 14:15	GC11B	93767

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	6.1	1.0	1	08/09/2014 08:23
TPH-Motor Oil (C18-C36)	23	5.0	1	08/09/2014 08:23

Surrogates	REC (%)	Limits	Analytical Comments: e7,e2
C9	108	70-130	08/09/2014 08:23

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-5-10	1408242-026A	Soil	08/05/2014 14:35	GC11B	93767

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	48	10	10	08/10/2014 19:48
TPH-Motor Oil (C18-C36)	210	50	10	08/10/2014 19:48

Surrogates	REC (%)	Limits	Analytical Comments: e7,e2
C9	109	70-130	08/10/2014 19:48

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-5-15	1408242-027A	Soil	08/05/2014 14:40	GC11B	93767

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	34	5.0	5	08/12/2014 02:24
TPH-Motor Oil (C18-C36)	150	25	5	08/12/2014 02:24

Surrogates	REC (%)	Limits	Analytical Comments: e7,e2
C9	109	70-130	08/12/2014 02:24

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-6-3.0	1408242-029A	Soil	08/05/2014 08:45	GC11B	93767

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	9.2	5.0	5	08/14/2014 15:07
TPH-Motor Oil (C18-C36)	75	25	5	08/14/2014 15:07

Surrogates	REC (%)	Limits	Analytical Comments: e7,e2
C9	106	70-130	08/14/2014 15:07

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/7/14-8/11/14

WorkOrder: 1408242
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-6-5.0	1408242-030A	Soil	08/05/2014 08:50	GC11B	93767

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	17	2.0	2	08/08/2014 23:15
TPH-Motor Oil (C18-C36)	54	10	2	08/08/2014 23:15

Surrogates	REC (%)	Limits	Analytical Comments: e7,e2	Date Analyzed
C9	100	70-130		08/08/2014 23:15

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-6-10	1408242-032A	Soil	08/05/2014 09:00	GC11B	93767

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	120	5.0	5	08/09/2014 12:57
TPH-Motor Oil (C18-C36)	270	25	5	08/09/2014 12:57

Surrogates	REC (%)	Limits	Analytical Comments: e7,e2	Date Analyzed
C9	107	70-130		08/09/2014 12:57

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-7-3.0	1408242-035A	Soil	08/05/2014 10:00	GC9a	93767

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	15	10	10	08/10/2014 07:47
TPH-Motor Oil (C18-C36)	130	50	10	08/10/2014 07:47

Surrogates	REC (%)	Limits	Analytical Comments: e7,e2	Date Analyzed
C9	90	70-130		08/10/2014 07:47

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-7-5.0	1408242-036A	Soil	08/05/2014 10:05	GC11B	93767

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	48	20	20	08/10/2014 04:57
TPH-Motor Oil (C18-C36)	410	100	20	08/10/2014 04:57

Surrogates	REC (%)	Limits	Analytical Comments: e7,e2	Date Analyzed
C9	106	70-130		08/10/2014 04:57

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/7/14-8/11/14

WorkOrder: 1408242
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-7-10	1408242-038A	Soil	08/05/2014 10:15	GC6A	93767

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	1.9	1.0	1	08/09/2014 18:16
TPH-Motor Oil (C18-C36)	7.1	5.0	1	08/09/2014 18:16

Surrogates	REC (%)	Limits	Analytical Comments: e7,e2
C9	90	70-130	08/09/2014 18:16



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/7/14

WorkOrder: 1408242
Extraction Method: SW3510C
Analytical Method: SW8015B
Unit: µg/L

Total Extractable Petroleum Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-GW	1408242-040A	Water	08/06/2014 10:15	GC11A	93764

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	510	200	2	08/12/2014 01:16
TPH-Motor Oil (C18-C36)	4200	1000	2	08/12/2014 01:16

Surrogates	REC (%)	Limits	Analytical Comments: e7,e2
C9	93	70-130	08/12/2014 01:16



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 8/7/14
Date Analyzed: 8/7/14
Instrument: GC5A
Matrix: Soil
Project: #731626702; India Basin

WorkOrder: 1408242
BatchID: 93753
Extraction Method: SW3550B
Analytical Method: SW8082
Unit: mg/kg
Sample ID: MB/LCS-93753
1408222-001AMS/MSD

QC Summary Report for SW8082

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Aroclor1016	ND	-	0.050	-	-	-	-
Aroclor1221	ND	-	0.050	-	-	-	-
Aroclor1232	ND	-	0.050	-	-	-	-
Aroclor1242	ND	-	0.050	-	-	-	-
Aroclor1248	ND	-	0.050	-	-	-	-
Aroclor1254	ND	-	0.050	-	-	-	-
Aroclor1260	ND	0.181	0.050	0.15	-	121	70-130
PCBs, total	ND	-	0.050	-	-	-	-

Surrogate Recovery

Decachlorobiphenyl	0.0554	0.0567		0.050	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
Aroclor1260	0.168	0.168	0.15	ND	112	112	70-130	0	30
Surrogate Recovery									
Decachlorobiphenyl	0.0562	0.0558	0.050		112	112	70-130	0	30



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 8/6/14
Date Analyzed: 8/8/14
Instrument: GC16
Matrix: Soil
Project: #731626702; India Basin

WorkOrder: 1408242
BatchID: 93720
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/Kg
Sample ID: MB/LCS-93720
1408188-002AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	0.10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	0.0391	0.0050	0.050	-	78.2	61-115
Benzene	ND	0.0448	0.0050	0.050	-	89.6	75-126
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	0.206	0.050	0.20	-	103	63-125
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.0467	0.0050	0.050	-	93.4	80-118
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.0409	0.0040	0.050	-	81.8	74-121
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.0515	0.0040	0.050	-	103	68-122
1,1-Dichloroethene	ND	0.0553	0.0050	0.050	-	111	65-138
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-

(Cont.)



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 8/6/14
Date Analyzed: 8/8/14
Instrument: GC16
Matrix: Soil
Project: #731626702; India Basin

WorkOrder: 1408242
BatchID: 93720
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/Kg
Sample ID: MB/LCS-93720
1408188-002AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Diisopropyl ether (DIPE)	ND	0.0465	0.0050	0.050	-	93.1	68-117
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.0456	0.0050	0.050	-	91.1	67-116
Freon 113	ND	-	0.0050	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.0413	0.0050	0.050	-	82.6	66-118
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	0.0458	0.0050	0.050	-	91.6	84-129
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	0.0484	0.0050	0.050	-	96.8	82-130
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Xylenes, Total	ND	-	0.0050	-	-	-	-

Surrogate Recovery

Dibromofluoromethane	0.116	0.122	0.12	93	97	80-120
Toluene-d8	0.129	0.124	0.12	103	99	80-120
4-BFB	0.0114	0.0110	0.012	92	88	80-120

(Cont.)



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 8/6/14
Date Analyzed: 8/8/14
Instrument: GC16
Matrix: Soil
Project: #731626702; India Basin

WorkOrder: 1408242
BatchID: 93720
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/Kg
Sample ID: MB/LCS-93720
1408188-002AMS/MSD

QC Summary Report for SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	0.0320	0.0329	0.050	ND	64.1,F1	65.8,F1	70-130	2.62	30
Benzene	0.0319	0.0334	0.050	ND	63.8,F1	66.8,F1	70-130	4.71	30
t-Butyl alcohol (TBA)	0.144	0.154	0.20	ND	72.2	76.8	70-130	6.30	30
Chlorobenzene	0.0337	0.0344	0.050	ND	67.5,F1	68.9,F1	70-130	2.04	30
1,2-Dibromoethane (EDB)	0.0334	0.0342	0.050	ND	66.9,F1	68.4,F1	70-130	2.31	30
1,2-Dichloroethane (1,2-DCA)	0.0320	0.0331	0.050	ND	63.9,F1	66.2,F1	70-130	3.50	30
1,1-Dichloroethene	0.0345	0.0359	0.050	ND	69,F1	71.9	70-130	4.12	30
Diisopropyl ether (DIPE)	0.0330	0.0342	0.050	ND	66,F1	68.4,F1	70-130	3.61	30
Ethyl tert-butyl ether (ETBE)	0.0327	0.0338	0.050	ND	65.5,F1	67.7,F1	70-130	3.32	30
Methyl-t-butyl ether (MTBE)	0.0323	0.0340	0.050	ND	64.6,F1	67.9,F1	70-130	4.94	30
Toluene	0.0343	0.0351	0.050	ND	68.7,F1	70.2	70-130	2.24	30
Trichloroethene	0.0386	0.0400	0.050	ND	77.2	79.9	70-130	3.44	30
Surrogate Recovery									
Dibromofluoromethane	0.115	0.114	0.12		92	91	70-130	0.559	30
Toluene-d8	0.110	0.110	0.12		88	88	70-130	0	30
4-BFB	0.0112	0.0106	0.012		89	84	70-130	5.49	30



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 8/7/14
Date Analyzed: 8/8/14 - 8/9/14
Instrument: GC16
Matrix: Soil
Project: #731626702; India Basin

WorkOrder: 1408242
BatchID: 93770
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/Kg
Sample ID: MB/LCS-93770
1408242-008AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	0.10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	0.0397	0.0050	0.050	-	79.4	61-115
Benzene	ND	0.0464	0.0050	0.050	-	92.8	75-126
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	0.203	0.050	0.20	-	102	63-125
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.0480	0.0050	0.050	-	96.1	80-118
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.0408	0.0040	0.050	-	81.6	74-121
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.0505	0.0040	0.050	-	101	68-122
1,1-Dichloroethene	ND	0.0559	0.0050	0.050	-	112	65-138
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-

(Cont.)



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 8/7/14
Date Analyzed: 8/8/14 - 8/9/14
Instrument: GC16
Matrix: Soil
Project: #731626702; India Basin

WorkOrder: 1408242
BatchID: 93770
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/Kg
Sample ID: MB/LCS-93770
1408242-008AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Diisopropyl ether (DIPE)	ND	0.0477	0.0050	0.050	-	95.4	68-117
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.0463	0.0050	0.050	-	92.6	67-116
Freon 113	ND	-	0.0050	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.0418	0.0050	0.050	-	83.7	66-118
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	0.0478	0.0050	0.050	-	95.6	84-129
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	0.0490	0.0050	0.050	-	98	82-130
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Xylenes, Total	ND	-	0.0050	-	-	-	-

Surrogate Recovery

Dibromofluoromethane	0.118	0.119	0.12	94	95	80-120
Toluene-d8	0.127	0.125	0.12	101	100	80-120
4-BFB	0.0111	0.0112	0.012	89	89	80-120

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Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 8/7/14
Date Analyzed: 8/8/14 - 8/9/14
Instrument: GC16
Matrix: Soil
Project: #731626702; India Basin

WorkOrder: 1408242
BatchID: 93770
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/Kg
Sample ID: MB/LCS-93770
1408242-008AMS/MSD

QC Summary Report for SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	0.0345	0.0354	0.050	ND	69.1	70.8	70-130	2.60	30
Benzene	0.0391	0.0407	0.050	ND	78.3	81.3	70-130	3.82	30
t-Butyl alcohol (TBA)	0.173	0.180	0.20	ND	86.4	89.8	70-130	3.86	30
Chlorobenzene	0.0407	0.0429	0.050	ND	81.5	85.7	70-130	5.11	30
1,2-Dibromoethane (EDB)	0.0356	0.0362	0.050	ND	71.1	72.4	70-130	1.69	30
1,2-Dichloroethane (1,2-DCA)	0.0432	0.0443	0.050	ND	86.4	88.7	70-130	2.63	30
1,1-Dichloroethene	0.0474	0.0488	0.050	ND	94.9	97.5	70-130	2.78	30
Diisopropyl ether (DIPE)	0.0416	0.0429	0.050	ND	83.3	85.8	70-130	2.93	30
Ethyl tert-butyl ether (ETBE)	0.0402	0.0409	0.050	ND	80.4	81.9	70-130	1.75	30
Methyl-t-butyl ether (MTBE)	0.0361	0.0368	0.050	ND	72.2	73.7	70-130	2.08	30
Toluene	0.0394	0.0412	0.050	ND	78.7	82.3	70-130	4.48	30
Trichloroethene	0.0399	0.0419	0.050	ND	79.8	83.8	70-130	4.89	30
Surrogate Recovery									
Dibromofluoromethane	0.118	0.117	0.12		95	93	70-130	1.42	30
Toluene-d8	0.122	0.123	0.12		98	98	70-130	0	30
4-BFB	0.0113	0.0115	0.012		90	92	70-130	2.17	30



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 8/13/14
Date Analyzed: 8/13/14
Instrument: GC10
Matrix: Soil
Project: #731626702; India Basin

WorkOrder: 1408242
BatchID: 93996
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/Kg
Sample ID: MB/LCS-93996
1408456-016AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	0.10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	0.0411	0.0050	0.050	-	82.2	61-115
Benzene	ND	0.0466	0.0050	0.050	-	93.1	75-126
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	0.177	0.050	0.20	-	88.6	63-125
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.0472	0.0050	0.050	-	94.5	80-118
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.0456	0.0040	0.050	-	91.2	74-121
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.0470	0.0040	0.050	-	93.9	68-122
1,1-Dichloroethene	ND	0.0426	0.0050	0.050	-	85.3	65-138
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-

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Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 8/13/14
Date Analyzed: 8/13/14
Instrument: GC10
Matrix: Soil
Project: #731626702; India Basin

WorkOrder: 1408242
BatchID: 93996
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/Kg
Sample ID: MB/LCS-93996
1408456-016AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Diisopropyl ether (DIPE)	ND	0.0448	0.0050	0.050	-	89.7	68-117
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.0437	0.0050	0.050	-	87.4	67-116
Freon 113	ND	-	0.0050	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.0429	0.0050	0.050	-	85.9	66-118
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	0.0508	0.0050	0.050	-	102	84-129
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	0.0487	0.0050	0.050	-	97.4	82-130
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Xylenes, Total	ND	-	0.0050	-	-	-	-

Surrogate Recovery

Dibromofluoromethane	0.116	0.119	0.12	93	95	80-120
Toluene-d8	0.134	0.133	0.12	107	107	80-120
4-BFB	0.0128	0.0125	0.012	102	100	80-120

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Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 8/13/14
Date Analyzed: 8/13/14
Instrument: GC10
Matrix: Soil
Project: #731626702; India Basin

WorkOrder: 1408242
BatchID: 93996
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/Kg
Sample ID: MB/LCS-93996
1408456-016AMS/MSD

QC Summary Report for SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	0.0385	0.0385	0.050	ND	77.1	76.9	70-130	0.196	30
Benzene	0.0423	0.0427	0.050	ND	84.6	85.4	70-130	0.918	30
t-Butyl alcohol (TBA)	0.159	0.164	0.20	ND	79.7	82	70-130	2.91	30
Chlorobenzene	0.0422	0.0428	0.050	ND	84.3	85.6	70-130	1.47	30
1,2-Dibromoethane (EDB)	0.0424	0.0416	0.050	ND	84.7	83.2	70-130	1.84	30
1,2-Dichloroethane (1,2-DCA)	0.0434	0.0438	0.050	ND	86.8	87.7	70-130	0.964	30
1,1-Dichloroethene	0.0377	0.0381	0.050	ND	75.4	76.2	70-130	0.985	30
Diisopropyl ether (DIPE)	0.0424	0.0422	0.050	ND	84.7	84.4	70-130	0.357	30
Ethyl tert-butyl ether (ETBE)	0.0415	0.0414	0.050	ND	82.9	82.9	70-130	0	30
Methyl-t-butyl ether (MTBE)	0.0404	0.0408	0.050	ND	80.8	81.6	70-130	1.01	30
Toluene	0.0440	0.0444	0.050	ND	88	88.9	70-130	1.04	30
Trichloroethene	0.0440	0.0436	0.050	ND	88.1	87.2	70-130	1.06	30
Surrogate Recovery									
Dibromofluoromethane	0.122	0.120	0.12		98	96	70-130	1.58	30
Toluene-d8	0.131	0.130	0.12		105	104	70-130	0.634	30
4-BFB	0.0128	0.0128	0.012		102	103	70-130	0.729	30



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 8/12/14
Date Analyzed: 8/11/14
Instrument: GC10
Matrix: Water
Project: #731626702; India Basin

WorkOrder: 1408242
BatchID: 93921
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L
Sample ID: MB/LCS-93921
1408330-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	21.0	0.50	20	-	105	70-130
Benzene	ND	18.5	0.50	20	-	92.7	70-130
Bromobenzene	ND	-	0.50	-	-	-	-
Bromochloromethane	ND	-	0.50	-	-	-	-
Bromodichloromethane	ND	-	0.50	-	-	-	-
Bromoform	ND	-	0.50	-	-	-	-
Bromomethane	ND	-	0.50	-	-	-	-
2-Butanone (MEK)	ND	-	2.0	-	-	-	-
t-Butyl alcohol (TBA)	ND	78.7	2.0	80	-	98.4	70-130
n-Butyl benzene	ND	-	0.50	-	-	-	-
sec-Butyl benzene	ND	-	0.50	-	-	-	-
tert-Butyl benzene	ND	-	0.50	-	-	-	-
Carbon Disulfide	ND	-	0.50	-	-	-	-
Carbon Tetrachloride	ND	-	0.50	-	-	-	-
Chlorobenzene	ND	18.9	0.50	20	-	94.5	70-130
Chloroethane	ND	-	0.50	-	-	-	-
Chloroform	ND	-	0.50	-	-	-	-
Chloromethane	ND	-	0.50	-	-	-	-
2-Chlorotoluene	ND	-	0.50	-	-	-	-
4-Chlorotoluene	ND	-	0.50	-	-	-	-
Dibromochloromethane	ND	-	0.50	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.20	-	-	-	-
1,2-Dibromoethane (EDB)	ND	20.6	0.50	20	-	103	70-130
Dibromomethane	ND	-	0.50	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.50	-	-	-	-
Dichlorodifluoromethane	ND	-	0.50	-	-	-	-
1,1-Dichloroethane	ND	-	0.50	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	20.7	0.50	20	-	103	70-130
1,1-Dichloroethene	ND	18.0	0.50	20	-	89.9	70-130
cis-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
1,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,3-Dichloropropane	ND	-	0.50	-	-	-	-
2,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,1-Dichloropropene	ND	-	0.50	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.50	-	-	-	-

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Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 8/12/14
Date Analyzed: 8/11/14
Instrument: GC10
Matrix: Water
Project: #731626702; India Basin

WorkOrder: 1408242
BatchID: 93921
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L
Sample ID: MB/LCS-93921
1408330-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Diisopropyl ether (DIPE)	ND	20.2	0.50	20	-	101	70-130
Ethylbenzene	ND	-	0.50	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	20.7	0.50	20	-	104	70-130
Freon 113	ND	-	0.50	-	-	-	-
Hexachlorobutadiene	ND	-	0.50	-	-	-	-
Hexachloroethane	ND	-	0.50	-	-	-	-
2-Hexanone	ND	-	0.50	-	-	-	-
Isopropylbenzene	ND	-	0.50	-	-	-	-
4-Isopropyl toluene	ND	-	0.50	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	19.5	0.50	20	-	97.7	70-130
Methylene chloride	ND	-	0.50	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.50	-	-	-	-
Naphthalene	ND	-	0.50	-	-	-	-
n-Propyl benzene	ND	-	0.50	-	-	-	-
Styrene	ND	-	0.50	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
Tetrachloroethene	ND	-	0.50	-	-	-	-
Toluene	ND	20.2	0.50	20	-	101	70-130
1,2,3-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.50	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.50	-	-	-	-
Trichloroethene	ND	18.8	0.50	20	-	94.1	70-130
Trichlorofluoromethane	ND	-	0.50	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.50	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.50	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.50	-	-	-	-
Vinyl Chloride	ND	-	0.50	-	-	-	-
Xylenes, Total	ND	-	0.50	-	-	-	-

Surrogate Recovery

Dibromofluoromethane	24.2	25.3	25	97	101	70-130
Toluene-d8	24.7	26.4	25	99	106	70-130
4-BFB	2.57	2.69	2.5	103	108	70-130

(Cont.)



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 8/12/14
Date Analyzed: 8/11/14
Instrument: GC10
Matrix: Water
Project: #731626702; India Basin

WorkOrder: 1408242
BatchID: 93921
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L
Sample ID: MB/LCS-93921
1408330-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	21.1	22.9	20	ND	105	114	70-130	8.22	20
Benzene	19.0	18.3	20	ND	94.8	91.4	70-130	3.69	20
t-Butyl alcohol (TBA)	77.3	99.7	80	ND	96.6	125	70-130	25.3,F1	20
Chlorobenzene	19.7	18.3	20	ND	98.6	91.4	70-130	7.58	20
1,2-Dibromoethane (EDB)	22.0	21.8	20	ND	110	109	70-130	1.02	20
1,2-Dichloroethane (1,2-DCA)	20.4	21.5	20	ND	102	108	70-130	5.17	20
1,1-Dichloroethene	18.8	17.7	20	ND	93.9	88.6	70-130	5.86	20
Diisopropyl ether (DIPE)	20.4	21.1	20	ND	102	106	70-130	3.21	20
Ethyl tert-butyl ether (ETBE)	21.1	22.6	20	ND	106	113	70-130	6.57	20
Methyl-t-butyl ether (MTBE)	20.2	22.9	20	ND	101	114	70-130	12.7	20
Toluene	20.1	18.8	20	ND	100	93.8	70-130	6.84	20
Trichloroethene	19.4	17.7	20	ND	97.3	88.5	70-130	9.45	20

Surrogate Recovery

Dibromofluoromethane	25.6	26.1	25		103	104	70-130	1.67	20
Toluene-d8	25.2	25.5	25		101	102	70-130	1.14	20
4-BFB	2.37	2.42	2.5		95	97	70-130	1.71	20



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 8/7/14
Date Analyzed: 8/7/14 - 8/8/14
Instrument: GC21
Matrix: Soil
Project: #731626702; India Basin

WorkOrder: 1408242
BatchID: 93771
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg
Sample ID: MB/LCS-93771
1408231-001AMS/MSD

QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acenaphthene	ND	3.65	0.25	5	-	73	30-130
Acenaphthylene	ND	-	0.25	-	-	-	-
Acetochlor	ND	-	0.25	-	-	-	-
Anthracene	ND	-	0.25	-	-	-	-
Benzydine	ND	-	1.3	-	-	-	-
Benzo (a) anthracene	ND	-	0.25	-	-	-	-
Benzo (b) fluoranthene	ND	-	0.25	-	-	-	-
Benzo (k) fluoranthene	ND	-	0.25	-	-	-	-
Benzo (g,h,i) perylene	ND	-	0.25	-	-	-	-
Benzo (a) pyrene	ND	-	0.25	-	-	-	-
Benzyl Alcohol	ND	-	1.3	-	-	-	-
1,1-Biphenyl	ND	-	0.25	-	-	-	-
Bis (2-chloroethoxy) Methane	ND	-	0.25	-	-	-	-
Bis (2-chloroethyl) Ether	ND	-	0.25	-	-	-	-
Bis (2-chloroisopropyl) Ether	ND	-	0.25	-	-	-	-
Bis (2-ethylhexyl) Adipate	ND	-	0.25	-	-	-	-
Bis (2-ethylhexyl) Phthalate	ND	-	0.25	-	-	-	-
4-Bromophenyl Phenyl Ether	ND	-	0.25	-	-	-	-
Butylbenzyl Phthalate	ND	-	0.25	-	-	-	-
4-Chloroaniline	ND	-	0.25	-	-	-	-
4-Chloro-3-methylphenol	ND	4.69	0.25	5	-	93.7	30-130
2-Chloronaphthalene	ND	-	0.25	-	-	-	-
2-Chlorophenol	ND	4.56	0.25	5	-	91.1	30-130
4-Chlorophenyl Phenyl Ether	ND	-	0.25	-	-	-	-
Chrysene	ND	-	0.25	-	-	-	-
Dibenzo (a,h) anthracene	ND	-	0.25	-	-	-	-
Dibenzofuran	ND	-	0.25	-	-	-	-
Di-n-butyl Phthalate	ND	-	0.25	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.25	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.25	-	-	-	-
1,4-Dichlorobenzene	ND	3.67	0.25	5	-	73.5	30-130
3,3-Dichlorobenzidine	ND	-	0.50	-	-	-	-
2,4-Dichlorophenol	ND	-	0.25	-	-	-	-
Diethyl Phthalate	ND	-	0.25	-	-	-	-
2,4-Dimethylphenol	ND	-	0.25	-	-	-	-
Dimethyl Phthalate	ND	-	0.25	-	-	-	-
4,6-Dinitro-2-methylphenol	ND	-	1.3	-	-	-	-
2,4-Dinitrophenol	ND	-	6.3	-	-	-	-
2,4-Dinitrotoluene	ND	4.45	0.25	5	-	89	30-130
2,6-Dinitrotoluene	ND	-	0.25	-	-	-	-

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Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 8/7/14
Date Analyzed: 8/7/14 - 8/8/14
Instrument: GC21
Matrix: Soil
Project: #731626702; India Basin

WorkOrder: 1408242
BatchID: 93771
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg
Sample ID: MB/LCS-93771
1408231-001AMS/MSD

QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Di-n-octyl Phthalate	ND	-	0.50	-	-	-	-
1,2-Diphenylhydrazine	ND	-	0.25	-	-	-	-
Fluoranthene	ND	-	0.25	-	-	-	-
Fluorene	ND	-	0.25	-	-	-	-
Hexachlorobenzene	ND	-	0.25	-	-	-	-
Hexachlorobutadiene	ND	-	0.25	-	-	-	-
Hexachlorocyclopentadiene	ND	-	1.3	-	-	-	-
Hexachloroethane	ND	-	0.25	-	-	-	-
Indeno (1,2,3-cd) pyrene	ND	-	0.25	-	-	-	-
Isophorone	ND	-	0.25	-	-	-	-
2-Methylnaphthalene	ND	-	0.25	-	-	-	-
2-Methylphenol (o-Cresol)	ND	-	0.25	-	-	-	-
3 &/or 4-Methylphenol (m,p-Cresol)	ND	-	0.25	-	-	-	-
Naphthalene	ND	-	0.25	-	-	-	-
2-Nitroaniline	ND	-	1.3	-	-	-	-
3-Nitroaniline	ND	-	1.3	-	-	-	-
4-Nitroaniline	ND	-	1.3	-	-	-	-
Nitrobenzene	ND	-	0.25	-	-	-	-
2-Nitrophenol	ND	-	1.3	-	-	-	-
4-Nitrophenol	ND	3.58	1.3	5	-	71.6	30-130
N-Nitrosodiphenylamine	ND	-	0.25	-	-	-	-
N-Nitrosodi-n-propylamine	ND	3.67	0.25	5	-	73.4	30-130
Pentachlorophenol	ND	3.35	1.3	5	-	67	30-130
Phenanthrene	ND	-	0.25	-	-	-	-
Phenol	ND	4.31	0.25	5	-	86.2	30-130
Pyrene	ND	3.92	0.25	5	-	78.4	30-130
1,2,4-Trichlorobenzene	ND	4.25	0.25	5	-	84.9	30-130
2,4,5-Trichlorophenol	ND	-	0.25	-	-	-	-
2,4,6-Trichlorophenol	ND	-	0.25	-	-	-	-

Surrogate Recovery

2-Fluorophenol	4.66	3.62		5	93	72	30-130
Phenol-d5	4.46	3.44		5	89	69	30-130
Nitrobenzene-d5	4.56	3.72		5	91	74	30-130
2-Fluorobiphenyl	3.77	3.13		5	75	63	30-130
2,4,6-Tribromophenol	3.82	3.44		5	76	69	16-130
4-Terphenyl-d14	4.33	3.55		5	87	71	30-130

(Cont.)



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 8/7/14
Date Analyzed: 8/7/14 - 8/8/14
Instrument: GC21
Matrix: Soil
Project: #731626702; India Basin

WorkOrder: 1408242
BatchID: 93771
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg
Sample ID: MB/LCS-93771
1408231-001AMS/MSD

QC Summary Report for SW8270C

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Acenaphthene	NR	NR	0	ND<10	NR	NR	-	NR	
4-Chloro-3-methylphenol	NR	NR	0	ND<10	NR	NR	-	NR	
2-Chlorophenol	NR	NR	0	ND<10	NR	NR	-	NR	
1,4-Dichlorobenzene	NR	NR	0	ND<10	NR	NR	-	NR	
2,4-Dinitrotoluene	NR	NR	0	ND<10	NR	NR	-	NR	
4-Nitrophenol	NR	NR	0	ND<52	NR	NR	-	NR	
N-Nitrosodi-n-propylamine	NR	NR	0	ND<10	NR	NR	-	NR	
Pentachlorophenol	NR	NR	0	ND<52	NR	NR	-	NR	
Phenol	NR	NR	0	ND<10	NR	NR	-	NR	
Pyrene	NR	NR	0	ND<10	NR	NR	-	NR	
1,2,4-Trichlorobenzene	NR	NR	0	ND<10	NR	NR	-	NR	

Surrogate Recovery

2-Fluorophenol	NR	NR	0		NR	NR	-	NR	
Phenol-d5	NR	NR	0		NR	NR	-	NR	
Nitrobenzene-d5	NR	NR	0		NR	NR	-	NR	
2-Fluorobiphenyl	NR	NR	0		NR	NR	-	NR	
2,4,6-Tribromophenol	NR	NR	0		NR	NR	-	NR	
4-Terphenyl-d14	NR	NR	0		NR	NR	-	NR	



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 8/7/14
Date Analyzed: 8/8/14 - 8/11/14
Instrument: ICP-MS1, ICP-MS2
Matrix: Water
Project: #731626702; India Basin

WorkOrder: 1408242
BatchID: 93732
Extraction Method: E200.8
Analytical Method: E200.8
Unit: µg/L
Sample ID: MB/LCS-93732
1408210-001AMS/MSD

QC Summary Report for E200.8

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Antimony	ND	46.8	0.50	50	-	93.5	85-115
Arsenic	ND	51.7	0.50	50	-	103	85-115
Barium	ND	461	5.0	500	-	92.3	85-115
Beryllium	ND	48.3	0.50	50	-	96.7	85-115
Cadmium	ND	47.3	0.25	50	-	94.7	85-115
Chromium	ND	51.6	0.50	50	-	103	85-115
Cobalt	ND	49.8	0.50	50	-	99.6	85-115
Copper	ND	54.6	2.0	50	-	109	85-115
Lead	ND	48.4	0.50	50	-	96.8	85-115
Mercury	ND	1.27	0.025	1.25	-	101	85-115
Molybdenum	ND	47.0	0.50	50	-	93.9	85-115
Nickel	ND	54.1	0.50	50	-	108	85-115
Selenium	ND	51.2	0.50	50	-	102	85-115
Silver	ND	47.7	0.19	50	-	95.4	85-115
Thallium	ND	45.8	0.50	50	-	91.7	85-115
Vanadium	ND	50.8	0.50	50	-	102	85-115
Zinc	ND	540	15	500	-	108	85-115

Surrogate Recovery

Tb 350.917	680	688	750	91	92	70-130
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Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 8/7/14
Date Analyzed: 8/8/14 - 8/11/14
Instrument: ICP-MS1, ICP-MS2
Matrix: Water
Project: #731626702; India Basin

WorkOrder: 1408242
BatchID: 93732
Extraction Method: E200.8
Analytical Method: E200.8
Unit: µg/L
Sample ID: MB/LCS-93732
1408210-001AMS/MSD

QC Summary Report for E200.8

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Antimony	51.4	50.6	50	ND	103	101	70-130	1.71	20
Arsenic	53.4	53.6	50	1.427	104	104	70-130	0	20
Barium	522	512	500	12.90	102	99.8	70-130	1.88	20
Beryllium	47.3	48.0	50	ND	94.7	96.1	70-130	1.45	20
Cadmium	50.1	48.8	50	ND	100	97.6	70-130	2.69	20
Chromium	47.3	48.5	50	ND	94.6	97	70-130	2.49	20
Cobalt	46.6	46.7	50	0.5068	92.2	92.4	70-130	0.214	20
Copper	56.6	56.1	50	5.421	102	101	70-130	0.745	20
Lead	51.6	50.6	50	ND	103	101	70-130	2.00	20
Mercury	1.40	1.38	1.25	ND	112	110	70-130	1.87	20
Molybdenum	57.8	57.8	50	5.749	104	104	70-130	0	20
Nickel	53.8	54.3	50	3.676	100	101	70-130	0.999	20
Selenium	52.4	51.4	50	0.5935	104	102	70-130	1.97	20
Silver	50.2	48.8	50	ND	100	97.5	70-130	2.89	20
Thallium	49.9	49.0	50	ND	99.8	98	70-130	1.90	20
Vanadium	48.7	50.2	50	0.6160	96.2	99.1	70-130	2.95	20
Zinc	543	534	500	42.56	100	98.3	70-130	1.74	20

Surrogate Recovery

Tb 350.917	744	837	750		99	112	70-130	11.8	20
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Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 8/7/14
Date Analyzed: 8/8/14
Instrument: ICP-MS1
Matrix: Soil
Project: #731626702; India Basin

WorkOrder: 1408242
BatchID: 93752
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-93752
1408222-001AMS/MSD

QC Summary Report for SW6020

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Antimony	ND	47.2	0.50	50	-	94.3	75-125
Arsenic	ND	55.1	0.50	50	-	110	75-125
Barium	ND	491	5.0	500	-	98.3	75-125
Beryllium	ND	47.1	0.50	50	-	94.2	75-125
Cadmium	ND	50.2	0.25	50	-	100	75-125
Chromium	ND	54.8	0.50	50	-	110	75-125
Cobalt	ND	53.6	0.50	50	-	107	75-125
Copper	ND	57.4	0.50	50	-	115	75-125
Lead	ND	50.7	0.50	50	-	101	75-125
Mercury	ND	1.05	0.050	1.25	-	83.9	75-125
Molybdenum	ND	48.0	0.50	50	-	95.9	75-125
Nickel	ND	58.0	0.50	50	-	116	75-125
Selenium	ND	61.3	0.50	50	-	123	75-125
Silver	ND	41.5	0.50	50	-	83	75-125
Thallium	ND	47.5	0.50	50	-	95	75-125
Vanadium	ND	54.7	0.50	50	-	109	75-125
Zinc	ND	559	5.0	500	-	112	75-125
Surrogate Recovery							
Tb 350.917	567	479		500	113	96	70-130

(Cont.)



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 8/7/14
Date Analyzed: 8/8/14
Instrument: ICP-MS1
Matrix: Soil
Project: #731626702; India Basin

WorkOrder: 1408242
BatchID: 93752
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-93752
1408222-001AMS/MSD

QC Summary Report for SW6020

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Antimony	56.2	53.2	50	ND	112	106	75-125	5.52	20
Arsenic	56.8	54.8	50	1.908	110	106	75-125	3.66	20
Barium	941	860	500	241.7	140,F1	124	75-125	9.01	20
Beryllium	56.9	56.0	50	ND	114	112	75-125	1.43	20
Cadmium	57.5	54.8	50	ND	115	110	75-125	4.81	20
Chromium	63.4	58.6	50	7.832	111	102	75-125	7.79	20
Cobalt	91.3	96.3	50	28.62	125	135,F1	75-125	5.32	20
Copper	83.9	78.1	50	16.52	135,F1	123	75-125	7.16	20
Lead	61.3	59.1	50	3.348	116	112	75-125	3.54	20
Mercury	1.23	1.15	1.25	ND	98.1	91.8	75-125	6.66	20
Molybdenum	56.9	55.0	50	ND	114	110	75-125	3.47	20
Nickel	71.3	67.2	50	7.668	127,F1	119	75-125	6.01	20
Selenium	57.6	55.2	50	ND	115	110	75-125	4.26	20
Silver	46.2	44.3	50	ND	92.4	88.6	75-125	4.24	20
Thallium	55.3	52.6	50	ND	111	105	75-125	5.02	20
Vanadium	NR	NR	50	79.77	NR	NR	75-125	NR	20
Zinc	648	609	500	ND	126,F1	118	75-125	6.24	20

Surrogate Recovery

Tb 350.917	574	536	500		115	107	70-130	6.77	20
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Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 8/7/14
Date Analyzed: 8/11/14
Instrument: ICP-MS2
Matrix: Soil
Project: #731626702; India Basin

WorkOrder: 1408242
BatchID: 93769
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-93769
1408242-020AMS/MSD

QC Summary Report for SW6020

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Antimony	ND	48.8	0.50	50	-	97.5	75-125
Arsenic	ND	52.3	0.50	50	-	105	75-125
Barium	ND	494	5.0	500	-	98.8	75-125
Beryllium	ND	51.9	0.50	50	-	104	75-125
Cadmium	ND	50.7	0.25	50	-	101	75-125
Chromium	ND	51.4	0.50	50	-	103	75-125
Cobalt	ND	52.6	0.50	50	-	105	75-125
Copper	ND	53.0	0.50	50	-	106	75-125
Lead	ND	52.0	0.50	50	-	104	75-125
Mercury	ND	1.10	0.050	1.25	-	88.1	75-125
Molybdenum	ND	47.9	0.50	50	-	95.9	75-125
Nickel	ND	52.9	0.50	50	-	106	75-125
Selenium	ND	51.1	0.50	50	-	102	75-125
Silver	ND	41.3	0.50	50	-	82.5	75-125
Thallium	ND	50.9	0.50	50	-	102	75-125
Vanadium	ND	52.3	0.50	50	-	105	75-125
Zinc	ND	525	5.0	500	-	105	75-125
Surrogate Recovery							
Tb 350.917	512	491		500	102	98	70-130

(Cont.)



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 8/7/14
Date Analyzed: 8/11/14
Instrument: ICP-MS2
Matrix: Soil
Project: #731626702; India Basin

WorkOrder: 1408242
BatchID: 93769
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-93769
1408242-020AMS/MSD

QC Summary Report for SW6020

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Antimony	52.4	48.6	50	3.6	97.6	90	75-125	7.53	20
Arsenic	54.3	54.2	50	6.4	95.7	95.6	75-125	0.147	20
Barium	571	559	500	90	96.3	93.9	75-125	2.16	20
Beryllium	52.6	50.4	50	ND	105	101	75-125	4.14	20
Cadmium	52.1	51.8	50	6.035	92.2	91.5	75-125	0.635	20
Chromium	NR	NR	50	85.46	NR	NR	75-125	NR	20
Cobalt	55.6	57.6	50	11	89.8	93.8	75-125	3.55	20
Copper	NR	NR	50	110	NR	NR	75-125	NR	20
Lead	NR	NR	50	179.5	NR	NR	75-125	NR	20
Mercury	NR	NR	1.25	2.2	NR	NR	75-125	NR	20
Molybdenum	50.2	46.8	50	0.69	99.1	92.3	75-125	6.98	20
Nickel	NR	NR	50	111.2	NR	NR	75-125	NR	20
Selenium	50.4	51.4	50	ND	101	103	75-125	2.02	20
Silver	39.8	39.0	50	1.3	77.1	75.4	75-125	2.18	20
Thallium	47.2	46.5	50	ND	94.4	92.9	75-125	1.54	20
Vanadium	NR	NR	50	59	NR	NR	75-125	NR	20
Zinc	684	708	500	269.1	83	87.9	75-125	3.52	20

Surrogate Recovery

Tb 350.917	469	462	500		94	92	70-130	1.61	20
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Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 8/11/14
Date Analyzed: 8/11/14
Instrument: SKALAR
Matrix: Soil
Project: #731626702; India Basin

WorkOrder: 1408242
BatchID: 93874
Extraction Method: SM4500-CN⁻ E
Analytical Method: SM4500-CN⁻ ABCE
Unit: mg/Kg
Sample ID: MB/LCS-93874
1408242-002AMS/MSD

QC Summary Report for SM4500-CN⁻ ABCE

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Total Cyanide	ND	0.741	0.10	0.80	-	92.7	85-115

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Total Cyanide	0.869	0.751	0.80	0.2130	82	67.2,F1	80-120	14.6	20



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 8/7/14
Date Analyzed: 8/7/14
Instrument: GC19
Matrix: Soil
Project: #731626702; India Basin

WorkOrder: 1408242
BatchID: 93744
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-93744
1408214-001AMS/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	0.543	0.40	0.60	-	90.6	70-130
MTBE	ND	0.0929	0.050	0.10	-	92.9	70-130
Benzene	ND	0.106	0.0050	0.10	-	106	70-130
Toluene	ND	0.106	0.0050	0.10	-	106	70-130
Ethylbenzene	ND	0.104	0.0050	0.10	-	104	70-130
Xylenes	ND	0.326	0.0050	0.30	-	109	70-130

Surrogate Recovery

2-Fluorotoluene	0.0993	0.102		0.10	99	102	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
TPH(btex)	0.516	0.514	0.60	ND	85.9	85.7	70-130	0.238	20
MTBE	0.0870	0.0870	0.10	ND	87	86.9	70-130	0.0444	20
Benzene	0.0910	0.0961	0.10	ND	91	96.1	70-130	5.53	20
Toluene	0.0930	0.0971	0.10	ND	93	97.1	70-130	4.37	20
Ethylbenzene	0.0934	0.0958	0.10	ND	93.4	95.9	70-130	2.63	20
Xylenes	0.296	0.301	0.30	ND	98.7	100	70-130	1.51	20

Surrogate Recovery

2-Fluorotoluene	0.0901	0.0961	0.10		90	96	70-130	6.37	20
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Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 8/7/14
Date Analyzed: 8/8/14
Instrument: GC19
Matrix: Soil
Project: #731626702; India Basin

WorkOrder: 1408242
BatchID: 93768
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-93768
1408242-026AMS/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	0.546	0.40	0.60	-	90.9	70-130
MTBE	ND	0.0912	0.050	0.10	-	91.2	70-130
Benzene	ND	0.104	0.0050	0.10	-	104	70-130
Toluene	ND	0.105	0.0050	0.10	-	105	70-130
Ethylbenzene	ND	0.104	0.0050	0.10	-	104	70-130
Xylenes	ND	0.330	0.0050	0.30	-	110	70-130

Surrogate Recovery

2-Fluorotoluene	0.106	0.103		0.10	106	103	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
TPH(btex)	0.506	0.519	0.60	ND	84.3	86.6	70-130	2.63	20
MTBE	0.0893	0.0876	0.10	ND	89.3	87.6	70-130	1.95	20
Benzene	0.0926	0.0929	0.10	ND	92.6	92.9	70-130	0.398	20
Toluene	0.0938	0.0952	0.10	ND	93.8	95.2	70-130	1.57	20
Ethylbenzene	0.0939	0.0937	0.10	ND	93.9	93.7	70-130	0.163	20
Xylenes	0.295	0.294	0.30	ND	98.4	97.9	70-130	0.470	20

Surrogate Recovery

2-Fluorotoluene	0.0918	0.0927	0.10		92	93	70-130	1.01	20
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Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 8/11/14
Date Analyzed: 8/12/14
Instrument: GC19
Matrix: Soil
Project: #731626702; India Basin

WorkOrder: 1408242
BatchID: 93890
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-93890
1408315-075AMS/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	0.567	0.40	0.60	-	94.5	70-130
MTBE	ND	0.0868	0.050	0.10	-	86.8	70-130
Benzene	ND	0.103	0.0050	0.10	-	103	70-130
Toluene	ND	0.104	0.0050	0.10	-	104	70-130
Ethylbenzene	ND	0.102	0.0050	0.10	-	102	70-130
Xylenes	ND	0.323	0.0050	0.30	-	108	70-130

Surrogate Recovery

2-Fluorotoluene	0.104	0.103		0.10	105	103	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
TPH(btex)	0.502	0.523	0.60	ND	83.7	87.1	70-130	3.96	20
MTBE	0.0767	0.0823	0.10	ND	76.7	82.3	70-130	7.01	20
Benzene	0.0940	0.0954	0.10	ND	94	95.4	70-130	1.49	20
Toluene	0.0956	0.0967	0.10	ND	95.6	96.7	70-130	1.12	20
Ethylbenzene	0.0951	0.0960	0.10	ND	95.1	96.1	70-130	0.985	20
Xylenes	0.302	0.306	0.30	ND	101	102	70-130	1.59	20

Surrogate Recovery

2-Fluorotoluene	0.0950	0.0955	0.10		95	96	70-130	0.487	20
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(Cont.)



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 8/13/14
Date Analyzed: 8/13/14 - 8/14/14
Instrument: GC19
Matrix: Soil
Project: #731626702; India Basin

WorkOrder: 1408242
BatchID: 93966
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-93966
1408389-002AMS/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	0.563	0.40	0.60	-	93.8	70-130
MTBE	ND	0.0882	0.050	0.10	-	88.2	70-130
Benzene	ND	0.108	0.0050	0.10	-	108	70-130
Toluene	ND	0.107	0.0050	0.10	-	107	70-130
Ethylbenzene	ND	0.105	0.0050	0.10	-	105	70-130
Xylenes	ND	0.329	0.0050	0.30	-	110	70-130

Surrogate Recovery

2-Fluorotoluene	0.104	0.106		0.10	104	106	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
TPH(btex)	0.488	0.516	0.60	ND	81.3	86.1	70-130	5.76	20
MTBE	0.0839	0.0838	0.10	ND	83.9	83.8	70-130	0.0871	20
Benzene	0.0966	0.0985	0.10	ND	96.7	98.5	70-130	1.87	20
Toluene	0.0968	0.0995	0.10	ND	96.8	99.5	70-130	2.77	20
Ethylbenzene	0.0957	0.0988	0.10	ND	95.7	98.8	70-130	3.20	20
Xylenes	0.300	0.310	0.30	ND	100	103	70-130	3.26	20

Surrogate Recovery

2-Fluorotoluene	0.0957	0.0985	0.10		96	98	70-130	2.85	20
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Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 8/11/14
Date Analyzed: 8/8/14
Instrument: GC3
Matrix: Water
Project: #731626702; India Basin

WorkOrder: 1408242
BatchID: 93866
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: µg/L
Sample ID: MB/LCS-93866
1408257-001EMS/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	62.2	40	60	-	104	70-130
MTBE	ND	11.2	5.0	10	-	111	70-130
Benzene	ND	9.99	0.50	10	-	99.9	70-130
Toluene	ND	10.1	0.50	10	-	101	70-130
Ethylbenzene	ND	10.3	0.50	10	-	103	70-130
Xylenes	ND	31.2	0.50	30	-	104	70-130

Surrogate Recovery

aaa-TFT_2	9.52	9.36		10	95	94	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
TPH(btex)	61.4	62.9	60	ND	102	105	70-130	2.38	20
MTBE	10.9	10.9	10	ND	109	109	70-130	0	20
Benzene	9.74	9.91	10	ND	97.4	99.1	70-130	1.67	20
Toluene	9.89	9.94	10	ND	98.9	99.3	70-130	0.432	20
Ethylbenzene	9.88	10.0	10	ND	98.8	100	70-130	1.44	20
Xylenes	30.1	30.5	30	ND	100	102	70-130	1.28	20

Surrogate Recovery

aaa-TFT_2	9.38	9.34	10		94	93	70-130	0.392	20
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Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 8/7/14
Date Analyzed: 8/8/14
Instrument: ICP-JY
Matrix: Soil
Project: #731626702; India Basin

WorkOrder: 1408242
BatchID: 93772
Extraction Method: SW3050B
Analytical Method: SW6010B
Unit: mg/Kg
Sample ID: MB/LCS-93772
1408242-005AMS/MSD

QC Summary Report for SW6010B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Lead	ND	51.2	5.0	50	-	102	75-125
Surrogate Recovery							
Tb 350.917	576	522		500	115	104	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Lead	132	135	50	90.25	84.5	89.7	75-125	1.94	25
Surrogate Recovery									
Tb 350.917	509	531	500		102	106	70-130	4.28	20



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 8/13/14 - 8/14/14
Date Analyzed: 8/13/14 - 8/14/14
Instrument: WetChem
Matrix: Soil
Project: #731626702; India Basin

WorkOrder: 1408242
BatchID: 93997
Extraction Method: SW9045D
Analytical Method: SW9045D
Test Method: SW9045D (pH)

QC Summary Report for pH

Lab ID	Analyte	Reporting Units	Sample Result	Sample DF	Dup / Serial Dilution Result	Dup / Serial Dilution DF	Precisi on	Acceptance Criteria
1408242-002A	pH	±, pH units @ 25°C	8.79	1	8.80	1	0.01	0.1



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 8/12/14
Date Analyzed: 8/12/14
Instrument: SPECTROPHOTOMETER
Matrix: Soil
Project: #731626702; India Basin

WorkOrder: 1408242
BatchID: 93929
Extraction Method: SW9030A/E376.2
Analytical Method: SW9030A/E376.2
Unit: mg/Kg
Sample ID: MB/LCS-93929
1408242-002AMS/MSD

QC Summary Report for SW9030A/E376.2

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Sulfide	ND	50.4	10	50	-	101	80-120

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Sulfide	ND	ND	50	ND	87.2	87.3	75-125	0.0737	20



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 8/6/14
Date Analyzed: 8/7/14
Instrument: GC6B
Matrix: Soil
Project: #731626702; India Basin

WorkOrder: 1408242
BatchID: 93721
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg
Sample ID: MB/LCS-93721
1408188-012AMS/MSD

QC Summary Report for SW8015B

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

Surrogate Recovery

C9	29.9	29.4		25	120	117	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
TPH-Diesel (C10-C23)	57.5	70.7	40	26.03	78.6,F1	112,F1	70-130	20.6	30

Surrogate Recovery

C9	25.3	24.9	25		101	100	70-130	1.60	30
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(Cont.)



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 8/7/14
Date Analyzed: 8/9/14
Instrument: GC6B
Matrix: Soil
Project: #731626702; India Basin

WorkOrder: 1408242
BatchID: 93767
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg
Sample ID: MB/LCS-93767
1408242-017AMS/MSD

QC Summary Report for SW8015B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	47.9	1.0	40	-	120	70-130
Surrogate Recovery							
C9	29.0	29.2		25	116	117	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	0	20	NR	NR	-	NR	
Surrogate Recovery									
C9	NR	NR	0		NR	NR	-	NR	

(Cont.)



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 8/11/14
Date Analyzed: 8/12/14
Instrument: GC6A
Matrix: Soil
Project: #731626702; India Basin

WorkOrder: 1408242
BatchID: 93882
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg
Sample ID: MB/LCS-93882
1408316-002AMS/MSD

QC Summary Report for SW8015B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	41.5	1.0	40	-	104	70-130
Surrogate Recovery							
C9	24.7	20.0		25	99	80	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	0	12	NR	NR	-	NR	
Surrogate Recovery									
C9	NR	NR	0		NR	NR	-	NR	



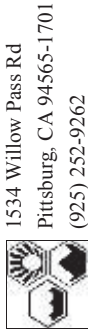
Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 8/7/14
Date Analyzed: 8/8/14 - 8/9/14
Instrument: GC6B, GC9a
Matrix: Water
Project: #731626702; India Basin

WorkOrder: 1408242
BatchID: 93764
Extraction Method: SW3510C
Analytical Method: SW8015B
Unit: µg/L
Sample ID: MB/LCS-93764

QC Summary Report for SW8015B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	1240	50	1000	-	125	70-130
Surrogate Recovery							
C9	621	764		625	99	122	70-130



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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1408242 ClientCode: TWRf

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Report to:

Peter Cusack
Treadwell & Rollo
555 Montgomery St., Suite 1300
San Francisco, CA 94111
(415) 955-5200 FAX: (415) 955-9041

Email: pcusack@langan.com
cc/3rd Party:
PO: ProjectNo: #731626702; India Basin

Bill to:

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

Requested TAT: 5 days

Date Received: 08/07/2014
Date Printed: 08/21/2014

			Requested Tests (See legend below)													
Lab ID	Client ID	Matrix	Collection Date	Hold	1	2	3	4	5	6	7	8	9	10	11	12
1408242-001	EB-1-1.5	Soil	8/6/2014 8:20	☐							A		A			
1408242-002	EB-1-3.0	Soil	8/6/2014 8:25	☐	A	A		A	A			A	A		A	
1408242-005	EB-1-10	Soil	8/6/2014 8:40	☐									A			A
1408242-006	EB-2-1.5	Soil	8/6/2014 9:20	☐	A	A		A			A		A			
1408242-008	EB-2-5.0	Soil	8/6/2014 9:35	☐		A		A							A	
1408242-011	EB-2-15	Soil	8/6/2014 9:55	☐		A		A					A		A	
1408242-012	EB-3-1.5	Soil	8/5/2014 11:50	☐									A		A	
1408242-013	EB-3-3.0	Soil	8/5/2014 11:55	☐							A		A			
1408242-014	EB-3-5.0	Soil	8/5/2014 12:00	☐		A		A	A			A	A		A	
1408242-017	EB-4-1.5	Soil	8/5/2014 10:45	☐									A		A	
1408242-018	EB-4-3.0	Soil	8/5/2014 10:50	☐							A		A			
1408242-020	EB-4-7.5	Soil	8/5/2014 11:05	☐	A	A		A					A		A	
1408242-022	EB-5-1.5	Soil	8/5/2014 13:25	☐									A			A
1408242-024	EB-5-5.0	Soil	8/5/2014 14:15	☐									A		A	
1408242-026	EB-5-10	Soil	8/5/2014 14:35	☐									A		A	
1408242-027	EB-5-15	Soil	8/5/2014 14:40	☐	A	A		A			A		A			

Test Legend:

1	8082A_PCB_S	2	8260B_S	3	8260B_W	4	8270D_S	5	ASBESTOS_E600PLM_S
6	CAM17(T)MS_W	7	CAM17MS_S	8	CN_TOTAL_S	9	G-MBTX_S	10	G-MBTX_W
11	LUFTMS_S	12	PB_S						

The following SampleIDs: 001A, 002A, 005A, 006A, 011A, 012A, 013A, 014A, 017A, 018A, 020A, 022A, 024A, 026A, 027A, 029A, 030A, 032A, 035A, 036A, 038A, 040A contain testgroup.

Prepared by: Jena Alfaro

Comments: SEND HARD COPY

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: 1408242 ClientCode: TWRP

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Report to:

Peter Cusack
Treadwell & Rollo
555 Montgomery St., Suite 1300
San Francisco, CA 94111
(415) 955-5200 FAX: (415) 955-9041

Email: pcusack@langan.com
cc/3rd Party:
PO: ProjectNo: #731626702; India Basin

Bill to:

Accounts Payable
Treadwell & Rollo
555 Montgomery St., Suite 1300
San Francisco, CA 94111
Requested TAT: 5 days
Date Received: 08/07/2014
Date Printed: 08/21/2014

					Requested Tests (See legend below)											
Lab ID	Client ID	Matrix	Collection Date	Hold	1	2	3	4	5	6	7	8	9	10	11	12
1408242-029	EB-6-3.0	Soil	8/5/2014 8:45	☐									A		A	
1408242-030	EB-6-5.0	Soil	8/5/2014 8:50	☐									A		A	
1408242-032	EB-6-10	Soil	8/5/2014 9:00	☐	A	A		A	A		A	A	A			
1408242-035	EB-7-3.0	Soil	8/5/2014 10:00	☐							A		A			
1408242-036	EB-7-5.0	Soil	8/5/2014 10:05	☐									A		A	
1408242-038	EB-7-10	Soil	8/5/2014 10:15	☐	A	A		A			A		A			
1408242-040	EB-2-GW	Water	8/6/2014 10:15	☐			B			C				A		

Test Legend:

1	8082A_PCB_S	2	8260B_S	3	8260B_W	4	8270D_S	5	ASBESTOS_E600PLM_S
6	CAM17(T)MS_W	7	CAM17MS_S	8	CN_TOTAL_S	9	G-MBTX_S	10	G-MBTX_W
11	LUFTMS_S	12	PB_S						

The following SampleIDs: 001A, 002A, 005A, 006A, 011A, 012A, 013A, 014A, 017A, 018A, 020A, 022A, 024A, 026A, 027A, 029A, 030A, 032A, 035A, 036A, 038A, 040A contain testgroup.

Prepared by: Jena Alfaro

Comments: SEND HARD COPY

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1408242 ClientCode: TWRF

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Report to:

Peter Cusack
Treadwell & Rollo
555 Montgomery St., Suite 1300
San Francisco, CA 94111
(415) 955-5200 FAX: (415) 955-9041

Email: pcusack@langan.com
cc/3rd Party:
PO:
ProjectNo: #731626702; India Basin

Bill to:

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

Requested TAT: 5 days

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)														
					13	14	15	16	17	18	19	20	21	22	23	24			
1408242-001	EB-1-1.5	Soil	8/6/2014 8:20	☐															
1408242-002	EB-1-3.0	Soil	8/6/2014 8:25	☐	A	A													
1408242-005	EB-1-10	Soil	8/6/2014 8:40	☐															
1408242-006	EB-2-1.5	Soil	8/6/2014 9:20	☐															
1408242-008	EB-2-5.0	Soil	8/6/2014 9:35	☐															
1408242-011	EB-2-15	Soil	8/6/2014 9:55	☐															
1408242-012	EB-3-1.5	Soil	8/5/2014 11:50	☐															
1408242-013	EB-3-3.0	Soil	8/5/2014 11:55	☐															
1408242-014	EB-3-5.0	Soil	8/5/2014 12:00	☐	A	A													
1408242-017	EB-4-1.5	Soil	8/5/2014 10:45	☐															
1408242-018	EB-4-3.0	Soil	8/5/2014 10:50	☐															
1408242-020	EB-4-7.5	Soil	8/5/2014 11:05	☐															
1408242-022	EB-5-1.5	Soil	8/5/2014 13:25	☐															
1408242-024	EB-5-5.0	Soil	8/5/2014 14:15	☐															
1408242-026	EB-5-10	Soil	8/5/2014 14:35	☐															
1408242-027	EB-5-15	Soil	8/5/2014 14:40	☐															

Test Legend:

13	PH_S	14	SULFIDE_S	15	16	17
18		19		20	21	22
23		24				

The following SampleIDs: 001A, 002A, 005A, 006A, 011A, 012A, 013A, 014A, 017A, 018A, 020A, 022A, 024A, 026A, 027A, 029A, 030A, 032A, 035A, 036A, 038A, 040A contain testgroup.

Prepared by: Jena Alfaro

Comments: SEND HARD COPY

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
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CHAIN-OF-CUSTODY RECORD

WorkOrder: 1408242 ClientCode: TWRF

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Report to:

Peter Cusack
Treadwell & Rollo
555 Montgomery St., Suite 1300
San Francisco, CA 94111
(415) 955-5200 FAX: (415) 955-9041

Email: pcusack@langan.com
cc/3rd Party:
PO: ProjectNo: #731626702; India Basin

Bill to:

Accounts Payable
Treadwell & Rollo
555 Montgomery St., Suite 1300
San Francisco, CA 94111
Requested TAT: 5 days
Date Received: 08/07/2014
Date Printed: 08/21/2014

				Requested Tests (See legend below)												
Lab ID	Client ID	Matrix	Collection Date	Hold	13	14	15	16	17	18	19	20	21	22	23	24
1408242-029	EB-6-3.0	Soil	8/5/2014 8:45	☐												
1408242-030	EB-6-5.0	Soil	8/5/2014 8:50	☐												
1408242-032	EB-6-10	Soil	8/5/2014 9:00	☐	A	A										
1408242-035	EB-7-3.0	Soil	8/5/2014 10:00	☐												
1408242-036	EB-7-5.0	Soil	8/5/2014 10:05	☐												
1408242-038	EB-7-10	Soil	8/5/2014 10:15	☐												
1408242-040	EB-2-GW	Water	8/6/2014 10:15	☐												

Test Legend:

13	PH_S	14	SULFIDE_S	15	16	17
18		19		20	21	22
23		24				

The following SampleIDs: 001A, 002A, 005A, 006A, 011A, 012A, 013A, 014A, 017A, 018A, 020A, 022A, 024A, 026A, 027A, 029A, 030A, 032A, 035A, 036A, 038A, 040A contain testgroup.

Prepared by: Jena Alfaro

Comments: SEND HARD COPY

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.



McC Campbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

WORK ORDER SUMMARY

Client Name: TREADWELL & ROLLO

Work Order: 1408242

Project: #731626702; India Basin

QC Level: LEVEL 2

Date Received: 8/7/2014

Comments: SEND HARD COPY

Contact's Email: pcusack@langan.com

Client Contact: Peter Cusack

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Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1408242-001A	EB-1-1.5	Soil	Multi-Range TPH(g,d,mo) SW6020 (CAM 17)	1	Acetate Liner	☐	8/6/2014 8:20	5 days		☐	
1408242-002A	EB-1-3.0	Soil	SW9030A/E376.2 (Sulfide) SW9045D (pH) SW6020 (LUFT) Multi-Range TPH(g,d,mo) Cyanide, Total Asbestos - PLM SW8270C (SVOCs) SW8260B (VOCs) SW8082 (PCBs Only)	1	Acetate Liner	☐	8/6/2014 8:25	5 days		☐	SubOut
1408242-003A	EB-1-5.0	Soil		1	Acetate Liner	☐	8/6/2014 8:35			☒	
1408242-004A	EB-1-7.5	Soil		1	Acetate Liner	☐	8/6/2014 8:35			☒	
1408242-005A	EB-1-10	Soil	SW6010B (Lead) Multi-Range TPH(g,d,mo)	1	Acetate Liner	☐	8/6/2014 8:40	5 days		☐	
1408242-006A	EB-2-1.5	Soil	Multi-Range TPH(g,d,mo) SW6020 (CAM 17)	1	Acetate Liner	☐	8/6/2014 9:20	5 days		☐	
						☐		5 days		☐	

*** NOTE: STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).**

Bottle Legend:

250mL HDPE w/ HNO3 = 250mL HDPE Bottle w/ HNO3

Acetate Liner = Acetate Liner

Short Stainless Tube =

VOA w/ HCl = 43mL VOA w/ HCl



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http://www.mcccampbell.com / E-mail: main@mcccampbell.com

WORK ORDER SUMMARY

Client Name: TREADWELL & ROLLO

QC Level: LEVEL 2

Work Order: 1408242

Project: #731626702; India Basin

Client Contact: Peter Cusack

Date Received: 8/7/2014

Comments: SEND HARD COPY

Contact's Email: pcusack@langan.com

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1408242-006A	EB-2-1.5	Soil	SW8270C (SVOCs)	1	Acetate Liner	☐	8/6/2014 9:20	5 days	☐	☐	
			SW8260B (VOCs)			☐		5 days	☐	☐	
			SW8082 (PCBs Only)			☐		5 days	☐	☐	
1408242-007A	EB-2-3.0	Soil		1	Acetate Liner	☐	8/6/2014 9:25		☐	☒	
1408242-008A	EB-2-5.0	Soil	SW6020 (LUFT)	1	Acetate Liner	☐	8/6/2014 9:35	5 days	☐	☐	
			SW8270C (SVOCs)			☐		5 days	☐	☐	
			SW8260B (VOCs)			☐		5 days	☐	☐	
1408242-009A	EB-2-7.5	Soil		1	Acetate Liner	☐	8/6/2014 9:40		☐	☒	
1408242-010A	EB-2-10	Soil		1	Acetate Liner	☐	8/6/2014 9:50		☐	☒	
1408242-011A	EB-2-15	Soil	SW6020 (LUFT)	1	Acetate Liner	☐	8/6/2014 9:55	5 days	☐	☐	
			Multi-Range TPH(g,d,mo)			☐		5 days	☐	☐	
			SW8270C (SVOCs)			☐		5 days	☐	☐	
			SW8260B (VOCs)			☐		5 days	☐	☐	
1408242-012A	EB-3-1.5	Soil	SW6020 (LUFT)	1	Acetate Liner	☐	8/5/2014 11:50	5 days	☐	☐	
			Multi-Range TPH(g,d,mo)			☐		5 days	☐	☐	
1408242-013A	EB-3-3.0	Soil	Multi-Range TPH(g,d,mo)	1	Acetate Liner	☐	8/5/2014 11:55	5 days	☐	☐	
			SW6020 (CAM 17)			☐		5 days	☐	☐	

*** NOTE: STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).**

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WORK ORDER SUMMARY

Client Name: TREADWELL & ROLLO

Work Order: 1408242

Project: #731626702; India Basin

QC Level: LEVEL 2

Date Received: 8/7/2014

Comments: SEND HARD COPY

Contact's Email: pcusack@langan.com

Client Contact: Peter Cusack

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☐ Excel

☐ Fax

☒ Email

☐ HardCopy

☐ ThirdParty

☐ J-flag

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1408242-014A	EB-3-5.0	Soil	SW9030A/E376.2 (Sulfide)	1	Acetate Liner	☐	8/5/2014 12:00	5 days	☐	☐	
			SW9045D (pH)			☐		5 days	☐	☐	
			SW6020 (LUFT)			☐		5 days	☐	☐	
			Multi-Range TPH(g,d,mo)			☐		5 days	☐	☐	
			Cyanide, Total			☐		5 days	☐	☐	
			Asbestos - PLM			☐		5 days	☐	☐	SubOut
			SW8270C (SVOCs)			☐		5 days	☐	☐	
			SW8260B (VOCs)			☐		5 days	☐	☐	
1408242-015A	EB-3-7.5	Soil		1	Acetate Liner	☐	8/5/2014 12:05		☒	☒	
1408242-016A	EB-3-10	Soil		1	Acetate Liner	☐	8/5/2014 12:10		☒	☒	
1408242-017A	EB-4-1.5	Soil	SW6020 (LUFT)	1	Acetate Liner	☐	8/5/2014 10:45	5 days	☐	☐	
			Multi-Range TPH(g,d,mo)			☐		5 days	☐	☐	
1408242-018A	EB-4-3.0	Soil	Multi-Range TPH(g,d,mo)	1	Acetate Liner	☐	8/5/2014 10:50	5 days	☐	☐	
			SW6020 (CAM 17)			☐		5 days	☐	☐	
1408242-019A	EB-4-5.0	Soil		1	Acetate Liner	☐	8/5/2014 11:00		☒	☒	
1408242-020A	EB-4-7.5	Soil	SW6020 (LUFT)	1	Acetate Liner	☐	8/5/2014 11:05	5 days	☐	☐	
			Multi-Range TPH(g,d,mo)			☐		5 days	☐	☐	

*** NOTE: STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).**

Bottle Legend:

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WORK ORDER SUMMARY

Client Name: TREADWELL & ROLLO
Project: #731626702; India Basin
Comments: SEND HARD COPY

QC Level: LEVEL 2
Client Contact: Peter Cusack
Contact's Email: pcusack@langan.com
Work Order: 1408242
Date Received: 8/7/2014

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1408242-020A	EB-4-7.5	Soil	SW8270C (SVOCs)	1	Acetate Liner	☐	8/5/2014 11:05	5 days	☐		
			SW8260B (VOCs)			☐		5 days			
			SW8082 (PCBs Only)			☐		5 days			
1408242-021A	EB-4-10	Soil		1	Acetate Liner	☐	8/5/2014 11:10			☒	
1408242-022A	EB-5-1.5	Soil	Multi-Range TPH(g,d,mo)	1	Short Stainless Tube	☐	8/5/2014 13:25	5 days	☐		
			SW6010B (Lead)			☐		5 days			
1408242-023A	EB-5-3.0	Soil		1	Short Stainless Tube	☐	8/5/2014 13:55			☒	
1408242-024A	EB-5-5.0	Soil	SW6020 (LUFT)	1	Acetate Liner	☐	8/5/2014 14:15	5 days	☐		
			Multi-Range TPH(g,d,mo)			☐		5 days			
1408242-025A	EB-5-7.5	Soil		1	Acetate Liner	☐	8/5/2014 14:25			☒	
1408242-026A	EB-5-10	Soil	SW6020 (LUFT)	1	Acetate Liner	☐	8/5/2014 14:35	5 days	☐		
			Multi-Range TPH(g,d,mo)			☐		5 days			
1408242-027A	EB-5-15	Soil	Multi-Range TPH(g,d,mo)	1	Acetate Liner	☐	8/5/2014 14:40	5 days	☐		
			SW6020 (CAM 17)			☐		5 days			
			SW8270C (SVOCs)			☐		5 days			
			SW8260B (VOCs)			☐		5 days			
			SW8082 (PCBs Only)			☐		5 days			

*** NOTE: STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).**

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WORK ORDER SUMMARY

Client Name: TREADWELL & ROLLO

Work Order: 1408242

Project: #731626702; India Basin

QC Level: LEVEL 2

Date Received: 8/7/2014

Comments: SEND HARD COPY

Contact's Email: pcusack@langan.com

Client Contact: Peter Cusack

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☐ ThirdParty

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Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold SubOut
1408242-028A	EB-6-1.5	Soil		1	Acetate Liner	☐	8/5/2014 8:40			☒
1408242-029A	EB-6-3.0	Soil	SW6020 (LUFT)	1	Acetate Liner	☐	8/5/2014 8:45	5 days		☐
			Multi-Range TPH(g,d,mo)			☐		5 days		☐
1408242-030A	EB-6-5.0	Soil	SW6020 (LUFT)	1	Acetate Liner	☐	8/5/2014 8:50	5 days		☐
			Multi-Range TPH(g,d,mo)			☐		5 days		☐
1408242-031A	EB-6-7.5	Soil		1	Acetate Liner	☐	8/5/2014 8:55			☒
1408242-032A	EB-6-10	Soil	Multi-Range TPH(g,d,mo)	1	Acetate Liner	☐	8/5/2014 9:00	5 days		☐
			SW9030A/E376.2 (Sulfide)			☐		5 days		☐
			SW9045D (pH)			☐		5 days		☐
			Cyanide, Total			☐		5 days		☐
			SW6020 (CAM 17)			☐		5 days		☐
			Asbestos - PLM			☐		5 days		☐
			SW8270C (SVOCs)			☐		5 days		☐
			SW8260B (VOCs)			☐		5 days		☐
			SW8082 (PCBs Only)			☐		5 days		☐
1408242-033A	EB-6-15	Soil		1	Acetate Liner	☐	8/5/2014 9:05			☒
1408242-034A	EB-7-1.5	Soil		1	Acetate Liner	☐	8/5/2014 9:55			☒

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WORK ORDER SUMMARY

Client Name: TREADWELL & ROLLO

QC Level: LEVEL 2

Work Order: 1408242

Project: #731626702; India Basin

Client Contact: Peter Cusack

Date Received: 8/7/2014

Comments: SEND HARD COPY

Contact's Email: pcusack@langan.com

☐ WaterTrax

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Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1408242-035A	EB-7-3.0	Soil	Multi-Range TPH(g,d,mo) SW6020 (CAM 17)	1	Acetate Liner	☐	8/5/2014 10:00	5 days		☐	
1408242-036A	EB-7-5.0	Soil	SW6020 (LUFT) Multi-Range TPH(g,d,mo)	1	Acetate Liner	☐	8/5/2014 10:05	5 days		☐	
1408242-037A	EB-7-7.5	Soil		1	Acetate Liner	☐	8/5/2014 10:10	5 days		☒	
1408242-038A	EB-7-10	Soil	Multi-Range TPH(g,d,mo) SW6020 (CAM 17)	1	Acetate Liner	☐	8/5/2014 10:15	5 days		☐	
			SW8270C (SVOCs)			☐		5 days		☐	
			SW8260B (VOCs)			☐		5 days		☐	
			SW8082 (PCBs Only)			☐		5 days		☐	
1408242-039A	EB-7-12	Soil		1	Acetate Liner	☐	8/7/2014			☒	
1408242-040A	EB-2-GW	Water	Multi-Range TPH(g,d,mo)	4	VOA w/ HCl	☐	8/6/2014 10:15	5 days	Present	☐	
1408242-040B	EB-2-GW	Water	SW8260B (VOCs)	2	VOA w/ HCl	☐	8/6/2014 10:15	5 days	Present	☐	
1408242-040C	EB-2-GW	Water	E200.8 (CAM 17)	1	250mL HDPE w/ HNO3	☐	8/6/2014 10:15	5 days	Present	☐	

*** NOTE:** STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).

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VOA w/ HCl = 43mL VOA w/ HCl

Page 1 of 3

Required):

HEAD SPACE	CONTAINERS	PRESERVED	METALS	OTHER
DECHLORINATED IN LAB			VOAS 10 & G	



Sample Receipt Checklist

Client Name: **Treadwell & Rollo**

Date and Time Received: **8/7/2014 6:11:37 PM**

Project Name: **#731626702; India Basin**

Login Reviewed by: **Jena Alfaro**

WorkOrder №: **1408242**

Matrix: Soil/Water

Carrier: Rob Pringle (MAI Courier)

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 ☐	
Container/Temp Blank temperature	Cooler 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: pH<2; 522: pH<4)?	Yes ☒	No ☐	NA ☐
Samples Received on Ice?	Yes ☒	No ☐	

(Ice Type: WET ICE)

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

Comments:



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1408242 A

Report Created for: Treadwell & Rollo
555 Montgomery St., Suite 1300
San Francisco, CA 94111

Project Contact: Peter Cusack
Project P.O.:
Project Name: #731626702; India Basin

Project Received: 08/07/2014

Analytical Report reviewed & approved for release on 08/29/2014 by:

Question about
your data?

[Click here to email
McC Campbell](#)

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: #731626702; India Basin
WorkOrder: 1408242

Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
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
ND	Not detected at or above the indicated MDL or RL
NR	Matrix interferences, or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix; or sample diluted due to high matrix or analyte content.
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
TEQ	Toxicity Equivalence

Analytical Qualifiers

S	spike recovery outside accepted recovery limits
a1	sample diluted due to matrix interference
a4	the reporting limits were raised due to the sample's matrix prohibiting a full volume extraction.
c4	surrogate recovery outside of the control limits due to coelution with another peak(s) / cluttered chromatogram.
d1	weakly modified or unmodified gasoline is significant
e2	diesel range compounds are significant; no recognizable pattern
e7	oil range compounds are significant
h4	sulfuric acid permanganate (EPA 3665) cleanup

Quality Control Qualifiers

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



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/23/14

WorkOrder: 1408242
Extraction Method: CA Title 22
Analytical Method: SW6010B
Unit: mg/L

Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-15	1408242-011A	Soil/WET	08/06/2014 09:55	ICP-JY	94369

Analytes	Result	RL	DF	Date Analyzed
Chromium	0.50	0.050	1	08/25/2014 18:43

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-3-1.5	1408242-012A	Soil/WET	08/05/2014 11:50	ICP-JY	94369

Analytes	Result	RL	DF	Date Analyzed
Chromium	0.58	0.050	1	08/25/2014 18:46

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-3-3.0	1408242-013A	Soil/WET	08/05/2014 11:55	ICP-JY	94369

Analytes	Result	RL	DF	Date Analyzed
Chromium	0.27	0.050	1	08/25/2014 18:49

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-5-5.0	1408242-024A	Soil/WET	08/05/2014 14:15	ICP-JY	94369

Analytes	Result	RL	DF	Date Analyzed
Chromium	0.067	0.050	1	08/25/2014 19:01

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/23/14

WorkOrder: 1408242
Extraction Method: CA Title 22
Analytical Method: SW6010B
Unit: mg/L

Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-6-3.0	1408242-029A	Soil/WET	08/05/2014 08:45	ICP-JY	94369

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Chromium	0.75	0.050	1	08/25/2014 19:16

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-6-5.0	1408242-030A	Soil/WET	08/05/2014 08:50	ICP-JY	94394

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Chromium	0.37	0.050	1	08/25/2014 15:48

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-7-10	1408242-038A	Soil/WET	08/05/2014 10:15	ICP-JY	94394

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Chromium	0.38	0.050	1	08/25/2014 19:22



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/22/14-8/23/14

WorkOrder: 1408242
Extraction Method: CA Title 22
Analytical Method: SW6010B
Unit: mg/L

Lead & Chromium

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-1.5	1408242-006A	Soil/WET	08/06/2014 09:20	ICP-JY	94369

Analytes	Result	RL	DF	Date Analyzed
Chromium	0.99	0.050	1	08/25/2014 18:37
Lead	12	0.20	1	08/25/2014 18:37

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-5.0	1408242-008A	Soil/WET	08/06/2014 09:35	ICP-JY	94369

Analytes	Result	RL	DF	Date Analyzed
Chromium	0.38	0.050	1	08/25/2014 18:40
Lead	5.5	0.20	1	08/25/2014 18:40

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-4-1.5	1408242-017A	Soil/WET	08/05/2014 10:45	ICP-JY	94369

Analytes	Result	RL	DF	Date Analyzed
Chromium	0.29	0.050	1	08/29/2014 10:30
Lead	4.1	0.20	1	08/29/2014 10:30

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-4-3.0	1408242-018A	Soil/WET	08/05/2014 10:50	ICP-JY	94369

Analytes	Result	RL	DF	Date Analyzed
Chromium	0.82	0.050	1	08/25/2014 18:52
Lead	6.3	0.20	1	08/25/2014 18:52

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/22/14-8/23/14

WorkOrder: 1408242
Extraction Method: CA Title 22
Analytical Method: SW6010B
Unit: mg/L

Lead & Chromium

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-4-7.5	1408242-020A	Soil/WET	08/05/2014 11:05	ICP-JY	94369

Analytes	Result	RL	DF	Date Analyzed
Chromium	0.96	0.050	1	08/25/2014 18:55
Lead	10	0.20	1	08/25/2014 18:55

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-5-10	1408242-026A	Soil/WET	08/05/2014 14:35	ICP-JY	94369

Analytes	Result	RL	DF	Date Analyzed
Chromium	0.34	0.050	1	08/25/2014 19:04
Lead	4.0	0.20	1	08/25/2014 19:04

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-5-15	1408242-027A	Soil/WET	08/05/2014 14:40	ICP-JY	94369

Analytes	Result	RL	DF	Date Analyzed
Chromium	0.44	0.050	1	08/25/2014 19:13
Lead	4.4	0.20	1	08/25/2014 19:13

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-6-10	1408242-032A	Soil/WET	08/05/2014 09:00	ICP-JY	94394

Analytes	Result	RL	DF	Date Analyzed
Chromium	0.56	0.050	1	08/29/2014 10:32
Lead	6.3	0.20	1	08/29/2014 10:32

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/22/14-8/23/14

WorkOrder: 1408242
Extraction Method: CA Title 22
Analytical Method: SW6010B
Unit: mg/L

Lead & Chromium

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-7-3.0	1408242-035A	Soil/WET	08/05/2014 10:00	ICP-JY	94394

Analytes	Result	RL	DF	Date Analyzed
Chromium	0.16	0.050	1	08/25/2014 19:19
Lead	11	0.20	1	08/25/2014 19:19



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/22/14-8/23/14

WorkOrder: 1408242
Extraction Method: CA Title 22
Analytical Method: SW6010B
Unit: mg/L

Lead

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-1-10	1408242-005A	Soil/WET	08/06/2014 08:40	ICP-JY	94369

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	12	0.20	1	08/29/2014 10:27

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-5-1.5	1408242-022A	Soil/WET	08/05/2014 13:25	ICP-JY	94369

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	2.0	0.20	1	08/25/2014 18:58



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/22/14

WorkOrder: 1408242
Extraction Method: SW1311/SW3050B
Analytical Method: SW6010B
Unit: mg/L

Lead

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-1-10	1408242-005A	Soil/TCLP	08/06/2014 08:40	ICP-JY	94350

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	ND	0.20	1	08/27/2014 10:37

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-1.5	1408242-006A	Soil/TCLP	08/06/2014 09:20	ICP-JY	94350

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	ND	0.20	1	08/27/2014 10:40

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-5.0	1408242-008A	Soil/TCLP	08/06/2014 09:35	ICP-JY	94350

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	ND	0.20	1	08/27/2014 10:42

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-4-1.5	1408242-017A	Soil/TCLP	08/05/2014 10:45	ICP-JY	94350

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	ND	0.20	1	08/27/2014 10:48

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/22/14

WorkOrder: 1408242
Extraction Method: SW1311/SW3050B
Analytical Method: SW6010B
Unit: mg/L

Lead

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-4-3.0	1408242-018A	Soil/TCLP	08/05/2014 10:50	ICP-JY	94350

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	ND	0.20	1	08/27/2014 10:50

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-4-7.5	1408242-020A	Soil/TCLP	08/05/2014 11:05	ICP-JY	94350

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	0.58	0.20	1	08/27/2014 10:53

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-5-1.5	1408242-022A	Soil/TCLP	08/05/2014 13:25	ICP-JY	94350

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	ND	0.20	1	08/27/2014 10:55

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-5-10	1408242-026A	Soil/TCLP	08/05/2014 14:35	ICP-JY	94350

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	ND	0.20	1	08/27/2014 10:57

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 18:11
Date Prepared: 8/22/14

WorkOrder: 1408242
Extraction Method: SW1311/SW3050B
Analytical Method: SW6010B
Unit: mg/L

Lead

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-5-15	1408242-027A	Soil/TCLP	08/05/2014 14:40	ICP-JY	94350

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	ND	0.20	1	08/27/2014 10:59

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-6-10	1408242-032A	Soil/TCLP	08/05/2014 09:00	ICP-JY	94350

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	0.30	0.20	1	08/27/2014 11:01

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-7-3.0	1408242-035A	Soil/TCLP	08/05/2014 10:00	ICP-JY	94350

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	1.2	0.20	1	08/27/2014 11:03



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 8/22/14
Date Analyzed: 8/25/14
Instrument: ICP-JY
Matrix: Soil
Project: #731626702; India Basin

WorkOrder: 1408242
BatchID: 94369
Extraction Method: CA Title 22
Analytical Method: SW6010B
Unit: mg/L
Sample ID: MB/LCS-94369
1408514-003AMS/MSD

QC Summary Report for SW6010B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Chromium	ND	1.01	0.050	1	-	101	75-125

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Chromium	1.11	1.06	1	0.07612	103	98.4	70-130	4.70	30

(Cont.)



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 8/22/14
Date Analyzed: 8/25/14
Instrument: ICP-JY
Matrix: Soil
Project: #731626702; India Basin

WorkOrder: 1408242
BatchID: 94394
Extraction Method: CA Title 22
Analytical Method: SW6010B
Unit: mg/L
Sample ID: MB/LCS-94394
1408242-030AMS/MSD

QC Summary Report for SW6010B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Chromium	ND	1.01	0.050	1	-	101	75-125

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Chromium	1.40	1.37	1	0.3707	103	99.6	70-130	2.31	30



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 8/22/14
Date Analyzed: 8/25/14
Instrument: ICP-JY
Matrix: Soil
Project: #731626702; India Basin

WorkOrder: 1408242
BatchID: 94369
Extraction Method: CA Title 22
Analytical Method: SW6010B
Unit: mg/L
Sample ID: MB/LCS-94369
1408514-003AMS/MSD

QC Summary Report for SW6010B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Chromium	ND	1.01	0.050	1	-	101	75-125
Lead	ND	1.17	0.20	1	-	117	75-125

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Chromium	1.11	1.06	1	0.07612	103	98.4	70-130	4.70	30
Lead	1.49	1.42	1	0.2711	122	115	70-130	4.66	30

(Cont.)



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 8/22/14
Date Analyzed: 8/25/14
Instrument: ICP-JY
Matrix: Soil
Project: #731626702; India Basin

WorkOrder: 1408242
BatchID: 94394
Extraction Method: CA Title 22
Analytical Method: SW6010B
Unit: mg/L
Sample ID: MB/LCS-94394
1408242-030AMS/MSD

QC Summary Report for SW6010B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Chromium	ND	1.01	0.050	1	-	101	75-125
Lead	ND	1.08	0.20	1	-	108	75-125

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Chromium	1.40	1.37	1	0.3707	103	99.6	70-130	2.31	30
Lead	2.34	2.20	1	1.2	109	95.5	70-130	6.03	30



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 8/22/14
Date Analyzed: 8/25/14
Instrument: ICP-JY
Matrix: Soil
Project: #731626702; India Basin

WorkOrder: 1408242
BatchID: 94369
Extraction Method: CA Title 22
Analytical Method: SW6010B
Unit: mg/L
Sample ID: MB/LCS-94369
1408514-003AMS/MSD

QC Summary Report for SW6010B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Lead	ND	1.17	0.20	1	-	117	75-125

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Lead	1.49	1.42	1	0.2711	122	115	70-130	4.66	30



Quality Control Report

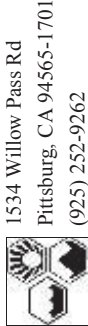
Client: Treadwell & Rollo
Date Prepared: 8/21/14
Date Analyzed: 8/25/14
Instrument: ICP-JY
Matrix: Soil
Project: #731626702; India Basin

WorkOrder: 1408242
BatchID: 94350
Extraction Method: SW1311/SW3050B
Analytical Method: SW6010B
Unit: mg/L
Sample ID: MB/LCS-94350
1407927-002AMS/MSD

QC Summary Report for SW6010B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Lead	ND	1.09	0.20	1	-	109	75-125

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Lead	1.18	1.08	1	ND	118	108	70-130	8.30	30



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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1408242 A ClientCode: TWRF

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ Fax ☒ 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

Bill to:

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

Requested TAT: 5 days

Date Received: 08/07/2014

Date Add-On: 08/22/2014

Date Printed: 08/29/2014

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
1408242-005	EB-1-10	Soil	8/6/2014 8:40	☐		A		A								
1408242-006	EB-2-1.5	Soil	8/6/2014 9:20	☐			A	A								
1408242-008	EB-2-5.0	Soil	8/6/2014 9:35	☐			A	A								
1408242-011	EB-2-15	Soil	8/6/2014 9:55	☐	A											
1408242-012	EB-3-1.5	Soil	8/5/2014 11:50	☐	A											
1408242-013	EB-3-3.0	Soil	8/5/2014 11:55	☐	A											
1408242-017	EB-4-1.5	Soil	8/5/2014 10:45	☐			A	A								
1408242-018	EB-4-3.0	Soil	8/5/2014 10:50	☐			A	A								
1408242-020	EB-4-7.5	Soil	8/5/2014 11:05	☐			A	A								
1408242-022	EB-5-1.5	Soil	8/5/2014 13:25	☐		A		A								
1408242-024	EB-5-5.0	Soil	8/5/2014 14:15	☐	A											
1408242-026	EB-5-10	Soil	8/5/2014 14:35	☐			A	A								
1408242-027	EB-5-15	Soil	8/5/2014 14:40	☐			A	A								
1408242-029	EB-6-3.0	Soil	8/5/2014 8:45	☐	A											
1408242-030	EB-6-5.0	Soil	8/5/2014 8:50	☐	A											

Test Legend:

1	STLC_METALS_S	2	STLC_PB_S	3	STLC_PBCR_S	4	TCLP_PB_S	5	
6		7		8		9		10	
11		12							

Comments: SEND HARD COPY, STLCs added 8/22/14 5D TAT

Prepared by: Jena Alfaro
Add-On Prepared By: Jena Alfaro

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.



WorkOrder: 1408242 A ClientCode: TWRF

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ Fax ☒ 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: #731626702; India Basin

Bill to:

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

Requested TAT: 5 days

Date Received: 08/07/2014

Date Add-On: 08/22/2014

Date Printed: 08/29/2014

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
1408242-032	EB-6-10	Soil	8/5/2014 9:00	☐			A	A								
1408242-035	EB-7-3.0	Soil	8/5/2014 10:00	☐			A	A								
1408242-038	EB-7-10	Soil	8/5/2014 10:15	☐	A											

Test Legend:

1	STLC_METALS_S	2	STLC_PB_S	3	STLC_PBCR_S	4	TCLP_PB_S	5	
6		7		8		9		10	
11		12							

Prepared by: Jena Alfaro

Add-On Prepared By: Jena Alfaro

Comments: SEND HARD COPY. STLCs added 8/22/14 5D TAT

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.



McC Campbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

WORK ORDER SUMMARY

Client Name: TREADWELL & ROLLO

QC Level: LEVEL 2

Work Order: 1408242

Project: #731626702; India Basin

Client Contact: Peter Cusack

Date Received: 8/7/2014

Comments: SEND HARD COPY. STLCS added 8/22/14 5D TAT

Contact's Email: pcusack@langan.com

Date Add-On: 8/22/2014

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1408242-005A	EB-1-10	Soil	SW6010B (Lead) (TCPLP) SW6010B (Lead) (STLC)	1	Acetate Liner	8/6/2014 8:40	5 days*		☐	
1408242-006A	EB-2-1.5	Soil	SW6010B (Lead) (TCPLP) SW6010B (Chromium & Lead) (STLC)	1	Acetate Liner	8/6/2014 9:20	5 days*		☐	
1408242-008A	EB-2-5.0	Soil	SW6010B (Lead) (TCPLP) SW6010B (Chromium & Lead) (STLC)	1	Acetate Liner	8/6/2014 9:35	5 days*		☐	
1408242-011A	EB-2-15	Soil	SW6010B (Metals) (STLC) <Chromium>	1	Acetate Liner	8/6/2014 9:55	5 days*		☐	
1408242-012A	EB-3-1.5	Soil	SW6010B (Metals) (STLC) <Chromium>	1	Acetate Liner	8/5/2014 11:50	5 days*		☐	
1408242-013A	EB-3-3.0	Soil	SW6010B (Metals) (STLC) <Chromium>	1	Acetate Liner	8/5/2014 11:55	5 days*		☐	
1408242-017A	EB-4-1.5	Soil	SW6010B (Lead) (TCPLP) SW6010B (Chromium & Lead) (STLC)	1	Acetate Liner	8/5/2014 10:45	5 days*		☐	
1408242-018A	EB-4-3.0	Soil	SW6010B (Lead) (TCPLP) SW6010B (Chromium & Lead) (STLC)	1	Acetate Liner	8/5/2014 10:50	5 days*		☐	
1408242-020A	EB-4-7.5	Soil	SW6010B (Lead) (TCPLP) SW6010B (Chromium & Lead) (STLC)	1	Acetate Liner	8/5/2014 11:05	5 days*		☐	
1408242-022A	EB-5-1.5	Soil	SW6010B (Lead) (TCPLP) SW6010B (Lead) (STLC)	1	Short Stainless Tube	8/5/2014 13:25	5 days*		☐	
1408242-024A	EB-5-5.0	Soil	SW6010B (Metals) (STLC) <Chromium>	1	Acetate Liner	8/5/2014 14:15	5 days*		☐	

*** NOTE: STLC and TCPLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).**

Bottle Legend:

Acetate Liner = Acetate Liner

Short Stainless Tube =



McC Campbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mcccampbell.com / E-mail: main@mcccampbell.com

WORK ORDER SUMMARY

Client Name: TREADWELL & ROLLO

Project: #731626702; India Basin

Comments: SEND HARD COPY. STLCS added 8/22/14 5D TAT

QC Level: LEVEL 2

Client Contact: Peter Cusack

Contact's Email: pcusack@langan.com

Work Order: 1408242

Date Received: 8/7/2014

Date Add-On: 8/22/2014

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1408242-026A	EB-5-10	Soil	SW6010B (Lead) (TCPLP)	1	Acetate Liner	8/5/2014 14:35	5 days*		☐	
			SW6010B (Chromium & Lead) (STLC)				5 days*		☐	
1408242-027A	EB-5-15	Soil	SW6010B (Lead) (TCPLP)	1	Acetate Liner	8/5/2014 14:40	5 days*		☐	
			SW6010B (Chromium & Lead) (STLC)				5 days*		☐	
1408242-029A	EB-6-3.0	Soil	SW6010B (Metals) (STLC) <Chromium>	1	Acetate Liner	8/5/2014 8:45	5 days*		☐	
1408242-030A	EB-6-5.0	Soil	SW6010B (Metals) (STLC) <Chromium>	1	Acetate Liner	8/5/2014 8:50	5 days*		☐	
1408242-032A	EB-6-10	Soil	SW6010B (Lead) (TCPLP)	1	Acetate Liner	8/5/2014 9:00	5 days*		☐	
			SW6010B (Chromium & Lead) (STLC)				5 days*		☐	
1408242-035A	EB-7-3.0	Soil	SW6010B (Lead) (TCPLP)	1	Acetate Liner	8/5/2014 10:00	5 days*		☐	
			SW6010B (Chromium & Lead) (STLC)				5 days*		☐	
1408242-038A	EB-7-10	Soil	SW6010B (Metals) (STLC) <Chromium>	1	Acetate Liner	8/5/2014 10:15	5 days*		☐	

*** NOTE:** STLC and TCPLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).

Bottle Legend:

Acetate Liner = Acetate Liner

Short Stainless Tube =

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: INDIA BASIN
Job Number: 731020702
Project Manager/Contact: PETER CUSACK
Samplers: KSS + RNM
Recorder (Signature Required): [Signature]

Turnaround Time
Very

Field Sample Identification No.	Date	Time	Lab Sample No.	Matrix			No. Containers & Preservative							Analysis Requested	Remarks
				Soil	Water	Other	HCL	H ₂ SO ₄	HNO ₃	Ice	Other				
EB-1-1.5	8/6/14	0820		X											
EB-1-3.0		0825		X											
EB-1-5.0		0830		X											
EB-1-7.5		0835		X											
EB-1-10		0840		X											
EB-2-1.5		0920		X											
EB-2-3.0		0925		X											
EB-2-5.0		0935		X											
EB-2-7.5		0940		X											
EB-2-10		0950		X											
EB-2-15	8/6/14	0955		X											
EB-3-1.5	8/5/14	1150		X											
EB-3-3.0	8/5/14	1155		X											
EB-3-5.0	8/5/14	1200		X											
Relinquished by: (Signature)	Date	Time													
Relinquished by: (Signature)	Date	Time													
Relinquished by: (Signature)	Date	Time													

White Copy - Original
Yellow Copy - Laboratory
Pink Copy - Field
COC Number: **005750**
GOOD FOR HEAD SPACE VISIBLE CONTAINERS PRESERVED IN LAB
DECHLORINATED IN LAB PRESERVED IN LAB
VOAS 10 & G METALS OTHER
PRESERVATION

1408242

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777 Campus Commons Rd., Suite 200, Sacramento, CA 95825 Ph: 916.565.7412/Fax: 916.565.7412

Site Name: INDIA BASIN

Job Number: 731666702

Project Manager/Contact: PETER CUSACK

Samplers: KSS & RNM

Recorder (Signature Required): [Signature]

Turnaround Time

As per request

Analysis Requested

Analysis Requested	TPH & d.m.o	VOCs	SVOCs	PCBs	CAMIT	LUFTS	TOTAL Pb	ASBESTOS	PH	CYANIDE	TOTAL SULFIDES	SILICA	Hold
	X	X	X	X	X	X	X	X	X	X	X	X	X

No. Containers & Preservative

Matrix	Soil	Water	Other	HCL	H ₂ SO ₄	HNO ₃	Ice	Other
	X	X	X	X	X	X	X	X

Lab Sample No.

Field Sample Identification No.	Date	Time	Lab Sample No.
EB-3-7.5	8/5/14	1205	
EB-3-10		1210	
EB-4-1.5		1045	
EB-4-3.0		1050	
EB-4-5.0		1100	
EB-4-7.5		1105	
EB-4-10		1110	
EB-5-1.5		1325	
EB-5-3.0		1355	
EB-5-5.0		1415	
EB-5-7.5		1425	
EB-5-10		1435	
EB-5-15		1440	
EB-6-1.5	8/5/14	0840	

Relinquished by: (Signature) [Signature] Date 8/7/14 Time 1400

Relinquished by: (Signature) [Signature] Date 8/7/14 Time 1545

Relinquished by: (Signature) [Signature] Date 8/7/14 Time 1545

Relinquished by: (Signature) [Signature] Date 8/7/14 Time 1545

Relinquished by: (Signature) [Signature] Date 8/7/14 Time 1545

Relinquished by: (Signature) [Signature] Date 8/7/14 Time 1545

Relinquished by: (Signature) [Signature] Date 8/7/14 Time 1545

Relinquished by: (Signature) [Signature] Date 8/7/14 Time 1545

Relinquished by: (Signature) [Signature] Date 8/7/14 Time 1545

Relinquished by: (Signature) [Signature] Date 8/7/14 Time 1545

Relinquished by: (Signature) [Signature] Date 8/7/14 Time 1545

Relinquished by: (Signature) [Signature] Date 8/7/14 Time 1545

Relinquished by: (Signature) [Signature] Date 8/7/14 Time 1545

Relinquished by: (Signature) [Signature] Date 8/7/14 Time 1545

Relinquished by: (Signature) [Signature] Date 8/7/14 Time 1545

Relinquished by: (Signature) [Signature] Date 8/7/14 Time 1545

Sent to Laboratory (Name): MCCAMPBELL ANALYTICAL

Laboratory Comments/Notes:

Method of Shipment

☒ Hand Carried ☐ Private Courier (Co. Name)

☐ Lab courier ☐ Fed Ex ☐ Airborne ☐ UPS

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COC Number: **005752**

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777 Campus Commons Rd., Suite 200, Sacramento, CA 95825 Ph: 916.565.7412/Fax: 916.565.7412

Site Name: INDIA BASIN
Job Number: 731046702
Project Manager/Contact: PETER CUSACK
Samplers: KSS: RNM
Recorder (Signature Required): [Signature]

Analysis Requested

Analysis Requested	TPH g/dm ³	VOCs	SVOCs	PCBs	CAM 17	LAFTS	TOTAL Pb	Asbestos	PH	CHLORIDE	TOTAL SULFIDES	Silica gel clean-up	Hold
EB-6-3.0	X					X						X	
EB-6-5.0													
EB-6-7.5													
EB-6-10	X	X	X	X	X								
EB-6-15	X	X	X	X	X								
EB-7-1.5													
EB-7-3.0	X	X	X	X	X								
EB-7-5.0													
EB-7-7.5	X	X	X	X	X								
EB-7-10	X	X	X	X	X								
EB-7-12	X	X	X	X	X								
EB-2-GW	X	X	X	X	X								

Matrix	No. Containers & Preservative
Soil	X
Water	X
Other	X
HCL	X
H ₂ SO ₄	X
HNO ₃	X
Ice	X
Other	X

Field Sample Identification No.	Date	Time	Lab Sample No.	Remarks
EB-6-3.0	8/5/14	0845		
EB-6-5.0		0850		
EB-6-7.5		0855		
EB-6-10		0900		
EB-6-15		0905		
EB-7-1.5		0955		
EB-7-3.0		1000		
EB-7-5.0		1005		
EB-7-7.5		1010		
EB-7-10	9/5/14	1015		
EB-7-12				
EB-2-GW	8/6/14	1015		

Relinquished by: (Signature)	[Signature]	Date	8/7/14	Time	1460
Relinquished by: (Signature)	[Signature]	Date	8/7/14	Time	1545
Relinquished by: (Signature)	[Signature]	Date		Time	

Received by: (Signature)	[Signature]	Date	8/7/14	Time	1460
Received by: (Signature)	[Signature]	Date	8/7/14	Time	1545
Received by Lab: (Signature)	[Signature]	Date		Time	

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

Sent to Laboratory (Name): MCCAMPBELL ANALYTICAL

Laboratory Comments/Notes:

White Copy - Original

Yellow Copy - Laboratory

Pink Copy - Field

COC Number: **005751**

Additional Sample
No unpreserved container rec'd



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1408250

Report Created for: Treadwell & Rollo
555 Montgomery St., Suite 1300
San Francisco, CA 94111

Project Contact: Peter Cusack
Project P.O.:
Project Name: #731626702; India Basin

Project Received: 08/07/2014

Analytical Report reviewed & approved for release on 08/13/2014 by:

Question about
your data?

[Click here to email
McC Campbell](#)

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: #731626702; India Basin
WorkOrder: 1408250

Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
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
ND	Not detected at or above the indicated MDL or RL
NR	Matrix interferences, or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix; or sample diluted due to high matrix or analyte content.
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
TEQ	Toxicity Equivalence

Analytical Qualifiers

a2	sample diluted due to cluttered chromatogram
a3	sample diluted due to high organic content.
a21	reporting limit raised due to insufficient pressure in canister

Quality Control Qualifiers

F2	LCS recovery for this compound is outside of acceptance limits.
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Case Narrative

Client: Treadwell & Rollo
Project: #731626702; India Basin

Work Order: 1408250
August 12, 2014

TO-15 ANALYSIS

All summa canisters are EVACUATED 5 days after the reporting of the results. Please call or email if a longer retention time is required.

In an effort to attain the lowest reporting limits possible for the majority of the TO-15 target list, high level compounds may be analyzed using EPA Method 8260B.

Polymer (Tedlar) bags are not recommended for TO15 samples. The disadvantages are listed in Appendix B of the DTSC Advisory of April 2012.



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 21:01
Date Prepared: 8/8/14

WorkOrder: 1408250
Extraction Method: ASTM D 1946-90
Analytical Method: ASTM D 1946-90
Unit: %

Helium

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-3-SG	1408250-001A	Soil Gas	08/06/2014 13:52	GC26	93871

Initial Pressure (psia) **Final Pressure (psia)**

7.12 20.02

Analytes	Result	RL	DE	Date Analyzed
Helium	ND	0.0070	1	08/08/2014 13:25

Analytical Comments: a21

EB-4-SG	1408250-002A	Soil Gas	08/06/2014 13:10	GC26	93871
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Initial Pressure (psia) **Final Pressure (psia)**

12.61 25.14

Analytes	Result	RL	DE	Date Analyzed
Helium	ND	0.0050	1	08/08/2014 13:38

EB-6-SG	1408250-003A	Soil Gas	08/06/2014 11:30	GC26	93871
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Initial Pressure (psia) **Final Pressure (psia)**

12.46 24.83

Analytes	Result	RL	DE	Date Analyzed
Helium	ND	0.0050	1	08/08/2014 13:51

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 21:01
Date Prepared: 8/8/14

WorkOrder: 1408250
Extraction Method: ASTM D 1946-90
Analytical Method: ASTM D 1946-90
Unit: %

Helium

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-7-SG	1408250-004A	Soil Gas	08/06/2014 12:25	GC26	93871

Initial Pressure (psia) **Final Pressure (psia)**

12.77	25.44
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<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Helium	ND	0.0050	1	08/08/2014 14:04



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 21:01
Date Prepared: 8/8/14-8/9/14

WorkOrder: 1408250
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³

Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-3-SG	1408250-001A	Soil Gas	08/06/2014 13:52	GC24	93865

Initial Pressure (psia) **Final Pressure (psia)**

7.12	20.02
------	-------

Analytes	Result	RL	DE	Date Analyzed
Acetone	ND	84	1	08/08/2014 23:09
Acrolein	ND	1.6	1	08/08/2014 23:09
Acrylonitrile	ND	1.5	1	08/08/2014 23:09
tert-Amyl methyl ether (TAME)	ND	3.0	1	08/08/2014 23:09
Benzene	26	2.2	1	08/08/2014 23:09
Benzyl chloride	ND	3.7	1	08/08/2014 23:09
Bromodichloromethane	ND	4.9	1	08/08/2014 23:09
Bromoform	ND	7.4	1	08/08/2014 23:09
Bromomethane	ND	2.7	1	08/08/2014 23:09
1,3-Butadiene	21	1.5	1	08/08/2014 23:09
2-Butanone (MEK)	ND	110	1	08/08/2014 23:09
t-Butyl alcohol (TBA)	ND	44	1	08/08/2014 23:09
Carbon Disulfide	130	2.2	1	08/08/2014 23:09
Carbon Tetrachloride	ND	4.5	1	08/08/2014 23:09
Chlorobenzene	ND	3.3	1	08/08/2014 23:09
Chloroethane	ND	1.9	1	08/08/2014 23:09
Chloroform	ND	3.4	1	08/08/2014 23:09
Chloromethane	ND	1.5	1	08/08/2014 23:09
Cyclohexane	44	25	1	08/08/2014 23:09
Dibromochloromethane	ND	6.1	1	08/08/2014 23:09
1,2-Dibromo-3-chloropropane	ND	0.17	1	08/08/2014 23:09
1,2-Dibromoethane (EDB)	ND	5.5	1	08/08/2014 23:09
1,2-Dichlorobenzene	ND	4.3	1	08/08/2014 23:09
1,3-Dichlorobenzene	ND	4.3	1	08/08/2014 23:09
1,4-Dichlorobenzene	ND	4.3	1	08/08/2014 23:09
Dichlorodifluoromethane	ND	3.5	1	08/08/2014 23:09
1,1-Dichloroethane	ND	2.9	1	08/08/2014 23:09
1,2-Dichloroethane (1,2-DCA)	ND	2.9	1	08/08/2014 23:09
1,1-Dichloroethene	ND	2.8	1	08/08/2014 23:09
cis-1,2-Dichloroethene	ND	2.8	1	08/08/2014 23:09
trans-1,2-Dichloroethene	ND	2.8	1	08/08/2014 23:09
1,2-Dichloropropane	ND	3.3	1	08/08/2014 23:09
cis-1,3-Dichloropropene	ND	3.2	1	08/08/2014 23:09
trans-1,3-Dichloropropene	ND	3.2	1	08/08/2014 23:09

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 21:01
Date Prepared: 8/8/14-8/9/14

WorkOrder: 1408250
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³

Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-3-SG	1408250-001A	Soil Gas	08/06/2014 13:52	GC24	93865

Initial Pressure (psia) **Final Pressure (psia)**

7.12 20.02

Analytes	Result	RL	DE	Date Analyzed
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	5.0	1	08/08/2014 23:09
Diisopropyl ether (DIPE)	ND	3.0	1	08/08/2014 23:09
1,4-Dioxane	ND	2.6	1	08/08/2014 23:09
Ethanol	ND	130	1	08/08/2014 23:09
Ethyl acetate	ND	2.6	1	08/08/2014 23:09
Ethyl tert-butyl ether (ETBE)	ND	3.0	1	08/08/2014 23:09
Ethylbenzene	ND	3.1	1	08/08/2014 23:09
4-Ethyltoluene	ND	3.5	1	08/08/2014 23:09
Freon 113	ND	5.5	1	08/08/2014 23:09
Heptane	33	30	1	08/08/2014 23:09
Hexachlorobutadiene	ND	7.6	1	08/08/2014 23:09
Hexane	48	25	1	08/08/2014 23:09
2-Hexanone	ND	3.0	1	08/08/2014 23:09
4-Methyl-2-pentanone (MIBK)	ND	3.0	1	08/08/2014 23:09
Methyl-t-butyl ether (MTBE)	ND	2.6	1	08/08/2014 23:09
Methylene chloride	ND	2.5	1	08/08/2014 23:09
Methyl methacrylate	ND	2.9	1	08/08/2014 23:09
Naphthalene	ND	7.5	1	08/08/2014 23:09
Propene	ND	120	1	08/08/2014 23:09
Styrene	ND	3.0	1	08/08/2014 23:09
1,1,1,2-Tetrachloroethane	ND	4.9	1	08/08/2014 23:09
1,1,2,2-Tetrachloroethane	ND	4.9	1	08/08/2014 23:09
Tetrachloroethene	27	4.9	1	08/08/2014 23:09
Tetrahydrofuran	ND	2.1	1	08/08/2014 23:09
Toluene	49	2.7	1	08/08/2014 23:09
1,2,4-Trichlorobenzene	ND	5.3	1	08/08/2014 23:09
1,1,1-Trichloroethane	ND	3.9	1	08/08/2014 23:09
1,1,2-Trichloroethane	ND	3.9	1	08/08/2014 23:09
Trichloroethene	5.3	3.9	1	08/08/2014 23:09
Trichlorofluoromethane	ND	4.0	1	08/08/2014 23:09
1,2,4-Trimethylbenzene	ND	3.5	1	08/08/2014 23:09
1,3,5-Trimethylbenzene	ND	3.5	1	08/08/2014 23:09
Vinyl Acetate	ND	2.5	1	08/08/2014 23:09
Vinyl Chloride	ND	1.8	1	08/08/2014 23:09

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 21:01
Date Prepared: 8/8/14-8/9/14

WorkOrder: 1408250
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³

Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-3-SG	1408250-001A	Soil Gas	08/06/2014 13:52	GC24	93865

Initial Pressure (psia) **Final Pressure (psia)**

7.12	20.02
------	-------

Analytes	Result	RL	DE	Date Analyzed
Xylenes, Total	10	9.3	1	08/08/2014 23:09

Surrogates	REC (%)	Limits	Analytical Comments: a21
1,2-DCA-d4	95	70-130	08/08/2014 23:09
Toluene-d8	104	70-130	08/08/2014 23:09
4-BFB	101	70-130	08/08/2014 23:09

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 21:01
Date Prepared: 8/8/14-8/9/14

WorkOrder: 1408250
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³

Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-4-SG	1408250-002A	Soil Gas	08/06/2014 13:10	GC24	93865

Initial Pressure (psia) **Final Pressure (psia)**

12.61	25.14
-------	-------

Analytes	Result	RL	DE	Date Analyzed
Acetone	210	120	2	08/08/2014 23:56
Acrolein	ND	2.3	2	08/08/2014 23:56
Acrylonitrile	ND	2.2	2	08/08/2014 23:56
tert-Amyl methyl ether (TAME)	ND	4.2	2	08/08/2014 23:56
Benzene	67	3.2	2	08/08/2014 23:56
Benzyl chloride	ND	5.3	2	08/08/2014 23:56
Bromodichloromethane	25	7.0	2	08/08/2014 23:56
Bromoform	ND	10	2	08/08/2014 23:56
Bromomethane	ND	3.9	2	08/08/2014 23:56
1,3-Butadiene	ND	2.2	2	08/08/2014 23:56
2-Butanone (MEK)	ND	150	2	08/08/2014 23:56
t-Butyl alcohol (TBA)	ND	62	2	08/08/2014 23:56
Carbon Disulfide	190	3.2	2	08/08/2014 23:56
Carbon Tetrachloride	ND	6.4	2	08/08/2014 23:56
Chlorobenzene	ND	4.7	2	08/08/2014 23:56
Chloroethane	ND	2.7	2	08/08/2014 23:56
Chloroform	ND	4.9	2	08/08/2014 23:56
Chloromethane	ND	2.1	2	08/08/2014 23:56
Cyclohexane	180	35	2	08/08/2014 23:56
Dibromochloromethane	ND	8.7	2	08/08/2014 23:56
1,2-Dibromo-3-chloropropane	ND	0.25	2	08/08/2014 23:56
1,2-Dibromoethane (EDB)	ND	7.8	2	08/08/2014 23:56
1,2-Dichlorobenzene	ND	6.1	2	08/08/2014 23:56
1,3-Dichlorobenzene	ND	6.1	2	08/08/2014 23:56
1,4-Dichlorobenzene	ND	6.1	2	08/08/2014 23:56
Dichlorodifluoromethane	ND	5.0	2	08/08/2014 23:56
1,1-Dichloroethane	ND	4.1	2	08/08/2014 23:56
1,2-Dichloroethane (1,2-DCA)	ND	4.1	2	08/08/2014 23:56
1,1-Dichloroethene	ND	4.0	2	08/08/2014 23:56
cis-1,2-Dichloroethene	32	4.0	2	08/08/2014 23:56
trans-1,2-Dichloroethene	ND	4.0	2	08/08/2014 23:56
1,2-Dichloropropane	ND	4.7	2	08/08/2014 23:56
cis-1,3-Dichloropropene	ND	4.6	2	08/08/2014 23:56
trans-1,3-Dichloropropene	ND	4.6	2	08/08/2014 23:56

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 21:01
Date Prepared: 8/8/14-8/9/14

WorkOrder: 1408250
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³

Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-4-SG	1408250-002A	Soil Gas	08/06/2014 13:10	GC24	93865

Initial Pressure (psia) **Final Pressure (psia)**

12.61	25.14
-------	-------

Analytes	Result	RL	DE	Date Analyzed
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	7.1	2	08/08/2014 23:56
Diisopropyl ether (DIPE)	ND	4.2	2	08/08/2014 23:56
1,4-Dioxane	ND	3.7	2	08/08/2014 23:56
Ethanol	ND	190	2	08/08/2014 23:56
Ethyl acetate	ND	3.7	2	08/08/2014 23:56
Ethyl tert-butyl ether (ETBE)	ND	4.2	2	08/08/2014 23:56
Ethylbenzene	5.4	4.4	2	08/08/2014 23:56
4-Ethyltoluene	ND	5.0	2	08/08/2014 23:56
Freon 113	ND	7.8	2	08/08/2014 23:56
Heptane	280	42	2	08/08/2014 23:56
Hexachlorobutadiene	ND	11	2	08/08/2014 23:56
Hexane	850	36	2	08/08/2014 23:56
2-Hexanone	9.9	4.2	2	08/08/2014 23:56
4-Methyl-2-pentanone (MIBK)	ND	4.2	2	08/08/2014 23:56
Methyl-t-butyl ether (MTBE)	ND	3.7	2	08/08/2014 23:56
Methylene chloride	ND	3.5	2	08/08/2014 23:56
Methyl methacrylate	18	4.2	2	08/08/2014 23:56
Naphthalene	ND	11	2	08/08/2014 23:56
Propene	ND	180	2	08/08/2014 23:56
Styrene	ND	4.3	2	08/08/2014 23:56
1,1,1,2-Tetrachloroethane	ND	7.0	2	08/08/2014 23:56
1,1,2,2-Tetrachloroethane	ND	7.0	2	08/08/2014 23:56
Tetrachloroethene	ND	6.9	2	08/08/2014 23:56
Tetrahydrofuran	ND	3.0	2	08/08/2014 23:56
Toluene	26	3.8	2	08/08/2014 23:56
1,2,4-Trichlorobenzene	ND	7.5	2	08/08/2014 23:56
1,1,1-Trichloroethane	ND	5.5	2	08/08/2014 23:56
1,1,2-Trichloroethane	9.3	5.5	2	08/08/2014 23:56
Trichloroethene	34	5.5	2	08/08/2014 23:56
Trichlorofluoromethane	ND	5.7	2	08/08/2014 23:56
1,2,4-Trimethylbenzene	ND	5.0	2	08/08/2014 23:56
1,3,5-Trimethylbenzene	ND	5.0	2	08/08/2014 23:56
Vinyl Acetate	ND	3.6	2	08/08/2014 23:56
Vinyl Chloride	ND	2.6	2	08/08/2014 23:56

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 21:01
Date Prepared: 8/8/14-8/9/14

WorkOrder: 1408250
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³

Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-4-SG	1408250-002A	Soil Gas	08/06/2014 13:10	GC24	93865

Initial Pressure (psia) **Final Pressure (psia)**

12.61	25.14
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Analytes	Result	RL	DE	Date Analyzed
Xylenes, Total	ND	13	2	08/08/2014 23:56

Surrogates	REC (%)	Limits	Analytical Comments: a2,a3
1,2-DCA-d4	109	70-130	08/08/2014 23:56
Toluene-d8	103	70-130	08/08/2014 23:56
4-BFB	102	70-130	08/08/2014 23:56

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 21:01
Date Prepared: 8/8/14-8/9/14

WorkOrder: 1408250
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³

Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-6-SG	1408250-003A	Soil Gas	08/06/2014 11:30	GC24	93865

Initial Pressure (psia) **Final Pressure (psia)**

12.46	24.83
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Analytes	Result	RL	DE	Date Analyzed
Acetone	260	120	2	08/09/2014 00:35
Acrolein	ND	2.3	2	08/09/2014 00:35
Acrylonitrile	ND	2.2	2	08/09/2014 00:35
tert-Amyl methyl ether (TAME)	ND	4.2	2	08/09/2014 00:35
Benzene	50	3.2	2	08/09/2014 00:35
Benzyl chloride	ND	5.3	2	08/09/2014 00:35
Bromodichloromethane	ND	7.0	2	08/09/2014 00:35
Bromoform	ND	10	2	08/09/2014 00:35
Bromomethane	ND	3.9	2	08/09/2014 00:35
1,3-Butadiene	ND	2.2	2	08/09/2014 00:35
2-Butanone (MEK)	ND	150	2	08/09/2014 00:35
t-Butyl alcohol (TBA)	ND	62	2	08/09/2014 00:35
Carbon Disulfide	70	3.2	2	08/09/2014 00:35
Carbon Tetrachloride	ND	6.4	2	08/09/2014 00:35
Chlorobenzene	ND	4.7	2	08/09/2014 00:35
Chloroethane	ND	2.7	2	08/09/2014 00:35
Chloroform	ND	4.9	2	08/09/2014 00:35
Chloromethane	ND	2.1	2	08/09/2014 00:35
Cyclohexane	ND	35	2	08/09/2014 00:35
Dibromochloromethane	ND	8.7	2	08/09/2014 00:35
1,2-Dibromo-3-chloropropane	ND	0.25	2	08/09/2014 00:35
1,2-Dibromoethane (EDB)	ND	7.8	2	08/09/2014 00:35
1,2-Dichlorobenzene	ND	6.1	2	08/09/2014 00:35
1,3-Dichlorobenzene	ND	6.1	2	08/09/2014 00:35
1,4-Dichlorobenzene	ND	6.1	2	08/09/2014 00:35
Dichlorodifluoromethane	ND	5.0	2	08/09/2014 00:35
1,1-Dichloroethane	ND	4.1	2	08/09/2014 00:35
1,2-Dichloroethane (1,2-DCA)	ND	4.1	2	08/09/2014 00:35
1,1-Dichloroethene	ND	4.0	2	08/09/2014 00:35
cis-1,2-Dichloroethene	21	4.0	2	08/09/2014 00:35
trans-1,2-Dichloroethene	ND	4.0	2	08/09/2014 00:35
1,2-Dichloropropane	ND	4.7	2	08/09/2014 00:35
cis-1,3-Dichloropropene	ND	4.6	2	08/09/2014 00:35
trans-1,3-Dichloropropene	ND	4.6	2	08/09/2014 00:35

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 21:01
Date Prepared: 8/8/14-8/9/14

WorkOrder: 1408250
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³

Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-6-SG	1408250-003A	Soil Gas	08/06/2014 11:30	GC24	93865

Initial Pressure (psia) **Final Pressure (psia)**

12.46	24.83
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Analytes	Result	RL	DE	Date Analyzed
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	7.1	2	08/09/2014 00:35
Diisopropyl ether (DIPE)	ND	4.2	2	08/09/2014 00:35
1,4-Dioxane	ND	3.7	2	08/09/2014 00:35
Ethanol	320	190	2	08/09/2014 00:35
Ethyl acetate	ND	3.7	2	08/09/2014 00:35
Ethyl tert-butyl ether (ETBE)	ND	4.2	2	08/09/2014 00:35
Ethylbenzene	4.9	4.4	2	08/09/2014 00:35
4-Ethyltoluene	ND	5.0	2	08/09/2014 00:35
Freon 113	ND	7.8	2	08/09/2014 00:35
Heptane	100	42	2	08/09/2014 00:35
Hexachlorobutadiene	ND	11	2	08/09/2014 00:35
Hexane	250	36	2	08/09/2014 00:35
2-Hexanone	ND	4.2	2	08/09/2014 00:35
4-Methyl-2-pentanone (MIBK)	7.3	4.2	2	08/09/2014 00:35
Methyl-t-butyl ether (MTBE)	ND	3.7	2	08/09/2014 00:35
Methylene chloride	ND	3.5	2	08/09/2014 00:35
Methyl methacrylate	ND	4.2	2	08/09/2014 00:35
Naphthalene	ND	11	2	08/09/2014 00:35
Propene	ND	180	2	08/09/2014 00:35
Styrene	ND	4.3	2	08/09/2014 00:35
1,1,1,2-Tetrachloroethane	ND	7.0	2	08/09/2014 00:35
1,1,2,2-Tetrachloroethane	ND	7.0	2	08/09/2014 00:35
Tetrachloroethene	ND	6.9	2	08/09/2014 00:35
Tetrahydrofuran	ND	3.0	2	08/09/2014 00:35
Toluene	32	3.8	2	08/09/2014 00:35
1,2,4-Trichlorobenzene	ND	7.5	2	08/09/2014 00:35
1,1,1-Trichloroethane	ND	5.5	2	08/09/2014 00:35
1,1,2-Trichloroethane	ND	5.5	2	08/09/2014 00:35
Trichloroethene	18	5.5	2	08/09/2014 00:35
Trichlorofluoromethane	ND	5.7	2	08/09/2014 00:35
1,2,4-Trimethylbenzene	ND	5.0	2	08/09/2014 00:35
1,3,5-Trimethylbenzene	ND	5.0	2	08/09/2014 00:35
Vinyl Acetate	ND	3.6	2	08/09/2014 00:35
Vinyl Chloride	ND	2.6	2	08/09/2014 00:35

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Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 21:01
Date Prepared: 8/8/14-8/9/14

WorkOrder: 1408250
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³

Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-6-SG	1408250-003A	Soil Gas	08/06/2014 11:30	GC24	93865

Initial Pressure (psia) **Final Pressure (psia)**

12.46	24.83
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Analytes	Result	RL	DE	Date Analyzed
Xylenes, Total	14	13	2	08/09/2014 00:35

Surrogates	REC (%)	Limits	Analytical Comments: a2,a3
1,2-DCA-d4	107	70-130	08/09/2014 00:35
Toluene-d8	102	70-130	08/09/2014 00:35
4-BFB	102	70-130	08/09/2014 00:35

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 21:01
Date Prepared: 8/8/14-8/9/14

WorkOrder: 1408250
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³

Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-7-SG	1408250-004A	Soil Gas	08/06/2014 12:25	GC24	93865

Initial Pressure (psia) **Final Pressure (psia)**

12.77	25.44
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Analytes	Result	RL	DE	Date Analyzed
Acetone	84	60	1	08/09/2014 01:20
Acrolein	ND	1.2	1	08/09/2014 01:20
Acrylonitrile	ND	1.1	1	08/09/2014 01:20
tert-Amyl methyl ether (TAME)	ND	2.1	1	08/09/2014 01:20
Benzene	35	1.6	1	08/09/2014 01:20
Benzyl chloride	ND	2.6	1	08/09/2014 01:20
Bromodichloromethane	ND	3.5	1	08/09/2014 01:20
Bromoform	ND	5.2	1	08/09/2014 01:20
Bromomethane	ND	2.0	1	08/09/2014 01:20
1,3-Butadiene	7.8	1.1	1	08/09/2014 01:20
2-Butanone (MEK)	ND	75	1	08/09/2014 01:20
t-Butyl alcohol (TBA)	ND	31	1	08/09/2014 01:20
Carbon Disulfide	36	1.6	1	08/09/2014 01:20
Carbon Tetrachloride	ND	3.2	1	08/09/2014 01:20
Chlorobenzene	ND	2.4	1	08/09/2014 01:20
Chloroethane	ND	1.3	1	08/09/2014 01:20
Chloroform	8.2	2.4	1	08/09/2014 01:20
Chloromethane	11	1.0	1	08/09/2014 01:20
Cyclohexane	ND	18	1	08/09/2014 01:20
Dibromochloromethane	ND	4.4	1	08/09/2014 01:20
1,2-Dibromo-3-chloropropane	ND	0.12	1	08/09/2014 01:20
1,2-Dibromoethane (EDB)	ND	3.9	1	08/09/2014 01:20
1,2-Dichlorobenzene	ND	3.0	1	08/09/2014 01:20
1,3-Dichlorobenzene	ND	3.0	1	08/09/2014 01:20
1,4-Dichlorobenzene	ND	3.0	1	08/09/2014 01:20
Dichlorodifluoromethane	ND	2.5	1	08/09/2014 01:20
1,1-Dichloroethane	ND	2.0	1	08/09/2014 01:20
1,2-Dichloroethane (1,2-DCA)	ND	2.0	1	08/09/2014 01:20
1,1-Dichloroethene	ND	2.0	1	08/09/2014 01:20
cis-1,2-Dichloroethene	ND	2.0	1	08/09/2014 01:20
trans-1,2-Dichloroethene	ND	2.0	1	08/09/2014 01:20
1,2-Dichloropropane	ND	2.4	1	08/09/2014 01:20
cis-1,3-Dichloropropene	ND	2.3	1	08/09/2014 01:20
trans-1,3-Dichloropropene	ND	2.3	1	08/09/2014 01:20

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 21:01
Date Prepared: 8/8/14-8/9/14

WorkOrder: 1408250
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³

Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-7-SG	1408250-004A	Soil Gas	08/06/2014 12:25	GC24	93865

Initial Pressure (psia) **Final Pressure (psia)**

12.77	25.44
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Analytes	Result	RL	DE	Date Analyzed
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	3.6	1	08/09/2014 01:20
Diisopropyl ether (DIPE)	ND	2.1	1	08/09/2014 01:20
1,4-Dioxane	ND	1.8	1	08/09/2014 01:20
Ethanol	ND	96	1	08/09/2014 01:20
Ethyl acetate	ND	1.8	1	08/09/2014 01:20
Ethyl tert-butyl ether (ETBE)	ND	2.1	1	08/09/2014 01:20
Ethylbenzene	8.3	2.2	1	08/09/2014 01:20
4-Ethyltoluene	ND	2.5	1	08/09/2014 01:20
Freon 113	ND	3.9	1	08/09/2014 01:20
Heptane	27	21	1	08/09/2014 01:20
Hexachlorobutadiene	ND	5.4	1	08/09/2014 01:20
Hexane	30	18	1	08/09/2014 01:20
2-Hexanone	ND	2.1	1	08/09/2014 01:20
4-Methyl-2-pentanone (MIBK)	ND	2.1	1	08/09/2014 01:20
Methyl-t-butyl ether (MTBE)	ND	1.8	1	08/09/2014 01:20
Methylene chloride	ND	1.8	1	08/09/2014 01:20
Methyl methacrylate	ND	2.1	1	08/09/2014 01:20
Naphthalene	ND	5.3	1	08/09/2014 01:20
Propene	ND	88	1	08/09/2014 01:20
Styrene	ND	2.2	1	08/09/2014 01:20
1,1,1,2-Tetrachloroethane	ND	3.5	1	08/09/2014 01:20
1,1,2,2-Tetrachloroethane	ND	3.5	1	08/09/2014 01:20
Tetrachloroethene	8.5	3.4	1	08/09/2014 01:20
Tetrahydrofuran	28	1.5	1	08/09/2014 01:20
Toluene	430	1.9	1	08/09/2014 01:20
1,2,4-Trichlorobenzene	ND	3.8	1	08/09/2014 01:20
1,1,1-Trichloroethane	ND	2.8	1	08/09/2014 01:20
1,1,2-Trichloroethane	ND	2.8	1	08/09/2014 01:20
Trichloroethene	ND	2.8	1	08/09/2014 01:20
Trichlorofluoromethane	22	2.8	1	08/09/2014 01:20
1,2,4-Trimethylbenzene	ND	2.5	1	08/09/2014 01:20
1,3,5-Trimethylbenzene	ND	2.5	1	08/09/2014 01:20
Vinyl Acetate	ND	1.8	1	08/09/2014 01:20
Vinyl Chloride	ND	1.3	1	08/09/2014 01:20

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626702; India Basin
Date Received: 8/7/14 21:01
Date Prepared: 8/8/14-8/9/14

WorkOrder: 1408250
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³

Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-7-SG	1408250-004A	Soil Gas	08/06/2014 12:25	GC24	93865

Initial Pressure (psia) **Final Pressure (psia)**

12.77	25.44
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Analytes	Result	RL	DE	Date Analyzed
Xylenes, Total	27	6.6	1	08/09/2014 01:20

Surrogates	REC (%)	Limits	
1,2-DCA-d4	95	70-130	08/09/2014 01:20
Toluene-d8	103	70-130	08/09/2014 01:20
4-BFB	101	70-130	08/09/2014 01:20



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 8/11/14
Date Analyzed: 8/8/14
Instrument: GC26
Matrix: Soilgas
Project: #731626702; India Basin

WorkOrder: 1408250
BatchID: 93871
Extraction Method: ASTM D 1946-90
Analytical Method: ASTM D 1946-90
Unit: %
Sample ID: MB/LCS-93871

QC Summary Report for ASTM D1946-90

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Helium	ND	0.0113	0.0050	0.010	-	113	60-140



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 8/11/14
Date Analyzed: 8/8/14
Instrument: GC24
Matrix: Soilgas
Project: #731626702; India Basin

WorkOrder: 1408250
BatchID: 93865
Extraction Method: TO15
Analytical Method: TO15
Unit: nL/L
Sample ID: MB/LCS-93865

QC Summary Report for TO15

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	25	-	-	-	-
Acrolein	ND	30.6	0.50	25	-	123	60-140
Acrylonitrile	ND	28.1	0.50	25	-	112	60-140
tert-Amyl methyl ether (TAME)	ND	27.0	0.50	25	-	108	60-140
Benzene	ND	22.8	0.50	25	-	91	60-140
Benzyl chloride	ND	28.2	0.50	25	-	113	60-140
Bromodichloromethane	ND	24.8	0.50	25	-	99.3	60-140
Bromoform	ND	36.3	0.50	25	-	145, F2	60-140
Bromomethane	ND	-	0.50	-	-	-	-
1,3-Butadiene	ND	27.3	0.50	25	-	109	60-140
2-Butanone (MEK)	ND	-	25	-	-	-	-
t-Butyl alcohol (TBA)	ND	26.3	10	25	-	105	60-140
Carbon Disulfide	ND	24.4	0.50	25	-	97.4	60-140
Carbon Tetrachloride	ND	24.3	0.50	25	-	97.1	60-140
Chlorobenzene	ND	24.0	0.50	25	-	96.1	60-140
Chloroethane	ND	25.0	0.50	25	-	100	60-140
Chloroform	ND	20.0	0.50	25	-	80	60-140
Chloromethane	ND	25.7	0.50	25	-	103	60-140
Cyclohexane	ND	-	5.0	-	-	-	-
Dibromochloromethane	ND	27.5	0.50	25	-	110	60-140
1,2-Dibromo-3-chloropropane	ND	35.0	0.012	25	-	140	60-140
1,2-Dibromoethane (EDB)	ND	24.0	0.50	25	-	95.9	60-140
1,2-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,3-Dichlorobenzene	ND	24.8	0.50	25	-	99.3	60-140
1,4-Dichlorobenzene	ND	23.8	0.50	25	-	95	60-140
Dichlorodifluoromethane	ND	22.3	0.50	25	-	89.3	60-140
1,1-Dichloroethane	ND	24.9	0.50	25	-	99.4	60-140
1,2-Dichloroethane (1,2-DCA)	ND	22.8	0.50	25	-	91.2	60-140
1,1-Dichloroethene	ND	-	0.50	-	-	-	-
cis-1,2-Dichloroethene	ND	24.2	0.50	25	-	97	60-140
trans-1,2-Dichloroethene	ND	23.8	0.50	25	-	95.2	60-140
1,2-Dichloropropane	ND	25.4	0.50	25	-	102	60-140
cis-1,3-Dichloropropene	ND	26.6	0.50	25	-	106	60-140
trans-1,3-Dichloropropene	ND	25.0	0.50	25	-	100	60-140
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	22.8	0.50	25	-	91.2	60-140
Diisopropyl ether (DIPE)	ND	27.0	0.50	25	-	108	60-140
1,4-Dioxane	ND	24.8	0.50	25	-	99.1	60-140
Ethanol	ND	-	50	-	-	-	-
Ethyl acetate	ND	26.3	0.50	25	-	105	60-140
Ethyl tert-butyl ether (ETBE)	ND	26.0	0.50	25	-	104	60-140

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Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 8/11/14
Date Analyzed: 8/8/14
Instrument: GC24
Matrix: Soilgas
Project: #731626702; India Basin

WorkOrder: 1408250
BatchID: 93865
Extraction Method: TO15
Analytical Method: TO15
Unit: nL/L
Sample ID: MB/LCS-93865

QC Summary Report for TO15

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Ethylbenzene	ND	25.0	0.50	25	-	100	60-140
4-Ethyltoluene	ND	25.0	0.50	25	-	99.9	60-140
Freon 113	ND	21.7	0.50	25	-	86.9	60-140
Heptane	ND	-	5.0	-	-	-	-
Hexachlorobutadiene	ND	22.2	0.50	25	-	88.9	60-140
Hexane	ND	-	5.0	-	-	-	-
2-Hexanone	ND	-	0.50	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	32.1	0.50	25	-	128	60-140
Methyl-t-butyl ether (MTBE)	ND	24.8	0.50	25	-	99	60-140
Methylene chloride	ND	20.9	0.50	25	-	83.7	60-140
Methyl methacrylate	ND	28.9	0.50	25	-	116	60-140
Naphthalene	ND	63.4	1.0	50	-	127	60-140
Propene	ND	-	50	-	-	-	-
Styrene	ND	27.5	0.50	25	-	110	60-140
1,1,1,2-Tetrachloroethane	ND	26.0	0.50	25	-	104	60-140
1,1,2,2-Tetrachloroethane	ND	23.5	0.50	25	-	94	60-140
Tetrachloroethene	ND	25.3	0.50	25	-	101	60-140
Tetrahydrofuran	ND	23.1	0.50	25	-	92.3	60-140
Toluene	ND	24.4	0.50	25	-	97.4	60-140
1,2,4-Trichlorobenzene	ND	26.7	0.50	25	-	107	60-140
1,1,1-Trichloroethane	ND	26.1	0.50	25	-	105	60-140
1,1,2-Trichloroethane	ND	21.4	0.50	25	-	85.4	60-140
Trichloroethene	ND	22.7	0.50	25	-	90.8	60-140
Trichlorofluoromethane	ND	28.5	0.50	25	-	114	60-140
1,2,4-Trimethylbenzene	ND	23.1	0.50	25	-	92.5	60-140
1,3,5-Trimethylbenzene	ND	21.9	0.50	25	-	87.6	60-140
Vinyl Acetate	ND	-	0.50	-	-	-	-
Vinyl Chloride	ND	24.9	0.50	25	-	99.6	60-140
Xylenes, Total	ND	70.1	1.5	75	-	93.5	60-140

Surrogate Recovery

1,2-DCA-d4	492	485	500	99	97	60-140
Toluene-d8	520	521	500	104	104	60-140
4-BFB	497	522	500	99	104	60-140

WorkOrder: 1408250 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 Bill to: Accounts Payable Treadwell & Rollo 555 Montgomery St., Suite 1300 San Francisco, CA 94111 Requested TAT: 5 days

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
1408250-001	EB-3-SG	Soil Gas	8/6/2014 13:52	☐	A		A									
1408250-002	EB-4-SG	Soil Gas	8/6/2014 13:10	☐	A		A									
1408250-003	EB-6-SG	Soil Gas	8/6/2014 11:30	☐	A		A									
1408250-004	EB-7-SG	Soil Gas	8/6/2014 12:25	☐	A		A									
1408250-005	Unused Summa 1	Soil Gas	8/7/2014	☐		A										
1408250-006	Unused Summa 2	Soil Gas	8/7/2014	☐		A										

Test Legend:

1	PRHERegulator	2	PRUNUSEDSUMMA	3	015_Scan-SIM_SOIL(UG/M:	4	5
6		7		8		9	10
11		12					

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

Comments: SEND HARD COPY

Prepared by: Jena Alfaro

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.



McC Campbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

WORK ORDER SUMMARY

Client Name: TREADWELL & ROLLO
Project: #731626702; India Basin
Comments: SEND HARD COPY

QC Level: LEVEL 2
Client Contact: Peter Cusack
Contact's Email: pcusack@langan.com
Work Order: 1408250
Date Received: 8/7/2014

☐ WaterTrax ☐ WriteOn ☐ EDF

☐ Excel

☐ Fax

☒ Email

☐ HardCopy

☐ ThirdParty

☐ J-flag

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold SubOut
1408250-001A	EB-3-SG	Soil Gas	TO15 w/ Helium	1	1L Summa	☐	8/6/2014 13:52	5 days	☐	☐
1408250-002A	EB-4-SG	Soil Gas	TO15 w/ Helium	1	1L Summa	☐	8/6/2014 13:10	5 days	☐	☐
1408250-003A	EB-6-SG	Soil Gas	TO15 w/ Helium	1	1L Summa	☐	8/6/2014 11:30	5 days	☐	☐
1408250-004A	EB-7-SG	Soil Gas	TO15 w/ Helium	1	1L Summa	☐	8/6/2014 12:25	5 days	☐	☐

*** NOTE:** STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).

Bottle Legend:

1L Summa = 1L Summa Canister



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www.mcccampbell.com / main@mcccampbell.com
Telephone: (877) 252-9262 / Fax: (925) 252-9269

1408280

CHAIN OF CUSTODY RECORD

TURN AROUND TIME: RUSH ☐ 1 Day ☐ 2 Day ☐ 3 Day ☐ 5 DAY ☒ X
GeoTracker EDF ☐ PDF ☐ EDD ☐ EQulS ☐ 10 DAY ☐

UST Clean Up Fund Project ☐ Claim #

Report To: Peter Lusack Bill To: Peter Lusack
Company: Langan Treadwell Bollo
555 Montgomery St, #1300
SE, CA 94111 E-Mail: plusack@langan.com
Tele: (415) 955-5244 Fax: ()
Project #: 731626702 Project Name: Indian Basin
Project Location: Indian Basin
Sampler Signature: [Signature]

Field Sample ID
(Location)

Field Sample ID (Location)	Collection		Canister SN#	Sampler Kit SN#
	Date	Time		
<u>EB-13-SG</u>	<u>8-6-14</u>	<u>1352</u>	<u>7513-861</u>	<u>316-667</u>
<u>EB-14-SG</u>	<u>1</u>	<u>1310</u>	<u>6303-783</u>	<u>316-821</u>
<u>EB-16-SG</u>	<u>1</u>	<u>1130</u>	<u>6163-749</u>	<u>316-776</u>
<u>EB-17-SG</u>	<u>1</u>	<u>1225</u>	<u>6412-799</u>	<u>316-826</u>

Analysis Requested

VOCS by TO-15 (ug/m3) ☒ X
TPH(g) (ug/m3) ☐
LEED (inc. APCH, Formaldehyde, CO, Total VOCs) ☐
Fixed Gas: CO2, Methane, Ethane, Ethylene, Acetylene, CO (please circle or indicate in notes) uL/L ☐
Fixed Gas: O2, N2 (please circle) uL/L ☐
Fixed Gas: Propane uL/L ☐
Helium Leak Check (%) ☒ X
Leak Check (IPA, Norflorane, 1,1-difluoroethane) ug/m3 ☐
APH: Aliphatic and/or Aromatic (please circle) ug/m3 ☐
Other: ☐

Helium Shroud SN#

Other: ☐
Notes: Please Specify units if different than defaults VOCs is ug/m3 and fixed gas is uL/L. Leak check default is IPA.

Matrix	Cannister Pressure/ Vacuum	
	Initial	Final
Soilgas	-30	-15
Indoor Air	-30	-3
	-30	-5
	-30	-5

Relinquished By: [Signature] Date: 8/11/14 Time: 1400 Received By: [Signature]
Relinquished By: [Signature] Date: 8/11/14 Time: 1400 Received By: [Signature]
Relinquished By: [Signature] Date: 8/11/14 Time: 1400 Received By: [Signature]

Temp (°C) : _____ Work Order #: _____
Condition: _____
Custody Seals Intact?: Yes _____ No _____ None _____
Shipped Via: _____



Sample Receipt Checklist

Client Name: **Treadwell & Rollo**

Date and Time Received: **8/7/2014 9:01:22 PM**

Project Name: **#731626702; India Basin**

Login Reviewed by: **Jena Alfaro**

WorkOrder No: **1408250**

Matrix: Soil Gas

Carrier: Rob Pringle (MAI Courier)

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 ☐	
Container/Temp Blank temperature	Cooler 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: pH<2; 522: pH<4)?	Yes ☐	No ☐	NA ☒
Samples Received on Ice?	Yes ☐	No ☒	

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

Comments:



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1311112

Report Created for: Treadwell & Rollo
555 Montgomery St., Suite 1300
San Francisco, CA 94111

Project Contact: Maria Flessas

Project P.O.:

Project Name: India Basin

Project Received: 11/05/2013

Analytical Report reviewed & approved for release on 11/08/2013 by:

Question about
your data?

[Click here to email
McC Campbell](#)

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: India Basin

WorkOrder: 1311112

Glossary Abbreviation

Description

95% Interval	95% Confident Interval
DF	Dilution Factor
DUP	Duplicate
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ND	Not detected at or above the indicated MDL or RL
NR	Analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix; or sample diluted due to high matrix or analyte content.
RD	Relative Difference
RL	Reporting Limit
RPD	Relative Percent Deviation
SPK Val	Spike Value
SPKRef Val	Spike Reference Value

Analytical Qualifier

e2	diesel range compounds are significant; no recognizable pattern
e7	oil range compounds are significant
h4	sulfuric acid permanganate (EPA 3665) cleanup

Quality Control Qualifier

F1	MS/MSD recovery was out of acceptance criteria; LCS validated the prep batch.
F2	LCS recovery for this compound is outside of acceptance limits.



Analytical Report

Client: Treadwell & Rollo
Project: India Basin
Date Received: 11/5/13 19:44
Date Prepared: 11/5/13

WorkOrder: 1311112
Extraction Method SW3550B
Analytical Method: SW8081A/8082
Unit: mg/kg

Organochlorine Pesticides (8080 Basic Target List) + PCBs

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-2.5	1311112-001A	Soil	11/01/2013 08:00	GC22	83679
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Aldrin	ND		0.0010	1	11/06/2013 18:22
a-BHC	ND		0.0010	1	11/06/2013 18:22
b-BHC	ND		0.0010	1	11/06/2013 18:22
d-BHC	ND		0.0010	1	11/06/2013 18:22
g-BHC	ND		0.0010	1	11/06/2013 18:22
Chlordane (Technical)	ND		0.025	1	11/06/2013 18:22
a-Chlordane	ND		0.0010	1	11/06/2013 18:22
g-Chlordane	ND		0.0010	1	11/06/2013 18:22
p,p-DDD	ND		0.0010	1	11/06/2013 18:22
p,p-DDE	ND		0.0010	1	11/06/2013 18:22
p,p-DDT	ND		0.0010	1	11/06/2013 18:22
Dieldrin	ND		0.0010	1	11/06/2013 18:22
Endosulfan I	ND		0.0010	1	11/06/2013 18:22
Endosulfan II	ND		0.0010	1	11/06/2013 18:22
Endosulfan sulfate	ND		0.0010	1	11/06/2013 18:22
Endrin	ND		0.0010	1	11/06/2013 18:22
Endrin aldehyde	ND		0.0010	1	11/06/2013 18:22
Endrin ketone	ND		0.0010	1	11/06/2013 18:22
Heptachlor	ND		0.0010	1	11/06/2013 18:22
Heptachlor epoxide	ND		0.0010	1	11/06/2013 18:22
Hexachlorobenzene	ND		0.010	1	11/06/2013 18:22
Hexachlorocyclopentadiene	ND		0.020	1	11/06/2013 18:22
Methoxychlor	ND		0.0010	1	11/06/2013 18:22
Toxaphene	ND		0.050	1	11/06/2013 18:22
Aroclor1016	ND		0.050	1	11/06/2013 18:22
Aroclor1221	ND		0.050	1	11/06/2013 18:22
Aroclor1232	ND		0.050	1	11/06/2013 18:22
Aroclor1242	ND		0.050	1	11/06/2013 18:22
Aroclor1248	ND		0.050	1	11/06/2013 18:22
Aroclor1254	ND		0.050	1	11/06/2013 18:22
Aroclor1260	ND		0.050	1	11/06/2013 18:22
PCBs, total	ND		0.050	1	11/06/2013 18:22
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Decachlorobiphenyl	101		70-130		11/06/2013 18:22



Analytical Report

Client: Treadwell & Rollo
Project: India Basin
Date Received: 11/5/13 19:44
Date Prepared: 11/5/13

WorkOrder: 1311112
Extraction Method SW3550B
Analytical Method: SW8082
Unit: mg/kg

Polychlorinated Biphenyls (PCBs) Aroclors

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-7.5	1311112-003A	Soil	11/01/2013 08:30	GC5A	83697
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Aroclor1016	ND		0.050	1	11/06/2013 12:13
Aroclor1221	ND		0.050	1	11/06/2013 12:13
Aroclor1232	ND		0.050	1	11/06/2013 12:13
Aroclor1242	ND		0.050	1	11/06/2013 12:13
Aroclor1248	ND		0.050	1	11/06/2013 12:13
Aroclor1254	ND		0.050	1	11/06/2013 12:13
Aroclor1260	ND		0.050	1	11/06/2013 12:13
PCBs, total	ND		0.050	1	11/06/2013 12:13
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: h4	
Decachlorobiphenyl	106		70-130		11/06/2013 12:13



Analytical Report

Client: Treadwell & Rollo
Project: India Basin
Date Received: 11/5/13 19:44
Date Prepared: 11/5/13

WorkOrder: 1311112
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-2.5	1311112-001A	Soil	11/01/2013 08:00	GC16	83658
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	11/06/2013 17:46
tert-Amyl methyl ether (TAME)	ND		0.0050	1	11/06/2013 17:46
Benzene	ND		0.0050	1	11/06/2013 17:46
Bromobenzene	ND		0.0050	1	11/06/2013 17:46
Bromochloromethane	ND		0.0050	1	11/06/2013 17:46
Bromodichloromethane	ND		0.0050	1	11/06/2013 17:46
Bromoform	ND		0.0050	1	11/06/2013 17:46
Bromomethane	ND		0.0050	1	11/06/2013 17:46
2-Butanone (MEK)	ND		0.020	1	11/06/2013 17:46
t-Butyl alcohol (TBA)	ND		0.050	1	11/06/2013 17:46
n-Butyl benzene	ND		0.0050	1	11/06/2013 17:46
sec-Butyl benzene	ND		0.0050	1	11/06/2013 17:46
tert-Butyl benzene	ND		0.0050	1	11/06/2013 17:46
Carbon Disulfide	ND		0.0050	1	11/06/2013 17:46
Carbon Tetrachloride	ND		0.0050	1	11/06/2013 17:46
Chlorobenzene	ND		0.0050	1	11/06/2013 17:46
Chloroethane	ND		0.0050	1	11/06/2013 17:46
Chloroform	ND		0.0050	1	11/06/2013 17:46
Chloromethane	ND		0.0050	1	11/06/2013 17:46
2-Chlorotoluene	ND		0.0050	1	11/06/2013 17:46
4-Chlorotoluene	ND		0.0050	1	11/06/2013 17:46
Dibromochloromethane	ND		0.0050	1	11/06/2013 17:46
1,2-Dibromo-3-chloropropane	ND		0.0040	1	11/06/2013 17:46
1,2-Dibromoethane (EDB)	ND		0.0040	1	11/06/2013 17:46
Dibromomethane	ND		0.0050	1	11/06/2013 17:46
1,2-Dichlorobenzene	ND		0.0050	1	11/06/2013 17:46
1,3-Dichlorobenzene	ND		0.0050	1	11/06/2013 17:46
1,4-Dichlorobenzene	ND		0.0050	1	11/06/2013 17:46
Dichlorodifluoromethane	ND		0.0050	1	11/06/2013 17:46
1,1-Dichloroethane	ND		0.0050	1	11/06/2013 17:46
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	11/06/2013 17:46
1,1-Dichloroethene	ND		0.0050	1	11/06/2013 17:46
cis-1,2-Dichloroethene	ND		0.0050	1	11/06/2013 17:46
trans-1,2-Dichloroethene	ND		0.0050	1	11/06/2013 17:46
1,2-Dichloropropane	ND		0.0050	1	11/06/2013 17:46
1,3-Dichloropropane	ND		0.0050	1	11/06/2013 17:46
2,2-Dichloropropane	ND		0.0050	1	11/06/2013 17:46
1,1-Dichloropropene	ND		0.0050	1	11/06/2013 17:46

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: India Basin
Date Received: 11/5/13 19:44
Date Prepared: 11/5/13

WorkOrder: 1311112
Extraction Method SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-2.5	1311112-001A	Soil	11/01/2013 08:00	GC16	83658
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND		0.0050	1	11/06/2013 17:46
trans-1,3-Dichloropropene	ND		0.0050	1	11/06/2013 17:46
Diisopropyl ether (DIPE)	ND		0.0050	1	11/06/2013 17:46
Ethylbenzene	ND		0.0050	1	11/06/2013 17:46
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	11/06/2013 17:46
Freon 113	ND		0.10	1	11/06/2013 17:46
Hexachlorobutadiene	ND		0.0050	1	11/06/2013 17:46
Hexachloroethane	ND		0.0050	1	11/06/2013 17:46
2-Hexanone	ND		0.0050	1	11/06/2013 17:46
Isopropylbenzene	ND		0.0050	1	11/06/2013 17:46
4-Isopropyl toluene	ND		0.0050	1	11/06/2013 17:46
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	11/06/2013 17:46
Methylene chloride	ND		0.0050	1	11/06/2013 17:46
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	11/06/2013 17:46
Naphthalene	ND		0.0050	1	11/06/2013 17:46
n-Propyl benzene	ND		0.0050	1	11/06/2013 17:46
Styrene	ND		0.0050	1	11/06/2013 17:46
1,1,1,2-Tetrachloroethane	ND		0.0050	1	11/06/2013 17:46
1,1,2,2-Tetrachloroethane	ND		0.0050	1	11/06/2013 17:46
Tetrachloroethene	ND		0.0050	1	11/06/2013 17:46
Toluene	ND		0.0050	1	11/06/2013 17:46
1,2,3-Trichlorobenzene	ND		0.0050	1	11/06/2013 17:46
1,2,4-Trichlorobenzene	ND		0.0050	1	11/06/2013 17:46
1,1,1-Trichloroethane	ND		0.0050	1	11/06/2013 17:46
1,1,2-Trichloroethane	ND		0.0050	1	11/06/2013 17:46
Trichloroethene	ND		0.0050	1	11/06/2013 17:46
Trichlorofluoromethane	ND		0.0050	1	11/06/2013 17:46
1,2,3-Trichloropropane	ND		0.0050	1	11/06/2013 17:46
1,2,4-Trimethylbenzene	ND		0.0050	1	11/06/2013 17:46
1,3,5-Trimethylbenzene	ND		0.0050	1	11/06/2013 17:46
Vinyl Chloride	ND		0.0050	1	11/06/2013 17:46
Xylenes, Total	ND		0.0050	1	11/06/2013 17:46
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	96		70-130		11/06/2013 17:46
Toluene-d8	100		70-130		11/06/2013 17:46
4-BFB	103		70-130		11/06/2013 17:46

(Cont.)

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Analytical Report

Client: Treadwell & Rollo
Project: India Basin
Date Received: 11/5/13 19:44
Date Prepared: 11/5/13

WorkOrder: 1311112
Extraction Method SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-7.5	1311112-003A	Soil	11/01/2013 08:30	GC16	83658
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	11/06/2013 18:29
tert-Amyl methyl ether (TAME)	ND		0.0050	1	11/06/2013 18:29
Benzene	ND		0.0050	1	11/06/2013 18:29
Bromobenzene	ND		0.0050	1	11/06/2013 18:29
Bromochloromethane	ND		0.0050	1	11/06/2013 18:29
Bromodichloromethane	ND		0.0050	1	11/06/2013 18:29
Bromoform	ND		0.0050	1	11/06/2013 18:29
Bromomethane	ND		0.0050	1	11/06/2013 18:29
2-Butanone (MEK)	ND		0.020	1	11/06/2013 18:29
t-Butyl alcohol (TBA)	ND		0.050	1	11/06/2013 18:29
n-Butyl benzene	ND		0.0050	1	11/06/2013 18:29
sec-Butyl benzene	ND		0.0050	1	11/06/2013 18:29
tert-Butyl benzene	ND		0.0050	1	11/06/2013 18:29
Carbon Disulfide	ND		0.0050	1	11/06/2013 18:29
Carbon Tetrachloride	ND		0.0050	1	11/06/2013 18:29
Chlorobenzene	ND		0.0050	1	11/06/2013 18:29
Chloroethane	ND		0.0050	1	11/06/2013 18:29
Chloroform	ND		0.0050	1	11/06/2013 18:29
Chloromethane	ND		0.0050	1	11/06/2013 18:29
2-Chlorotoluene	ND		0.0050	1	11/06/2013 18:29
4-Chlorotoluene	ND		0.0050	1	11/06/2013 18:29
Dibromochloromethane	ND		0.0050	1	11/06/2013 18:29
1,2-Dibromo-3-chloropropane	ND		0.0040	1	11/06/2013 18:29
1,2-Dibromoethane (EDB)	ND		0.0040	1	11/06/2013 18:29
Dibromomethane	ND		0.0050	1	11/06/2013 18:29
1,2-Dichlorobenzene	ND		0.0050	1	11/06/2013 18:29
1,3-Dichlorobenzene	ND		0.0050	1	11/06/2013 18:29
1,4-Dichlorobenzene	ND		0.0050	1	11/06/2013 18:29
Dichlorodifluoromethane	ND		0.0050	1	11/06/2013 18:29
1,1-Dichloroethane	ND		0.0050	1	11/06/2013 18:29
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	11/06/2013 18:29
1,1-Dichloroethene	ND		0.0050	1	11/06/2013 18:29
cis-1,2-Dichloroethene	ND		0.0050	1	11/06/2013 18:29
trans-1,2-Dichloroethene	ND		0.0050	1	11/06/2013 18:29
1,2-Dichloropropane	ND		0.0050	1	11/06/2013 18:29
1,3-Dichloropropane	ND		0.0050	1	11/06/2013 18:29
2,2-Dichloropropane	ND		0.0050	1	11/06/2013 18:29
1,1-Dichloropropene	ND		0.0050	1	11/06/2013 18:29

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Analytical Report

Client: Treadwell & Rollo
Project: India Basin
Date Received: 11/5/13 19:44
Date Prepared: 11/5/13

WorkOrder: 1311112
Extraction Method SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-7.5	1311112-003A	Soil	11/01/2013 08:30	GC16	83658
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND		0.0050	1	11/06/2013 18:29
trans-1,3-Dichloropropene	ND		0.0050	1	11/06/2013 18:29
Diisopropyl ether (DIPE)	ND		0.0050	1	11/06/2013 18:29
Ethylbenzene	ND		0.0050	1	11/06/2013 18:29
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	11/06/2013 18:29
Freon 113	ND		0.10	1	11/06/2013 18:29
Hexachlorobutadiene	ND		0.0050	1	11/06/2013 18:29
Hexachloroethane	ND		0.0050	1	11/06/2013 18:29
2-Hexanone	ND		0.0050	1	11/06/2013 18:29
Isopropylbenzene	ND		0.0050	1	11/06/2013 18:29
4-Isopropyl toluene	ND		0.0050	1	11/06/2013 18:29
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	11/06/2013 18:29
Methylene chloride	ND		0.0050	1	11/06/2013 18:29
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	11/06/2013 18:29
Naphthalene	ND		0.0050	1	11/06/2013 18:29
n-Propyl benzene	ND		0.0050	1	11/06/2013 18:29
Styrene	ND		0.0050	1	11/06/2013 18:29
1,1,1,2-Tetrachloroethane	ND		0.0050	1	11/06/2013 18:29
1,1,2,2-Tetrachloroethane	ND		0.0050	1	11/06/2013 18:29
Tetrachloroethene	ND		0.0050	1	11/06/2013 18:29
Toluene	ND		0.0050	1	11/06/2013 18:29
1,2,3-Trichlorobenzene	ND		0.0050	1	11/06/2013 18:29
1,2,4-Trichlorobenzene	ND		0.0050	1	11/06/2013 18:29
1,1,1-Trichloroethane	ND		0.0050	1	11/06/2013 18:29
1,1,2-Trichloroethane	ND		0.0050	1	11/06/2013 18:29
Trichloroethene	ND		0.0050	1	11/06/2013 18:29
Trichlorofluoromethane	ND		0.0050	1	11/06/2013 18:29
1,2,3-Trichloropropane	ND		0.0050	1	11/06/2013 18:29
1,2,4-Trimethylbenzene	ND		0.0050	1	11/06/2013 18:29
1,3,5-Trimethylbenzene	ND		0.0050	1	11/06/2013 18:29
Vinyl Chloride	ND		0.0050	1	11/06/2013 18:29
Xylenes, Total	ND		0.0050	1	11/06/2013 18:29
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	96		70-130		11/06/2013 18:29
Toluene-d8	99		70-130		11/06/2013 18:29
4-BFB	108		70-130		11/06/2013 18:29



Analytical Report

Client: Treadwell & Rollo
Project: India Basin
Date Received: 11/5/13 19:44
Date Prepared: 11/6/13

WorkOrder: 1311112
Extraction Method SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-2.5	1311112-001A	Soil	11/01/2013 08:00	GC21	83748
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	ND		0.25	1	11/06/2013 21:35
Acenaphthylene	ND		0.25	1	11/06/2013 21:35
Acetochlor	ND		0.25	1	11/06/2013 21:35
Anthracene	ND		0.25	1	11/06/2013 21:35
Benidine	ND		1.3	1	11/06/2013 21:35
Benzo (a) anthracene	ND		0.25	1	11/06/2013 21:35
Benzo (b) fluoranthene	ND		0.25	1	11/06/2013 21:35
Benzo (k) fluoranthene	ND		0.25	1	11/06/2013 21:35
Benzo (g,h,i) perylene	ND		0.25	1	11/06/2013 21:35
Benzo (a) pyrene	ND		0.25	1	11/06/2013 21:35
Benzyl Alcohol	ND		1.3	1	11/06/2013 21:35
1,1-Biphenyl	ND		0.25	1	11/06/2013 21:35
Bis (2-chloroethoxy) Methane	ND		0.25	1	11/06/2013 21:35
Bis (2-chloroethyl) Ether	ND		0.25	1	11/06/2013 21:35
Bis (2-chloroisopropyl) Ether	ND		0.25	1	11/06/2013 21:35
Bis (2-ethylhexyl) Adipate	ND		0.25	1	11/06/2013 21:35
Bis (2-ethylhexyl) Phthalate	ND		0.25	1	11/06/2013 21:35
4-Bromophenyl Phenyl Ether	ND		0.25	1	11/06/2013 21:35
Butylbenzyl Phthalate	ND		0.25	1	11/06/2013 21:35
4-Chloroaniline	ND		0.25	1	11/06/2013 21:35
4-Chloro-3-methylphenol	ND		0.25	1	11/06/2013 21:35
2-Chloronaphthalene	ND		0.25	1	11/06/2013 21:35
2-Chlorophenol	ND		0.25	1	11/06/2013 21:35
4-Chlorophenyl Phenyl Ether	ND		0.25	1	11/06/2013 21:35
Chrysene	ND		0.25	1	11/06/2013 21:35
Dibenzo (a,h) anthracene	ND		0.25	1	11/06/2013 21:35
Dibenzofuran	ND		0.25	1	11/06/2013 21:35
Di-n-butyl Phthalate	ND		0.25	1	11/06/2013 21:35
1,2-Dichlorobenzene	ND		0.25	1	11/06/2013 21:35
1,3-Dichlorobenzene	ND		0.25	1	11/06/2013 21:35
1,4-Dichlorobenzene	ND		0.25	1	11/06/2013 21:35
3,3-Dichlorobenzidine	ND		0.50	1	11/06/2013 21:35
2,4-Dichlorophenol	ND		0.25	1	11/06/2013 21:35
Diethyl Phthalate	ND		0.25	1	11/06/2013 21:35
2,4-Dimethylphenol	ND		0.25	1	11/06/2013 21:35
Dimethyl Phthalate	ND		0.25	1	11/06/2013 21:35
4,6-Dinitro-2-methylphenol	ND		1.3	1	11/06/2013 21:35
2,4-Dinitrophenol	ND		6.3	1	11/06/2013 21:35

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Analytical Report

Client: Treadwell & Rollo
Project: India Basin
Date Received: 11/5/13 19:44
Date Prepared: 11/6/13

WorkOrder: 1311112
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-2.5	1311112-001A	Soil	11/01/2013 08:00	GC21	83748
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrotoluene	ND		0.25	1	11/06/2013 21:35
2,6-Dinitrotoluene	ND		0.25	1	11/06/2013 21:35
Di-n-octyl Phthalate	ND		0.50	1	11/06/2013 21:35
1,2-Diphenylhydrazine	ND		0.25	1	11/06/2013 21:35
Fluoranthene	ND		0.25	1	11/06/2013 21:35
Fluorene	ND		0.25	1	11/06/2013 21:35
Hexachlorobenzene	ND		0.25	1	11/06/2013 21:35
Hexachlorobutadiene	ND		0.25	1	11/06/2013 21:35
Hexachlorocyclopentadiene	ND		1.3	1	11/06/2013 21:35
Hexachloroethane	ND		0.25	1	11/06/2013 21:35
Indeno (1,2,3-cd) pyrene	ND		0.25	1	11/06/2013 21:35
Isophorone	ND		0.25	1	11/06/2013 21:35
2-Methylnaphthalene	ND		0.25	1	11/06/2013 21:35
2-Methylphenol (o-Cresol)	ND		0.25	1	11/06/2013 21:35
3 &/or 4-Methylphenol (m,p-Cresol)	ND		0.25	1	11/06/2013 21:35
Naphthalene	ND		0.25	1	11/06/2013 21:35
2-Nitroaniline	ND		1.3	1	11/06/2013 21:35
3-Nitroaniline	ND		1.3	1	11/06/2013 21:35
4-Nitroaniline	ND		1.3	1	11/06/2013 21:35
Nitrobenzene	ND		0.25	1	11/06/2013 21:35
2-Nitrophenol	ND		1.3	1	11/06/2013 21:35
4-Nitrophenol	ND		1.3	1	11/06/2013 21:35
N-Nitrosodiphenylamine	ND		0.25	1	11/06/2013 21:35
N-Nitrosodi-n-propylamine	ND		0.25	1	11/06/2013 21:35
Pentachlorophenol	ND		1.3	1	11/06/2013 21:35
Phenanthrene	ND		0.25	1	11/06/2013 21:35
Phenol	ND		0.25	1	11/06/2013 21:35
Pyrene	ND		0.25	1	11/06/2013 21:35
1,2,4-Trichlorobenzene	ND		0.25	1	11/06/2013 21:35
2,4,5-Trichlorophenol	ND		0.25	1	11/06/2013 21:35
2,4,6-Trichlorophenol	ND		0.25	1	11/06/2013 21:35

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Analytical Report

Client: Treadwell & Rollo

Project: India Basin

Date Received: 11/5/13 19:44

Date Prepared: 11/6/13

WorkOrder: 1311112

Extraction Method SW3550B

Analytical Method: SW8270C

Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-2.5	1311112-001A	Soil	11/01/2013 08:00	GC21	83748

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
2-Fluorophenol	95	30-130		11/06/2013 21:35
Phenol-d5	90	30-130		11/06/2013 21:35
Nitrobenzene-d5	75	30-130		11/06/2013 21:35
2-Fluorobiphenyl	68	30-130		11/06/2013 21:35
2,4,6-Tribromophenol	72	30-130		11/06/2013 21:35
4-Terphenyl-d14	76	30-130		11/06/2013 21:35

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Analytical Report

Client: Treadwell & Rollo
Project: India Basin
Date Received: 11/5/13 19:44
Date Prepared: 11/6/13

WorkOrder: 1311112
Extraction Method SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-7.5	1311112-003A	Soil	11/01/2013 08:30	GC21	83748
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	ND		0.50	2	11/06/2013 22:57
Acenaphthylene	ND		0.50	2	11/06/2013 22:57
Acetochlor	ND		0.50	2	11/06/2013 22:57
Anthracene	ND		0.50	2	11/06/2013 22:57
Benidine	ND		2.6	2	11/06/2013 22:57
Benzo (a) anthracene	ND		0.50	2	11/06/2013 22:57
Benzo (b) fluoranthene	ND		0.50	2	11/06/2013 22:57
Benzo (k) fluoranthene	ND		0.50	2	11/06/2013 22:57
Benzo (g,h,i) perylene	ND		0.50	2	11/06/2013 22:57
Benzo (a) pyrene	ND		0.50	2	11/06/2013 22:57
Benzyl Alcohol	ND		2.6	2	11/06/2013 22:57
1,1-Biphenyl	ND		0.50	2	11/06/2013 22:57
Bis (2-chloroethoxy) Methane	ND		0.50	2	11/06/2013 22:57
Bis (2-chloroethyl) Ether	ND		0.50	2	11/06/2013 22:57
Bis (2-chloroisopropyl) Ether	ND		0.50	2	11/06/2013 22:57
Bis (2-ethylhexyl) Adipate	ND		0.50	2	11/06/2013 22:57
Bis (2-ethylhexyl) Phthalate	ND		0.50	2	11/06/2013 22:57
4-Bromophenyl Phenyl Ether	ND		0.50	2	11/06/2013 22:57
Butylbenzyl Phthalate	ND		0.50	2	11/06/2013 22:57
4-Chloroaniline	ND		0.50	2	11/06/2013 22:57
4-Chloro-3-methylphenol	ND		0.50	2	11/06/2013 22:57
2-Chloronaphthalene	ND		0.50	2	11/06/2013 22:57
2-Chlorophenol	ND		0.50	2	11/06/2013 22:57
4-Chlorophenyl Phenyl Ether	ND		0.50	2	11/06/2013 22:57
Chrysene	ND		0.50	2	11/06/2013 22:57
Dibenzo (a,h) anthracene	ND		0.50	2	11/06/2013 22:57
Dibenzofuran	ND		0.50	2	11/06/2013 22:57
Di-n-butyl Phthalate	ND		0.50	2	11/06/2013 22:57
1,2-Dichlorobenzene	ND		0.50	2	11/06/2013 22:57
1,3-Dichlorobenzene	ND		0.50	2	11/06/2013 22:57
1,4-Dichlorobenzene	ND		0.50	2	11/06/2013 22:57
3,3-Dichlorobenzidine	ND		1.0	2	11/06/2013 22:57
2,4-Dichlorophenol	ND		0.50	2	11/06/2013 22:57
Diethyl Phthalate	ND		0.50	2	11/06/2013 22:57
2,4-Dimethylphenol	ND		0.50	2	11/06/2013 22:57
Dimethyl Phthalate	ND		0.50	2	11/06/2013 22:57
4,6-Dinitro-2-methylphenol	ND		2.6	2	11/06/2013 22:57
2,4-Dinitrophenol	ND		13	2	11/06/2013 22:57

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Analytical Report

Client: Treadwell & Rollo
Project: India Basin
Date Received: 11/5/13 19:44
Date Prepared: 11/6/13

WorkOrder: 1311112
Extraction Method SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-7.5	1311112-003A	Soil	11/01/2013 08:30	GC21	83748
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrotoluene	ND		0.50	2	11/06/2013 22:57
2,6-Dinitrotoluene	ND		0.50	2	11/06/2013 22:57
Di-n-octyl Phthalate	ND		1.0	2	11/06/2013 22:57
1,2-Diphenylhydrazine	ND		0.50	2	11/06/2013 22:57
Fluoranthene	ND		0.50	2	11/06/2013 22:57
Fluorene	ND		0.50	2	11/06/2013 22:57
Hexachlorobenzene	ND		0.50	2	11/06/2013 22:57
Hexachlorobutadiene	ND		0.50	2	11/06/2013 22:57
Hexachlorocyclopentadiene	ND		2.6	2	11/06/2013 22:57
Hexachloroethane	ND		0.50	2	11/06/2013 22:57
Indeno (1,2,3-cd) pyrene	ND		0.50	2	11/06/2013 22:57
Isophorone	ND		0.50	2	11/06/2013 22:57
2-Methylnaphthalene	ND		0.50	2	11/06/2013 22:57
2-Methylphenol (o-Cresol)	ND		0.50	2	11/06/2013 22:57
3 &/or 4-Methylphenol (m,p-Cresol)	ND		0.50	2	11/06/2013 22:57
Naphthalene	ND		0.50	2	11/06/2013 22:57
2-Nitroaniline	ND		2.6	2	11/06/2013 22:57
3-Nitroaniline	ND		2.6	2	11/06/2013 22:57
4-Nitroaniline	ND		2.6	2	11/06/2013 22:57
Nitrobenzene	ND		0.50	2	11/06/2013 22:57
2-Nitrophenol	ND		2.6	2	11/06/2013 22:57
4-Nitrophenol	ND		2.6	2	11/06/2013 22:57
N-Nitrosodiphenylamine	ND		0.50	2	11/06/2013 22:57
N-Nitrosodi-n-propylamine	ND		0.50	2	11/06/2013 22:57
Pentachlorophenol	ND		2.6	2	11/06/2013 22:57
Phenanthrene	ND		0.50	2	11/06/2013 22:57
Phenol	ND		0.50	2	11/06/2013 22:57
Pyrene	ND		0.50	2	11/06/2013 22:57
1,2,4-Trichlorobenzene	ND		0.50	2	11/06/2013 22:57
2,4,5-Trichlorophenol	ND		0.50	2	11/06/2013 22:57
2,4,6-Trichlorophenol	ND		0.50	2	11/06/2013 22:57

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Analytical Report

Client: Treadwell & Rollo
Project: India Basin
Date Received: 11/5/13 19:44
Date Prepared: 11/6/13

WorkOrder: 1311112
Extraction Method SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-7.5	1311112-003A	Soil	11/01/2013 08:30	GC21	83748
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorophenol	88		30-130		11/06/2013 22:57
Phenol-d5	85		30-130		11/06/2013 22:57
Nitrobenzene-d5	72		30-130		11/06/2013 22:57
2-Fluorobiphenyl	66		30-130		11/06/2013 22:57
2,4,6-Tribromophenol	72		30-130		11/06/2013 22:57
4-Terphenyl-d14	76		30-130		11/06/2013 22:57



Analytical Report

Client: Treadwell & Rollo
Project: India Basin
Date Received: 11/5/13 19:44
Date Prepared: 11/5/13

WorkOrder: 1311112
Extraction Method SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-2.5	1311112-001A	Soil/TOTAL	11/01/2013 08:00	ICP-MS1	83696
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Antimony	ND		0.50	1	11/06/2013 15:03
Arsenic	11		0.50	1	11/06/2013 15:03
Barium	290		5.0	1	11/06/2013 15:03
Beryllium	0.70		0.50	1	11/06/2013 15:03
Cadmium	ND		0.25	1	11/06/2013 15:03
Chromium	28		0.50	1	11/06/2013 15:03
Cobalt	15		0.50	1	11/06/2013 15:03
Copper	36		0.50	1	11/06/2013 15:03
Lead	15		0.50	1	11/06/2013 15:03
Mercury	0.058		0.050	1	11/06/2013 15:03
Molybdenum	0.72		0.50	1	11/06/2013 15:03
Nickel	43		0.50	1	11/06/2013 15:03
Selenium	ND		0.50	1	11/06/2013 15:03
Silver	ND		0.50	1	11/06/2013 15:03
Thallium	ND		0.50	1	11/06/2013 15:03
Vanadium	34		0.50	1	11/06/2013 15:03
Zinc	83		5.0	1	11/06/2013 15:03
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	100		70-130		11/06/2013 15:03

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Analytical Report

Client: Treadwell & Rollo
Project: India Basin
Date Received: 11/5/13 19:44
Date Prepared: 11/5/13

WorkOrder: 1311112
Extraction Method SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-5	1311112-002A	Soil/TOTAL	11/01/2013 08:08	ICP-MS1	83696
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Antimony	13		0.50	1	11/06/2013 15:09
Arsenic	37		0.50	1	11/06/2013 15:09
Barium	390		5.0	1	11/06/2013 15:09
Beryllium	0.63		0.50	1	11/06/2013 15:09
Cadmium	0.37		0.25	1	11/06/2013 15:09
Chromium	64		0.50	1	11/06/2013 15:09
Cobalt	22		0.50	1	11/06/2013 15:09
Copper	920		10	20	11/07/2013 22:53
Lead	340		10	20	11/07/2013 22:53
Mercury	3.6		0.50	10	11/08/2013 14:47
Molybdenum	1.7		0.50	1	11/06/2013 15:09
Nickel	82		0.50	1	11/06/2013 15:09
Selenium	ND		0.50	1	11/06/2013 15:09
Silver	4.4		0.50	1	11/06/2013 15:09
Thallium	ND		0.50	1	11/06/2013 15:09
Vanadium	77		0.50	1	11/06/2013 15:09
Zinc	340		5.0	1	11/06/2013 15:09
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	99		70-130		11/06/2013 15:09



Analytical Report

Client: Treadwell & Rollo

Project: India Basin

Date Received: 11/5/13 19:44

Date Prepared: 11/5/13-11/7/13

WorkOrder: 1311112

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/ExtType	Date Collected	Instrument	Batch ID
B-1-2.5	1311112-001A	Soil	11/01/2013 08:00	GC19	83695

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	11/07/2013 02:59
MTBE	---	0.050	1	11/07/2013 02:59
Benzene	---	0.0050	1	11/07/2013 02:59
Toluene	---	0.0050	1	11/07/2013 02:59
Ethylbenzene	---	0.0050	1	11/07/2013 02:59
Xylenes	---	0.0050	1	11/07/2013 02:59
Surrogates	REC (%)	Limits		
2-Fluorotoluene	106	70-130		11/07/2013 02:59

B-1-5	1311112-002A	Soil	11/01/2013 08:08	GC19	83764
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Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	11/08/2013 02:51
MTBE	---	0.050	1	11/08/2013 02:51
Benzene	---	0.0050	1	11/08/2013 02:51
Toluene	---	0.0050	1	11/08/2013 02:51
Ethylbenzene	---	0.0050	1	11/08/2013 02:51
Xylenes	---	0.0050	1	11/08/2013 02:51
Surrogates	REC (%)	Limits		
2-Fluorotoluene	100	70-130		11/08/2013 02:51

B-1-7.5	1311112-003A	Soil	11/01/2013 08:30	GC19	83695
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Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	11/07/2013 03:58
MTBE	---	0.050	1	11/07/2013 03:58
Benzene	---	0.0050	1	11/07/2013 03:58
Toluene	---	0.0050	1	11/07/2013 03:58
Ethylbenzene	---	0.0050	1	11/07/2013 03:58
Xylenes	---	0.0050	1	11/07/2013 03:58
Surrogates	REC (%)	Limits		
2-Fluorotoluene	99	70-130		11/07/2013 03:58

(Cont.)



Analytical Report

Client: Treadwell & Rollo

Project: India Basin

Date Received: 11/5/13 19:44

Date Prepared: 11/5/13-11/7/13

WorkOrder: 1311112

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/ExtType	Date Collected	Instrument	Batch ID
B-1-10	1311112-004A	Soil	11/01/2013 08:40	GC19	83695
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		1.0	1	11/07/2013 04:57
MTBE	---		0.050	1	11/07/2013 04:57
Benzene	---		0.0050	1	11/07/2013 04:57
Toluene	---		0.0050	1	11/07/2013 04:57
Ethylbenzene	---		0.0050	1	11/07/2013 04:57
Xylenes	---		0.0050	1	11/07/2013 04:57
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	105		70-130		11/07/2013 04:57



Analytical Report

Client: Treadwell & Rollo
Project: India Basin
Date Received: 11/5/13 19:44
Date Prepared: 11/5/13

WorkOrder: 1311112
Extraction Method SW3050B
Analytical Method: SW6020
Unit: mg/Kg

LUFT 5 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-7.5	1311112-003A	Soil/TOTAL	11/01/2013 08:30	ICP-MS1	83696
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	0.29		0.25	1	11/06/2013 15:15
Chromium	52		0.50	1	11/06/2013 15:15
Lead	160		5.0	10	11/07/2013 22:59
Nickel	54		0.50	1	11/06/2013 15:15
Zinc	240		5.0	1	11/06/2013 15:15
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	99		70-130		11/06/2013 15:15



Analytical Report

Client: Treadwell & Rollo
Project: India Basin
Date Received: 11/5/13 19:44
Date Prepared: 11/5/13

WorkOrder: 1311112
Extraction Method SW3050B
Analytical Method: SW6010B
Unit: mg/Kg

Lead

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-10	1311112-004A	Soil/TOTAL	11/01/2013 08:40	ICP-JY	83675
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	35		5.0	1	11/06/2013 13:05
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	111		70-130		11/06/2013 13:05



Analytical Report

Client: Treadwell & Rollo
Project: India Basin
Date Received: 11/5/13 19:44
Date Prepared: 11/5/13

WorkOrder: 1311112
Extraction Method SW3550B
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-2.5	1311112-001A	Soil	11/01/2013 08:00	GC11A	83651
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	2.3		1.0	1	11/06/2013 16:50
TPH-Motor Oil (C18-C36)	10		5.0	1	11/06/2013 16:50
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	103		70-130		11/06/2013 16:50
B-1-5	1311112-002A	Soil	11/01/2013 08:08	GC11A	83700
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	21		1.0	1	11/07/2013 05:24
TPH-Motor Oil (C18-C36)	76		5.0	1	11/07/2013 05:24
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	109		70-130		11/07/2013 05:24
B-1-7.5	1311112-003A	Soil	11/01/2013 08:30	GC2A	83700
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	18		2.0	2	11/06/2013 21:45
TPH-Motor Oil (C18-C36)	75		10	2	11/06/2013 21:45
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	94		70-130		11/06/2013 21:45
B-1-10	1311112-004A	Soil	11/01/2013 08:40	GC2A	83700
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	11		1.0	1	11/07/2013 09:05
TPH-Motor Oil (C18-C36)	38		5.0	1	11/07/2013 09:05
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	92		70-130		11/07/2013 09:05



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 11/5/13
Date Analyzed: 11/5/13
Instrument: GC22
Matrix: Soil
Project: India Basin

WorkOrder: 1311112
BatchID: 83679
Extraction Method SW3550B
Analytical Method: SW8081A/8082
Unit: mg/kg
Sample ID: MB/LCS-83679
1311094-042AMS/MSD

QC SUMMARY REPORT FOR SW8081A/8082

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Aldrin	ND	0.04901	0.0010	0.050	-	98	70-130
a-BHC	ND	-	0.0010	-	-	-	-
b-BHC	ND	-	0.0010	-	-	-	-
d-BHC	ND	-	0.0010	-	-	-	-
g-BHC	ND	0.05253	0.0010	0.050	-	105	70-130
Chlordane (Technical)	ND	-	0.025	-	-	-	-
a-Chlordane	ND	-	0.0010	-	-	-	-
g-Chlordane	ND	-	0.0010	-	-	-	-
p,p-DDD	ND	-	0.0010	-	-	-	-
p,p-DDE	ND	-	0.0010	-	-	-	-
p,p-DDT	ND	0.04269	0.0010	0.050	-	85.4	70-130
Dieldrin	ND	-	0.0010	-	-	-	-
Dieldrin	ND	0.06078	0.0010	0.050	-	122	70-130
Endosulfan I	ND	-	0.0010	-	-	-	-
Endosulfan II	ND	-	0.0010	-	-	-	-
Endosulfan sulfate	ND	-	0.0010	-	-	-	-
Endrin	ND	-	0.0010	-	-	-	-
Endrin	ND	0.05975	0.0010	0.050	-	119	70-130
Endrin aldehyde	ND	-	0.0010	-	-	-	-
Endrin ketone	ND	-	0.0010	-	-	-	-
Heptachlor	ND	-	0.0010	-	-	-	-
Heptachlor	ND	0.05865	0.0010	0.050	-	117	70-130
Heptachlor epoxide	ND	-	0.0010	-	-	-	-
Hexachlorobenzene	ND	-	0.010	-	-	-	-
Hexachlorocyclopentadiene	ND	-	0.020	-	-	-	-
Methoxychlor	ND	-	0.0010	-	-	-	-
Toxaphene	ND	-	0.050	-	-	-	-

Surrogate Recovery

Decachlorobiphenyl	0.05017	0.05225		0.050	100	105	70-130
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Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 11/5/13
Date Analyzed: 11/5/13
Instrument: GC22
Matrix: Soil
Project: India Basin

WorkOrder: 1311112
BatchID: 83679
Extraction Method: SW3550B
Analytical Method: SW8081A/8082
Unit: mg/kg
Sample ID: MB/LCS-83679
1311094-042AMS/MSD

QC SUMMARY REPORT FOR SW8081A/8082

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Aldrin	0.04816	0.04805	0.050	ND	96.3	96.1	70-130	0.218	30
g-BHC	0.05257	0.05262	0.050	ND	105	105	70-130	0	30
p,p-DDT	0.04306	0.04315	0.050	ND	86.1	86.3	70-130	0.205	30
Dieldrin	0.07643	0.07412	0.050	0.01327	126	122	70-130	3.07	30
Endrin	0.05881	0.05899	0.050	ND	118	118	70-130	0	30
Heptachlor	0.05915	0.05904	0.050	ND	118	118	70-130	0	30
Surrogate Recovery									
Decachlorobiphenyl	0.04971	0.04978	0.050		99	100	70-130	0.147	30



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 11/5/13
Date Analyzed: 11/6/13
Instrument: GC5A
Matrix: Soil
Project: India Basin

WorkOrder: 1311112
BatchID: 83697
Extraction Method: SW3550B
Analytical Method: SW8082
Unit: mg/kg
Sample ID: MB/LCS-83697
1311110-002AMS/MSD

QC SUMMARY REPORT FOR SW8082

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Aroclor1016	ND	-	0.050	-	-	-	-
Aroclor1221	ND	-	0.050	-	-	-	-
Aroclor1232	ND	-	0.050	-	-	-	-
Aroclor1242	ND	-	0.050	-	-	-	-
Aroclor1248	ND	-	0.050	-	-	-	-
Aroclor1254	ND	-	0.050	-	-	-	-
Aroclor1260	ND	0.1905	0.050	0.15	-	127	70-130
PCBs, total	ND	-	0.050	-	-	-	-

Surrogate Recovery

Decachlorobiphenyl	0.05596	0.05652		0.050	112	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
Aroclor1260	0.1842	0.1852	0.15	ND	123	123	70-130	0	30

Surrogate Recovery

Decachlorobiphenyl	0.05413	0.05428	0.050		108	109	70-130	0.265	30
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Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 11/5/13
Date Analyzed: 11/5/13
Instrument: GC16
Matrix: Soil
Project: India Basin

WorkOrder: 1311112
BatchID: 83658
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/Kg
Sample ID: MB/LCS-83658
1311078-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	0.10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	0.0543	0.0050	0.050	-	109	70-130
Benzene	ND	0.05051	0.0050	0.050	-	101	70-130
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	0.2638	0.050	0.20	-	132, F2	70-130
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.05295	0.0050	0.050	-	106	70-130
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.05487	0.0040	0.050	-	110	70-130
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.05423	0.0040	0.050	-	108	70-130
1,1-Dichloroethene	ND	0.05143	0.0050	0.050	-	103	70-130
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-

(Cont.)



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 11/5/13
Date Analyzed: 11/5/13
Instrument: GC16
Matrix: Soil
Project: India Basin

WorkOrder: 1311112
BatchID: 83658
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/Kg
Sample ID: MB/LCS-83658
1311078-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Diisopropyl ether (DIPE)	ND	0.05298	0.0050	0.050	-	106	70-130
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.05306	0.0050	0.050	-	106	70-130
Freon 113	ND	-	0.0050	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.05513	0.0050	0.050	-	110	70-130
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	0.05411	0.0050	0.050	-	108	70-130
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	0.05475	0.0050	0.050	-	110	70-130
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Xylenes, Total	ND	-	0.0050	-	-	-	-

Surrogate Recovery

Dibromofluoromethane	0.1216	0.1689	0.18	97	97	70-130
Toluene-d8	0.142	0.2011	0.18	114	115	70-130
4-BFB	0.01341	0.01767	0.018	107	101	70-130

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Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 11/5/13
Date Analyzed: 11/5/13
Instrument: GC16
Matrix: Soil
Project: India Basin

WorkOrder: 1311112
BatchID: 83658
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/Kg
Sample ID: MB/LCS-83658
1311078-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	0.05008	0.0505	0.050	ND	100,F1	101,F1	56-94	0.829	30
Benzene	0.04516	0.04516	0.050	ND	90.3	90.3	60-106	0	30
t-Butyl alcohol (TBA)	0.2398	0.2351	0.20	ND	120	118	56-140	1.95	30
Chlorobenzene	0.04667	0.04689	0.050	ND	93.3	93.8	61-108	0.477	30
1,2-Dibromoethane (EDB)	0.04983	0.04894	0.050	ND	99.7	97.9	54-119	1.81	30
1,2-Dichloroethane (1,2-DCA)	0.0486	0.04934	0.050	ND	97.2	98.7	48-115	1.50	30
1,1-Dichloroethene	0.0449	0.04541	0.050	ND	89.8	90.8	46-111	1.13	30
Diisopropyl ether (DIPE)	0.04789	0.04832	0.050	ND	95.8	96.6	53-111	0.888	30
Ethyl tert-butyl ether (ETBE)	0.0484	0.04862	0.050	ND	96.8	97.2	61-104	0.438	30
Methyl-t-butyl ether (MTBE)	0.05017	0.05082	0.050	ND	100	102	58-107	1.30	30
Toluene	0.04743	0.04734	0.050	ND	94.9	94.7	64-114	0.184	30
Trichloroethene	0.04903	0.04905	0.050	ND	98.1	98.1	60-116	0	30
Surrogate Recovery									
Dibromofluoromethane	0.1655	0.1653	0.18		95	94	70-130	0.148	30
Toluene-d8	0.1885	0.1871	0.18		108	107	70-130	0.748	30
4-BFB	0.01709	0.01671	0.018		98	95	70-130	2.23	30



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 11/6/13
Date Analyzed: 11/6/13
Instrument: GC21
Matrix: Soil
Project: India Basin

WorkOrder: 1311112
BatchID: 83748
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg
Sample ID: MB/LCS-83748
1311111-001AMS/MSD

QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acenaphthene	ND	3.559	0.25	5	-	71.2	30-130
Acenaphthylene	ND	-	0.25	-	-	-	-
Acetochlor	ND	-	0.25	-	-	-	-
Anthracene	ND	-	0.25	-	-	-	-
Benzidine	ND	-	1.3	-	-	-	-
Benzo (a) anthracene	ND	-	0.25	-	-	-	-
Benzo (b) fluoranthene	ND	-	0.25	-	-	-	-
Benzo (k) fluoranthene	ND	-	0.25	-	-	-	-
Benzo (g,h,i) perylene	ND	-	0.25	-	-	-	-
Benzo (a) pyrene	ND	-	0.25	-	-	-	-
Benzyl Alcohol	ND	-	1.3	-	-	-	-
1,1-Biphenyl	ND	-	0.25	-	-	-	-
Bis (2-chloroethoxy) Methane	ND	-	0.25	-	-	-	-
Bis (2-chloroethyl) Ether	ND	-	0.25	-	-	-	-
Bis (2-chloroisopropyl) Ether	ND	-	0.25	-	-	-	-
Bis (2-ethylhexyl) Adipate	ND	-	0.25	-	-	-	-
Bis (2-ethylhexyl) Phthalate	ND	-	0.25	-	-	-	-
4-Bromophenyl Phenyl Ether	ND	-	0.25	-	-	-	-
Butylbenzyl Phthalate	ND	-	0.25	-	-	-	-
4-Chloroaniline	ND	-	0.25	-	-	-	-
4-Chloro-3-methylphenol	ND	3.967	0.25	5	-	79.3	30-130
2-Chloronaphthalene	ND	-	0.25	-	-	-	-
2-Chlorophenol	ND	4.084	0.25	5	-	81.7	30-130
4-Chlorophenyl Phenyl Ether	ND	-	0.25	-	-	-	-
Chrysene	ND	-	0.25	-	-	-	-
Dibenzo (a,h) anthracene	ND	-	0.25	-	-	-	-
Dibenzofuran	ND	-	0.25	-	-	-	-
Di-n-butyl Phthalate	ND	-	0.25	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.25	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.25	-	-	-	-
1,4-Dichlorobenzene	ND	3.421	0.25	5	-	68.4	30-130
3,3-Dichlorobenzidine	ND	-	0.50	-	-	-	-
2,4-Dichlorophenol	ND	-	0.25	-	-	-	-
Diethyl Phthalate	ND	-	0.25	-	-	-	-
2,4-Dimethylphenol	ND	-	0.25	-	-	-	-
Dimethyl Phthalate	ND	-	0.25	-	-	-	-
4,6-Dinitro-2-methylphenol	ND	-	1.3	-	-	-	-
2,4-Dinitrophenol	ND	-	6.3	-	-	-	-
2,4-Dinitrotoluene	ND	3.853	0.25	5	-	77.1	30-130
2,6-Dinitrotoluene	ND	-	0.25	-	-	-	-

(Cont.)



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 11/6/13
Date Analyzed: 11/6/13
Instrument: GC21
Matrix: Soil
Project: India Basin

WorkOrder: 1311112
BatchID: 83748
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg
Sample ID: MB/LCS-83748
1311111-001AMS/MSD

QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Di-n-octyl Phthalate	ND	-	0.50	-	-	-	-
1,2-Diphenylhydrazine	ND	-	0.25	-	-	-	-
Fluoranthene	ND	-	0.25	-	-	-	-
Fluorene	ND	-	0.25	-	-	-	-
Hexachlorobenzene	ND	-	0.25	-	-	-	-
Hexachlorobutadiene	ND	-	0.25	-	-	-	-
Hexachlorocyclopentadiene	ND	-	1.3	-	-	-	-
Hexachloroethane	ND	-	0.25	-	-	-	-
Indeno (1,2,3-cd) pyrene	ND	-	0.25	-	-	-	-
Isophorone	ND	-	0.25	-	-	-	-
2-Methylnaphthalene	ND	-	0.25	-	-	-	-
2-Methylphenol (o-Cresol)	ND	-	0.25	-	-	-	-
3 &/or 4-Methylphenol (m,p-Cresol)	ND	-	0.25	-	-	-	-
Naphthalene	ND	-	0.25	-	-	-	-
2-Nitroaniline	ND	-	1.3	-	-	-	-
3-Nitroaniline	ND	-	1.3	-	-	-	-
4-Nitroaniline	ND	-	1.3	-	-	-	-
Nitrobenzene	ND	-	0.25	-	-	-	-
2-Nitrophenol	ND	-	1.3	-	-	-	-
4-Nitrophenol	ND	2.947	1.3	5	-	58.9	30-130
N-Nitrosodiphenylamine	ND	-	0.25	-	-	-	-
N-Nitrosodi-n-propylamine	ND	4.009	0.25	5	-	80.2	30-130
Pentachlorophenol	ND	2.654	1.3	5	-	53.1	30-130
Phenanthrene	ND	-	0.25	-	-	-	-
Phenol	ND	4.099	0.25	5	-	82	30-130
Pyrene	ND	3.999	0.25	5	-	80	30-130
1,2,4-Trichlorobenzene	ND	3.427	0.25	5	-	68.5	30-130
2,4,5-Trichlorophenol	ND	-	0.25	-	-	-	-
2,4,6-Trichlorophenol	ND	-	0.25	-	-	-	-

Surrogate Recovery

2-Fluorophenol	5.863	3.765		5	117	75	30-130
Phenol-d5	5.664	3.676		5	113	74	30-130
Nitrobenzene-d5	5.064	3.427		5	101	69	30-130
2-Fluorobiphenyl	4.527	2.953		5	91	59	30-130
2,4,6-Tribromophenol	4.342	3.464		5	87	69	30-130
4-Terphenyl-d14	5.09	3.43		5	102	69	30-130

(Cont.)



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 11/6/13
Date Analyzed: 11/6/13
Instrument: GC21
Matrix: Soil
Project: India Basin

WorkOrder: 1311112
BatchID: 83748
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg
Sample ID: MB/LCS-83748
1311111-001AMS/MSD

QC Summary Report for SW8270C

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Acenaphthene	NR	NR	0	ND<4	NR	NR	-	NR	
4-Chloro-3-methylphenol	NR	NR	0	ND<4	NR	NR	-	NR	
2-Chlorophenol	NR	NR	0	ND<4	NR	NR	-	NR	
1,4-Dichlorobenzene	NR	NR	0	ND<4	NR	NR	-	NR	
2,4-Dinitrotoluene	NR	NR	0	ND<4	NR	NR	-	NR	
4-Nitrophenol	NR	NR	0	ND<21	NR	NR	-	NR	
N-Nitrosodi-n-propylamine	NR	NR	0	ND<4	NR	NR	-	NR	
Pentachlorophenol	NR	NR	0	ND<21	NR	NR	-	NR	
Phenol	NR	NR	0	ND<4	NR	NR	-	NR	
Pyrene	NR	NR	0	ND<4	NR	NR	-	NR	
1,2,4-Trichlorobenzene	NR	NR	0	ND<4	NR	NR	-	NR	

Surrogate Recovery

2-Fluorophenol	NR	NR	0		NR	NR	-	NR	
Phenol-d5	NR	NR	0		NR	NR	-	NR	
Nitrobenzene-d5	NR	NR	0		NR	NR	-	NR	
2-Fluorobiphenyl	NR	NR	0		NR	NR	-	NR	
2,4,6-Tribromophenol	NR	NR	0		NR	NR	-	NR	
4-Terphenyl-d14	NR	NR	0		NR	NR	-	NR	



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 11/5/13
Date Analyzed: 11/6/13
Instrument: ICP-MS1
Matrix: Soil
Project: India Basin

WorkOrder: 1311112
BatchID: 83696
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-83696
1311110-004AMS/MSD

QC Summary Report for SW6020

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Antimony	ND	50.85	0.50	50	-	102	75-125
Arsenic	ND	51.94	0.50	50	-	104	75-125
Barium	ND	492.6	5.0	500	-	98.5	75-125
Beryllium	ND	48.2	0.50	50	-	96.4	75-125
Cadmium	ND	51.49	0.25	50	-	103	75-125
Chromium	ND	48.83	0.50	50	-	97.7	75-125
Cobalt	ND	53.61	0.50	50	-	107	75-125
Copper	ND	50.9	0.50	50	-	102	75-125
Lead	ND	51.07	0.50	50	-	102	75-125
Mercury	ND	1.267	0.050	1.25	-	101	75-125
Molybdenum	ND	50.64	0.50	50	-	101	75-125
Nickel	ND	50.82	0.50	50	-	102	75-125
Selenium	ND	55.58	0.50	50	-	111	75-125
Silver	ND	49.76	0.50	50	-	99.5	75-125
Thallium	ND	49.2	0.50	50	-	98.4	75-125
Vanadium	ND	50.48	0.50	50	-	101	75-125
Zinc	ND	518.3	5.0	500	-	104	75-125
Surrogate Recovery							
Tb 350.917	498.5	494.5		500	100	99	70-130

(Cont.)



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 11/5/13
Date Analyzed: 11/6/13
Instrument: ICP-MS1
Matrix: Soil
Project: India Basin

WorkOrder: 1311112
BatchID: 83696
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-83696
1311110-004AMS/MSD

QC Summary Report for SW6020

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Antimony	51.43	50.87	50	ND	103	102	75-125	1.09	20
Arsenic	55.2	56.81	50	2.597	105	108	75-125	2.87	20
Barium	567.6	568.4	500	43.42	105	105	75-125	0	20
Beryllium	46	45.7	50	ND	92	91.4	75-125	0.654	20
Cadmium	52.59	52.18	50	ND	105	104	75-125	0.783	20
Chromium	106.5	105.9	50	47.30	118	117	75-125	0.565	20
Cobalt	59.73	59.25	50	7.129	105	104	75-125	0.807	20
Copper	60.89	64.59	50	8.012	106	113	75-125	5.90	20
Lead	58.25	58.45	50	6.213	104	104	75-125	0	20
Mercury	1.303	1.28	1.25	ND	104	102	75-125	1.78	20
Molybdenum	52.49	53.03	50	ND	105	106	75-125	1.02	20
Nickel	86.72	88.87	50	31.27	111	115	75-125	2.45	20
Selenium	53.1	53.92	50	ND	106	108	75-125	1.53	20
Silver	51.95	50.89	50	ND	104	102	75-125	2.06	20
Thallium	49.81	50.21	50	ND	99.6	100	75-125	0.800	20
Vanadium	100	100.7	50	40.45	119	120	75-125	0.698	20
Zinc	550.4	553.5	500	25.62	105	106	75-125	0.562	20
Surrogate Recovery									
Tb 350.917	504.9	497.7	500		101	100	70-130	1.44	20



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 11/5/13
Date Analyzed: 11/6/13
Instrument: GC7
Matrix: Soil
Project: India Basin

WorkOrder: 1311112
BatchID: 83695
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-83695
1311110-004AMS/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	0.6236	0.40	0.60	-	104	70-130
MTBE	ND	0.09828	0.050	0.10	-	98.3	70-130
Benzene	ND	0.116	0.0050	0.10	-	116	70-130
Toluene	ND	0.1073	0.0050	0.10	-	107	70-130
Ethylbenzene	ND	0.1187	0.0050	0.10	-	119	70-130
Xylenes	ND	0.3547	0.0050	0.30	-	118	70-130

Surrogate Recovery

2-Fluorotoluene	0.1152	0.1139		0.10	115	114	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
TPH(btex)	0.5743	0.586	0.60	ND	95.7	97.7	70-130	2.02	20
MTBE	0.08996	0.08427	0.10	ND	90	84.3	70-130	6.53	20
Benzene	0.1075	0.1058	0.10	ND	107	106	70-130	1.63	20
Toluene	0.1002	0.09834	0.10	ND	100	98.3	70-130	1.83	20
Ethylbenzene	0.1112	0.1095	0.10	ND	111	110	70-130	1.51	20
Xylenes	0.328	0.3264	0.30	ND	109	109	70-130	0	20

Surrogate Recovery

2-Fluorotoluene	0.107	0.1058	0.10		107	106	70-130	1.06	20
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Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 11/6/13
Date Analyzed: 11/7/13
Instrument: GC7
Matrix: Soil
Project: India Basin

WorkOrder: 1311112
BatchID: 83764
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-83764
1311063-021AMS/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	0.7538	0.40	0.60	-	126	70-130
MTBE	ND	0.09589	0.050	0.10	-	95.9	70-130
Benzene	ND	0.1093	0.0050	0.10	-	109	70-130
Toluene	ND	0.1061	0.0050	0.10	-	106	70-130
Ethylbenzene	ND	0.1179	0.0050	0.10	-	118	70-130
Xylenes	ND	0.3581	0.0050	0.30	-	119	70-130

Surrogate Recovery

2-Fluorotoluene	0.1119	0.114		0.10	112	114	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
TPH(btex)	0.5838	0.587	0.60	ND	97.3	97.8	70-130	0.540	20
MTBE	0.08746	0.09279	0.10	ND	87.5	92.8	70-130	5.91	20
Benzene	0.1039	0.1003	0.10	ND	104	100	70-130	3.56	20
Toluene	0.09872	0.09638	0.10	ND	98.7	96.4	70-130	2.40	20
Ethylbenzene	0.1119	0.1101	0.10	ND	112	110	70-130	1.59	20
Xylenes	0.3337	0.3266	0.30	ND	111	109	70-130	2.14	20

Surrogate Recovery

2-Fluorotoluene	0.1092	0.1056	0.10		109	106	70-130	3.28	20
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Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 11/5/13
Date Analyzed: 11/6/13
Instrument: ICP-JY
Matrix: Soil
Project: India Basin

WorkOrder: 1311112
BatchID: 83675
Extraction Method: SW3050B
Analytical Method: SW6010B
Unit: mg/Kg
Sample ID: MB/LCS-83675
1310948-004BMS/MSD

QC SUMMARY REPORT FOR 6010B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Lead	ND	52.25	5.0	50	-	104	75-125

Surrogate Recovery

Tb 350.917	567.2	557.5		500	113	112	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
Lead	NR	NR	50	1244	NR	NR	75-125	NR	25

Surrogate Recovery

Tb 350.917	565.2	581	500		113	116	70-130	2.75	20
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Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 11/4/13
Date Analyzed: 11/6/13
Instrument: GC9b
Matrix: Soil
Project: India Basin

WorkOrder: 1311112
BatchID: 83651
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg
Sample ID: MB/LCS-83651

QC SUMMARY REPORT FOR SW8015B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	40.61	1.0	40	-	102	70-130
Surrogate Recovery							
C9	20.6	20.63		25	82	83	70-130



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 11/5/13
Date Analyzed: 11/6/13
Instrument: GC6B
Matrix: Soil
Project: India Basin

WorkOrder: 1311112
BatchID: 83700
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg
Sample ID: MB/LCS-83700

QC SUMMARY REPORT FOR SW8015B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	41.3	1.0	40	-	103	70-130
Surrogate Recovery							
C9	25.52	24.89		25	102	100	70-130

McCampbell Analytical, Inc.



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

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

WorkOrder: 1311112 ClientCode: TWRF

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ EQulS ☒ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to: Maria Flessas Treadwell & Rollo 555 Montgomery St., Suite 1300 San Francisco, CA 94111 (415) 955-9040 FAX: (415) 955-9041 Bill to: Accounts Payable Treadwell & Rollo 555 Montgomery St., Suite 1300 San Francisco, CA 94111 Requested TAT: 3 days

Email: mgflessas@treadwellrollo.com

cc:

PO: 555 Montgomery St., Suite 1300

ProjectNo: India Basin

Date Received: 11/05/2013

Date Printed: 11/05/2013

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

1311112-001	B-1-2.5	Soil	11/1/2013 8:00	☐	A		A	A	A	A	A					
1311112-002	B-1-5	Soil	11/1/2013 8:08	☐						A	A					
1311112-003	B-1-7.5	Soil	11/1/2013 8:30	☐		A	A	A			A	A				
1311112-004	B-1-10	Soil	11/1/2013 8:40	☐							A		A			

Test Legend:

1	8081PCB_S	2	8082A_PCB_S	3	8260B_S	4	8270D_S	5	ASBESTOS_S
6	CAM17MS_S	7	G-MBTX_S	8	LUFTMS_S	9	PB_S	10	
11		12							

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

Prepared by: Zoraida Cortez

Comments: Off hold 11/5/13.

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.

Treadwell & Pello

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

Site Name:

Job Number:

Project Manager\Contact:

Samplers:

Recorder (Signature Required): _____

Indira Basir

act: Maria Flores
Noel Cruz Pita Baez
required):

Job Number:		Project Manager/Contact:		Samplers:		Recorder (Signature Required):	
Field Sample Identification No.		Date	Time	Lab Sample No.	Matrix		No. Containers & Preservative
					Soil	Water	Other
B-1-2.5			0800		X		
B-1-5			0808		X		
B-1-7.5			0830		X		
B-1-10			0840		X		
ICER 2.5 GOOD CONDITION HEAD SPACE ABSENT DECHLORINATED IN LAB PRESERVATION APPROPRIATE CONTAINERS PRESERVED IN LAB VOAS O&G METALS OTHER							
Relinquished by: (Signature)		Date	Time				
Relinquished by: (Signature)		Date	Time				
Relinquished by: (Signature)		Date	Time				
Sent to Laboratory (Name): Laboratory Comments/Notes:							

Analysis Requested		Hold	
		Silica gel clean-up	Hold
Lead	X		
Cadmium	X		
Asbestos	X		
OCF	X		
PCB	X		
SAC	X		
VOC	X		
TH & PM10	X		
Turnaround Time Standard 72hr			

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

White Copy - Original

Yellow Copy - Laboratory

Pink Copy - Field

COC Number:

005681

Off hold 11/5/13 72hr



Sample Receipt Checklist

Client Name: **Treadwell & Rollo**

Date and Time Received: **11/5/2013 7:44:40 PM**

Project Name: **India Basin**

Login Reviewed by: **Zoraida Cortez**

WorkOrder N°: **1311112**

Matrix: Soil

Carrier: Rob Pringle (MAI Courier)

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 ☐	
Container/Temp Blank temperature	Cooler Temp: 3.4°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☐	No ☐	NA ☒
Sample labels checked for correct preservation?	Yes ☒	No ☐	
Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☒
Samples Received on Ice?	Yes ☒	No ☐	

(Ice Type: WET ICE)

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

Comments:



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1311111

Report Created for: Treadwell & Rollo
555 Montgomery St., Suite 1300
San Francisco, CA 94111

Project Contact: Maria Flessas
Project P.O.:
Project Name: #731626701; India Basin

Project Received: 11/05/2013

Analytical Report reviewed & approved for release on 11/08/2013 by:

Question about
your data?

[Click here to email
McC Campbell](#)

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: #731626701; India Basin
WorkOrder: 1311111

Glossary Abbreviation

Description

95% Interval	95% Confident Interval
DF	Dilution Factor
DUP	Duplicate
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ND	Not detected at or above the indicated MDL or RL
NR	Analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix; or sample diluted due to high matrix or analyte content.
RD	Relative Difference
RL	Reporting Limit
RPD	Relative Percent Deviation
SPK Val	Spike Value
SPKRef Val	Spike Reference Value

Analytical Qualifier

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

Quality Control Qualifier

F1	MS/MSD recovery was out of acceptance criteria; LCS validated the prep batch.
F2	LCS recovery for this compound is outside of acceptance limits.



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 11/5/13 19:22
Date Prepared: 11/5/13

WorkOrder: 1311111
Extraction Method SW3550B
Analytical Method: SW8081A/8082
Unit: mg/kg

Organochlorine Pesticides (8080 Basic Target List) + PCBs

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5-2.5	1311111-001A	Soil	11/02/2013 07:59	GC22	83679
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Aldrin	ND		0.010	10	11/06/2013 18:56
a-BHC	ND		0.010	10	11/06/2013 18:56
b-BHC	ND		0.010	10	11/06/2013 18:56
d-BHC	ND		0.010	10	11/06/2013 18:56
g-BHC	ND		0.010	10	11/06/2013 18:56
Chlordane (Technical)	ND		0.25	10	11/06/2013 18:56
a-Chlordane	ND		0.010	10	11/06/2013 18:56
g-Chlordane	ND		0.010	10	11/06/2013 18:56
p,p-DDD	ND		0.010	10	11/06/2013 18:56
p,p-DDE	ND		0.010	10	11/06/2013 18:56
p,p-DDT	ND		0.010	10	11/06/2013 18:56
Dieldrin	ND		0.010	10	11/06/2013 18:56
Endosulfan I	ND		0.010	10	11/06/2013 18:56
Endosulfan II	ND		0.010	10	11/06/2013 18:56
Endosulfan sulfate	ND		0.010	10	11/06/2013 18:56
Endrin	ND		0.010	10	11/06/2013 18:56
Endrin aldehyde	ND		0.010	10	11/06/2013 18:56
Endrin ketone	ND		0.010	10	11/06/2013 18:56
Heptachlor	ND		0.010	10	11/06/2013 18:56
Heptachlor epoxide	ND		0.010	10	11/06/2013 18:56
Hexachlorobenzene	ND		0.10	10	11/06/2013 18:56
Hexachlorocyclopentadiene	ND		0.20	10	11/06/2013 18:56
Methoxychlor	ND		0.010	10	11/06/2013 18:56
Toxaphene	ND		0.50	10	11/06/2013 18:56
Aroclor1016	ND		0.50	10	11/06/2013 18:56
Aroclor1221	ND		0.50	10	11/06/2013 18:56
Aroclor1232	ND		0.50	10	11/06/2013 18:56
Aroclor1242	ND		0.50	10	11/06/2013 18:56
Aroclor1248	ND		0.50	10	11/06/2013 18:56
Aroclor1254	ND		0.50	10	11/06/2013 18:56
Aroclor1260	ND		0.50	10	11/06/2013 18:56
PCBs, total	ND		0.50	10	11/06/2013 18:56
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Decachlorobiphenyl	88		70-130		11/06/2013 18:56



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 11/5/13 19:22
Date Prepared: 11/5/13-11/6/13

WorkOrder: 1311111
Extraction Method SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5-2.5	1311111-001A	Soil	11/02/2013 07:59	GC16	83658
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	11/06/2013 16:20
tert-Amyl methyl ether (TAME)	ND		0.0050	1	11/06/2013 16:20
Benzene	ND		0.0050	1	11/06/2013 16:20
Bromobenzene	ND		0.0050	1	11/06/2013 16:20
Bromochloromethane	ND		0.0050	1	11/06/2013 16:20
Bromodichloromethane	ND		0.0050	1	11/06/2013 16:20
Bromoform	ND		0.0050	1	11/06/2013 16:20
Bromomethane	ND		0.0050	1	11/06/2013 16:20
2-Butanone (MEK)	ND		0.020	1	11/06/2013 16:20
t-Butyl alcohol (TBA)	ND		0.050	1	11/06/2013 16:20
n-Butyl benzene	ND		0.0050	1	11/06/2013 16:20
sec-Butyl benzene	ND		0.0050	1	11/06/2013 16:20
tert-Butyl benzene	ND		0.0050	1	11/06/2013 16:20
Carbon Disulfide	ND		0.0050	1	11/06/2013 16:20
Carbon Tetrachloride	ND		0.0050	1	11/06/2013 16:20
Chlorobenzene	ND		0.0050	1	11/06/2013 16:20
Chloroethane	ND		0.0050	1	11/06/2013 16:20
Chloroform	ND		0.0050	1	11/06/2013 16:20
Chloromethane	ND		0.0050	1	11/06/2013 16:20
2-Chlorotoluene	ND		0.0050	1	11/06/2013 16:20
4-Chlorotoluene	ND		0.0050	1	11/06/2013 16:20
Dibromochloromethane	ND		0.0050	1	11/06/2013 16:20
1,2-Dibromo-3-chloropropane	ND		0.0040	1	11/06/2013 16:20
1,2-Dibromoethane (EDB)	ND		0.0040	1	11/06/2013 16:20
Dibromomethane	ND		0.0050	1	11/06/2013 16:20
1,2-Dichlorobenzene	ND		0.0050	1	11/06/2013 16:20
1,3-Dichlorobenzene	ND		0.0050	1	11/06/2013 16:20
1,4-Dichlorobenzene	ND		0.0050	1	11/06/2013 16:20
Dichlorodifluoromethane	ND		0.0050	1	11/06/2013 16:20
1,1-Dichloroethane	ND		0.0050	1	11/06/2013 16:20
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	11/06/2013 16:20
1,1-Dichloroethene	ND		0.0050	1	11/06/2013 16:20
cis-1,2-Dichloroethene	ND		0.0050	1	11/06/2013 16:20
trans-1,2-Dichloroethene	ND		0.0050	1	11/06/2013 16:20
1,2-Dichloropropane	ND		0.0050	1	11/06/2013 16:20
1,3-Dichloropropane	ND		0.0050	1	11/06/2013 16:20
2,2-Dichloropropane	ND		0.0050	1	11/06/2013 16:20
1,1-Dichloropropene	ND		0.0050	1	11/06/2013 16:20

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 11/5/13 19:22
Date Prepared: 11/5/13-11/6/13

WorkOrder: 1311111
Extraction Method SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5-2.5	1311111-001A	Soil	11/02/2013 07:59	GC16	83658
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND		0.0050	1	11/06/2013 16:20
trans-1,3-Dichloropropene	ND		0.0050	1	11/06/2013 16:20
Diisopropyl ether (DIPE)	ND		0.0050	1	11/06/2013 16:20
Ethylbenzene	ND		0.0050	1	11/06/2013 16:20
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	11/06/2013 16:20
Freon 113	ND		0.10	1	11/06/2013 16:20
Hexachlorobutadiene	ND		0.0050	1	11/06/2013 16:20
Hexachloroethane	ND		0.0050	1	11/06/2013 16:20
2-Hexanone	ND		0.0050	1	11/06/2013 16:20
Isopropylbenzene	ND		0.0050	1	11/06/2013 16:20
4-Isopropyl toluene	ND		0.0050	1	11/06/2013 16:20
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	11/06/2013 16:20
Methylene chloride	ND		0.0050	1	11/06/2013 16:20
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	11/06/2013 16:20
Naphthalene	ND		0.0050	1	11/06/2013 16:20
n-Propyl benzene	ND		0.0050	1	11/06/2013 16:20
Styrene	ND		0.0050	1	11/06/2013 16:20
1,1,1,2-Tetrachloroethane	ND		0.0050	1	11/06/2013 16:20
1,1,2,2-Tetrachloroethane	ND		0.0050	1	11/06/2013 16:20
Tetrachloroethene	ND		0.0050	1	11/06/2013 16:20
Toluene	ND		0.0050	1	11/06/2013 16:20
1,2,3-Trichlorobenzene	ND		0.0050	1	11/06/2013 16:20
1,2,4-Trichlorobenzene	ND		0.0050	1	11/06/2013 16:20
1,1,1-Trichloroethane	ND		0.0050	1	11/06/2013 16:20
1,1,2-Trichloroethane	ND		0.0050	1	11/06/2013 16:20
Trichloroethene	ND		0.0050	1	11/06/2013 16:20
Trichlorofluoromethane	ND		0.0050	1	11/06/2013 16:20
1,2,3-Trichloropropane	ND		0.0050	1	11/06/2013 16:20
1,2,4-Trimethylbenzene	ND		0.0050	1	11/06/2013 16:20
1,3,5-Trimethylbenzene	ND		0.0050	1	11/06/2013 16:20
Vinyl Chloride	ND		0.0050	1	11/06/2013 16:20
Xylenes, Total	ND		0.0050	1	11/06/2013 16:20
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	96		70-130		11/06/2013 16:20
Toluene-d8	100		70-130		11/06/2013 16:20
4-BFB	104		70-130		11/06/2013 16:20

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 11/5/13 19:22
Date Prepared: 11/5/13-11/6/13

WorkOrder: 1311111
Extraction Method SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5-7.5	1311111-003A	Soil	11/02/2013 08:40	GC16	83734
Analytes	Result	RL	DF	Date Analyzed	
Acetone	ND	0.10	1	11/06/2013 17:03	
tert-Amyl methyl ether (TAME)	ND	0.0050	1	11/06/2013 17:03	
Benzene	ND	0.0050	1	11/06/2013 17:03	
Bromobenzene	ND	0.0050	1	11/06/2013 17:03	
Bromochloromethane	ND	0.0050	1	11/06/2013 17:03	
Bromodichloromethane	ND	0.0050	1	11/06/2013 17:03	
Bromoform	ND	0.0050	1	11/06/2013 17:03	
Bromomethane	ND	0.0050	1	11/06/2013 17:03	
2-Butanone (MEK)	ND	0.020	1	11/06/2013 17:03	
t-Butyl alcohol (TBA)	ND	0.050	1	11/06/2013 17:03	
n-Butyl benzene	ND	0.0050	1	11/06/2013 17:03	
sec-Butyl benzene	ND	0.0050	1	11/06/2013 17:03	
tert-Butyl benzene	ND	0.0050	1	11/06/2013 17:03	
Carbon Disulfide	ND	0.0050	1	11/06/2013 17:03	
Carbon Tetrachloride	ND	0.0050	1	11/06/2013 17:03	
Chlorobenzene	ND	0.0050	1	11/06/2013 17:03	
Chloroethane	ND	0.0050	1	11/06/2013 17:03	
Chloroform	ND	0.0050	1	11/06/2013 17:03	
Chloromethane	ND	0.0050	1	11/06/2013 17:03	
2-Chlorotoluene	ND	0.0050	1	11/06/2013 17:03	
4-Chlorotoluene	ND	0.0050	1	11/06/2013 17:03	
Dibromochloromethane	ND	0.0050	1	11/06/2013 17:03	
1,2-Dibromo-3-chloropropane	ND	0.0040	1	11/06/2013 17:03	
1,2-Dibromoethane (EDB)	ND	0.0040	1	11/06/2013 17:03	
Dibromomethane	ND	0.0050	1	11/06/2013 17:03	
1,2-Dichlorobenzene	ND	0.0050	1	11/06/2013 17:03	
1,3-Dichlorobenzene	ND	0.0050	1	11/06/2013 17:03	
1,4-Dichlorobenzene	ND	0.0050	1	11/06/2013 17:03	
Dichlorodifluoromethane	ND	0.0050	1	11/06/2013 17:03	
1,1-Dichloroethane	ND	0.0050	1	11/06/2013 17:03	
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	11/06/2013 17:03	
1,1-Dichloroethene	ND	0.0050	1	11/06/2013 17:03	
cis-1,2-Dichloroethene	ND	0.0050	1	11/06/2013 17:03	
trans-1,2-Dichloroethene	ND	0.0050	1	11/06/2013 17:03	
1,2-Dichloropropane	ND	0.0050	1	11/06/2013 17:03	
1,3-Dichloropropane	ND	0.0050	1	11/06/2013 17:03	
2,2-Dichloropropane	ND	0.0050	1	11/06/2013 17:03	
1,1-Dichloropropene	ND	0.0050	1	11/06/2013 17:03	

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 11/5/13 19:22
Date Prepared: 11/5/13-11/6/13

WorkOrder: 1311111
Extraction Method SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5-7.5	1311111-003A	Soil	11/02/2013 08:40	GC16	83734
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND		0.0050	1	11/06/2013 17:03
trans-1,3-Dichloropropene	ND		0.0050	1	11/06/2013 17:03
Diisopropyl ether (DIPE)	ND		0.0050	1	11/06/2013 17:03
Ethylbenzene	ND		0.0050	1	11/06/2013 17:03
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	11/06/2013 17:03
Freon 113	ND		0.10	1	11/06/2013 17:03
Hexachlorobutadiene	ND		0.0050	1	11/06/2013 17:03
Hexachloroethane	ND		0.0050	1	11/06/2013 17:03
2-Hexanone	ND		0.0050	1	11/06/2013 17:03
Isopropylbenzene	ND		0.0050	1	11/06/2013 17:03
4-Isopropyl toluene	ND		0.0050	1	11/06/2013 17:03
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	11/06/2013 17:03
Methylene chloride	ND		0.0050	1	11/06/2013 17:03
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	11/06/2013 17:03
Naphthalene	0.0090		0.0050	1	11/06/2013 17:03
n-Propyl benzene	ND		0.0050	1	11/06/2013 17:03
Styrene	ND		0.0050	1	11/06/2013 17:03
1,1,1,2-Tetrachloroethane	ND		0.0050	1	11/06/2013 17:03
1,1,2,2-Tetrachloroethane	ND		0.0050	1	11/06/2013 17:03
Tetrachloroethene	ND		0.0050	1	11/06/2013 17:03
Toluene	ND		0.0050	1	11/06/2013 17:03
1,2,3-Trichlorobenzene	ND		0.0050	1	11/06/2013 17:03
1,2,4-Trichlorobenzene	ND		0.0050	1	11/06/2013 17:03
1,1,1-Trichloroethane	ND		0.0050	1	11/06/2013 17:03
1,1,2-Trichloroethane	ND		0.0050	1	11/06/2013 17:03
Trichloroethene	ND		0.0050	1	11/06/2013 17:03
Trichlorofluoromethane	ND		0.0050	1	11/06/2013 17:03
1,2,3-Trichloropropane	ND		0.0050	1	11/06/2013 17:03
1,2,4-Trimethylbenzene	ND		0.0050	1	11/06/2013 17:03
1,3,5-Trimethylbenzene	ND		0.0050	1	11/06/2013 17:03
Vinyl Chloride	ND		0.0050	1	11/06/2013 17:03
Xylenes, Total	ND		0.0050	1	11/06/2013 17:03
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	96		70-130		11/06/2013 17:03
Toluene-d8	100		70-130		11/06/2013 17:03
4-BFB	102		70-130		11/06/2013 17:03



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 11/5/13 19:22
Date Prepared: 11/6/13

WorkOrder: 1311111
Extraction Method SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5-2.5	1311111-001A	Soil	11/02/2013 07:59	GC21	83748
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	ND		4.0	2	11/06/2013 22:30
Acenaphthylene	ND		4.0	2	11/06/2013 22:30
Acetochlor	ND		4.0	2	11/06/2013 22:30
Anthracene	ND		4.0	2	11/06/2013 22:30
Benidine	ND		21	2	11/06/2013 22:30
Benzo (a) anthracene	ND		4.0	2	11/06/2013 22:30
Benzo (b) fluoranthene	ND		4.0	2	11/06/2013 22:30
Benzo (k) fluoranthene	ND		4.0	2	11/06/2013 22:30
Benzo (g,h,i) perylene	ND		4.0	2	11/06/2013 22:30
Benzo (a) pyrene	ND		4.0	2	11/06/2013 22:30
Benzyl Alcohol	ND		21	2	11/06/2013 22:30
1,1-Biphenyl	ND		4.0	2	11/06/2013 22:30
Bis (2-chloroethoxy) Methane	ND		4.0	2	11/06/2013 22:30
Bis (2-chloroethyl) Ether	ND		4.0	2	11/06/2013 22:30
Bis (2-chloroisopropyl) Ether	ND		4.0	2	11/06/2013 22:30
Bis (2-ethylhexyl) Adipate	ND		4.0	2	11/06/2013 22:30
Bis (2-ethylhexyl) Phthalate	ND		4.0	2	11/06/2013 22:30
4-Bromophenyl Phenyl Ether	ND		4.0	2	11/06/2013 22:30
Butylbenzyl Phthalate	ND		4.0	2	11/06/2013 22:30
4-Chloroaniline	ND		4.0	2	11/06/2013 22:30
4-Chloro-3-methylphenol	ND		4.0	2	11/06/2013 22:30
2-Chloronaphthalene	ND		4.0	2	11/06/2013 22:30
2-Chlorophenol	ND		4.0	2	11/06/2013 22:30
4-Chlorophenyl Phenyl Ether	ND		4.0	2	11/06/2013 22:30
Chrysene	ND		4.0	2	11/06/2013 22:30
Dibenzo (a,h) anthracene	ND		4.0	2	11/06/2013 22:30
Dibenzofuran	ND		4.0	2	11/06/2013 22:30
Di-n-butyl Phthalate	ND		4.0	2	11/06/2013 22:30
1,2-Dichlorobenzene	ND		4.0	2	11/06/2013 22:30
1,3-Dichlorobenzene	ND		4.0	2	11/06/2013 22:30
1,4-Dichlorobenzene	ND		4.0	2	11/06/2013 22:30
3,3-Dichlorobenzidine	ND		8.0	2	11/06/2013 22:30
2,4-Dichlorophenol	ND		4.0	2	11/06/2013 22:30
Diethyl Phthalate	ND		4.0	2	11/06/2013 22:30
2,4-Dimethylphenol	ND		4.0	2	11/06/2013 22:30
Dimethyl Phthalate	ND		4.0	2	11/06/2013 22:30
4,6-Dinitro-2-methylphenol	ND		21	2	11/06/2013 22:30
2,4-Dinitrophenol	ND		100	2	11/06/2013 22:30

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 11/5/13 19:22
Date Prepared: 11/6/13

WorkOrder: 1311111
Extraction Method SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5-2.5	1311111-001A	Soil	11/02/2013 07:59	GC21	83748
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrotoluene	ND		4.0	2	11/06/2013 22:30
2,6-Dinitrotoluene	ND		4.0	2	11/06/2013 22:30
Di-n-octyl Phthalate	ND		8.0	2	11/06/2013 22:30
1,2-Diphenylhydrazine	ND		4.0	2	11/06/2013 22:30
Fluoranthene	ND		4.0	2	11/06/2013 22:30
Fluorene	ND		4.0	2	11/06/2013 22:30
Hexachlorobenzene	ND		4.0	2	11/06/2013 22:30
Hexachlorobutadiene	ND		4.0	2	11/06/2013 22:30
Hexachlorocyclopentadiene	ND		21	2	11/06/2013 22:30
Hexachloroethane	ND		4.0	2	11/06/2013 22:30
Indeno (1,2,3-cd) pyrene	ND		4.0	2	11/06/2013 22:30
Isophorone	ND		4.0	2	11/06/2013 22:30
2-Methylnaphthalene	ND		4.0	2	11/06/2013 22:30
2-Methylphenol (o-Cresol)	ND		4.0	2	11/06/2013 22:30
3 &/or 4-Methylphenol (m,p-Cresol)	ND		4.0	2	11/06/2013 22:30
Naphthalene	ND		4.0	2	11/06/2013 22:30
2-Nitroaniline	ND		21	2	11/06/2013 22:30
3-Nitroaniline	ND		21	2	11/06/2013 22:30
4-Nitroaniline	ND		21	2	11/06/2013 22:30
Nitrobenzene	ND		4.0	2	11/06/2013 22:30
2-Nitrophenol	ND		21	2	11/06/2013 22:30
4-Nitrophenol	ND		21	2	11/06/2013 22:30
N-Nitrosodiphenylamine	ND		4.0	2	11/06/2013 22:30
N-Nitrosodi-n-propylamine	ND		4.0	2	11/06/2013 22:30
Pentachlorophenol	ND		21	2	11/06/2013 22:30
Phenanthrene	ND		4.0	2	11/06/2013 22:30
Phenol	ND		4.0	2	11/06/2013 22:30
Pyrene	ND		4.0	2	11/06/2013 22:30
1,2,4-Trichlorobenzene	ND		4.0	2	11/06/2013 22:30
2,4,5-Trichlorophenol	ND		4.0	2	11/06/2013 22:30
2,4,6-Trichlorophenol	ND		4.0	2	11/06/2013 22:30

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 11/5/13 19:22
Date Prepared: 11/6/13

WorkOrder: 1311111
Extraction Method SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5-2.5	1311111-001A	Soil	11/02/2013 07:59	GC21	83748
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorophenol	87		30-130		11/06/2013 22:30
Phenol-d5	82		30-130		11/06/2013 22:30
Nitrobenzene-d5	68		30-130		11/06/2013 22:30
2-Fluorobiphenyl	66		30-130		11/06/2013 22:30
2,4,6-Tribromophenol	50		30-130		11/06/2013 22:30
4-Terphenyl-d14	69		30-130		11/06/2013 22:30

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 11/5/13 19:22
Date Prepared: 11/6/13

WorkOrder: 1311111
Extraction Method SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5-7.5	1311111-003A	Soil	11/02/2013 08:40	GC21	83748
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	ND		4.0	2	11/06/2013 22:02
Acenaphthylene	ND		4.0	2	11/06/2013 22:02
Acetochlor	ND		4.0	2	11/06/2013 22:02
Anthracene	ND		4.0	2	11/06/2013 22:02
Benzidine	ND		21	2	11/06/2013 22:02
Benzo (a) anthracene	ND		4.0	2	11/06/2013 22:02
Benzo (b) fluoranthene	ND		4.0	2	11/06/2013 22:02
Benzo (k) fluoranthene	ND		4.0	2	11/06/2013 22:02
Benzo (g,h,i) perylene	ND		4.0	2	11/06/2013 22:02
Benzo (a) pyrene	ND		4.0	2	11/06/2013 22:02
Benzyl Alcohol	ND		21	2	11/06/2013 22:02
1,1-Biphenyl	ND		4.0	2	11/06/2013 22:02
Bis (2-chloroethoxy) Methane	ND		4.0	2	11/06/2013 22:02
Bis (2-chloroethyl) Ether	ND		4.0	2	11/06/2013 22:02
Bis (2-chloroisopropyl) Ether	ND		4.0	2	11/06/2013 22:02
Bis (2-ethylhexyl) Adipate	ND		4.0	2	11/06/2013 22:02
Bis (2-ethylhexyl) Phthalate	ND		4.0	2	11/06/2013 22:02
4-Bromophenyl Phenyl Ether	ND		4.0	2	11/06/2013 22:02
Butylbenzyl Phthalate	ND		4.0	2	11/06/2013 22:02
4-Chloroaniline	ND		4.0	2	11/06/2013 22:02
4-Chloro-3-methylphenol	ND		4.0	2	11/06/2013 22:02
2-Chloronaphthalene	ND		4.0	2	11/06/2013 22:02
2-Chlorophenol	ND		4.0	2	11/06/2013 22:02
4-Chlorophenyl Phenyl Ether	ND		4.0	2	11/06/2013 22:02
Chrysene	ND		4.0	2	11/06/2013 22:02
Dibenzo (a,h) anthracene	ND		4.0	2	11/06/2013 22:02
Dibenzofuran	ND		4.0	2	11/06/2013 22:02
Di-n-butyl Phthalate	ND		4.0	2	11/06/2013 22:02
1,2-Dichlorobenzene	ND		4.0	2	11/06/2013 22:02
1,3-Dichlorobenzene	ND		4.0	2	11/06/2013 22:02
1,4-Dichlorobenzene	ND		4.0	2	11/06/2013 22:02
3,3-Dichlorobenzidine	ND		8.0	2	11/06/2013 22:02
2,4-Dichlorophenol	ND		4.0	2	11/06/2013 22:02
Diethyl Phthalate	ND		4.0	2	11/06/2013 22:02
2,4-Dimethylphenol	ND		4.0	2	11/06/2013 22:02
Dimethyl Phthalate	ND		4.0	2	11/06/2013 22:02
4,6-Dinitro-2-methylphenol	ND		21	2	11/06/2013 22:02
2,4-Dinitrophenol	ND		100	2	11/06/2013 22:02

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 11/5/13 19:22
Date Prepared: 11/6/13

WorkOrder: 1311111
Extraction Method SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5-7.5	1311111-003A	Soil	11/02/2013 08:40	GC21	83748
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrotoluene	ND		4.0	2	11/06/2013 22:02
2,6-Dinitrotoluene	ND		4.0	2	11/06/2013 22:02
Di-n-octyl Phthalate	ND		8.0	2	11/06/2013 22:02
1,2-Diphenylhydrazine	ND		4.0	2	11/06/2013 22:02
Fluoranthene	ND		4.0	2	11/06/2013 22:02
Fluorene	ND		4.0	2	11/06/2013 22:02
Hexachlorobenzene	ND		4.0	2	11/06/2013 22:02
Hexachlorobutadiene	ND		4.0	2	11/06/2013 22:02
Hexachlorocyclopentadiene	ND		21	2	11/06/2013 22:02
Hexachloroethane	ND		4.0	2	11/06/2013 22:02
Indeno (1,2,3-cd) pyrene	ND		4.0	2	11/06/2013 22:02
Isophorone	ND		4.0	2	11/06/2013 22:02
2-Methylnaphthalene	ND		4.0	2	11/06/2013 22:02
2-Methylphenol (o-Cresol)	ND		4.0	2	11/06/2013 22:02
3 &/or 4-Methylphenol (m,p-Cresol)	ND		4.0	2	11/06/2013 22:02
Naphthalene	ND		4.0	2	11/06/2013 22:02
2-Nitroaniline	ND		21	2	11/06/2013 22:02
3-Nitroaniline	ND		21	2	11/06/2013 22:02
4-Nitroaniline	ND		21	2	11/06/2013 22:02
Nitrobenzene	ND		4.0	2	11/06/2013 22:02
2-Nitrophenol	ND		21	2	11/06/2013 22:02
4-Nitrophenol	ND		21	2	11/06/2013 22:02
N-Nitrosodiphenylamine	ND		4.0	2	11/06/2013 22:02
N-Nitrosodi-n-propylamine	ND		4.0	2	11/06/2013 22:02
Pentachlorophenol	ND		21	2	11/06/2013 22:02
Phenanthrene	ND		4.0	2	11/06/2013 22:02
Phenol	ND		4.0	2	11/06/2013 22:02
Pyrene	ND		4.0	2	11/06/2013 22:02
1,2,4-Trichlorobenzene	ND		4.0	2	11/06/2013 22:02
2,4,5-Trichlorophenol	ND		4.0	2	11/06/2013 22:02
2,4,6-Trichlorophenol	ND		4.0	2	11/06/2013 22:02

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 11/5/13 19:22
Date Prepared: 11/6/13

WorkOrder: 1311111
Extraction Method SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5-7.5	1311111-003A	Soil	11/02/2013 08:40	GC21	83748
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorophenol	101		30-130		11/06/2013 22:02
Phenol-d5	91		30-130		11/06/2013 22:02
Nitrobenzene-d5	82		30-130		11/06/2013 22:02
2-Fluorobiphenyl	77		30-130		11/06/2013 22:02
2,4,6-Tribromophenol	64		30-130		11/06/2013 22:02
4-Terphenyl-d14	79		30-130		11/06/2013 22:02



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 11/5/13 19:22
Date Prepared: 11/5/13

WorkOrder: 1311111
Extraction Method SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5-2.5	1311111-001A	Soil/TOTAL	11/02/2013 07:59	ICP-MS1	83696
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Antimony	1.4		0.50	1	11/06/2013 15:21
Arsenic	10		0.50	1	11/06/2013 15:21
Barium	220		5.0	1	11/06/2013 15:21
Beryllium	0.54		0.50	1	11/06/2013 15:21
Cadmium	ND		0.25	1	11/06/2013 15:21
Chromium	55		0.50	1	11/06/2013 15:21
Cobalt	15		0.50	1	11/06/2013 15:21
Copper	59		0.50	1	11/06/2013 15:21
Lead	59		0.50	1	11/06/2013 15:21
Mercury	0.42		0.050	1	11/06/2013 15:21
Molybdenum	0.64		0.50	1	11/06/2013 15:21
Nickel	61		0.50	1	11/06/2013 15:21
Selenium	ND		0.50	1	11/06/2013 15:21
Silver	ND		0.50	1	11/06/2013 15:21
Thallium	ND		0.50	1	11/06/2013 15:21
Vanadium	53		0.50	1	11/06/2013 15:21
Zinc	110		5.0	1	11/06/2013 15:21
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	99		70-130		11/06/2013 15:21



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 11/5/13 19:22
Date Prepared: 11/5/13-11/7/13

WorkOrder: 1311111
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/ExtType	Date Collected	Instrument	Batch ID
B-5-2.5	1311111-001A	Soil	11/02/2013 07:59	GC19	83695

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	11/06/2013 14:27
MTBE	---	0.050	1	11/06/2013 14:27
Benzene	---	0.0050	1	11/06/2013 14:27
Toluene	---	0.0050	1	11/06/2013 14:27
Ethylbenzene	---	0.0050	1	11/06/2013 14:27
Xylenes	---	0.0050	1	11/06/2013 14:27
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	110	70-130		11/06/2013 14:27

B-5-5	1311111-002A	Soil	11/02/2013 08:25	GC19	83764
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Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	11/08/2013 00:22
MTBE	---	0.050	1	11/08/2013 00:22
Benzene	---	0.0050	1	11/08/2013 00:22
Toluene	---	0.0050	1	11/08/2013 00:22
Ethylbenzene	---	0.0050	1	11/08/2013 00:22
Xylenes	---	0.0050	1	11/08/2013 00:22
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	103	70-130		11/08/2013 00:22

B-5-7.5	1311111-003A	Soil	11/02/2013 08:40	GC19	83764
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Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	11/08/2013 00:52
MTBE	---	0.050	1	11/08/2013 00:52
Benzene	---	0.0050	1	11/08/2013 00:52
Toluene	---	0.0050	1	11/08/2013 00:52
Ethylbenzene	---	0.0050	1	11/08/2013 00:52
Xylenes	---	0.0050	1	11/08/2013 00:52
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	105	70-130		11/08/2013 00:52

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 11/5/13 19:22
Date Prepared: 11/5/13-11/7/13

WorkOrder: 1311111
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/ExtType	Date Collected	Instrument	Batch ID
B-5-10	1311111-004A	Soil	11/02/2013 08:50	GC19	83764
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		1.0	1	11/08/2013 02:21
MTBE	---		0.050	1	11/08/2013 02:21
Benzene	---		0.0050	1	11/08/2013 02:21
Toluene	---		0.0050	1	11/08/2013 02:21
Ethylbenzene	---		0.0050	1	11/08/2013 02:21
Xylenes	---		0.0050	1	11/08/2013 02:21
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	102		70-130		11/08/2013 02:21



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 11/5/13 19:22
Date Prepared: 11/5/13

WorkOrder: 1311111
Extraction Method SW3050B
Analytical Method: SW6020
Unit: mg/Kg

LUFT 5 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5-5	1311111-002A	Soil/TOTAL	11/02/2013 08:25	ICP-MS1	83696

Analytes	Result	RL	DF	Date Analyzed
Cadmium	0.38	0.25	1	11/06/2013 15:28
Chromium	32	0.50	1	11/06/2013 15:28
Lead	120	5.0	10	11/07/2013 23:05
Nickel	45	0.50	1	11/06/2013 15:28
Zinc	120	5.0	1	11/06/2013 15:28
Surrogates	REC (%)	Limits		
Tb 350.917	95	70-130		11/06/2013 15:28

B-5-7.5	1311111-003A	Soil/TOTAL	11/02/2013 08:40	ICP-MS1	83696
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Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	11/06/2013 15:34
Chromium	48	0.50	1	11/06/2013 15:34
Lead	41	0.50	1	11/06/2013 15:34
Nickel	73	0.50	1	11/06/2013 15:34
Zinc	130	5.0	1	11/06/2013 15:34
Surrogates	REC (%)	Limits		
Tb 350.917	97	70-130		11/06/2013 15:34



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 11/5/13 19:22
Date Prepared: 11/5/13

WorkOrder: 1311111
Extraction Method SW3050B
Analytical Method: SW6010B
Unit: mg/Kg

Lead

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5-10	1311111-004A	Soil/TOTAL	11/02/2013 08:50	ICP-JY	83675
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	62		5.0	1	11/06/2013 13:03
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	114		70-130		11/06/2013 13:03



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 11/5/13 19:22
Date Prepared: 11/5/13

WorkOrder: 1311111
Extraction Method SW3550B
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5-2.5	1311111-001A	Soil	11/02/2013 07:59	GC2A	83651
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	24		2.0	2	11/06/2013 17:58
TPH-Motor Oil (C18-C36)	95		10	2	11/06/2013 17:58
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	92		70-130		11/06/2013 17:58
B-5-5	1311111-002A	Soil	11/02/2013 08:25	GC11A	83651
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	84		10	10	11/07/2013 07:41
TPH-Motor Oil (C18-C36)	390		50	10	11/07/2013 07:41
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	102		70-130		11/07/2013 07:41
B-5-7.5	1311111-003A	Soil	11/02/2013 08:40	GC2A	83651
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	26		5.0	5	11/07/2013 01:32
TPH-Motor Oil (C18-C36)	120		25	5	11/07/2013 01:32
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	95		70-130		11/07/2013 01:32
B-5-10	1311111-004A	Soil	11/02/2013 08:50	GC11A	83651
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	12		2.0	2	11/07/2013 00:50
TPH-Motor Oil (C18-C36)	60		10	2	11/07/2013 00:50
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	108		70-130		11/07/2013 00:50



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 11/5/13
Date Analyzed: 11/5/13
Instrument: GC22
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1311111
BatchID: 83679
Extraction Method: SW3550B
Analytical Method: SW8081A/8082
Unit: mg/kg
Sample ID: MB/LCS-83679
1311094-042AMS/MSD

QC SUMMARY REPORT FOR SW8081A/8082

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Aldrin	ND	0.04901	0.0010	0.050	-	98	70-130
a-BHC	ND	-	0.0010	-	-	-	-
b-BHC	ND	-	0.0010	-	-	-	-
d-BHC	ND	-	0.0010	-	-	-	-
g-BHC	ND	0.05253	0.0010	0.050	-	105	70-130
Chlordane (Technical)	ND	-	0.025	-	-	-	-
a-Chlordane	ND	-	0.0010	-	-	-	-
g-Chlordane	ND	-	0.0010	-	-	-	-
p,p-DDD	ND	-	0.0010	-	-	-	-
p,p-DDE	ND	-	0.0010	-	-	-	-
p,p-DDT	ND	0.04269	0.0010	0.050	-	85.4	70-130
Dieldrin	ND	-	0.0010	-	-	-	-
Dieldrin	ND	0.06078	0.0010	0.050	-	122	70-130
Endosulfan I	ND	-	0.0010	-	-	-	-
Endosulfan II	ND	-	0.0010	-	-	-	-
Endosulfan sulfate	ND	-	0.0010	-	-	-	-
Endrin	ND	-	0.0010	-	-	-	-
Endrin	ND	0.05975	0.0010	0.050	-	119	70-130
Endrin aldehyde	ND	-	0.0010	-	-	-	-
Endrin ketone	ND	-	0.0010	-	-	-	-
Heptachlor	ND	-	0.0010	-	-	-	-
Heptachlor	ND	0.05865	0.0010	0.050	-	117	70-130
Heptachlor epoxide	ND	-	0.0010	-	-	-	-
Hexachlorobenzene	ND	-	0.010	-	-	-	-
Hexachlorocyclopentadiene	ND	-	0.020	-	-	-	-
Methoxychlor	ND	-	0.0010	-	-	-	-
Toxaphene	ND	-	0.050	-	-	-	-

Surrogate Recovery

Decachlorobiphenyl	0.05017	0.05225	0.050	100	105	70-130
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SW



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 11/5/13
Date Analyzed: 11/5/13
Instrument: GC22
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1311111
BatchID: 83679
Extraction Method: SW3550B
Analytical Method: SW8081A/8082
Unit: mg/kg
Sample ID: MB/LCS-83679
1311094-042AMS/MSD

QC SUMMARY REPORT FOR SW8081A/8082

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Aldrin	0.04816	0.04805	0.050	ND	96.3	96.1	70-130	0.218	30
g-BHC	0.05257	0.05262	0.050	ND	105	105	70-130	0	30
p,p-DDT	0.04306	0.04315	0.050	ND	86.1	86.3	70-130	0.205	30
Dieldrin	0.07643	0.07412	0.050	0.01327	126	122	70-130	3.07	30
Endrin	0.05881	0.05899	0.050	ND	118	118	70-130	0	30
Heptachlor	0.05915	0.05904	0.050	ND	118	118	70-130	0	30
Surrogate Recovery									
Decachlorobiphenyl	0.04971	0.04978	0.050		99	100	70-130	0.147	30



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 11/5/13
Date Analyzed: 11/5/13
Instrument: GC16
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1311111
BatchID: 83658
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/Kg
Sample ID: MB/LCS-83658
1311078-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	0.10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	0.0543	0.0050	0.050	-	109	70-130
Benzene	ND	0.05051	0.0050	0.050	-	101	70-130
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	0.2638	0.050	0.20	-	132, F2	70-130
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.05295	0.0050	0.050	-	106	70-130
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.05487	0.0040	0.050	-	110	70-130
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.05423	0.0040	0.050	-	108	70-130
1,1-Dichloroethene	ND	0.05143	0.0050	0.050	-	103	70-130
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-

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Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 11/5/13
Date Analyzed: 11/5/13
Instrument: GC16
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1311111
BatchID: 83658
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/Kg
Sample ID: MB/LCS-83658
1311078-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Diisopropyl ether (DIPE)	ND	0.05298	0.0050	0.050	-	106	70-130
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.05306	0.0050	0.050	-	106	70-130
Freon 113	ND	-	0.0050	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.05513	0.0050	0.050	-	110	70-130
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	0.05411	0.0050	0.050	-	108	70-130
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	0.05475	0.0050	0.050	-	110	70-130
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Xylenes, Total	ND	-	0.0050	-	-	-	-

Surrogate Recovery

Dibromofluoromethane	0.1216	0.1689	0.18	97	97	70-130
Toluene-d8	0.142	0.2011	0.18	114	115	70-130
4-BFB	0.01341	0.01767	0.018	107	101	70-130

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Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 11/5/13
Date Analyzed: 11/5/13
Instrument: GC16
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1311111
BatchID: 83658
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/Kg
Sample ID: MB/LCS-83658
1311078-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	0.05008	0.0505	0.050	ND	100,F1	101,F1	56-94	0.829	30
Benzene	0.04516	0.04516	0.050	ND	90.3	90.3	60-106	0	30
t-Butyl alcohol (TBA)	0.2398	0.2351	0.20	ND	120	118	56-140	1.95	30
Chlorobenzene	0.04667	0.04689	0.050	ND	93.3	93.8	61-108	0.477	30
1,2-Dibromoethane (EDB)	0.04983	0.04894	0.050	ND	99.7	97.9	54-119	1.81	30
1,2-Dichloroethane (1,2-DCA)	0.0486	0.04934	0.050	ND	97.2	98.7	48-115	1.50	30
1,1-Dichloroethene	0.0449	0.04541	0.050	ND	89.8	90.8	46-111	1.13	30
Diisopropyl ether (DIPE)	0.04789	0.04832	0.050	ND	95.8	96.6	53-111	0.888	30
Ethyl tert-butyl ether (ETBE)	0.0484	0.04862	0.050	ND	96.8	97.2	61-104	0.438	30
Methyl-t-butyl ether (MTBE)	0.05017	0.05082	0.050	ND	100	102	58-107	1.30	30
Toluene	0.04743	0.04734	0.050	ND	94.9	94.7	64-114	0.184	30
Trichloroethene	0.04903	0.04905	0.050	ND	98.1	98.1	60-116	0	30
Surrogate Recovery									
Dibromofluoromethane	0.1655	0.1653	0.18		95	94	70-130	0.148	30
Toluene-d8	0.1885	0.1871	0.18		108	107	70-130	0.748	30
4-BFB	0.01709	0.01671	0.018		98	95	70-130	2.23	30

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Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 11/6/13
Date Analyzed: 11/7/13
Instrument: GC16
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1311111
BatchID: 83734
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/Kg
Sample ID: MB/LCS-83734
1311146-022AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	0.10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	0.04857	0.0050	0.050	-	97.1	70-130
Benzene	ND	0.04526	0.0050	0.050	-	90.5	70-130
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	0.2476	0.050	0.20	-	124	70-130
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.04816	0.0050	0.050	-	96.3	70-130
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.05009	0.0040	0.050	-	100	70-130
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.04955	0.0040	0.050	-	99.1	70-130
1,1-Dichloroethene	ND	0.04584	0.0050	0.050	-	91.7	70-130
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-

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Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 11/6/13
Date Analyzed: 11/7/13
Instrument: GC16
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1311111
BatchID: 83734
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/Kg
Sample ID: MB/LCS-83734
1311146-022AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Diisopropyl ether (DIPE)	ND	0.0472	0.0050	0.050	-	94.4	70-130
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.04744	0.0050	0.050	-	94.9	70-130
Freon 113	ND	-	0.0050	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.04928	0.0050	0.050	-	98.6	70-130
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	0.04982	0.0050	0.050	-	99.6	70-130
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	0.04907	0.0050	0.050	-	98.1	70-130
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Xylenes, Total	ND	-	0.0050	-	-	-	-

Surrogate Recovery

Dibromofluoromethane	0.1218	0.1612	0.18	97	92	70-130
Toluene-d8	0.1375	0.1941	0.18	110	111	70-130
4-BFB	0.01302	0.01736	0.018	104	99	70-130

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SW



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 11/6/13
Date Analyzed: 11/7/13
Instrument: GC16
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1311111
BatchID: 83734
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/Kg
Sample ID: MB/LCS-83734
1311146-022AMS/MSD

QC Summary Report for SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	0.05009	0.04843	0.050	ND	100,F1	96.9,F1	56-94	3.36	30
Benzene	0.04498	0.04325	0.050	ND	90	86.5	60-106	3.90	30
t-Butyl alcohol (TBA)	0.2465	0.2395	0.20	ND	123	120	56-140	2.89	30
Chlorobenzene	0.04843	0.04615	0.050	ND	96.9	92.3	61-108	4.83	30
1,2-Dibromoethane (EDB)	0.04991	0.04841	0.050	ND	99.8	96.8	54-119	3.05	30
1,2-Dichloroethane (1,2-DCA)	0.04905	0.04748	0.050	ND	98.1	95	48-115	3.25	30
1,1-Dichloroethene	0.04576	0.04447	0.050	ND	91.5	88.9	46-111	2.86	30
Diisopropyl ether (DIPE)	0.04755	0.0458	0.050	ND	95.1	91.6	53-111	3.74	30
Ethyl tert-butyl ether (ETBE)	0.04782	0.04659	0.050	ND	95.6	93.2	61-104	2.60	30
Methyl-t-butyl ether (MTBE)	0.0497	0.04874	0.050	ND	99.4	97.5	58-107	1.93	30
Toluene	0.04894	0.04707	0.050	ND	97.9	94.1	64-114	3.88	30
Trichloroethene	0.05009	0.04832	0.050	ND	100	96.6	60-116	3.59	30
Surrogate Recovery									
Dibromofluoromethane	0.1623	0.1625	0.18		93	93	70-130	0	30
Toluene-d8	0.1921	0.1897	0.18		110	108	70-130	1.26	30
4-BFB	0.01734	0.01692	0.018		99	97	70-130	2.41	30



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 11/6/13
Date Analyzed: 11/6/13
Instrument: GC21
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1311111
BatchID: 83748
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg
Sample ID: MB/LCS-83748
1311111-001AMS/MSD

QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acenaphthene	ND	3.559	0.25	5	-	71.2	30-130
Acenaphthylene	ND	-	0.25	-	-	-	-
Acetochlor	ND	-	0.25	-	-	-	-
Anthracene	ND	-	0.25	-	-	-	-
Benzidine	ND	-	1.3	-	-	-	-
Benzo (a) anthracene	ND	-	0.25	-	-	-	-
Benzo (b) fluoranthene	ND	-	0.25	-	-	-	-
Benzo (k) fluoranthene	ND	-	0.25	-	-	-	-
Benzo (g,h,i) perylene	ND	-	0.25	-	-	-	-
Benzo (a) pyrene	ND	-	0.25	-	-	-	-
Benzyl Alcohol	ND	-	1.3	-	-	-	-
1,1-Biphenyl	ND	-	0.25	-	-	-	-
Bis (2-chloroethoxy) Methane	ND	-	0.25	-	-	-	-
Bis (2-chloroethyl) Ether	ND	-	0.25	-	-	-	-
Bis (2-chloroisopropyl) Ether	ND	-	0.25	-	-	-	-
Bis (2-ethylhexyl) Adipate	ND	-	0.25	-	-	-	-
Bis (2-ethylhexyl) Phthalate	ND	-	0.25	-	-	-	-
4-Bromophenyl Phenyl Ether	ND	-	0.25	-	-	-	-
Butylbenzyl Phthalate	ND	-	0.25	-	-	-	-
4-Chloroaniline	ND	-	0.25	-	-	-	-
4-Chloro-3-methylphenol	ND	3.967	0.25	5	-	79.3	30-130
2-Chloronaphthalene	ND	-	0.25	-	-	-	-
2-Chlorophenol	ND	4.084	0.25	5	-	81.7	30-130
4-Chlorophenyl Phenyl Ether	ND	-	0.25	-	-	-	-
Chrysene	ND	-	0.25	-	-	-	-
Dibenzo (a,h) anthracene	ND	-	0.25	-	-	-	-
Dibenzofuran	ND	-	0.25	-	-	-	-
Di-n-butyl Phthalate	ND	-	0.25	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.25	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.25	-	-	-	-
1,4-Dichlorobenzene	ND	3.421	0.25	5	-	68.4	30-130
3,3-Dichlorobenzidine	ND	-	0.50	-	-	-	-
2,4-Dichlorophenol	ND	-	0.25	-	-	-	-
Diethyl Phthalate	ND	-	0.25	-	-	-	-
2,4-Dimethylphenol	ND	-	0.25	-	-	-	-
Dimethyl Phthalate	ND	-	0.25	-	-	-	-
4,6-Dinitro-2-methylphenol	ND	-	1.3	-	-	-	-
2,4-Dinitrophenol	ND	-	6.3	-	-	-	-
2,4-Dinitrotoluene	ND	3.853	0.25	5	-	77.1	30-130
2,6-Dinitrotoluene	ND	-	0.25	-	-	-	-

(Cont.)



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 11/6/13
Date Analyzed: 11/6/13
Instrument: GC21
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1311111
BatchID: 83748
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg
Sample ID: MB/LCS-83748
1311111-001AMS/MSD

QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Di-n-octyl Phthalate	ND	-	0.50	-	-	-	-
1,2-Diphenylhydrazine	ND	-	0.25	-	-	-	-
Fluoranthene	ND	-	0.25	-	-	-	-
Fluorene	ND	-	0.25	-	-	-	-
Hexachlorobenzene	ND	-	0.25	-	-	-	-
Hexachlorobutadiene	ND	-	0.25	-	-	-	-
Hexachlorocyclopentadiene	ND	-	1.3	-	-	-	-
Hexachloroethane	ND	-	0.25	-	-	-	-
Indeno (1,2,3-cd) pyrene	ND	-	0.25	-	-	-	-
Isophorone	ND	-	0.25	-	-	-	-
2-Methylnaphthalene	ND	-	0.25	-	-	-	-
2-Methylphenol (o-Cresol)	ND	-	0.25	-	-	-	-
3 &/or 4-Methylphenol (m,p-Cresol)	ND	-	0.25	-	-	-	-
Naphthalene	ND	-	0.25	-	-	-	-
2-Nitroaniline	ND	-	1.3	-	-	-	-
3-Nitroaniline	ND	-	1.3	-	-	-	-
4-Nitroaniline	ND	-	1.3	-	-	-	-
Nitrobenzene	ND	-	0.25	-	-	-	-
2-Nitrophenol	ND	-	1.3	-	-	-	-
4-Nitrophenol	ND	2.947	1.3	5	-	58.9	30-130
N-Nitrosodiphenylamine	ND	-	0.25	-	-	-	-
N-Nitrosodi-n-propylamine	ND	4.009	0.25	5	-	80.2	30-130
Pentachlorophenol	ND	2.654	1.3	5	-	53.1	30-130
Phenanthrene	ND	-	0.25	-	-	-	-
Phenol	ND	4.099	0.25	5	-	82	30-130
Pyrene	ND	3.999	0.25	5	-	80	30-130
1,2,4-Trichlorobenzene	ND	3.427	0.25	5	-	68.5	30-130
2,4,5-Trichlorophenol	ND	-	0.25	-	-	-	-
2,4,6-Trichlorophenol	ND	-	0.25	-	-	-	-

Surrogate Recovery

2-Fluorophenol	5.863	3.765		5	117	75	30-130
Phenol-d5	5.664	3.676		5	113	74	30-130
Nitrobenzene-d5	5.064	3.427		5	101	69	30-130
2-Fluorobiphenyl	4.527	2.953		5	91	59	30-130
2,4,6-Tribromophenol	4.342	3.464		5	87	69	30-130
4-Terphenyl-d14	5.09	3.43		5	102	69	30-130

(Cont.)



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 11/6/13
Date Analyzed: 11/6/13
Instrument: GC21
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1311111
BatchID: 83748
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg
Sample ID: MB/LCS-83748
1311111-001AMS/MSD

QC Summary Report for SW8270C

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Acenaphthene	NR	NR	0	ND<4	NR	NR	-	NR	
4-Chloro-3-methylphenol	NR	NR	0	ND<4	NR	NR	-	NR	
2-Chlorophenol	NR	NR	0	ND<4	NR	NR	-	NR	
1,4-Dichlorobenzene	NR	NR	0	ND<4	NR	NR	-	NR	
2,4-Dinitrotoluene	NR	NR	0	ND<4	NR	NR	-	NR	
4-Nitrophenol	NR	NR	0	ND<21	NR	NR	-	NR	
N-Nitrosodi-n-propylamine	NR	NR	0	ND<4	NR	NR	-	NR	
Pentachlorophenol	NR	NR	0	ND<21	NR	NR	-	NR	
Phenol	NR	NR	0	ND<4	NR	NR	-	NR	
Pyrene	NR	NR	0	ND<4	NR	NR	-	NR	
1,2,4-Trichlorobenzene	NR	NR	0	ND<4	NR	NR	-	NR	

Surrogate Recovery

2-Fluorophenol	NR	NR	0		NR	NR	-	NR	
Phenol-d5	NR	NR	0		NR	NR	-	NR	
Nitrobenzene-d5	NR	NR	0		NR	NR	-	NR	
2-Fluorobiphenyl	NR	NR	0		NR	NR	-	NR	
2,4,6-Tribromophenol	NR	NR	0		NR	NR	-	NR	
4-Terphenyl-d14	NR	NR	0		NR	NR	-	NR	



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 11/5/13
Date Analyzed: 11/6/13
Instrument: ICP-MS1
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1311111
BatchID: 83696
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-83696
1311110-004AMS/MSD

QC Summary Report for SW6020

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Antimony	ND	50.85	0.50	50	-	102	75-125
Arsenic	ND	51.94	0.50	50	-	104	75-125
Barium	ND	492.6	5.0	500	-	98.5	75-125
Beryllium	ND	48.2	0.50	50	-	96.4	75-125
Cadmium	ND	51.49	0.25	50	-	103	75-125
Chromium	ND	48.83	0.50	50	-	97.7	75-125
Cobalt	ND	53.61	0.50	50	-	107	75-125
Copper	ND	50.9	0.50	50	-	102	75-125
Lead	ND	51.07	0.50	50	-	102	75-125
Mercury	ND	1.267	0.050	1.25	-	101	75-125
Molybdenum	ND	50.64	0.50	50	-	101	75-125
Nickel	ND	50.82	0.50	50	-	102	75-125
Selenium	ND	55.58	0.50	50	-	111	75-125
Silver	ND	49.76	0.50	50	-	99.5	75-125
Thallium	ND	49.2	0.50	50	-	98.4	75-125
Vanadium	ND	50.48	0.50	50	-	101	75-125
Zinc	ND	518.3	5.0	500	-	104	75-125
Surrogate Recovery							
Tb 350.917	498.5	494.5		500	100	99	70-130

(Cont.)



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 11/5/13
Date Analyzed: 11/6/13
Instrument: ICP-MS1
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1311111
BatchID: 83696
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-83696
1311110-004AMS/MSD

QC Summary Report for SW6020

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Antimony	51.43	50.87	50	ND	103	102	75-125	1.09	20
Arsenic	55.2	56.81	50	2.597	105	108	75-125	2.87	20
Barium	567.6	568.4	500	43.42	105	105	75-125	0	20
Beryllium	46	45.7	50	ND	92	91.4	75-125	0.654	20
Cadmium	52.59	52.18	50	ND	105	104	75-125	0.783	20
Chromium	106.5	105.9	50	47.30	118	117	75-125	0.565	20
Cobalt	59.73	59.25	50	7.129	105	104	75-125	0.807	20
Copper	60.89	64.59	50	8.012	106	113	75-125	5.90	20
Lead	58.25	58.45	50	6.213	104	104	75-125	0	20
Mercury	1.303	1.28	1.25	ND	104	102	75-125	1.78	20
Molybdenum	52.49	53.03	50	ND	105	106	75-125	1.02	20
Nickel	86.72	88.87	50	31.27	111	115	75-125	2.45	20
Selenium	53.1	53.92	50	ND	106	108	75-125	1.53	20
Silver	51.95	50.89	50	ND	104	102	75-125	2.06	20
Thallium	49.81	50.21	50	ND	99.6	100	75-125	0.800	20
Vanadium	100	100.7	50	40.45	119	120	75-125	0.698	20
Zinc	550.4	553.5	500	25.62	105	106	75-125	0.562	20
Surrogate Recovery									
Tb 350.917	504.9	497.7	500		101	100	70-130	1.44	20



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 11/5/13
Date Analyzed: 11/6/13
Instrument: GC7
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1311111
BatchID: 83695
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-83695
1311110-004AMS/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	0.6236	0.40	0.60	-	104	70-130
MTBE	ND	0.09828	0.050	0.10	-	98.3	70-130
Benzene	ND	0.116	0.0050	0.10	-	116	70-130
Toluene	ND	0.1073	0.0050	0.10	-	107	70-130
Ethylbenzene	ND	0.1187	0.0050	0.10	-	119	70-130
Xylenes	ND	0.3547	0.0050	0.30	-	118	70-130

Surrogate Recovery

2-Fluorotoluene	0.1152	0.1139		0.10	115	114	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
TPH(btex)	0.5743	0.586	0.60	ND	95.7	97.7	70-130	2.02	20
MTBE	0.08996	0.08427	0.10	ND	90	84.3	70-130	6.53	20
Benzene	0.1075	0.1058	0.10	ND	107	106	70-130	1.63	20
Toluene	0.1002	0.09834	0.10	ND	100	98.3	70-130	1.83	20
Ethylbenzene	0.1112	0.1095	0.10	ND	111	110	70-130	1.51	20
Xylenes	0.328	0.3264	0.30	ND	109	109	70-130	0	20

Surrogate Recovery

2-Fluorotoluene	0.107	0.1058	0.10		107	106	70-130	1.06	20
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(Cont.)



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 11/6/13
Date Analyzed: 11/7/13
Instrument: GC7
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1311111
BatchID: 83764
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-83764
1311063-021AMS/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	0.7538	0.40	0.60	-	126	70-130
MTBE	ND	0.09589	0.050	0.10	-	95.9	70-130
Benzene	ND	0.1093	0.0050	0.10	-	109	70-130
Toluene	ND	0.1061	0.0050	0.10	-	106	70-130
Ethylbenzene	ND	0.1179	0.0050	0.10	-	118	70-130
Xylenes	ND	0.3581	0.0050	0.30	-	119	70-130

Surrogate Recovery

2-Fluorotoluene	0.1119	0.114		0.10	112	114	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
TPH(btex)	0.5838	0.587	0.60	ND	97.3	97.8	70-130	0.540	20
MTBE	0.08746	0.09279	0.10	ND	87.5	92.8	70-130	5.91	20
Benzene	0.1039	0.1003	0.10	ND	104	100	70-130	3.56	20
Toluene	0.09872	0.09638	0.10	ND	98.7	96.4	70-130	2.40	20
Ethylbenzene	0.1119	0.1101	0.10	ND	112	110	70-130	1.59	20
Xylenes	0.3337	0.3266	0.30	ND	111	109	70-130	2.14	20

Surrogate Recovery

2-Fluorotoluene	0.1092	0.1056	0.10		109	106	70-130	3.28	20
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Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 11/5/13
Date Analyzed: 11/6/13
Instrument: ICP-JY
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1311111
BatchID: 83675
Extraction Method: SW3050B
Analytical Method: SW6010B
Unit: mg/Kg
Sample ID: MB/LCS-83675
1310948-004BMS/MSD

QC SUMMARY REPORT FOR 6010B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Lead	ND	52.25	5.0	50	-	104	75-125
Surrogate Recovery							
Tb 350.917	567.2	557.5		500	113	112	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Lead	NR	NR	50	1244	NR	NR	75-125	NR	25
Surrogate Recovery									
Tb 350.917	565.2	581	500		113	116	70-130	2.75	20



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 11/4/13
Date Analyzed: 11/6/13
Instrument: GC9b
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1311111
BatchID: 83651
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg
Sample ID: MB/LCS-83651

QC SUMMARY REPORT FOR SW8015B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	40.61	1.0	40	-	102	70-130
Surrogate Recovery							
C9	20.6	20.63		25	82	83	70-130

McCampbell Analytical, Inc.



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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1311111 ClientCode: TWRF

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ EQulS ☒ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to: Maria Flessas Treadwell & Rollo 555 Montgomery St., Suite 1300 San Francisco, CA 94111 (415) 955-9040 FAX: (415) 955-9041 Bill to: Accounts Payable Treadwell & Rollo 555 Montgomery St., Suite 1300 San Francisco, CA 94111 Requested TAT: 3 days

Email: mgflessas@treadwellrollo.com

cc:

555 Montgomery St., Suite 1300

San Francisco, CA 94111

(415) 955-9040 FAX: (415) 955-9041

555 Montgomery St., Suite 1300

San Francisco, CA 94111

Date Received: 11/05/2013

Date Printed: 11/06/2013

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

1311111-001	B-5-2.5	Soil	11/2/2013 7:59	☐	A	A	A	A	A	A						
1311111-002	B-5-5	Soil	11/2/2013 8:25	☐						A	A					
1311111-003	B-5-7.5	Soil	11/2/2013 8:40	☐		A	A			A	A					
1311111-004	B-5-10	Soil	11/2/2013 8:50	☐						A		A				

Test Legend:

1	8081PCB_S	2	8260B_S	3	8270D_S	4	ASBESTOS_S	5	CAM17MS_S
6	G-MBTX_S	7	LUFTMS_S	8	PB_S	9		10	
11		12							

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

Prepared by: Zoraida Cortez

Comments: SEND HARD COPY

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.



Sample Receipt Checklist

Client Name: **Treadwell & Rollo**

Date and Time Received: **11/5/2013 7:22:00 PM**

Project Name: **#731626701; India Basin**

Login Reviewed by: **Zoraida Cortez**

WorkOrder N°: **1311111** Matrix: Soil

Carrier: Rob Pringle (MAI Courier)

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 ☐	
Container/Temp Blank temperature	Cooler Temp: 4.2°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☐	No ☐	NA ☒
Sample labels checked for correct preservation?	Yes ☒	No ☐	
Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☒
Samples Received on Ice?	Yes ☒	No ☐	

(Ice Type: WET ICE)

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

Comments:



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1311110

Report Created for: Treadwell & Rollo
555 Montgomery St., Suite 1300
San Francisco, CA 94111

Project Contact: Maria Flessas
Project P.O.:
Project Name: #731626701; India Basin

Project Received: 11/05/2013

Analytical Report reviewed & approved for release on 11/08/2013 by:

Question about
your data?

[Click here to email
McC Campbell](#)

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: #731626701; India Basin
WorkOrder: 1311110

Glossary Abbreviation

Description

95% Interval	95% Confident Interval
DF	Dilution Factor
DUP	Duplicate
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ND	Not detected at or above the indicated MDL or RL
NR	Analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix; or sample diluted due to high matrix or analyte content.
RD	Relative Difference
RL	Reporting Limit
RPD	Relative Percent Deviation
SPK Val	Spike Value
SPKRef Val	Spike Reference Value

Analytical Qualifier

d7	strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram
e2	diesel range compounds are significant; no recognizable pattern
e4	gasoline range compounds are significant.
e7	oil range compounds are significant
h4	sulfuric acid permanganate (EPA 3665) cleanup

Quality Control Qualifier

F1	MS/MSD recovery was out of acceptance criteria; LCS validated the prep batch.
F2	LCS recovery for this compound is outside of acceptance limits.



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 11/5/13 19:02
Date Prepared: 11/5/13

WorkOrder: 1311110
Extraction Method SW3550B
Analytical Method: SW8081A
Unit: mg/kg

Organochlorine Pesticides (8080 Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2-2.5	1311110-001A	Soil	11/02/2013 07:30	GC22	83679
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Aldrin	ND		0.010	10	11/06/2013 19:31
a-BHC	ND		0.010	10	11/06/2013 19:31
b-BHC	ND		0.010	10	11/06/2013 19:31
d-BHC	ND		0.010	10	11/06/2013 19:31
g-BHC	ND		0.010	10	11/06/2013 19:31
Chlordane (Technical)	ND		0.25	10	11/06/2013 19:31
a-Chlordane	ND		0.010	10	11/06/2013 19:31
g-Chlordane	ND		0.010	10	11/06/2013 19:31
p,p-DDD	ND		0.010	10	11/06/2013 19:31
p,p-DDE	ND		0.010	10	11/06/2013 19:31
p,p-DDT	ND		0.010	10	11/06/2013 19:31
Dieldrin	ND		0.010	10	11/06/2013 19:31
Endosulfan I	ND		0.010	10	11/06/2013 19:31
Endosulfan II	ND		0.010	10	11/06/2013 19:31
Endosulfan sulfate	ND		0.010	10	11/06/2013 19:31
Endrin	ND		0.010	10	11/06/2013 19:31
Endrin aldehyde	ND		0.010	10	11/06/2013 19:31
Endrin ketone	ND		0.010	10	11/06/2013 19:31
Heptachlor	ND		0.010	10	11/06/2013 19:31
Heptachlor epoxide	ND		0.010	10	11/06/2013 19:31
Hexachlorobenzene	ND		0.10	10	11/06/2013 19:31
Hexachlorocyclopentadiene	ND		0.20	10	11/06/2013 19:31
Methoxychlor	ND		0.010	10	11/06/2013 19:31
Toxaphene	ND		0.50	10	11/06/2013 19:31
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Decachlorobiphenyl	96		70-130		11/06/2013 19:31



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 11/5/13 19:02
Date Prepared: 11/5/13

WorkOrder: 1311110
Extraction Method SW3550B
Analytical Method: SW8082
Unit: mg/kg

Polychlorinated Biphenyls (PCBs) Aroclors

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2-5	1311110-002A	Soil	11/02/2013 07:40	GC5A	83697
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Aroclor1016	ND		0.050	1	11/06/2013 10:20
Aroclor1221	ND		0.050	1	11/06/2013 10:20
Aroclor1232	ND		0.050	1	11/06/2013 10:20
Aroclor1242	ND		0.050	1	11/06/2013 10:20
Aroclor1248	ND		0.050	1	11/06/2013 10:20
Aroclor1254	ND		0.050	1	11/06/2013 10:20
Aroclor1260	ND		0.050	1	11/06/2013 10:20
PCBs, total	ND		0.050	1	11/06/2013 10:20
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: h4	
Decachlorobiphenyl	110		70-130		11/06/2013 10:20



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 11/5/13 19:02
Date Prepared: 11/5/13

WorkOrder: 1311110
Extraction Method SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2-5	1311110-002A	Soil	11/02/2013 07:40	GC16	83658
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	11/06/2013 15:38
tert-Amyl methyl ether (TAME)	ND		0.0050	1	11/06/2013 15:38
Benzene	ND		0.0050	1	11/06/2013 15:38
Bromobenzene	ND		0.0050	1	11/06/2013 15:38
Bromochloromethane	ND		0.0050	1	11/06/2013 15:38
Bromodichloromethane	ND		0.0050	1	11/06/2013 15:38
Bromoform	ND		0.0050	1	11/06/2013 15:38
Bromomethane	ND		0.0050	1	11/06/2013 15:38
2-Butanone (MEK)	ND		0.020	1	11/06/2013 15:38
t-Butyl alcohol (TBA)	ND		0.050	1	11/06/2013 15:38
n-Butyl benzene	ND		0.0050	1	11/06/2013 15:38
sec-Butyl benzene	ND		0.0050	1	11/06/2013 15:38
tert-Butyl benzene	ND		0.0050	1	11/06/2013 15:38
Carbon Disulfide	ND		0.0050	1	11/06/2013 15:38
Carbon Tetrachloride	ND		0.0050	1	11/06/2013 15:38
Chlorobenzene	ND		0.0050	1	11/06/2013 15:38
Chloroethane	ND		0.0050	1	11/06/2013 15:38
Chloroform	ND		0.0050	1	11/06/2013 15:38
Chloromethane	ND		0.0050	1	11/06/2013 15:38
2-Chlorotoluene	ND		0.0050	1	11/06/2013 15:38
4-Chlorotoluene	ND		0.0050	1	11/06/2013 15:38
Dibromochloromethane	ND		0.0050	1	11/06/2013 15:38
1,2-Dibromo-3-chloropropane	ND		0.0040	1	11/06/2013 15:38
1,2-Dibromoethane (EDB)	ND		0.0040	1	11/06/2013 15:38
Dibromomethane	ND		0.0050	1	11/06/2013 15:38
1,2-Dichlorobenzene	ND		0.0050	1	11/06/2013 15:38
1,3-Dichlorobenzene	ND		0.0050	1	11/06/2013 15:38
1,4-Dichlorobenzene	ND		0.0050	1	11/06/2013 15:38
Dichlorodifluoromethane	ND		0.0050	1	11/06/2013 15:38
1,1-Dichloroethane	ND		0.0050	1	11/06/2013 15:38
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	11/06/2013 15:38
1,1-Dichloroethene	ND		0.0050	1	11/06/2013 15:38
cis-1,2-Dichloroethene	ND		0.0050	1	11/06/2013 15:38
trans-1,2-Dichloroethene	ND		0.0050	1	11/06/2013 15:38
1,2-Dichloropropane	ND		0.0050	1	11/06/2013 15:38
1,3-Dichloropropane	ND		0.0050	1	11/06/2013 15:38
2,2-Dichloropropane	ND		0.0050	1	11/06/2013 15:38
1,1-Dichloropropene	ND		0.0050	1	11/06/2013 15:38

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 11/5/13 19:02
Date Prepared: 11/5/13

WorkOrder: 1311110
Extraction Method SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2-5	1311110-002A	Soil	11/02/2013 07:40	GC16	83658
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND		0.0050	1	11/06/2013 15:38
trans-1,3-Dichloropropene	ND		0.0050	1	11/06/2013 15:38
Diisopropyl ether (DIPE)	ND		0.0050	1	11/06/2013 15:38
Ethylbenzene	ND		0.0050	1	11/06/2013 15:38
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	11/06/2013 15:38
Freon 113	ND		0.10	1	11/06/2013 15:38
Hexachlorobutadiene	ND		0.0050	1	11/06/2013 15:38
Hexachloroethane	ND		0.0050	1	11/06/2013 15:38
2-Hexanone	ND		0.0050	1	11/06/2013 15:38
Isopropylbenzene	ND		0.0050	1	11/06/2013 15:38
4-Isopropyl toluene	ND		0.0050	1	11/06/2013 15:38
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	11/06/2013 15:38
Methylene chloride	ND		0.0050	1	11/06/2013 15:38
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	11/06/2013 15:38
Naphthalene	ND		0.0050	1	11/06/2013 15:38
n-Propyl benzene	ND		0.0050	1	11/06/2013 15:38
Styrene	ND		0.0050	1	11/06/2013 15:38
1,1,1,2-Tetrachloroethane	ND		0.0050	1	11/06/2013 15:38
1,1,2,2-Tetrachloroethane	ND		0.0050	1	11/06/2013 15:38
Tetrachloroethene	ND		0.0050	1	11/06/2013 15:38
Toluene	ND		0.0050	1	11/06/2013 15:38
1,2,3-Trichlorobenzene	ND		0.0050	1	11/06/2013 15:38
1,2,4-Trichlorobenzene	ND		0.0050	1	11/06/2013 15:38
1,1,1-Trichloroethane	ND		0.0050	1	11/06/2013 15:38
1,1,2-Trichloroethane	ND		0.0050	1	11/06/2013 15:38
Trichloroethene	ND		0.0050	1	11/06/2013 15:38
Trichlorofluoromethane	ND		0.0050	1	11/06/2013 15:38
1,2,3-Trichloropropane	ND		0.0050	1	11/06/2013 15:38
1,2,4-Trimethylbenzene	ND		0.0050	1	11/06/2013 15:38
1,3,5-Trimethylbenzene	ND		0.0050	1	11/06/2013 15:38
Vinyl Chloride	ND		0.0050	1	11/06/2013 15:38
Xylenes, Total	ND		0.0050	1	11/06/2013 15:38
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	95		70-130		11/06/2013 15:38
Toluene-d8	99		70-130		11/06/2013 15:38
4-BFB	105		70-130		11/06/2013 15:38



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 11/5/13 19:02
Date Prepared: 11/6/13

WorkOrder: 1311110
Extraction Method SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2-5	1311110-002A	Soil	11/02/2013 07:40	GC21	83748
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	ND		0.50	2	11/06/2013 23:25
Acenaphthylene	ND		0.50	2	11/06/2013 23:25
Acetochlor	ND		0.50	2	11/06/2013 23:25
Anthracene	ND		0.50	2	11/06/2013 23:25
Benidine	ND		2.6	2	11/06/2013 23:25
Benzo (a) anthracene	ND		0.50	2	11/06/2013 23:25
Benzo (b) fluoranthene	ND		0.50	2	11/06/2013 23:25
Benzo (k) fluoranthene	ND		0.50	2	11/06/2013 23:25
Benzo (g,h,i) perylene	ND		0.50	2	11/06/2013 23:25
Benzo (a) pyrene	ND		0.50	2	11/06/2013 23:25
Benzyl Alcohol	ND		2.6	2	11/06/2013 23:25
1,1-Biphenyl	ND		0.50	2	11/06/2013 23:25
Bis (2-chloroethoxy) Methane	ND		0.50	2	11/06/2013 23:25
Bis (2-chloroethyl) Ether	ND		0.50	2	11/06/2013 23:25
Bis (2-chloroisopropyl) Ether	ND		0.50	2	11/06/2013 23:25
Bis (2-ethylhexyl) Adipate	ND		0.50	2	11/06/2013 23:25
Bis (2-ethylhexyl) Phthalate	ND		0.50	2	11/06/2013 23:25
4-Bromophenyl Phenyl Ether	ND		0.50	2	11/06/2013 23:25
Butylbenzyl Phthalate	ND		0.50	2	11/06/2013 23:25
4-Chloroaniline	ND		0.50	2	11/06/2013 23:25
4-Chloro-3-methylphenol	ND		0.50	2	11/06/2013 23:25
2-Chloronaphthalene	ND		0.50	2	11/06/2013 23:25
2-Chlorophenol	ND		0.50	2	11/06/2013 23:25
4-Chlorophenyl Phenyl Ether	ND		0.50	2	11/06/2013 23:25
Chrysene	ND		0.50	2	11/06/2013 23:25
Dibenzo (a,h) anthracene	ND		0.50	2	11/06/2013 23:25
Dibenzofuran	ND		0.50	2	11/06/2013 23:25
Di-n-butyl Phthalate	ND		0.50	2	11/06/2013 23:25
1,2-Dichlorobenzene	ND		0.50	2	11/06/2013 23:25
1,3-Dichlorobenzene	ND		0.50	2	11/06/2013 23:25
1,4-Dichlorobenzene	ND		0.50	2	11/06/2013 23:25
3,3-Dichlorobenzidine	ND		1.0	2	11/06/2013 23:25
2,4-Dichlorophenol	ND		0.50	2	11/06/2013 23:25
Diethyl Phthalate	ND		0.50	2	11/06/2013 23:25
2,4-Dimethylphenol	ND		0.50	2	11/06/2013 23:25
Dimethyl Phthalate	ND		0.50	2	11/06/2013 23:25
4,6-Dinitro-2-methylphenol	ND		2.6	2	11/06/2013 23:25
2,4-Dinitrophenol	ND		13	2	11/06/2013 23:25

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 11/5/13 19:02
Date Prepared: 11/6/13

WorkOrder: 1311110
Extraction Method SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2-5	1311110-002A	Soil	11/02/2013 07:40	GC21	83748
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrotoluene	ND		0.50	2	11/06/2013 23:25
2,6-Dinitrotoluene	ND		0.50	2	11/06/2013 23:25
Di-n-octyl Phthalate	ND		1.0	2	11/06/2013 23:25
1,2-Diphenylhydrazine	ND		0.50	2	11/06/2013 23:25
Fluoranthene	ND		0.50	2	11/06/2013 23:25
Fluorene	ND		0.50	2	11/06/2013 23:25
Hexachlorobenzene	ND		0.50	2	11/06/2013 23:25
Hexachlorobutadiene	ND		0.50	2	11/06/2013 23:25
Hexachlorocyclopentadiene	ND		2.6	2	11/06/2013 23:25
Hexachloroethane	ND		0.50	2	11/06/2013 23:25
Indeno (1,2,3-cd) pyrene	ND		0.50	2	11/06/2013 23:25
Isophorone	ND		0.50	2	11/06/2013 23:25
2-Methylnaphthalene	ND		0.50	2	11/06/2013 23:25
2-Methylphenol (o-Cresol)	ND		0.50	2	11/06/2013 23:25
3 &/or 4-Methylphenol (m,p-Cresol)	ND		0.50	2	11/06/2013 23:25
Naphthalene	ND		0.50	2	11/06/2013 23:25
2-Nitroaniline	ND		2.6	2	11/06/2013 23:25
3-Nitroaniline	ND		2.6	2	11/06/2013 23:25
4-Nitroaniline	ND		2.6	2	11/06/2013 23:25
Nitrobenzene	ND		0.50	2	11/06/2013 23:25
2-Nitrophenol	ND		2.6	2	11/06/2013 23:25
4-Nitrophenol	ND		2.6	2	11/06/2013 23:25
N-Nitrosodiphenylamine	ND		0.50	2	11/06/2013 23:25
N-Nitrosodi-n-propylamine	ND		0.50	2	11/06/2013 23:25
Pentachlorophenol	ND		2.6	2	11/06/2013 23:25
Phenanthrene	ND		0.50	2	11/06/2013 23:25
Phenol	ND		0.50	2	11/06/2013 23:25
Pyrene	ND		0.50	2	11/06/2013 23:25
1,2,4-Trichlorobenzene	ND		0.50	2	11/06/2013 23:25
2,4,5-Trichlorophenol	ND		0.50	2	11/06/2013 23:25
2,4,6-Trichlorophenol	ND		0.50	2	11/06/2013 23:25

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 11/5/13 19:02
Date Prepared: 11/6/13

WorkOrder: 1311110
Extraction Method SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2-5	1311110-002A	Soil	11/02/2013 07:40	GC21	83748
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorophenol	116		30-130		11/06/2013 23:25
Phenol-d5	111		30-130		11/06/2013 23:25
Nitrobenzene-d5	94		30-130		11/06/2013 23:25
2-Fluorobiphenyl	89		30-130		11/06/2013 23:25
2,4,6-Tribromophenol	97		30-130		11/06/2013 23:25
4-Terphenyl-d14	101		30-130		11/06/2013 23:25



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 11/5/13 19:02
Date Prepared: 11/5/13

WorkOrder: 1311110
Extraction Method SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2-2.5	1311110-001A	Soil/TOTAL	11/02/2013 07:30	ICP-MS1	83696
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Antimony	0.70		0.50	1	11/06/2013 13:41
Arsenic	8.9		0.50	1	11/06/2013 13:41
Barium	280		5.0	1	11/06/2013 13:41
Beryllium	0.51		0.50	1	11/06/2013 13:41
Cadmium	ND		0.25	1	11/06/2013 13:41
Chromium	41		0.50	1	11/06/2013 13:41
Cobalt	17		0.50	1	11/06/2013 13:41
Copper	78		0.50	1	11/06/2013 13:41
Lead	28		0.50	1	11/06/2013 13:41
Mercury	0.35		0.050	1	11/06/2013 13:41
Molybdenum	0.71		0.50	1	11/06/2013 13:41
Nickel	60		0.50	1	11/06/2013 13:41
Selenium	ND		0.50	1	11/06/2013 13:41
Silver	ND		0.50	1	11/06/2013 13:41
Thallium	ND		0.50	1	11/06/2013 13:41
Vanadium	42		0.50	1	11/06/2013 13:41
Zinc	130		5.0	1	11/06/2013 13:41
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	100		70-130		11/06/2013 13:41

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 11/5/13 19:02
Date Prepared: 11/5/13

WorkOrder: 1311110
Extraction Method SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2-10	1311110-004A	Soil/TOTAL	11/02/2013 08:06	ICP-MS1	83696
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Antimony	ND		0.50	1	11/06/2013 13:54
Arsenic	2.6		0.50	1	11/06/2013 13:54
Barium	43		5.0	1	11/06/2013 13:54
Beryllium	ND		0.50	1	11/06/2013 13:54
Cadmium	ND		0.25	1	11/06/2013 13:54
Chromium	47		0.50	1	11/06/2013 13:54
Cobalt	7.1		0.50	1	11/06/2013 13:54
Copper	8.0		0.50	1	11/06/2013 13:54
Lead	6.2		0.50	1	11/06/2013 13:54
Mercury	ND		0.050	1	11/06/2013 13:54
Molybdenum	ND		0.50	1	11/06/2013 13:54
Nickel	31		0.50	1	11/06/2013 13:54
Selenium	ND		0.50	1	11/06/2013 13:54
Silver	ND		0.50	1	11/06/2013 13:54
Thallium	ND		0.50	1	11/06/2013 13:54
Vanadium	40		0.50	1	11/06/2013 13:54
Zinc	26		5.0	1	11/06/2013 13:54
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	99		70-130		11/06/2013 13:54



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 11/5/13 19:02
Date Prepared: 11/5/13

WorkOrder: 1311110
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/ExtType	Date Collected	Instrument	Batch ID
B-2-2.5	1311110-001A	Soil	11/02/2013 07:30	GC19	83650
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		1.0	1	11/06/2013 11:55
MTBE	---		0.050	1	11/06/2013 11:55
Benzene	---		0.0050	1	11/06/2013 11:55
Toluene	---		0.0050	1	11/06/2013 11:55
Ethylbenzene	---		0.0050	1	11/06/2013 11:55
Xylenes	---		0.0050	1	11/06/2013 11:55
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	109		70-130		11/06/2013 11:55
B-2-5	1311110-002A	Soil	11/02/2013 07:40	GC19	83650
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		1.0	1	11/06/2013 12:56
MTBE	---		0.050	1	11/06/2013 12:56
Benzene	---		0.0050	1	11/06/2013 12:56
Toluene	---		0.0050	1	11/06/2013 12:56
Ethylbenzene	---		0.0050	1	11/06/2013 12:56
Xylenes	---		0.0050	1	11/06/2013 12:56
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	102		70-130		11/06/2013 12:56
B-2-7.5	1311110-003A	Soil	11/02/2013 07:55	GC19	83650
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	13		1.0	1	11/06/2013 13:57
MTBE	---		0.050	1	11/06/2013 13:57
Benzene	---		0.0050	1	11/06/2013 13:57
Toluene	---		0.0050	1	11/06/2013 13:57
Ethylbenzene	---		0.0050	1	11/06/2013 13:57
Xylenes	---		0.0050	1	11/06/2013 13:57
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: d7	
2-Fluorotoluene	84		70-130		11/06/2013 13:57

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 11/5/13 19:02
Date Prepared: 11/5/13

WorkOrder: 1311110
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/ExtType	Date Collected	Instrument	Batch ID
B-2-10	1311110-004A	Soil	11/02/2013 08:06	GC7	83695
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		1.0	1	11/06/2013 19:38
MTBE	---		0.050	1	11/06/2013 19:38
Benzene	---		0.0050	1	11/06/2013 19:38
Toluene	---		0.0050	1	11/06/2013 19:38
Ethylbenzene	---		0.0050	1	11/06/2013 19:38
Xylenes	---		0.0050	1	11/06/2013 19:38
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	103		70-130		11/06/2013 19:38



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 11/5/13 19:02
Date Prepared: 11/5/13

WorkOrder: 1311110
Extraction Method SW3050B
Analytical Method: SW6020
Unit: mg/Kg

LUFT 5 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2-5	1311110-002A	Soil/TOTAL	11/02/2013 07:40	ICP-MS1	83696
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	0.32		0.25	1	11/06/2013 13:48
Chromium	58		0.50	1	11/06/2013 13:48
Lead	140		5.0	10	11/07/2013 22:46
Nickel	73		0.50	1	11/06/2013 13:48
Zinc	190		5.0	1	11/06/2013 13:48
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	99		70-130		11/06/2013 13:48



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 11/5/13 19:02
Date Prepared: 11/5/13

WorkOrder: 1311110
Extraction Method SW3050B
Analytical Method: SW6010B
Unit: mg/Kg

Lead

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2-7.5	1311110-003A	Soil/TOTAL	11/02/2013 07:55	ICP-JY	83675
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	48		5.0	1	11/06/2013 13:01
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	111		70-130		11/06/2013 13:01



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 11/5/13 19:02
Date Prepared: 11/5/13

WorkOrder: 1311110
Extraction Method SW3550B
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2-2.5	1311110-001A	Soil	11/02/2013 07:30	GC2A	83651
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	52		5.0	5	11/07/2013 05:18
TPH-Motor Oil (C18-C36)	160		25	5	11/07/2013 05:18
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	88		70-130		11/07/2013 05:18
B-2-5	1311110-002A	Soil	11/02/2013 07:40	GC11A	83651
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	15		2.0	2	11/06/2013 19:07
TPH-Motor Oil (C18-C36)	79		10	2	11/06/2013 19:07
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	105		70-130		11/06/2013 19:07
B-2-7.5	1311110-003A	Soil	11/02/2013 07:55	GC11A	83651
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	23		2.0	2	11/06/2013 22:33
TPH-Motor Oil (C18-C36)	36		10	2	11/06/2013 22:33
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e4,e2	
C9	106		70-130		11/06/2013 22:33
B-2-10	1311110-004A	Soil	11/02/2013 08:06	GC6B	83651
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	1.6		1.0	1	11/07/2013 01:46
TPH-Motor Oil (C18-C36)	7.7		5.0	1	11/07/2013 01:46
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	120		70-130		11/07/2013 01:46



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 11/5/13
Date Analyzed: 11/5/13
Instrument: GC22
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1311110
BatchID: 83679
Extraction Method: SW3550B
Analytical Method: SW8081A
Unit: mg/kg
Sample ID: MB/LCS-83679
1311094-042AMS/MSD

QC SUMMARY REPORT FOR SW8081A

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Aldrin	ND	0.04901	0.0010	0.050	-	98	70-130
a-BHC	ND	-	0.0010	-	-	-	-
b-BHC	ND	-	0.0010	-	-	-	-
d-BHC	ND	-	0.0010	-	-	-	-
g-BHC	ND	0.05253	0.0010	0.050	-	105	70-130
Chlordane (Technical)	ND	-	0.025	-	-	-	-
a-Chlordane	ND	-	0.0010	-	-	-	-
g-Chlordane	ND	-	0.0010	-	-	-	-
p,p-DDD	ND	-	0.0010	-	-	-	-
p,p-DDE	ND	-	0.0010	-	-	-	-
p,p-DDT	ND	0.04269	0.0010	0.050	-	85.4	70-130
Dieldrin	ND	-	0.0010	-	-	-	-
Dieldrin	ND	0.06078	0.0010	0.050	-	122	70-130
Endosulfan I	ND	-	0.0010	-	-	-	-
Endosulfan II	ND	-	0.0010	-	-	-	-
Endosulfan sulfate	ND	-	0.0010	-	-	-	-
Endrin	ND	-	0.0010	-	-	-	-
Endrin	ND	0.05975	0.0010	0.050	-	119	70-130
Endrin aldehyde	ND	-	0.0010	-	-	-	-
Endrin ketone	ND	-	0.0010	-	-	-	-
Heptachlor	ND	-	0.0010	-	-	-	-
Heptachlor	ND	0.05865	0.0010	0.050	-	117	70-130
Heptachlor epoxide	ND	-	0.0010	-	-	-	-
Hexachlorobenzene	ND	-	0.010	-	-	-	-
Hexachlorocyclopentadiene	ND	-	0.020	-	-	-	-
Methoxychlor	ND	-	0.0010	-	-	-	-
Toxaphene	ND	-	0.050	-	-	-	-

Surrogate Recovery

Decachlorobiphenyl	0.05017	0.05225		0.050	100	105	70-130
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Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 11/5/13
Date Analyzed: 11/5/13
Instrument: GC22
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1311110
BatchID: 83679
Extraction Method: SW3550B
Analytical Method: SW8081A
Unit: mg/kg
Sample ID: MB/LCS-83679
1311094-042AMS/MSD

QC SUMMARY REPORT FOR SW8081A

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Aldrin	0.04816	0.04805	0.050	ND	96.3	96.1	70-130	0.218	30
g-BHC	0.05257	0.05262	0.050	ND	105	105	70-130	0	30
p,p-DDT	0.04306	0.04315	0.050	ND	86.1	86.3	70-130	0.205	30
Dieldrin	0.07643	0.07412	0.050	0.01327	126	122	70-130	3.07	30
Endrin	0.05881	0.05899	0.050	ND	118	118	70-130	0	30
Heptachlor	0.05915	0.05904	0.050	ND	118	118	70-130	0	30
Surrogate Recovery									
Decachlorobiphenyl	0.04971	0.04978	0.050		99	100	70-130	0.147	30



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 11/5/13
Date Analyzed: 11/6/13
Instrument: GC5A
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1311110
BatchID: 83697
Extraction Method: SW3550B
Analytical Method: SW8082
Unit: mg/kg
Sample ID: MB/LCS-83697
1311110-002AMS/MSD

QC SUMMARY REPORT FOR SW8082

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Aroclor1016	ND	-	0.050	-	-	-	-
Aroclor1221	ND	-	0.050	-	-	-	-
Aroclor1232	ND	-	0.050	-	-	-	-
Aroclor1242	ND	-	0.050	-	-	-	-
Aroclor1248	ND	-	0.050	-	-	-	-
Aroclor1254	ND	-	0.050	-	-	-	-
Aroclor1260	ND	0.1905	0.050	0.15	-	127	70-130
PCBs, total	ND	-	0.050	-	-	-	-

Surrogate Recovery

Decachlorobiphenyl	0.05596	0.05652		0.050	112	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
Aroclor1260	0.1842	0.1852	0.15	ND	123	123	70-130	0	30

Surrogate Recovery

Decachlorobiphenyl	0.05413	0.05428	0.050		108	109	70-130	0.265	30
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Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 11/5/13
Date Analyzed: 11/5/13
Instrument: GC16
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1311110
BatchID: 83658
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/Kg
Sample ID: MB/LCS-83658
1311078-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	0.10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	0.0543	0.0050	0.050	-	109	70-130
Benzene	ND	0.05051	0.0050	0.050	-	101	70-130
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	0.2638	0.050	0.20	-	132, F2	70-130
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.05295	0.0050	0.050	-	106	70-130
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.05487	0.0040	0.050	-	110	70-130
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.05423	0.0040	0.050	-	108	70-130
1,1-Dichloroethene	ND	0.05143	0.0050	0.050	-	103	70-130
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-

(Cont.)



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 11/5/13
Date Analyzed: 11/5/13
Instrument: GC16
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1311110
BatchID: 83658
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/Kg
Sample ID: MB/LCS-83658
1311078-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Diisopropyl ether (DIPE)	ND	0.05298	0.0050	0.050	-	106	70-130
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.05306	0.0050	0.050	-	106	70-130
Freon 113	ND	-	0.0050	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.05513	0.0050	0.050	-	110	70-130
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	0.05411	0.0050	0.050	-	108	70-130
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	0.05475	0.0050	0.050	-	110	70-130
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Xylenes, Total	ND	-	0.0050	-	-	-	-

Surrogate Recovery

Dibromofluoromethane	0.1216	0.1689	0.18	97	97	70-130
Toluene-d8	0.142	0.2011	0.18	114	115	70-130
4-BFB	0.01341	0.01767	0.018	107	101	70-130

(Cont.)

SW



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 11/5/13
Date Analyzed: 11/5/13
Instrument: GC16
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1311110
BatchID: 83658
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/Kg
Sample ID: MB/LCS-83658
1311078-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	0.05008	0.0505	0.050	ND	100,F1	101,F1	56-94	0.829	30
Benzene	0.04516	0.04516	0.050	ND	90.3	90.3	60-106	0	30
t-Butyl alcohol (TBA)	0.2398	0.2351	0.20	ND	120	118	56-140	1.95	30
Chlorobenzene	0.04667	0.04689	0.050	ND	93.3	93.8	61-108	0.477	30
1,2-Dibromoethane (EDB)	0.04983	0.04894	0.050	ND	99.7	97.9	54-119	1.81	30
1,2-Dichloroethane (1,2-DCA)	0.0486	0.04934	0.050	ND	97.2	98.7	48-115	1.50	30
1,1-Dichloroethene	0.0449	0.04541	0.050	ND	89.8	90.8	46-111	1.13	30
Diisopropyl ether (DIPE)	0.04789	0.04832	0.050	ND	95.8	96.6	53-111	0.888	30
Ethyl tert-butyl ether (ETBE)	0.0484	0.04862	0.050	ND	96.8	97.2	61-104	0.438	30
Methyl-t-butyl ether (MTBE)	0.05017	0.05082	0.050	ND	100	102	58-107	1.30	30
Toluene	0.04743	0.04734	0.050	ND	94.9	94.7	64-114	0.184	30
Trichloroethene	0.04903	0.04905	0.050	ND	98.1	98.1	60-116	0	30
Surrogate Recovery									
Dibromofluoromethane	0.1655	0.1653	0.18		95	94	70-130	0.148	30
Toluene-d8	0.1885	0.1871	0.18		108	107	70-130	0.748	30
4-BFB	0.01709	0.01671	0.018		98	95	70-130	2.23	30



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 11/6/13
Date Analyzed: 11/6/13
Instrument: GC21
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1311110
BatchID: 83748
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg
Sample ID: MB/LCS-83748
1311111-001AMS/MSD

QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acenaphthene	ND	3.559	0.25	5	-	71.2	30-130
Acenaphthylene	ND	-	0.25	-	-	-	-
Acetochlor	ND	-	0.25	-	-	-	-
Anthracene	ND	-	0.25	-	-	-	-
Benzidine	ND	-	1.3	-	-	-	-
Benzo (a) anthracene	ND	-	0.25	-	-	-	-
Benzo (b) fluoranthene	ND	-	0.25	-	-	-	-
Benzo (k) fluoranthene	ND	-	0.25	-	-	-	-
Benzo (g,h,i) perylene	ND	-	0.25	-	-	-	-
Benzo (a) pyrene	ND	-	0.25	-	-	-	-
Benzyl Alcohol	ND	-	1.3	-	-	-	-
1,1-Biphenyl	ND	-	0.25	-	-	-	-
Bis (2-chloroethoxy) Methane	ND	-	0.25	-	-	-	-
Bis (2-chloroethyl) Ether	ND	-	0.25	-	-	-	-
Bis (2-chloroisopropyl) Ether	ND	-	0.25	-	-	-	-
Bis (2-ethylhexyl) Adipate	ND	-	0.25	-	-	-	-
Bis (2-ethylhexyl) Phthalate	ND	-	0.25	-	-	-	-
4-Bromophenyl Phenyl Ether	ND	-	0.25	-	-	-	-
Butylbenzyl Phthalate	ND	-	0.25	-	-	-	-
4-Chloroaniline	ND	-	0.25	-	-	-	-
4-Chloro-3-methylphenol	ND	3.967	0.25	5	-	79.3	30-130
2-Chloronaphthalene	ND	-	0.25	-	-	-	-
2-Chlorophenol	ND	4.084	0.25	5	-	81.7	30-130
4-Chlorophenyl Phenyl Ether	ND	-	0.25	-	-	-	-
Chrysene	ND	-	0.25	-	-	-	-
Dibenzo (a,h) anthracene	ND	-	0.25	-	-	-	-
Dibenzofuran	ND	-	0.25	-	-	-	-
Di-n-butyl Phthalate	ND	-	0.25	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.25	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.25	-	-	-	-
1,4-Dichlorobenzene	ND	3.421	0.25	5	-	68.4	30-130
3,3-Dichlorobenzidine	ND	-	0.50	-	-	-	-
2,4-Dichlorophenol	ND	-	0.25	-	-	-	-
Diethyl Phthalate	ND	-	0.25	-	-	-	-
2,4-Dimethylphenol	ND	-	0.25	-	-	-	-
Dimethyl Phthalate	ND	-	0.25	-	-	-	-
4,6-Dinitro-2-methylphenol	ND	-	1.3	-	-	-	-
2,4-Dinitrophenol	ND	-	6.3	-	-	-	-
2,4-Dinitrotoluene	ND	3.853	0.25	5	-	77.1	30-130
2,6-Dinitrotoluene	ND	-	0.25	-	-	-	-

(Cont.)



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 11/6/13
Date Analyzed: 11/6/13
Instrument: GC21
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1311110
BatchID: 83748
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg
Sample ID: MB/LCS-83748
1311111-001AMS/MSD

QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Di-n-octyl Phthalate	ND	-	0.50	-	-	-	-
1,2-Diphenylhydrazine	ND	-	0.25	-	-	-	-
Fluoranthene	ND	-	0.25	-	-	-	-
Fluorene	ND	-	0.25	-	-	-	-
Hexachlorobenzene	ND	-	0.25	-	-	-	-
Hexachlorobutadiene	ND	-	0.25	-	-	-	-
Hexachlorocyclopentadiene	ND	-	1.3	-	-	-	-
Hexachloroethane	ND	-	0.25	-	-	-	-
Indeno (1,2,3-cd) pyrene	ND	-	0.25	-	-	-	-
Isophorone	ND	-	0.25	-	-	-	-
2-Methylnaphthalene	ND	-	0.25	-	-	-	-
2-Methylphenol (o-Cresol)	ND	-	0.25	-	-	-	-
3 &/or 4-Methylphenol (m,p-Cresol)	ND	-	0.25	-	-	-	-
Naphthalene	ND	-	0.25	-	-	-	-
2-Nitroaniline	ND	-	1.3	-	-	-	-
3-Nitroaniline	ND	-	1.3	-	-	-	-
4-Nitroaniline	ND	-	1.3	-	-	-	-
Nitrobenzene	ND	-	0.25	-	-	-	-
2-Nitrophenol	ND	-	1.3	-	-	-	-
4-Nitrophenol	ND	2.947	1.3	5	-	58.9	30-130
N-Nitrosodiphenylamine	ND	-	0.25	-	-	-	-
N-Nitrosodi-n-propylamine	ND	4.009	0.25	5	-	80.2	30-130
Pentachlorophenol	ND	2.654	1.3	5	-	53.1	30-130
Phenanthrene	ND	-	0.25	-	-	-	-
Phenol	ND	4.099	0.25	5	-	82	30-130
Pyrene	ND	3.999	0.25	5	-	80	30-130
1,2,4-Trichlorobenzene	ND	3.427	0.25	5	-	68.5	30-130
2,4,5-Trichlorophenol	ND	-	0.25	-	-	-	-
2,4,6-Trichlorophenol	ND	-	0.25	-	-	-	-

Surrogate Recovery

2-Fluorophenol	5.863	3.765		5	117	75	30-130
Phenol-d5	5.664	3.676		5	113	74	30-130
Nitrobenzene-d5	5.064	3.427		5	101	69	30-130
2-Fluorobiphenyl	4.527	2.953		5	91	59	30-130
2,4,6-Tribromophenol	4.342	3.464		5	87	69	30-130
4-Terphenyl-d14	5.09	3.43		5	102	69	30-130

(Cont.)



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 11/6/13
Date Analyzed: 11/6/13
Instrument: GC21
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1311110
BatchID: 83748
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg
Sample ID: MB/LCS-83748
1311111-001AMS/MSD

QC Summary Report for SW8270C

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Acenaphthene	NR	NR	0	ND<4	NR	NR	-	NR	
4-Chloro-3-methylphenol	NR	NR	0	ND<4	NR	NR	-	NR	
2-Chlorophenol	NR	NR	0	ND<4	NR	NR	-	NR	
1,4-Dichlorobenzene	NR	NR	0	ND<4	NR	NR	-	NR	
2,4-Dinitrotoluene	NR	NR	0	ND<4	NR	NR	-	NR	
4-Nitrophenol	NR	NR	0	ND<21	NR	NR	-	NR	
N-Nitrosodi-n-propylamine	NR	NR	0	ND<4	NR	NR	-	NR	
Pentachlorophenol	NR	NR	0	ND<21	NR	NR	-	NR	
Phenol	NR	NR	0	ND<4	NR	NR	-	NR	
Pyrene	NR	NR	0	ND<4	NR	NR	-	NR	
1,2,4-Trichlorobenzene	NR	NR	0	ND<4	NR	NR	-	NR	

Surrogate Recovery

2-Fluorophenol	NR	NR	0		NR	NR	-	NR	
Phenol-d5	NR	NR	0		NR	NR	-	NR	
Nitrobenzene-d5	NR	NR	0		NR	NR	-	NR	
2-Fluorobiphenyl	NR	NR	0		NR	NR	-	NR	
2,4,6-Tribromophenol	NR	NR	0		NR	NR	-	NR	
4-Terphenyl-d14	NR	NR	0		NR	NR	-	NR	



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 11/5/13
Date Analyzed: 11/6/13
Instrument: ICP-MS1
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1311110
BatchID: 83696
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-83696
1311110-004AMS/MSD

QC Summary Report for SW6020

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Antimony	ND	50.85	0.50	50	-	102	75-125
Arsenic	ND	51.94	0.50	50	-	104	75-125
Barium	ND	492.6	5.0	500	-	98.5	75-125
Beryllium	ND	48.2	0.50	50	-	96.4	75-125
Cadmium	ND	51.49	0.25	50	-	103	75-125
Chromium	ND	48.83	0.50	50	-	97.7	75-125
Cobalt	ND	53.61	0.50	50	-	107	75-125
Copper	ND	50.9	0.50	50	-	102	75-125
Lead	ND	51.07	0.50	50	-	102	75-125
Mercury	ND	1.267	0.050	1.25	-	101	75-125
Molybdenum	ND	50.64	0.50	50	-	101	75-125
Nickel	ND	50.82	0.50	50	-	102	75-125
Selenium	ND	55.58	0.50	50	-	111	75-125
Silver	ND	49.76	0.50	50	-	99.5	75-125
Thallium	ND	49.2	0.50	50	-	98.4	75-125
Vanadium	ND	50.48	0.50	50	-	101	75-125
Zinc	ND	518.3	5.0	500	-	104	75-125
Surrogate Recovery							
Tb 350.917	498.5	494.5		500	100	99	70-130

(Cont.)



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 11/5/13
Date Analyzed: 11/6/13
Instrument: ICP-MS1
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1311110
BatchID: 83696
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-83696
1311110-004AMS/MSD

QC Summary Report for SW6020

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Antimony	51.43	50.87	50	ND	103	102	75-125	1.09	20
Arsenic	55.2	56.81	50	2.597	105	108	75-125	2.87	20
Barium	567.6	568.4	500	43.42	105	105	75-125	0	20
Beryllium	46	45.7	50	ND	92	91.4	75-125	0.654	20
Cadmium	52.59	52.18	50	ND	105	104	75-125	0.783	20
Chromium	106.5	105.9	50	47.30	118	117	75-125	0.565	20
Cobalt	59.73	59.25	50	7.129	105	104	75-125	0.807	20
Copper	60.89	64.59	50	8.012	106	113	75-125	5.90	20
Lead	58.25	58.45	50	6.213	104	104	75-125	0	20
Mercury	1.303	1.28	1.25	ND	104	102	75-125	1.78	20
Molybdenum	52.49	53.03	50	ND	105	106	75-125	1.02	20
Nickel	86.72	88.87	50	31.27	111	115	75-125	2.45	20
Selenium	53.1	53.92	50	ND	106	108	75-125	1.53	20
Silver	51.95	50.89	50	ND	104	102	75-125	2.06	20
Thallium	49.81	50.21	50	ND	99.6	100	75-125	0.800	20
Vanadium	100	100.7	50	40.45	119	120	75-125	0.698	20
Zinc	550.4	553.5	500	25.62	105	106	75-125	0.562	20
Surrogate Recovery									
Tb 350.917	504.9	497.7	500		101	100	70-130	1.44	20



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 11/4/13
Date Analyzed: 11/5/13
Instrument: GC7
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1311110
BatchID: 83650
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-83650

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.5958	0.40	0.60	-	99.3	70-130
MTBE	ND	0.1001	0.050	0.10	-	100	70-130
Benzene	ND	0.12	0.0050	0.10	-	120	70-130
Toluene	ND	0.1087	0.0050	0.10	-	109	70-130
Ethylbenzene	ND	0.1213	0.0050	0.10	-	121	70-130
Xylenes	ND	0.359	0.0050	0.30	-	120	70-130
Surrogate Recovery							
2-Fluorotoluene	0.1125	0.1188		0.10	113	119	70-130



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 11/5/13
Date Analyzed: 11/6/13
Instrument: GC7
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1311110
BatchID: 83695
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-83695
1311110-004AMS/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	0.6236	0.40	0.60	-	104	70-130
MTBE	ND	0.09828	0.050	0.10	-	98.3	70-130
Benzene	ND	0.116	0.0050	0.10	-	116	70-130
Toluene	ND	0.1073	0.0050	0.10	-	107	70-130
Ethylbenzene	ND	0.1187	0.0050	0.10	-	119	70-130
Xylenes	ND	0.3547	0.0050	0.30	-	118	70-130

Surrogate Recovery

2-Fluorotoluene	0.1152	0.1139		0.10	115	114	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
TPH(btex)	0.5743	0.586	0.60	ND	95.7	97.7	70-130	2.02	20
MTBE	0.08996	0.08427	0.10	ND	90	84.3	70-130	6.53	20
Benzene	0.1075	0.1058	0.10	ND	107	106	70-130	1.63	20
Toluene	0.1002	0.09834	0.10	ND	100	98.3	70-130	1.83	20
Ethylbenzene	0.1112	0.1095	0.10	ND	111	110	70-130	1.51	20
Xylenes	0.328	0.3264	0.30	ND	109	109	70-130	0	20

Surrogate Recovery

2-Fluorotoluene	0.107	0.1058	0.10		107	106	70-130	1.06	20
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Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 11/5/13
Date Analyzed: 11/6/13
Instrument: ICP-MS1
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1311110
BatchID: 83696
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-83696
1311110-004AMS/MSD

QC SUMMARY REPORT FOR SW6020

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Cadmium	ND	51.49	0.25	50	-	103	75-125
Chromium	ND	48.83	0.50	50	-	97.7	75-125
Lead	ND	51.07	0.50	50	-	102	75-125
Nickel	ND	50.82	0.50	50	-	102	75-125
Zinc	ND	518.3	5.0	500	-	104	75-125

Surrogate Recovery

Tb 350.917	498.5	494.5		500	100	99	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
Cadmium	52.59	52.18	50	ND	105	104	75-125	0.783	20
Chromium	106.5	105.9	50	47.30	118	117	75-125	0.565	20
Lead	58.25	58.45	50	6.213	104	104	75-125	0	20
Nickel	86.72	88.87	50	31.27	111	115	75-125	2.45	20
Zinc	550.4	553.5	500	25.62	105	106	75-125	0.562	20

Surrogate Recovery

Tb 350.917	504.9	497.7	500		101	100	70-130	1.44	20
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Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 11/5/13
Date Analyzed: 11/6/13
Instrument: ICP-JY
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1311110
BatchID: 83675
Extraction Method: SW3050B
Analytical Method: SW6010B
Unit: mg/Kg
Sample ID: MB/LCS-83675
1310948-004BMS/MSD

QC SUMMARY REPORT FOR 6010B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Lead	ND	52.25	5.0	50	-	104	75-125
Surrogate Recovery							
Tb 350.917	567.2	557.5		500	113	112	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Lead	NR	NR	50	1244	NR	NR	75-125	NR	25
Surrogate Recovery									
Tb 350.917	565.2	581	500		113	116	70-130	2.75	20



Quality Control Report

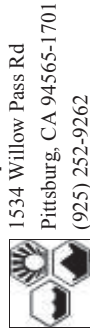
Client: Treadwell & Rollo
Date Prepared: 11/4/13
Date Analyzed: 11/6/13
Instrument: GC9b
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1311110
BatchID: 83651
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg
Sample ID: MB/LCS-83651

QC SUMMARY REPORT FOR SW8015B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	40.61	1.0	40	-	102	70-130
Surrogate Recovery							
C9	20.6	20.63		25	82	83	70-130

McCampbell Analytical, Inc.



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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1311110 ClientCode: TWRF

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ EQulS ☒ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to: Maria Flessas Treadwell & Rollo 555 Montgomery St., Suite 1300 San Francisco, CA 94111 (415) 955-9040 FAX: (415) 955-9041 Bill to: Accounts Payable Treadwell & Rollo 555 Montgomery St., Suite 1300 San Francisco, CA 94111 Requested TAT: 3 days

Email: mgflessas@treadwellrollo.com
cc:
PO: 555 Montgomery St., Suite 1300
ProjectNo: #731626701; India Basin
(415) 955-9040 FAX: (415) 955-9041

Date Received: 11/05/2013
Date Printed: 11/05/2013

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

1311110-001	B-2-2.5	Soil	11/2/2013 7:30	☐	A					A	A					
1311110-002	B-2-5	Soil	11/2/2013 7:40	☐		A	A	A			A	A				
1311110-003	B-2-7.5	Soil	11/2/2013 7:55	☐					A		A		A			
1311110-004	B-2-10	Soil	11/2/2013 8:06	☐						A	A					

Test Legend:

1	8081_S	2	8082A_PCB_S	3	8260B_S	4	8270D_S	5	ASBESTOS_S
6	CAM17MS_S	7	G-MBTX S	8	LUFTMS_S	9	PB_S	10	
11		12							

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

Prepared by: Zoraida Cortez

Comments: SEND HARD COPY

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.

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: Indira Bustin
Job Number: 731626701
Project Manager/Contact: Maria Pletas
Samplers: Peter Bletas
Recorder (Signature Required): [Signature]

Turnaround
Time

12 Feb 0

Analysis Requested

Analysis Requested	Hold	Silica gel clean-up
TOH, d, m	X	
VOCs	X	
SVCs	X	
PCBs	X	
Residuals	X	
Asbestos	X	
CHM 17 Meth	X	
WFS Meth	X	
Volatile LRD	X	

Remarks

No. Containers
& Preservative

Matrix	Soil	Water	Other	HCL	H ₂ SO ₄	HNO ₃	Ice	Other
--------	------	-------	-------	-----	--------------------------------	------------------	-----	-------

X							1	
X							1	
X							1	
X							1	

Field Sample Identification No.	Date	Time	Lab Sample No.
B-2 - 2.5	11/2/13	0730	
B-2 - 5	11/2/13	0740	
B-2 - 7.5	11/2/13	0755	
B-2 - 10	11/2/13	0806	

4.2

ICE/GOOD CONDITION
HEAD SPACE ABSENT
DECLORINATED IN LAB
PRESERVATION

Relinquished by: (Signature) [Signature] Date 11/5/13 Time 1530
Relinquished by: (Signature) [Signature] Date 11/5/13 Time 1500
Relinquished by: (Signature) [Signature] Date _____ Time _____

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

Method of Shipment
☐ Hand Carried ☒ Lab courier ☐ Fed Ex ☐ Airborne ☐ UPS

White Copy - Original

Yellow Copy - Laboratory

Pink Copy - Field

COC Number: **005773**



Sample Receipt Checklist

Client Name: **Treadwell & Rollo**

Date and Time Received: **11/5/2013 7:02:12 PM**

Project Name: **#731626701; India Basin**

Login Reviewed by: **Zoraida Cortez**

WorkOrder N°: **1311110**

Matrix: Soil

Carrier: Rob Pringle (MAI Courier)

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 ☐	
Container/Temp Blank temperature	Cooler Temp: 4.2°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☐	No ☐	NA ☒
Sample labels checked for correct preservation?	Yes ☒	No ☐	
Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☒
Samples Received on Ice?	Yes ☒	No ☐	

(Ice Type: WET ICE)

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

Comments:



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1405A73

Report Created for: Treadwell & Rollo
555 Montgomery St., Suite 1300
San Francisco, CA 94111

Project Contact: Peter Cusack
Project P.O.:
Project Name: #731626701; India Basin

Project Received: 05/28/2014

Analytical Report reviewed & approved for release on 06/04/2014 by:

Question about
your data?

[Click here to email
McC Campbell](#)

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: #731626701; India Basin
WorkOrder: 1405A73

Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
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
ND	Not detected at or above the indicated MDL or RL
NR	Matrix interferences, or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix; or sample diluted due to high matrix or analyte content.
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
TEQ	Toxicity Equivalence

Analytical Qualifiers

H	samples were analyzed out of holding time
a3	sample diluted due to high organic content.
e2	diesel range compounds are significant; no recognizable pattern
e3	aged diesel is significant
e7	oil range compounds are significant

Quality Control Qualifiers

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

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 5/28/14 18:36
Date Prepared: 5/28/14

WorkOrder: 1405A73
Extraction Method: SW3550B
Analytical Method: SW8081A/8082
Unit: mg/kg

Organochlorine Pesticides (Basic Target List) + PCBs

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3-3'	1405A73-001A	Soil	05/03/2014	GC22	90885
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Aldrin	ND	H	0.020	20	05/29/2014 00:44
a-BHC	ND	H	0.020	20	05/29/2014 00:44
b-BHC	ND	H	0.020	20	05/29/2014 00:44
d-BHC	ND	H	0.020	20	05/29/2014 00:44
g-BHC	ND	H	0.020	20	05/29/2014 00:44
Chlordane (Technical)	ND	H	0.50	20	05/29/2014 00:44
a-Chlordane	ND	H	0.020	20	05/29/2014 00:44
g-Chlordane	ND	H	0.020	20	05/29/2014 00:44
p,p-DDD	ND	H	0.020	20	05/29/2014 00:44
p,p-DDE	ND	H	0.020	20	05/29/2014 00:44
p,p-DDT	ND	H	0.020	20	05/29/2014 00:44
Dieldrin	ND	H	0.020	20	05/29/2014 00:44
Endosulfan I	ND	H	0.020	20	05/29/2014 00:44
Endosulfan II	ND	H	0.020	20	05/29/2014 00:44
Endosulfan sulfate	ND	H	0.020	20	05/29/2014 00:44
Endrin	ND	H	0.020	20	05/29/2014 00:44
Endrin aldehyde	ND	H	0.020	20	05/29/2014 00:44
Endrin ketone	ND	H	0.020	20	05/29/2014 00:44
Heptachlor	ND	H	0.020	20	05/29/2014 00:44
Heptachlor epoxide	ND	H	0.020	20	05/29/2014 00:44
Hexachlorobenzene	ND	H	0.20	20	05/29/2014 00:44
Hexachlorocyclopentadiene	ND	H	0.40	20	05/29/2014 00:44
Methoxychlor	ND	H	0.020	20	05/29/2014 00:44
Toxaphene	ND	H	1.0	20	05/29/2014 00:44
Aroclor1016	ND	H	1.0	20	05/29/2014 00:44
Aroclor1221	ND	H	1.0	20	05/29/2014 00:44
Aroclor1232	ND	H	1.0	20	05/29/2014 00:44
Aroclor1242	ND	H	1.0	20	05/29/2014 00:44
Aroclor1248	ND	H	1.0	20	05/29/2014 00:44
Aroclor1254	ND	H	1.0	20	05/29/2014 00:44
Aroclor1260	ND	H	1.0	20	05/29/2014 00:44
PCBs, total	ND	H	1.0	20	05/29/2014 00:44
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	Analytical Comments: a3	
Decachlorobiphenyl	103	H	70-130	05/29/2014 00:44	

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 5/28/14 18:36
Date Prepared: 5/28/14

WorkOrder: 1405A73
Extraction Method: SW3550B
Analytical Method: SW8081A/8082
Unit: mg/kg

Organochlorine Pesticides (Basic Target List) + PCBs

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-4-3'	1405A73-004A	Soil	05/08/2014	GC22	90885
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Aldrin	ND	H	0.020	20	05/29/2014 00:09
a-BHC	ND	H	0.020	20	05/29/2014 00:09
b-BHC	ND	H	0.020	20	05/29/2014 00:09
d-BHC	ND	H	0.020	20	05/29/2014 00:09
g-BHC	ND	H	0.020	20	05/29/2014 00:09
Chlordane (Technical)	ND	H	0.50	20	05/29/2014 00:09
a-Chlordane	ND	H	0.020	20	05/29/2014 00:09
g-Chlordane	ND	H	0.020	20	05/29/2014 00:09
p,p-DDD	ND	H	0.020	20	05/29/2014 00:09
p,p-DDE	ND	H	0.020	20	05/29/2014 00:09
p,p-DDT	ND	H	0.020	20	05/29/2014 00:09
Dieldrin	ND	H	0.020	20	05/29/2014 00:09
Endosulfan I	ND	H	0.020	20	05/29/2014 00:09
Endosulfan II	ND	H	0.020	20	05/29/2014 00:09
Endosulfan sulfate	ND	H	0.020	20	05/29/2014 00:09
Endrin	ND	H	0.020	20	05/29/2014 00:09
Endrin aldehyde	ND	H	0.020	20	05/29/2014 00:09
Endrin ketone	ND	H	0.020	20	05/29/2014 00:09
Heptachlor	ND	H	0.020	20	05/29/2014 00:09
Heptachlor epoxide	ND	H	0.020	20	05/29/2014 00:09
Hexachlorobenzene	ND	H	0.20	20	05/29/2014 00:09
Hexachlorocyclopentadiene	ND	H	0.40	20	05/29/2014 00:09
Methoxychlor	ND	H	0.020	20	05/29/2014 00:09
Toxaphene	ND	H	1.0	20	05/29/2014 00:09
Aroclor1016	ND	H	1.0	20	05/29/2014 00:09
Aroclor1221	ND	H	1.0	20	05/29/2014 00:09
Aroclor1232	ND	H	1.0	20	05/29/2014 00:09
Aroclor1242	ND	H	1.0	20	05/29/2014 00:09
Aroclor1248	ND	H	1.0	20	05/29/2014 00:09
Aroclor1254	ND	H	1.0	20	05/29/2014 00:09
Aroclor1260	ND	H	1.0	20	05/29/2014 00:09
PCBs, total	ND	H	1.0	20	05/29/2014 00:09
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	Analytical Comments: a3	
Decachlorobiphenyl	101	H	70-130		05/29/2014 00:09

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 5/28/14 18:36
Date Prepared: 5/28/14

WorkOrder: 1405A73
Extraction Method: SW3550B
Analytical Method: SW8081A/8082
Unit: mg/kg

Organochlorine Pesticides (Basic Target List) + PCBs

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-15-5.5'	1405A73-007A	Soil	05/10/2014	GC22	90885
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Aldrin	ND	H	0.050	50	05/28/2014 23:35
a-BHC	ND	H	0.050	50	05/28/2014 23:35
b-BHC	ND	H	0.050	50	05/28/2014 23:35
d-BHC	ND	H	0.050	50	05/28/2014 23:35
g-BHC	ND	H	0.050	50	05/28/2014 23:35
Chlordane (Technical)	ND	H	1.2	50	05/28/2014 23:35
a-Chlordane	ND	H	0.050	50	05/28/2014 23:35
g-Chlordane	ND	H	0.050	50	05/28/2014 23:35
p,p-DDD	ND	H	0.050	50	05/28/2014 23:35
p,p-DDE	ND	H	0.050	50	05/28/2014 23:35
p,p-DDT	ND	H	0.050	50	05/28/2014 23:35
Dieldrin	ND	H	0.050	50	05/28/2014 23:35
Endosulfan I	ND	H	0.050	50	05/28/2014 23:35
Endosulfan II	ND	H	0.050	50	05/28/2014 23:35
Endosulfan sulfate	ND	H	0.050	50	05/28/2014 23:35
Endrin	ND	H	0.050	50	05/28/2014 23:35
Endrin aldehyde	ND	H	0.050	50	05/28/2014 23:35
Endrin ketone	ND	H	0.050	50	05/28/2014 23:35
Heptachlor	ND	H	0.050	50	05/28/2014 23:35
Heptachlor epoxide	ND	H	0.050	50	05/28/2014 23:35
Hexachlorobenzene	ND	H	0.50	50	05/28/2014 23:35
Hexachlorocyclopentadiene	ND	H	1.0	50	05/28/2014 23:35
Methoxychlor	ND	H	0.050	50	05/28/2014 23:35
Toxaphene	ND	H	2.5	50	05/28/2014 23:35
Aroclor1016	ND	H	2.5	50	05/28/2014 23:35
Aroclor1221	ND	H	2.5	50	05/28/2014 23:35
Aroclor1232	ND	H	2.5	50	05/28/2014 23:35
Aroclor1242	ND	H	2.5	50	05/28/2014 23:35
Aroclor1248	ND	H	2.5	50	05/28/2014 23:35
Aroclor1254	ND	H	2.5	50	05/28/2014 23:35
Aroclor1260	ND	H	2.5	50	05/28/2014 23:35
PCBs, total	ND	H	2.5	50	05/28/2014 23:35
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	Analytical Comments: a3	
Decachlorobiphenyl	114	H	70-130	05/28/2014 23:35	



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 5/28/14 18:36
Date Prepared: 5/28/14

WorkOrder: 1405A73
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3-5.5'	1405A73-002A	Soil	05/03/2014	GC10	90881
Analytes	Result	Qualifiers	RL	DF	Date Analyzed
Acetone	ND	H	0.10	1	06/01/2014 00:14
tert-Amyl methyl ether (TAME)	ND	H	0.0050	1	06/01/2014 00:14
Benzene	ND	H	0.0050	1	06/01/2014 00:14
Bromobenzene	ND	H	0.0050	1	06/01/2014 00:14
Bromochloromethane	ND	H	0.0050	1	06/01/2014 00:14
Bromodichloromethane	ND	H	0.0050	1	06/01/2014 00:14
Bromoform	ND	H	0.0050	1	06/01/2014 00:14
Bromomethane	ND	H	0.0050	1	06/01/2014 00:14
2-Butanone (MEK)	ND	H	0.020	1	06/01/2014 00:14
t-Butyl alcohol (TBA)	ND	H	0.050	1	06/01/2014 00:14
n-Butyl benzene	ND	H	0.0050	1	06/01/2014 00:14
sec-Butyl benzene	ND	H	0.0050	1	06/01/2014 00:14
tert-Butyl benzene	ND	H	0.0050	1	06/01/2014 00:14
Carbon Disulfide	ND	H	0.0050	1	06/01/2014 00:14
Carbon Tetrachloride	ND	H	0.0050	1	06/01/2014 00:14
Chlorobenzene	ND	H	0.0050	1	06/01/2014 00:14
Chloroethane	ND	H	0.0050	1	06/01/2014 00:14
Chloroform	ND	H	0.0050	1	06/01/2014 00:14
Chloromethane	ND	H	0.0050	1	06/01/2014 00:14
2-Chlorotoluene	ND	H	0.0050	1	06/01/2014 00:14
4-Chlorotoluene	ND	H	0.0050	1	06/01/2014 00:14
Dibromochloromethane	ND	H	0.0050	1	06/01/2014 00:14
1,2-Dibromo-3-chloropropane	ND	H	0.0040	1	06/01/2014 00:14
1,2-Dibromoethane (EDB)	ND	H	0.0040	1	06/01/2014 00:14
Dibromomethane	ND	H	0.0050	1	06/01/2014 00:14
1,2-Dichlorobenzene	ND	H	0.0050	1	06/01/2014 00:14
1,3-Dichlorobenzene	ND	H	0.0050	1	06/01/2014 00:14
1,4-Dichlorobenzene	ND	H	0.0050	1	06/01/2014 00:14
Dichlorodifluoromethane	ND	H	0.0050	1	06/01/2014 00:14
1,1-Dichloroethane	ND	H	0.0050	1	06/01/2014 00:14
1,2-Dichloroethane (1,2-DCA)	ND	H	0.0040	1	06/01/2014 00:14
1,1-Dichloroethene	ND	H	0.0050	1	06/01/2014 00:14
cis-1,2-Dichloroethene	ND	H	0.0050	1	06/01/2014 00:14
trans-1,2-Dichloroethene	ND	H	0.0050	1	06/01/2014 00:14
1,2-Dichloropropane	ND	H	0.0050	1	06/01/2014 00:14
1,3-Dichloropropane	ND	H	0.0050	1	06/01/2014 00:14
2,2-Dichloropropane	ND	H	0.0050	1	06/01/2014 00:14
1,1-Dichloropropene	ND	H	0.0050	1	06/01/2014 00:14

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 5/28/14 18:36
Date Prepared: 5/28/14

WorkOrder: 1405A73
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3-5.5'	1405A73-002A	Soil	05/03/2014	GC10	90881
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND	H	0.0050	1	06/01/2014 00:14
trans-1,3-Dichloropropene	ND	H	0.0050	1	06/01/2014 00:14
Diisopropyl ether (DIPE)	ND	H	0.0050	1	06/01/2014 00:14
Ethylbenzene	ND	H	0.0050	1	06/01/2014 00:14
Ethyl tert-butyl ether (ETBE)	ND	H	0.0050	1	06/01/2014 00:14
Freon 113	ND	H	0.10	1	06/01/2014 00:14
Hexachlorobutadiene	ND	H	0.0050	1	06/01/2014 00:14
Hexachloroethane	ND	H	0.0050	1	06/01/2014 00:14
2-Hexanone	ND	H	0.0050	1	06/01/2014 00:14
Isopropylbenzene	ND	H	0.0050	1	06/01/2014 00:14
4-Isopropyl toluene	ND	H	0.0050	1	06/01/2014 00:14
Methyl-t-butyl ether (MTBE)	ND	H	0.0050	1	06/01/2014 00:14
Methylene chloride	ND	H	0.0050	1	06/01/2014 00:14
4-Methyl-2-pentanone (MIBK)	ND	H	0.0050	1	06/01/2014 00:14
Naphthalene	ND	H	0.0050	1	06/01/2014 00:14
n-Propyl benzene	ND	H	0.0050	1	06/01/2014 00:14
Styrene	ND	H	0.0050	1	06/01/2014 00:14
1,1,1,2-Tetrachloroethane	ND	H	0.0050	1	06/01/2014 00:14
1,1,2,2-Tetrachloroethane	ND	H	0.0050	1	06/01/2014 00:14
Tetrachloroethene	ND	H	0.0050	1	06/01/2014 00:14
Toluene	ND	H	0.0050	1	06/01/2014 00:14
1,2,3-Trichlorobenzene	ND	H	0.0050	1	06/01/2014 00:14
1,2,4-Trichlorobenzene	ND	H	0.0050	1	06/01/2014 00:14
1,1,1-Trichloroethane	ND	H	0.0050	1	06/01/2014 00:14
1,1,2-Trichloroethane	ND	H	0.0050	1	06/01/2014 00:14
Trichloroethene	ND	H	0.0050	1	06/01/2014 00:14
Trichlorofluoromethane	ND	H	0.0050	1	06/01/2014 00:14
1,2,3-Trichloropropane	ND	H	0.0050	1	06/01/2014 00:14
1,2,4-Trimethylbenzene	ND	H	0.0050	1	06/01/2014 00:14
1,3,5-Trimethylbenzene	ND	H	0.0050	1	06/01/2014 00:14
Vinyl Chloride	ND	H	0.0050	1	06/01/2014 00:14
Xylenes, Total	ND	H	0.0050	1	06/01/2014 00:14
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>		
Dibromofluoromethane	108	H	70-130		06/01/2014 00:14
Toluene-d8	100	H	70-130		06/01/2014 00:14
4-BFB	98	H	70-130		06/01/2014 00:14

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 5/28/14 18:36
Date Prepared: 5/28/14

WorkOrder: 1405A73
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-4-3'	1405A73-004A	Soil	05/08/2014	GC10	90881
Analytes	Result	Qualifiers	RL	DF	Date Analyzed
Acetone	ND	H	0.10	1	06/01/2014 00:56
tert-Amyl methyl ether (TAME)	ND	H	0.0050	1	06/01/2014 00:56
Benzene	ND	H	0.0050	1	06/01/2014 00:56
Bromobenzene	ND	H	0.0050	1	06/01/2014 00:56
Bromochloromethane	ND	H	0.0050	1	06/01/2014 00:56
Bromodichloromethane	ND	H	0.0050	1	06/01/2014 00:56
Bromoform	ND	H	0.0050	1	06/01/2014 00:56
Bromomethane	ND	H	0.0050	1	06/01/2014 00:56
2-Butanone (MEK)	ND	H	0.020	1	06/01/2014 00:56
t-Butyl alcohol (TBA)	ND	H	0.050	1	06/01/2014 00:56
n-Butyl benzene	ND	H	0.0050	1	06/01/2014 00:56
sec-Butyl benzene	ND	H	0.0050	1	06/01/2014 00:56
tert-Butyl benzene	ND	H	0.0050	1	06/01/2014 00:56
Carbon Disulfide	ND	H	0.0050	1	06/01/2014 00:56
Carbon Tetrachloride	ND	H	0.0050	1	06/01/2014 00:56
Chlorobenzene	ND	H	0.0050	1	06/01/2014 00:56
Chloroethane	ND	H	0.0050	1	06/01/2014 00:56
Chloroform	ND	H	0.0050	1	06/01/2014 00:56
Chloromethane	ND	H	0.0050	1	06/01/2014 00:56
2-Chlorotoluene	ND	H	0.0050	1	06/01/2014 00:56
4-Chlorotoluene	ND	H	0.0050	1	06/01/2014 00:56
Dibromochloromethane	ND	H	0.0050	1	06/01/2014 00:56
1,2-Dibromo-3-chloropropane	ND	H	0.0040	1	06/01/2014 00:56
1,2-Dibromoethane (EDB)	ND	H	0.0040	1	06/01/2014 00:56
Dibromomethane	ND	H	0.0050	1	06/01/2014 00:56
1,2-Dichlorobenzene	ND	H	0.0050	1	06/01/2014 00:56
1,3-Dichlorobenzene	ND	H	0.0050	1	06/01/2014 00:56
1,4-Dichlorobenzene	ND	H	0.0050	1	06/01/2014 00:56
Dichlorodifluoromethane	ND	H	0.0050	1	06/01/2014 00:56
1,1-Dichloroethane	ND	H	0.0050	1	06/01/2014 00:56
1,2-Dichloroethane (1,2-DCA)	ND	H	0.0040	1	06/01/2014 00:56
1,1-Dichloroethene	ND	H	0.0050	1	06/01/2014 00:56
cis-1,2-Dichloroethene	ND	H	0.0050	1	06/01/2014 00:56
trans-1,2-Dichloroethene	ND	H	0.0050	1	06/01/2014 00:56
1,2-Dichloropropane	ND	H	0.0050	1	06/01/2014 00:56
1,3-Dichloropropane	ND	H	0.0050	1	06/01/2014 00:56
2,2-Dichloropropane	ND	H	0.0050	1	06/01/2014 00:56
1,1-Dichloropropene	ND	H	0.0050	1	06/01/2014 00:56

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 5/28/14 18:36
Date Prepared: 5/28/14

WorkOrder: 1405A73
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-4-3'	1405A73-004A	Soil	05/08/2014	GC10	90881
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND	H	0.0050	1	06/01/2014 00:56
trans-1,3-Dichloropropene	ND	H	0.0050	1	06/01/2014 00:56
Diisopropyl ether (DIPE)	ND	H	0.0050	1	06/01/2014 00:56
Ethylbenzene	ND	H	0.0050	1	06/01/2014 00:56
Ethyl tert-butyl ether (ETBE)	ND	H	0.0050	1	06/01/2014 00:56
Freon 113	ND	H	0.10	1	06/01/2014 00:56
Hexachlorobutadiene	ND	H	0.0050	1	06/01/2014 00:56
Hexachloroethane	ND	H	0.0050	1	06/01/2014 00:56
2-Hexanone	ND	H	0.0050	1	06/01/2014 00:56
Isopropylbenzene	ND	H	0.0050	1	06/01/2014 00:56
4-Isopropyl toluene	ND	H	0.0050	1	06/01/2014 00:56
Methyl-t-butyl ether (MTBE)	ND	H	0.0050	1	06/01/2014 00:56
Methylene chloride	ND	H	0.0050	1	06/01/2014 00:56
4-Methyl-2-pentanone (MIBK)	ND	H	0.0050	1	06/01/2014 00:56
Naphthalene	ND	H	0.0050	1	06/01/2014 00:56
n-Propyl benzene	ND	H	0.0050	1	06/01/2014 00:56
Styrene	ND	H	0.0050	1	06/01/2014 00:56
1,1,1,2-Tetrachloroethane	ND	H	0.0050	1	06/01/2014 00:56
1,1,2,2-Tetrachloroethane	ND	H	0.0050	1	06/01/2014 00:56
Tetrachloroethene	ND	H	0.0050	1	06/01/2014 00:56
Toluene	ND	H	0.0050	1	06/01/2014 00:56
1,2,3-Trichlorobenzene	ND	H	0.0050	1	06/01/2014 00:56
1,2,4-Trichlorobenzene	ND	H	0.0050	1	06/01/2014 00:56
1,1,1-Trichloroethane	ND	H	0.0050	1	06/01/2014 00:56
1,1,2-Trichloroethane	ND	H	0.0050	1	06/01/2014 00:56
Trichloroethene	ND	H	0.0050	1	06/01/2014 00:56
Trichlorofluoromethane	ND	H	0.0050	1	06/01/2014 00:56
1,2,3-Trichloropropane	ND	H	0.0050	1	06/01/2014 00:56
1,2,4-Trimethylbenzene	ND	H	0.0050	1	06/01/2014 00:56
1,3,5-Trimethylbenzene	ND	H	0.0050	1	06/01/2014 00:56
Vinyl Chloride	ND	H	0.0050	1	06/01/2014 00:56
Xylenes, Total	ND	H	0.0050	1	06/01/2014 00:56
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>		
Dibromofluoromethane	110	H	70-130		06/01/2014 00:56
Toluene-d8	99	H	70-130		06/01/2014 00:56
4-BFB	100	H	70-130		06/01/2014 00:56

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 5/28/14 18:36
Date Prepared: 5/28/14

WorkOrder: 1405A73
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-15-5.5'	1405A73-007A	Soil	05/10/2014	GC10	90881
Analytes	Result	Qualifiers	RL	DF	Date Analyzed
Acetone	ND	H	0.10	1	06/01/2014 01:37
tert-Amyl methyl ether (TAME)	ND	H	0.0050	1	06/01/2014 01:37
Benzene	ND	H	0.0050	1	06/01/2014 01:37
Bromobenzene	ND	H	0.0050	1	06/01/2014 01:37
Bromochloromethane	ND	H	0.0050	1	06/01/2014 01:37
Bromodichloromethane	ND	H	0.0050	1	06/01/2014 01:37
Bromoform	ND	H	0.0050	1	06/01/2014 01:37
Bromomethane	ND	H	0.0050	1	06/01/2014 01:37
2-Butanone (MEK)	ND	H	0.020	1	06/01/2014 01:37
t-Butyl alcohol (TBA)	ND	H	0.050	1	06/01/2014 01:37
n-Butyl benzene	ND	H	0.0050	1	06/01/2014 01:37
sec-Butyl benzene	ND	H	0.0050	1	06/01/2014 01:37
tert-Butyl benzene	ND	H	0.0050	1	06/01/2014 01:37
Carbon Disulfide	ND	H	0.0050	1	06/01/2014 01:37
Carbon Tetrachloride	ND	H	0.0050	1	06/01/2014 01:37
Chlorobenzene	ND	H	0.0050	1	06/01/2014 01:37
Chloroethane	ND	H	0.0050	1	06/01/2014 01:37
Chloroform	ND	H	0.0050	1	06/01/2014 01:37
Chloromethane	ND	H	0.0050	1	06/01/2014 01:37
2-Chlorotoluene	ND	H	0.0050	1	06/01/2014 01:37
4-Chlorotoluene	ND	H	0.0050	1	06/01/2014 01:37
Dibromochloromethane	ND	H	0.0050	1	06/01/2014 01:37
1,2-Dibromo-3-chloropropane	ND	H	0.0040	1	06/01/2014 01:37
1,2-Dibromoethane (EDB)	ND	H	0.0040	1	06/01/2014 01:37
Dibromomethane	ND	H	0.0050	1	06/01/2014 01:37
1,2-Dichlorobenzene	ND	H	0.0050	1	06/01/2014 01:37
1,3-Dichlorobenzene	ND	H	0.0050	1	06/01/2014 01:37
1,4-Dichlorobenzene	ND	H	0.0050	1	06/01/2014 01:37
Dichlorodifluoromethane	ND	H	0.0050	1	06/01/2014 01:37
1,1-Dichloroethane	ND	H	0.0050	1	06/01/2014 01:37
1,2-Dichloroethane (1,2-DCA)	ND	H	0.0040	1	06/01/2014 01:37
1,1-Dichloroethene	ND	H	0.0050	1	06/01/2014 01:37
cis-1,2-Dichloroethene	ND	H	0.0050	1	06/01/2014 01:37
trans-1,2-Dichloroethene	ND	H	0.0050	1	06/01/2014 01:37
1,2-Dichloropropane	ND	H	0.0050	1	06/01/2014 01:37
1,3-Dichloropropane	ND	H	0.0050	1	06/01/2014 01:37
2,2-Dichloropropane	ND	H	0.0050	1	06/01/2014 01:37
1,1-Dichloropropene	ND	H	0.0050	1	06/01/2014 01:37

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 5/28/14 18:36
Date Prepared: 5/28/14

WorkOrder: 1405A73
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-15-5.5'	1405A73-007A	Soil	05/10/2014	GC10	90881
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND	H	0.0050	1	06/01/2014 01:37
trans-1,3-Dichloropropene	ND	H	0.0050	1	06/01/2014 01:37
Diisopropyl ether (DIPE)	ND	H	0.0050	1	06/01/2014 01:37
Ethylbenzene	ND	H	0.0050	1	06/01/2014 01:37
Ethyl tert-butyl ether (ETBE)	ND	H	0.0050	1	06/01/2014 01:37
Freon 113	ND	H	0.10	1	06/01/2014 01:37
Hexachlorobutadiene	ND	H	0.0050	1	06/01/2014 01:37
Hexachloroethane	ND	H	0.0050	1	06/01/2014 01:37
2-Hexanone	ND	H	0.0050	1	06/01/2014 01:37
Isopropylbenzene	ND	H	0.0050	1	06/01/2014 01:37
4-Isopropyl toluene	ND	H	0.0050	1	06/01/2014 01:37
Methyl-t-butyl ether (MTBE)	ND	H	0.0050	1	06/01/2014 01:37
Methylene chloride	ND	H	0.0050	1	06/01/2014 01:37
4-Methyl-2-pentanone (MIBK)	ND	H	0.0050	1	06/01/2014 01:37
Naphthalene	ND	H	0.0050	1	06/01/2014 01:37
n-Propyl benzene	ND	H	0.0050	1	06/01/2014 01:37
Styrene	ND	H	0.0050	1	06/01/2014 01:37
1,1,1,2-Tetrachloroethane	ND	H	0.0050	1	06/01/2014 01:37
1,1,2,2-Tetrachloroethane	ND	H	0.0050	1	06/01/2014 01:37
Tetrachloroethene	ND	H	0.0050	1	06/01/2014 01:37
Toluene	ND	H	0.0050	1	06/01/2014 01:37
1,2,3-Trichlorobenzene	ND	H	0.0050	1	06/01/2014 01:37
1,2,4-Trichlorobenzene	ND	H	0.0050	1	06/01/2014 01:37
1,1,1-Trichloroethane	ND	H	0.0050	1	06/01/2014 01:37
1,1,2-Trichloroethane	ND	H	0.0050	1	06/01/2014 01:37
Trichloroethene	ND	H	0.0050	1	06/01/2014 01:37
Trichlorofluoromethane	ND	H	0.0050	1	06/01/2014 01:37
1,2,3-Trichloropropane	ND	H	0.0050	1	06/01/2014 01:37
1,2,4-Trimethylbenzene	ND	H	0.0050	1	06/01/2014 01:37
1,3,5-Trimethylbenzene	ND	H	0.0050	1	06/01/2014 01:37
Vinyl Chloride	ND	H	0.0050	1	06/01/2014 01:37
Xylenes, Total	ND	H	0.0050	1	06/01/2014 01:37
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>		
Dibromofluoromethane	110	H	70-130		06/01/2014 01:37
Toluene-d8	100	H	70-130		06/01/2014 01:37
4-BFB	98	H	70-130		06/01/2014 01:37

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 5/28/14 18:36
Date Prepared: 5/28/14

WorkOrder: 1405A73
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-15-10.5'	1405A73-009A	Soil	05/10/2014	GC10	90881
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND	H	0.10	1	06/01/2014 02:19
tert-Amyl methyl ether (TAME)	ND	H	0.0050	1	06/01/2014 02:19
Benzene	ND	H	0.0050	1	06/01/2014 02:19
Bromobenzene	ND	H	0.0050	1	06/01/2014 02:19
Bromochloromethane	ND	H	0.0050	1	06/01/2014 02:19
Bromodichloromethane	ND	H	0.0050	1	06/01/2014 02:19
Bromoform	ND	H	0.0050	1	06/01/2014 02:19
Bromomethane	ND	H	0.0050	1	06/01/2014 02:19
2-Butanone (MEK)	ND	H	0.020	1	06/01/2014 02:19
t-Butyl alcohol (TBA)	ND	H	0.050	1	06/01/2014 02:19
n-Butyl benzene	ND	H	0.0050	1	06/01/2014 02:19
sec-Butyl benzene	ND	H	0.0050	1	06/01/2014 02:19
tert-Butyl benzene	ND	H	0.0050	1	06/01/2014 02:19
Carbon Disulfide	ND	H	0.0050	1	06/01/2014 02:19
Carbon Tetrachloride	ND	H	0.0050	1	06/01/2014 02:19
Chlorobenzene	ND	H	0.0050	1	06/01/2014 02:19
Chloroethane	ND	H	0.0050	1	06/01/2014 02:19
Chloroform	ND	H	0.0050	1	06/01/2014 02:19
Chloromethane	ND	H	0.0050	1	06/01/2014 02:19
2-Chlorotoluene	ND	H	0.0050	1	06/01/2014 02:19
4-Chlorotoluene	ND	H	0.0050	1	06/01/2014 02:19
Dibromochloromethane	ND	H	0.0050	1	06/01/2014 02:19
1,2-Dibromo-3-chloropropane	ND	H	0.0040	1	06/01/2014 02:19
1,2-Dibromoethane (EDB)	ND	H	0.0040	1	06/01/2014 02:19
Dibromomethane	ND	H	0.0050	1	06/01/2014 02:19
1,2-Dichlorobenzene	ND	H	0.0050	1	06/01/2014 02:19
1,3-Dichlorobenzene	ND	H	0.0050	1	06/01/2014 02:19
1,4-Dichlorobenzene	ND	H	0.0050	1	06/01/2014 02:19
Dichlorodifluoromethane	ND	H	0.0050	1	06/01/2014 02:19
1,1-Dichloroethane	ND	H	0.0050	1	06/01/2014 02:19
1,2-Dichloroethane (1,2-DCA)	ND	H	0.0040	1	06/01/2014 02:19
1,1-Dichloroethene	ND	H	0.0050	1	06/01/2014 02:19
cis-1,2-Dichloroethene	ND	H	0.0050	1	06/01/2014 02:19
trans-1,2-Dichloroethene	ND	H	0.0050	1	06/01/2014 02:19
1,2-Dichloropropane	ND	H	0.0050	1	06/01/2014 02:19
1,3-Dichloropropane	ND	H	0.0050	1	06/01/2014 02:19
2,2-Dichloropropane	ND	H	0.0050	1	06/01/2014 02:19
1,1-Dichloropropene	ND	H	0.0050	1	06/01/2014 02:19

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 5/28/14 18:36
Date Prepared: 5/28/14

WorkOrder: 1405A73
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-15-10.5'	1405A73-009A	Soil	05/10/2014	GC10	90881
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND	H	0.0050	1	06/01/2014 02:19
trans-1,3-Dichloropropene	ND	H	0.0050	1	06/01/2014 02:19
Diisopropyl ether (DIPE)	ND	H	0.0050	1	06/01/2014 02:19
Ethylbenzene	ND	H	0.0050	1	06/01/2014 02:19
Ethyl tert-butyl ether (ETBE)	ND	H	0.0050	1	06/01/2014 02:19
Freon 113	ND	H	0.10	1	06/01/2014 02:19
Hexachlorobutadiene	ND	H	0.0050	1	06/01/2014 02:19
Hexachloroethane	ND	H	0.0050	1	06/01/2014 02:19
2-Hexanone	ND	H	0.0050	1	06/01/2014 02:19
Isopropylbenzene	ND	H	0.0050	1	06/01/2014 02:19
4-Isopropyl toluene	ND	H	0.0050	1	06/01/2014 02:19
Methyl-t-butyl ether (MTBE)	ND	H	0.0050	1	06/01/2014 02:19
Methylene chloride	ND	H	0.0050	1	06/01/2014 02:19
4-Methyl-2-pentanone (MIBK)	ND	H	0.0050	1	06/01/2014 02:19
Naphthalene	ND	H	0.0050	1	06/01/2014 02:19
n-Propyl benzene	ND	H	0.0050	1	06/01/2014 02:19
Styrene	ND	H	0.0050	1	06/01/2014 02:19
1,1,1,2-Tetrachloroethane	ND	H	0.0050	1	06/01/2014 02:19
1,1,2,2-Tetrachloroethane	ND	H	0.0050	1	06/01/2014 02:19
Tetrachloroethene	ND	H	0.0050	1	06/01/2014 02:19
Toluene	ND	H	0.0050	1	06/01/2014 02:19
1,2,3-Trichlorobenzene	ND	H	0.0050	1	06/01/2014 02:19
1,2,4-Trichlorobenzene	ND	H	0.0050	1	06/01/2014 02:19
1,1,1-Trichloroethane	ND	H	0.0050	1	06/01/2014 02:19
1,1,2-Trichloroethane	ND	H	0.0050	1	06/01/2014 02:19
Trichloroethene	ND	H	0.0050	1	06/01/2014 02:19
Trichlorofluoromethane	ND	H	0.0050	1	06/01/2014 02:19
1,2,3-Trichloropropane	ND	H	0.0050	1	06/01/2014 02:19
1,2,4-Trimethylbenzene	ND	H	0.0050	1	06/01/2014 02:19
1,3,5-Trimethylbenzene	ND	H	0.0050	1	06/01/2014 02:19
Vinyl Chloride	ND	H	0.0050	1	06/01/2014 02:19
Xylenes, Total	ND	H	0.0050	1	06/01/2014 02:19
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>		
Dibromofluoromethane	110	H	70-130		06/01/2014 02:19
Toluene-d8	100	H	70-130		06/01/2014 02:19
4-BFB	97	H	70-130		06/01/2014 02:19



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 5/28/14 18:36
Date Prepared: 5/30/14

WorkOrder: 1405A73
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3-5.5'	1405A73-002A	Soil	05/03/2014	GC21	90969
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	ND	H	1.2	5	05/30/2014 21:58
Acenaphthylene	ND	H	1.2	5	05/30/2014 21:58
Acetochlor	ND	H	1.2	5	05/30/2014 21:58
Anthracene	ND	H	1.2	5	05/30/2014 21:58
Benzidine	ND	H	6.5	5	05/30/2014 21:58
Benzo (a) anthracene	ND	H	1.2	5	05/30/2014 21:58
Benzo (b) fluoranthene	ND	H	1.2	5	05/30/2014 21:58
Benzo (k) fluoranthene	ND	H	1.2	5	05/30/2014 21:58
Benzo (g,h,i) perylene	ND	H	1.2	5	05/30/2014 21:58
Benzo (a) pyrene	ND	H	1.2	5	05/30/2014 21:58
Benzyl Alcohol	ND	H	6.5	5	05/30/2014 21:58
1,1-Biphenyl	ND	H	1.2	5	05/30/2014 21:58
Bis (2-chloroethoxy) Methane	ND	H	1.2	5	05/30/2014 21:58
Bis (2-chloroethyl) Ether	ND	H	1.2	5	05/30/2014 21:58
Bis (2-chloroisopropyl) Ether	ND	H	1.2	5	05/30/2014 21:58
Bis (2-ethylhexyl) Adipate	ND	H	1.2	5	05/30/2014 21:58
Bis (2-ethylhexyl) Phthalate	ND	H	1.2	5	05/30/2014 21:58
4-Bromophenyl Phenyl Ether	ND	H	1.2	5	05/30/2014 21:58
Butylbenzyl Phthalate	ND	H	1.2	5	05/30/2014 21:58
4-Chloroaniline	ND	H	1.2	5	05/30/2014 21:58
4-Chloro-3-methylphenol	ND	H	1.2	5	05/30/2014 21:58
2-Chloronaphthalene	ND	H	1.2	5	05/30/2014 21:58
2-Chlorophenol	ND	H	1.2	5	05/30/2014 21:58
4-Chlorophenyl Phenyl Ether	ND	H	1.2	5	05/30/2014 21:58
Chrysene	ND	H	1.2	5	05/30/2014 21:58
Dibenzo (a,h) anthracene	ND	H	1.2	5	05/30/2014 21:58
Dibenzofuran	ND	H	1.2	5	05/30/2014 21:58
Di-n-butyl Phthalate	ND	H	1.2	5	05/30/2014 21:58
1,2-Dichlorobenzene	ND	H	1.2	5	05/30/2014 21:58
1,3-Dichlorobenzene	ND	H	1.2	5	05/30/2014 21:58
1,4-Dichlorobenzene	ND	H	1.2	5	05/30/2014 21:58
3,3-Dichlorobenzidine	ND	H	2.5	5	05/30/2014 21:58
2,4-Dichlorophenol	ND	H	1.2	5	05/30/2014 21:58
Diethyl Phthalate	ND	H	1.2	5	05/30/2014 21:58
2,4-Dimethylphenol	ND	H	1.2	5	05/30/2014 21:58
Dimethyl Phthalate	ND	H	1.2	5	05/30/2014 21:58
4,6-Dinitro-2-methylphenol	ND	H	6.5	5	05/30/2014 21:58
2,4-Dinitrophenol	ND	H	32	5	05/30/2014 21:58

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 5/28/14 18:36
Date Prepared: 5/30/14

WorkOrder: 1405A73
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3-5.5'	1405A73-002A	Soil	05/03/2014	GC21	90969
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrotoluene	ND	H	1.2	5	05/30/2014 21:58
2,6-Dinitrotoluene	ND	H	1.2	5	05/30/2014 21:58
Di-n-octyl Phthalate	ND	H	2.5	5	05/30/2014 21:58
1,2-Diphenylhydrazine	ND	H	1.2	5	05/30/2014 21:58
Fluoranthene	ND	H	1.2	5	05/30/2014 21:58
Fluorene	ND	H	1.2	5	05/30/2014 21:58
Hexachlorobenzene	ND	H	1.2	5	05/30/2014 21:58
Hexachlorobutadiene	ND	H	1.2	5	05/30/2014 21:58
Hexachlorocyclopentadiene	ND	H	6.5	5	05/30/2014 21:58
Hexachloroethane	ND	H	1.2	5	05/30/2014 21:58
Indeno (1,2,3-cd) pyrene	ND	H	1.2	5	05/30/2014 21:58
Isophorone	ND	H	1.2	5	05/30/2014 21:58
2-Methylnaphthalene	ND	H	1.2	5	05/30/2014 21:58
2-Methylphenol (o-Cresol)	ND	H	1.2	5	05/30/2014 21:58
3 &/or 4-Methylphenol (m,p-Cresol)	ND	H	1.2	5	05/30/2014 21:58
Naphthalene	ND	H	1.2	5	05/30/2014 21:58
2-Nitroaniline	ND	H	6.5	5	05/30/2014 21:58
3-Nitroaniline	ND	H	6.5	5	05/30/2014 21:58
4-Nitroaniline	ND	H	6.5	5	05/30/2014 21:58
Nitrobenzene	ND	H	1.2	5	05/30/2014 21:58
2-Nitrophenol	ND	H	6.5	5	05/30/2014 21:58
4-Nitrophenol	ND	H	6.5	5	05/30/2014 21:58
N-Nitrosodiphenylamine	ND	H	1.2	5	05/30/2014 21:58
N-Nitrosodi-n-propylamine	ND	H	1.2	5	05/30/2014 21:58
Pentachlorophenol	ND	H	6.5	5	05/30/2014 21:58
Phenanthrene	ND	H	1.2	5	05/30/2014 21:58
Phenol	ND	H	1.2	5	05/30/2014 21:58
Pyrene	ND	H	1.2	5	05/30/2014 21:58
1,2,4-Trichlorobenzene	ND	H	1.2	5	05/30/2014 21:58
2,4,5-Trichlorophenol	ND	H	1.2	5	05/30/2014 21:58
2,4,6-Trichlorophenol	ND	H	1.2	5	05/30/2014 21:58

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 5/28/14 18:36
Date Prepared: 5/30/14

WorkOrder: 1405A73
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3-5.5'	1405A73-002A	Soil	05/03/2014	GC21	90969
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	Analytical Comments: a3	
2-Fluorophenol	102	H	30-130		05/30/2014 21:58
Phenol-d5	103	H	30-130		05/30/2014 21:58
Nitrobenzene-d5	84	H	30-130		05/30/2014 21:58
2-Fluorobiphenyl	92	H	30-130		05/30/2014 21:58
2,4,6-Tribromophenol	75	H	16-130		05/30/2014 21:58
4-Terphenyl-d14	114	H	30-130		05/30/2014 21:58

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 5/28/14 18:36
Date Prepared: 5/30/14

WorkOrder: 1405A73
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-4-3'	1405A73-004A	Soil	05/08/2014	GC21	90969
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	ND	H	2.5	10	05/30/2014 22:25
Acenaphthylene	ND	H	2.5	10	05/30/2014 22:25
Acetochlor	ND	H	2.5	10	05/30/2014 22:25
Anthracene	ND	H	2.5	10	05/30/2014 22:25
Benzidine	ND	H	13	10	05/30/2014 22:25
Benzo (a) anthracene	ND	H	2.5	10	05/30/2014 22:25
Benzo (b) fluoranthene	ND	H	2.5	10	05/30/2014 22:25
Benzo (k) fluoranthene	ND	H	2.5	10	05/30/2014 22:25
Benzo (g,h,i) perylene	ND	H	2.5	10	05/30/2014 22:25
Benzo (a) pyrene	ND	H	2.5	10	05/30/2014 22:25
Benzyl Alcohol	ND	H	13	10	05/30/2014 22:25
1,1-Biphenyl	ND	H	2.5	10	05/30/2014 22:25
Bis (2-chloroethoxy) Methane	ND	H	2.5	10	05/30/2014 22:25
Bis (2-chloroethyl) Ether	ND	H	2.5	10	05/30/2014 22:25
Bis (2-chloroisopropyl) Ether	ND	H	2.5	10	05/30/2014 22:25
Bis (2-ethylhexyl) Adipate	ND	H	2.5	10	05/30/2014 22:25
Bis (2-ethylhexyl) Phthalate	ND	H	2.5	10	05/30/2014 22:25
4-Bromophenyl Phenyl Ether	ND	H	2.5	10	05/30/2014 22:25
Butylbenzyl Phthalate	ND	H	2.5	10	05/30/2014 22:25
4-Chloroaniline	ND	H	2.5	10	05/30/2014 22:25
4-Chloro-3-methylphenol	ND	H	2.5	10	05/30/2014 22:25
2-Chloronaphthalene	ND	H	2.5	10	05/30/2014 22:25
2-Chlorophenol	ND	H	2.5	10	05/30/2014 22:25
4-Chlorophenyl Phenyl Ether	ND	H	2.5	10	05/30/2014 22:25
Chrysene	ND	H	2.5	10	05/30/2014 22:25
Dibenzo (a,h) anthracene	ND	H	2.5	10	05/30/2014 22:25
Dibenzofuran	ND	H	2.5	10	05/30/2014 22:25
Di-n-butyl Phthalate	ND	H	2.5	10	05/30/2014 22:25
1,2-Dichlorobenzene	ND	H	2.5	10	05/30/2014 22:25
1,3-Dichlorobenzene	ND	H	2.5	10	05/30/2014 22:25
1,4-Dichlorobenzene	ND	H	2.5	10	05/30/2014 22:25
3,3-Dichlorobenzidine	ND	H	5.0	10	05/30/2014 22:25
2,4-Dichlorophenol	ND	H	2.5	10	05/30/2014 22:25
Diethyl Phthalate	ND	H	2.5	10	05/30/2014 22:25
2,4-Dimethylphenol	ND	H	2.5	10	05/30/2014 22:25
Dimethyl Phthalate	ND	H	2.5	10	05/30/2014 22:25
4,6-Dinitro-2-methylphenol	ND	H	13	10	05/30/2014 22:25
2,4-Dinitrophenol	ND	H	63	10	05/30/2014 22:25

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 5/28/14 18:36
Date Prepared: 5/30/14

WorkOrder: 1405A73
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-4-3'	1405A73-004A	Soil	05/08/2014	GC21	90969
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrotoluene	ND	H	2.5	10	05/30/2014 22:25
2,6-Dinitrotoluene	ND	H	2.5	10	05/30/2014 22:25
Di-n-octyl Phthalate	ND	H	5.0	10	05/30/2014 22:25
1,2-Diphenylhydrazine	ND	H	2.5	10	05/30/2014 22:25
Fluoranthene	ND	H	2.5	10	05/30/2014 22:25
Fluorene	ND	H	2.5	10	05/30/2014 22:25
Hexachlorobenzene	ND	H	2.5	10	05/30/2014 22:25
Hexachlorobutadiene	ND	H	2.5	10	05/30/2014 22:25
Hexachlorocyclopentadiene	ND	H	13	10	05/30/2014 22:25
Hexachloroethane	ND	H	2.5	10	05/30/2014 22:25
Indeno (1,2,3-cd) pyrene	ND	H	2.5	10	05/30/2014 22:25
Isophorone	ND	H	2.5	10	05/30/2014 22:25
2-Methylnaphthalene	ND	H	2.5	10	05/30/2014 22:25
2-Methylphenol (o-Cresol)	ND	H	2.5	10	05/30/2014 22:25
3 &/or 4-Methylphenol (m,p-Cresol)	ND	H	2.5	10	05/30/2014 22:25
Naphthalene	ND	H	2.5	10	05/30/2014 22:25
2-Nitroaniline	ND	H	13	10	05/30/2014 22:25
3-Nitroaniline	ND	H	13	10	05/30/2014 22:25
4-Nitroaniline	ND	H	13	10	05/30/2014 22:25
Nitrobenzene	ND	H	2.5	10	05/30/2014 22:25
2-Nitrophenol	ND	H	13	10	05/30/2014 22:25
4-Nitrophenol	ND	H	13	10	05/30/2014 22:25
N-Nitrosodiphenylamine	ND	H	2.5	10	05/30/2014 22:25
N-Nitrosodi-n-propylamine	ND	H	2.5	10	05/30/2014 22:25
Pentachlorophenol	ND	H	13	10	05/30/2014 22:25
Phenanthrene	ND	H	2.5	10	05/30/2014 22:25
Phenol	ND	H	2.5	10	05/30/2014 22:25
Pyrene	ND	H	2.5	10	05/30/2014 22:25
1,2,4-Trichlorobenzene	ND	H	2.5	10	05/30/2014 22:25
2,4,5-Trichlorophenol	ND	H	2.5	10	05/30/2014 22:25
2,4,6-Trichlorophenol	ND	H	2.5	10	05/30/2014 22:25

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 5/28/14 18:36
Date Prepared: 5/30/14

WorkOrder: 1405A73
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-4-3'	1405A73-004A	Soil	05/08/2014	GC21	90969
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	Analytical Comments: a3	
2-Fluorophenol	90	H	30-130		05/30/2014 22:25
Phenol-d5	90	H	30-130		05/30/2014 22:25
Nitrobenzene-d5	70	H	30-130		05/30/2014 22:25
2-Fluorobiphenyl	82	H	30-130		05/30/2014 22:25
2,4,6-Tribromophenol	72	H	16-130		05/30/2014 22:25
4-Terphenyl-d14	103	H	30-130		05/30/2014 22:25

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 5/28/14 18:36
Date Prepared: 5/30/14

WorkOrder: 1405A73
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-15-5.5'	1405A73-007A	Soil	05/10/2014	GC21	90969
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	ND	H	5.0	20	05/30/2014 23:19
Acenaphthylene	ND	H	5.0	20	05/30/2014 23:19
Acetochlor	ND	H	5.0	20	05/30/2014 23:19
Anthracene	ND	H	5.0	20	05/30/2014 23:19
Benzidine	ND	H	26	20	05/30/2014 23:19
Benzo (a) anthracene	ND	H	5.0	20	05/30/2014 23:19
Benzo (b) fluoranthene	ND	H	5.0	20	05/30/2014 23:19
Benzo (k) fluoranthene	ND	H	5.0	20	05/30/2014 23:19
Benzo (g,h,i) perylene	ND	H	5.0	20	05/30/2014 23:19
Benzo (a) pyrene	ND	H	5.0	20	05/30/2014 23:19
Benzyl Alcohol	ND	H	26	20	05/30/2014 23:19
1,1-Biphenyl	ND	H	5.0	20	05/30/2014 23:19
Bis (2-chloroethoxy) Methane	ND	H	5.0	20	05/30/2014 23:19
Bis (2-chloroethyl) Ether	ND	H	5.0	20	05/30/2014 23:19
Bis (2-chloroisopropyl) Ether	ND	H	5.0	20	05/30/2014 23:19
Bis (2-ethylhexyl) Adipate	ND	H	5.0	20	05/30/2014 23:19
Bis (2-ethylhexyl) Phthalate	ND	H	5.0	20	05/30/2014 23:19
4-Bromophenyl Phenyl Ether	ND	H	5.0	20	05/30/2014 23:19
Butylbenzyl Phthalate	ND	H	5.0	20	05/30/2014 23:19
4-Chloroaniline	ND	H	5.0	20	05/30/2014 23:19
4-Chloro-3-methylphenol	ND	H	5.0	20	05/30/2014 23:19
2-Chloronaphthalene	ND	H	5.0	20	05/30/2014 23:19
2-Chlorophenol	ND	H	5.0	20	05/30/2014 23:19
4-Chlorophenyl Phenyl Ether	ND	H	5.0	20	05/30/2014 23:19
Chrysene	ND	H	5.0	20	05/30/2014 23:19
Dibenzo (a,h) anthracene	ND	H	5.0	20	05/30/2014 23:19
Dibenzofuran	ND	H	5.0	20	05/30/2014 23:19
Di-n-butyl Phthalate	ND	H	5.0	20	05/30/2014 23:19
1,2-Dichlorobenzene	ND	H	5.0	20	05/30/2014 23:19
1,3-Dichlorobenzene	ND	H	5.0	20	05/30/2014 23:19
1,4-Dichlorobenzene	ND	H	5.0	20	05/30/2014 23:19
3,3-Dichlorobenzidine	ND	H	10	20	05/30/2014 23:19
2,4-Dichlorophenol	ND	H	5.0	20	05/30/2014 23:19
Diethyl Phthalate	ND	H	5.0	20	05/30/2014 23:19
2,4-Dimethylphenol	ND	H	5.0	20	05/30/2014 23:19
Dimethyl Phthalate	ND	H	5.0	20	05/30/2014 23:19
4,6-Dinitro-2-methylphenol	ND	H	26	20	05/30/2014 23:19
2,4-Dinitrophenol	ND	H	130	20	05/30/2014 23:19

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 5/28/14 18:36
Date Prepared: 5/30/14

WorkOrder: 1405A73
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-15-5.5'	1405A73-007A	Soil	05/10/2014	GC21	90969
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrotoluene	ND	H	5.0	20	05/30/2014 23:19
2,6-Dinitrotoluene	ND	H	5.0	20	05/30/2014 23:19
Di-n-octyl Phthalate	ND	H	10	20	05/30/2014 23:19
1,2-Diphenylhydrazine	ND	H	5.0	20	05/30/2014 23:19
Fluoranthene	ND	H	5.0	20	05/30/2014 23:19
Fluorene	ND	H	5.0	20	05/30/2014 23:19
Hexachlorobenzene	ND	H	5.0	20	05/30/2014 23:19
Hexachlorobutadiene	ND	H	5.0	20	05/30/2014 23:19
Hexachlorocyclopentadiene	ND	H	26	20	05/30/2014 23:19
Hexachloroethane	ND	H	5.0	20	05/30/2014 23:19
Indeno (1,2,3-cd) pyrene	ND	H	5.0	20	05/30/2014 23:19
Isophorone	ND	H	5.0	20	05/30/2014 23:19
2-Methylnaphthalene	ND	H	5.0	20	05/30/2014 23:19
2-Methylphenol (o-Cresol)	ND	H	5.0	20	05/30/2014 23:19
3 &/or 4-Methylphenol (m,p-Cresol)	ND	H	5.0	20	05/30/2014 23:19
Naphthalene	ND	H	5.0	20	05/30/2014 23:19
2-Nitroaniline	ND	H	26	20	05/30/2014 23:19
3-Nitroaniline	ND	H	26	20	05/30/2014 23:19
4-Nitroaniline	ND	H	26	20	05/30/2014 23:19
Nitrobenzene	ND	H	5.0	20	05/30/2014 23:19
2-Nitrophenol	ND	H	26	20	05/30/2014 23:19
4-Nitrophenol	ND	H	26	20	05/30/2014 23:19
N-Nitrosodiphenylamine	ND	H	5.0	20	05/30/2014 23:19
N-Nitrosodi-n-propylamine	ND	H	5.0	20	05/30/2014 23:19
Pentachlorophenol	ND	H	26	20	05/30/2014 23:19
Phenanthrene	ND	H	5.0	20	05/30/2014 23:19
Phenol	ND	H	5.0	20	05/30/2014 23:19
Pyrene	ND	H	5.0	20	05/30/2014 23:19
1,2,4-Trichlorobenzene	ND	H	5.0	20	05/30/2014 23:19
2,4,5-Trichlorophenol	ND	H	5.0	20	05/30/2014 23:19
2,4,6-Trichlorophenol	ND	H	5.0	20	05/30/2014 23:19

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 5/28/14 18:36
Date Prepared: 5/30/14

WorkOrder: 1405A73
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-15-5.5'	1405A73-007A	Soil	05/10/2014	GC21	90969
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	Analytical Comments: a3	
2-Fluorophenol	83	H	30-130		05/30/2014 23:19
Phenol-d5	89	H	30-130		05/30/2014 23:19
Nitrobenzene-d5	67	H	30-130		05/30/2014 23:19
2-Fluorobiphenyl	81	H	30-130		05/30/2014 23:19
2,4,6-Tribromophenol	57	H	16-130		05/30/2014 23:19
4-Terphenyl-d14	100	H	30-130		05/30/2014 23:19

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 5/28/14 18:36
Date Prepared: 5/30/14

WorkOrder: 1405A73
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-15-10.5'	1405A73-009A	Soil	05/10/2014	GC21	90969
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	1.0	H	0.50	2	05/30/2014 21:04
Acenaphthylene	ND	H	0.50	2	05/30/2014 21:04
Acetochlor	ND	H	0.50	2	05/30/2014 21:04
Anthracene	ND	H	0.50	2	05/30/2014 21:04
Benzidine	ND	H	2.6	2	05/30/2014 21:04
Benzo (a) anthracene	ND	H	0.50	2	05/30/2014 21:04
Benzo (b) fluoranthene	ND	H	0.50	2	05/30/2014 21:04
Benzo (k) fluoranthene	ND	H	0.50	2	05/30/2014 21:04
Benzo (g,h,i) perylene	ND	H	0.50	2	05/30/2014 21:04
Benzo (a) pyrene	ND	H	0.50	2	05/30/2014 21:04
Benzyl Alcohol	ND	H	2.6	2	05/30/2014 21:04
1,1-Biphenyl	ND	H	0.50	2	05/30/2014 21:04
Bis (2-chloroethoxy) Methane	ND	H	0.50	2	05/30/2014 21:04
Bis (2-chloroethyl) Ether	ND	H	0.50	2	05/30/2014 21:04
Bis (2-chloroisopropyl) Ether	ND	H	0.50	2	05/30/2014 21:04
Bis (2-ethylhexyl) Adipate	ND	H	0.50	2	05/30/2014 21:04
Bis (2-ethylhexyl) Phthalate	ND	H	0.50	2	05/30/2014 21:04
4-Bromophenyl Phenyl Ether	ND	H	0.50	2	05/30/2014 21:04
Butylbenzyl Phthalate	ND	H	0.50	2	05/30/2014 21:04
4-Chloroaniline	ND	H	0.50	2	05/30/2014 21:04
4-Chloro-3-methylphenol	ND	H	0.50	2	05/30/2014 21:04
2-Chloronaphthalene	ND	H	0.50	2	05/30/2014 21:04
2-Chlorophenol	ND	H	0.50	2	05/30/2014 21:04
4-Chlorophenyl Phenyl Ether	ND	H	0.50	2	05/30/2014 21:04
Chrysene	ND	H	0.50	2	05/30/2014 21:04
Dibenzo (a,h) anthracene	ND	H	0.50	2	05/30/2014 21:04
Dibenzofuran	1.0	H	0.50	2	05/30/2014 21:04
Di-n-butyl Phthalate	ND	H	0.50	2	05/30/2014 21:04
1,2-Dichlorobenzene	ND	H	0.50	2	05/30/2014 21:04
1,3-Dichlorobenzene	ND	H	0.50	2	05/30/2014 21:04
1,4-Dichlorobenzene	ND	H	0.50	2	05/30/2014 21:04
3,3-Dichlorobenzidine	ND	H	1.0	2	05/30/2014 21:04
2,4-Dichlorophenol	ND	H	0.50	2	05/30/2014 21:04
Diethyl Phthalate	ND	H	0.50	2	05/30/2014 21:04
2,4-Dimethylphenol	ND	H	0.50	2	05/30/2014 21:04
Dimethyl Phthalate	ND	H	0.50	2	05/30/2014 21:04
4,6-Dinitro-2-methylphenol	ND	H	2.6	2	05/30/2014 21:04
2,4-Dinitrophenol	ND	H	13	2	05/30/2014 21:04

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 5/28/14 18:36
Date Prepared: 5/30/14

WorkOrder: 1405A73
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-15-10.5'	1405A73-009A	Soil	05/10/2014	GC21	90969
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrotoluene	ND	H	0.50	2	05/30/2014 21:04
2,6-Dinitrotoluene	ND	H	0.50	2	05/30/2014 21:04
Di-n-octyl Phthalate	ND	H	1.0	2	05/30/2014 21:04
1,2-Diphenylhydrazine	ND	H	0.50	2	05/30/2014 21:04
Fluoranthene	1.3	H	0.50	2	05/30/2014 21:04
Fluorene	0.97	H	0.50	2	05/30/2014 21:04
Hexachlorobenzene	ND	H	0.50	2	05/30/2014 21:04
Hexachlorobutadiene	ND	H	0.50	2	05/30/2014 21:04
Hexachlorocyclopentadiene	ND	H	2.6	2	05/30/2014 21:04
Hexachloroethane	ND	H	0.50	2	05/30/2014 21:04
Indeno (1,2,3-cd) pyrene	ND	H	0.50	2	05/30/2014 21:04
Isophorone	ND	H	0.50	2	05/30/2014 21:04
2-Methylnaphthalene	ND	H	0.50	2	05/30/2014 21:04
2-Methylphenol (o-Cresol)	ND	H	0.50	2	05/30/2014 21:04
3 &/or 4-Methylphenol (m,p-Cresol)	ND	H	0.50	2	05/30/2014 21:04
Naphthalene	ND	H	0.50	2	05/30/2014 21:04
2-Nitroaniline	ND	H	2.6	2	05/30/2014 21:04
3-Nitroaniline	ND	H	2.6	2	05/30/2014 21:04
4-Nitroaniline	ND	H	2.6	2	05/30/2014 21:04
Nitrobenzene	ND	H	0.50	2	05/30/2014 21:04
2-Nitrophenol	ND	H	2.6	2	05/30/2014 21:04
4-Nitrophenol	ND	H	2.6	2	05/30/2014 21:04
N-Nitrosodiphenylamine	ND	H	0.50	2	05/30/2014 21:04
N-Nitrosodi-n-propylamine	ND	H	0.50	2	05/30/2014 21:04
Pentachlorophenol	ND	H	2.6	2	05/30/2014 21:04
Phenanthrene	3.7	H	0.50	2	05/30/2014 21:04
Phenol	ND	H	0.50	2	05/30/2014 21:04
Pyrene	0.85	H	0.50	2	05/30/2014 21:04
1,2,4-Trichlorobenzene	ND	H	0.50	2	05/30/2014 21:04
2,4,5-Trichlorophenol	ND	H	0.50	2	05/30/2014 21:04
2,4,6-Trichlorophenol	ND	H	0.50	2	05/30/2014 21:04

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 5/28/14 18:36
Date Prepared: 5/30/14

WorkOrder: 1405A73
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-15-10.5'	1405A73-009A	Soil	05/10/2014	GC21	90969
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>		
2-Fluorophenol	86	H	30-130		05/30/2014 21:04
Phenol-d5	85	H	30-130		05/30/2014 21:04
Nitrobenzene-d5	75	H	30-130		05/30/2014 21:04
2-Fluorobiphenyl	77	H	30-130		05/30/2014 21:04
2,4,6-Tribromophenol	64	H	16-130		05/30/2014 21:04
4-Terphenyl-d14	90	H	30-130		05/30/2014 21:04



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 5/28/14 18:36
Date Prepared: 5/28/14

WorkOrder: 1405A73
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3-3'	1405A73-001A	Soil/TOTAL	05/03/2014	ICP-MS1	90875
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Antimony	0.86		0.50	1	05/30/2014 08:38
Arsenic	5.6		0.50	1	05/30/2014 08:38
Barium	190		5.0	1	05/30/2014 08:38
Beryllium	0.58		0.50	1	05/30/2014 08:38
Cadmium	ND		0.25	1	05/30/2014 08:38
Chromium	58		0.50	1	05/30/2014 08:38
Cobalt	14		0.50	1	05/30/2014 08:38
Copper	34		0.50	1	05/30/2014 08:38
Lead	58		0.50	1	05/30/2014 08:38
Mercury	1.5		0.050	1	05/30/2014 08:38
Molybdenum	0.58		0.50	1	05/30/2014 08:38
Nickel	170		5.0	10	05/30/2014 16:18
Selenium	ND		0.50	1	05/30/2014 08:38
Silver	ND		0.50	1	05/30/2014 08:38
Thallium	ND		0.50	1	05/30/2014 08:38
Vanadium	43		0.50	1	05/30/2014 08:38
Zinc	100		5.0	1	05/30/2014 08:38
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	108		70-130		05/30/2014 08:38

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 5/28/14 18:36
Date Prepared: 5/28/14

WorkOrder: 1405A73
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-4-3'	1405A73-004A	Soil/TOTAL	05/08/2014	ICP-MS2	90875
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Antimony	4.3		0.50	1	05/30/2014 18:01
Arsenic	18		0.50	1	05/30/2014 18:01
Barium	130		5.0	1	05/30/2014 18:01
Beryllium	ND		0.50	1	05/30/2014 18:01
Cadmium	0.40		0.25	1	05/30/2014 18:01
Chromium	170		5.0	10	05/31/2014 02:04
Cobalt	27		0.50	1	05/30/2014 18:01
Copper	210		5.0	10	05/31/2014 02:04
Lead	130		5.0	10	05/31/2014 02:04
Mercury	0.57		0.050	1	05/30/2014 18:01
Molybdenum	1.2		0.50	1	05/30/2014 18:01
Nickel	270		5.0	10	05/31/2014 02:04
Selenium	ND		0.50	1	05/30/2014 18:01
Silver	ND		0.50	1	05/30/2014 18:01
Thallium	ND		0.50	1	05/30/2014 18:01
Vanadium	84		0.50	1	05/30/2014 18:01
Zinc	130		5.0	1	05/30/2014 18:01
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	108		70-130		05/30/2014 18:01

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 5/28/14 18:36
Date Prepared: 5/28/14

WorkOrder: 1405A73
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-15-3'	1405A73-006A	Soil/TOTAL	05/10/2014	ICP-MS2	90875
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Antimony	1.4		0.50	1	05/30/2014 18:07
Arsenic	6.5		0.50	1	05/30/2014 18:07
Barium	120		5.0	1	05/30/2014 18:07
Beryllium	ND		0.50	1	05/30/2014 18:07
Cadmium	1.0		0.25	1	05/30/2014 18:07
Chromium	87		0.50	1	05/30/2014 18:07
Cobalt	10		0.50	1	05/30/2014 18:07
Copper	67		0.50	1	05/30/2014 18:07
Lead	170		5.0	10	05/31/2014 02:23
Mercury	0.61		0.050	1	05/30/2014 18:07
Molybdenum	0.55		0.50	1	05/30/2014 18:07
Nickel	53		0.50	1	05/30/2014 18:07
Selenium	ND		0.50	1	05/30/2014 18:07
Silver	ND		0.50	1	05/30/2014 18:07
Thallium	ND		0.50	1	05/30/2014 18:07
Vanadium	66		0.50	1	05/30/2014 18:07
Zinc	180		5.0	1	05/30/2014 18:07
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	111		70-130		05/30/2014 18:07

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 5/28/14 18:36
Date Prepared: 5/28/14

WorkOrder: 1405A73
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-15-10.5'	1405A73-009A	Soil/TOTAL	05/10/2014	ICP-MS2	90875
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Antimony	ND		0.50	1	05/30/2014 18:12
Arsenic	5.3		0.50	1	05/30/2014 18:12
Barium	130		5.0	1	05/30/2014 18:12
Beryllium	ND		0.50	1	05/30/2014 18:12
Cadmium	ND		0.25	1	05/30/2014 18:12
Chromium	130		5.0	10	05/31/2014 02:29
Cobalt	14		0.50	1	05/30/2014 18:12
Copper	31		0.50	1	05/30/2014 18:12
Lead	45		0.50	1	05/30/2014 18:12
Mercury	0.26		0.050	1	05/30/2014 18:12
Molybdenum	ND		0.50	1	05/30/2014 18:12
Nickel	110		5.0	10	05/31/2014 02:29
Selenium	ND		0.50	1	05/30/2014 18:12
Silver	ND		0.50	1	05/30/2014 18:12
Thallium	ND		0.50	1	05/30/2014 18:12
Vanadium	72		0.50	1	05/30/2014 18:12
Zinc	87		5.0	1	05/30/2014 18:12
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	103		70-130		05/30/2014 18:12



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 5/28/14 18:36
Date Prepared: 6/3/14

WorkOrder: 1405A73
Extraction Method: SM4500-CN⁻ E
Analytical Method: SM4500-CN⁻ ABCE
Unit: mg/Kg

Cyanide, Total

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-4-3'	1405A73-004A	Soil	05/08/2014	SKALAR	91103

<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Total Cyanide	0.16	H	0.10	1	06/03/2014 13:14

B-15-10.5'	1405A73-009A	Soil	05/10/2014	SKALAR	91103
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<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Total Cyanide	0.13	H	0.10	1	06/03/2014 13:18



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 5/28/14 18:36
Date Prepared: 5/28/14-5/30/14

WorkOrder: 1405A73
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/ExtType	Date Collected	Instrument	Batch ID
B-3-3'	1405A73-001A	Soil	05/03/2014	GC19	90904
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND	H	1.0	1	05/30/2014 05:01
MTBE	---		0.050	1	05/30/2014 05:01
Benzene	---		0.0050	1	05/30/2014 05:01
Toluene	---		0.0050	1	05/30/2014 05:01
Ethylbenzene	---		0.0050	1	05/30/2014 05:01
Xylenes	---		0.0050	1	05/30/2014 05:01
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>		
2-Fluorotoluene	98	H	70-130		05/30/2014 05:01
B-3-5.5'	1405A73-002A	Soil	05/03/2014	GC19	90904
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND	H	1.0	1	05/30/2014 05:31
MTBE	---		0.050	1	05/30/2014 05:31
Benzene	---		0.0050	1	05/30/2014 05:31
Toluene	---		0.0050	1	05/30/2014 05:31
Ethylbenzene	---		0.0050	1	05/30/2014 05:31
Xylenes	---		0.0050	1	05/30/2014 05:31
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>		
2-Fluorotoluene	100	H	70-130		05/30/2014 05:31
B-3-8'	1405A73-003A	Soil	05/03/2014	GC19	90904
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND	H	1.0	1	05/30/2014 06:01
MTBE	---		0.050	1	05/30/2014 06:01
Benzene	---		0.0050	1	05/30/2014 06:01
Toluene	---		0.0050	1	05/30/2014 06:01
Ethylbenzene	---		0.0050	1	05/30/2014 06:01
Xylenes	---		0.0050	1	05/30/2014 06:01
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>		
2-Fluorotoluene	98	H	70-130		05/30/2014 06:01

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 5/28/14 18:36
Date Prepared: 5/28/14-5/30/14

WorkOrder: 1405A73
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/ExtType	Date Collected	Instrument	Batch ID
B-4-3'	1405A73-004A	Soil	05/08/2014	GC19	90904
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND	H	1.0	1	05/30/2014 06:30
MTBE	---		0.050	1	05/30/2014 06:30
Benzene	---		0.0050	1	05/30/2014 06:30
Toluene	---		0.0050	1	05/30/2014 06:30
Ethylbenzene	---		0.0050	1	05/30/2014 06:30
Xylenes	---		0.0050	1	05/30/2014 06:30
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>		
2-Fluorotoluene	97	H	70-130		05/30/2014 06:30
B-4-6	1405A73-005A	Soil	05/08/2014	GC7	90987
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND	H	1.0	1	05/30/2014 22:55
MTBE	---		0.050	1	05/30/2014 22:55
Benzene	---		0.0050	1	05/30/2014 22:55
Toluene	---		0.0050	1	05/30/2014 22:55
Ethylbenzene	---		0.0050	1	05/30/2014 22:55
Xylenes	---		0.0050	1	05/30/2014 22:55
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>		
2-Fluorotoluene	103	H	70-130		05/30/2014 22:55
B-15-3'	1405A73-006A	Soil	05/10/2014	GC7	90987
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND	H	1.0	1	05/31/2014 08:17
MTBE	---		0.050	1	05/31/2014 08:17
Benzene	---		0.0050	1	05/31/2014 08:17
Toluene	---		0.0050	1	05/31/2014 08:17
Ethylbenzene	---		0.0050	1	05/31/2014 08:17
Xylenes	---		0.0050	1	05/31/2014 08:17
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>		
2-Fluorotoluene	103	H	70-130		05/31/2014 08:17

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 5/28/14 18:36
Date Prepared: 5/28/14-5/30/14

WorkOrder: 1405A73
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/ExtType	Date Collected	Instrument	Batch ID
B-15-5.5'	1405A73-007A	Soil	05/10/2014	GC7	90987
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND	H	1.0	1	05/31/2014 09:46
MTBE	---		0.050	1	05/31/2014 09:46
Benzene	---		0.0050	1	05/31/2014 09:46
Toluene	---		0.0050	1	05/31/2014 09:46
Ethylbenzene	---		0.0050	1	05/31/2014 09:46
Xylenes	---		0.0050	1	05/31/2014 09:46
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>		
2-Fluorotoluene	108	H	70-130		05/31/2014 09:46
B-15-8'	1405A73-008A	Soil	05/10/2014	GC19	90987
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND	H	1.0	1	05/31/2014 01:31
MTBE	---		0.050	1	05/31/2014 01:31
Benzene	---		0.0050	1	05/31/2014 01:31
Toluene	---		0.0050	1	05/31/2014 01:31
Ethylbenzene	---		0.0050	1	05/31/2014 01:31
Xylenes	---		0.0050	1	05/31/2014 01:31
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>		
2-Fluorotoluene	97	H	70-130		05/31/2014 01:31
B-15-10.5'	1405A73-009A	Soil	05/10/2014	GC19	90987
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND	H	1.0	1	05/30/2014 22:33
MTBE	---		0.050	1	05/30/2014 22:33
Benzene	---		0.0050	1	05/30/2014 22:33
Toluene	---		0.0050	1	05/30/2014 22:33
Ethylbenzene	---		0.0050	1	05/30/2014 22:33
Xylenes	---		0.0050	1	05/30/2014 22:33
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>		
2-Fluorotoluene	103	H	70-130		05/30/2014 22:33



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 5/28/14 18:36
Date Prepared: 5/28/14

WorkOrder: 1405A73
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

LUFT 5 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3-5.5'	1405A73-002A	Soil/TOTAL	05/03/2014	ICP-MS2	90875
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	0.30		0.25	1	05/30/2014 18:35
Chromium	74		0.50	1	05/30/2014 18:35
Lead	98		5.0	10	05/31/2014 02:42
Nickel	63		0.50	1	05/30/2014 18:35
Zinc	150		5.0	1	05/30/2014 18:35
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	110		70-130		05/30/2014 18:35

B-4-6	1405A73-005A	Soil/TOTAL	05/08/2014	ICP-MS2	90875
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	1.2		0.25	1	05/30/2014 18:40
Chromium	130		5.0	10	05/31/2014 02:48
Lead	120		5.0	10	05/31/2014 02:48
Nickel	220		5.0	10	05/31/2014 02:48
Zinc	230		5.0	1	05/30/2014 18:40
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	109		70-130		05/30/2014 18:40

B-15-5.5'	1405A73-007A	Soil/TOTAL	05/10/2014	ICP-MS2	90875
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	3.5		0.25	1	05/30/2014 18:46
Chromium	120		5.0	10	05/31/2014 02:54
Lead	410		5.0	10	05/31/2014 02:54
Nickel	110		5.0	10	05/31/2014 02:54
Zinc	260		5.0	1	05/30/2014 18:46
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	112		70-130		05/30/2014 18:46

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 5/28/14 18:36
Date Prepared: 5/28/14

WorkOrder: 1405A73
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

LUFT 5 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-15-8'	1405A73-008A	Soil/TOTAL	05/10/2014	ICP-MS2	90875
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	ND		0.25	1	05/30/2014 18:51
Chromium	76		0.50	1	05/30/2014 18:51
Lead	110		5.0	10	05/31/2014 03:00
Nickel	63		0.50	1	05/30/2014 18:51
Zinc	110		5.0	1	05/30/2014 18:51
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	109		70-130		05/30/2014 18:51



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 5/28/14 18:36
Date Prepared: 5/28/14

WorkOrder: 1405A73
Extraction Method: SW3050B
Analytical Method: SW6010B
Unit: mg/Kg

Lead

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3-8'	1405A73-003A	Soil/TOTAL	05/03/2014	ICP-JY	90870
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	110		5.0	1	05/29/2014 19:00
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	98		70-130		05/29/2014 19:00



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 5/28/14 18:36
Date Prepared: 5/29/14

WorkOrder: 1405A73
Extraction Method: SW9045D
Analytical Method: SW9045D
Unit: $\pm$, pH units @ 25°C

pH

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-4-3'	1405A73-004A	Soil	05/08/2014	WetChem	90941

<u>Analytes</u>	<u>Result</u>	<u>Accuracy</u>	<u>DF</u>	<u>Date Analyzed</u>
pH	8.89	0.1	1	05/29/2014 14:21

B-15-10.5'	1405A73-009A	Soil	05/10/2014	WetChem	90941
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<u>Analytes</u>	<u>Result</u>	<u>Accuracy</u>	<u>DF</u>	<u>Date Analyzed</u>
pH	8.11	0.1	1	05/29/2014 14:27



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 5/28/14 18:36
Date Prepared: 6/3/14

WorkOrder: 1405A73
Extraction Method: SW9030A/E376.2
Analytical Method: SW9030A/E376.2
Unit: mg/Kg

Acid Soluble Sulfide

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-4-3'	1405A73-004A	Soil	05/08/2014	SPECTROPHOTOMETER	91140

<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Sulfide	ND	H	10	1	06/03/2014 18:50

B-15-10.5'	1405A73-009A	Soil	05/10/2014	SPECTROPHOTOMETER	91140
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<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Sulfide	ND	H	10	1	06/03/2014 18:35



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 5/28/14 18:36
Date Prepared: 5/28/14

WorkOrder: 1405A73
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3-3'	1405A73-001A	Soil	05/03/2014	GC6A	90905
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	170	H	5.0	5	06/03/2014 09:48
TPH-Motor Oil (C18-C36)	220	H	25	5	06/03/2014 09:48
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	Analytical Comments: e3,e7	
C9	101	H	70-130		06/03/2014 09:48
B-3-5.5'	1405A73-002A	Soil	05/03/2014	GC11A	90905
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	23	H	5.0	5	06/03/2014 10:51
TPH-Motor Oil (C18-C36)	100	H	25	5	06/03/2014 10:51
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	Analytical Comments: e7,e2	
C9	106	H	70-130		06/03/2014 10:51
B-3-8'	1405A73-003A	Soil	05/03/2014	GC2B	90905
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	8.8	H	1.0	1	06/04/2014 01:25
TPH-Motor Oil (C18-C36)	28	H	5.0	1	06/04/2014 01:25
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	Analytical Comments: e7,e2	
C9	113	H	70-130		06/04/2014 01:25
B-4-3'	1405A73-004A	Soil	05/08/2014	GC2B	90905
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	55	H	5.0	5	06/03/2014 00:25
TPH-Motor Oil (C18-C36)	190	H	25	5	06/03/2014 00:25
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	Analytical Comments: e7,e2	
C9	111	H	70-130		06/03/2014 00:25

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 5/28/14 18:36
Date Prepared: 5/28/14

WorkOrder: 1405A73
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-4-6	1405A73-005A	Soil	05/08/2014	GC2B	90905
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	57	H	10	10	06/03/2014 20:19
TPH-Motor Oil (C18-C36)	230	H	50	10	06/03/2014 20:19
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	Analytical Comments: e7,e2	
C9	107	H	70-130		06/03/2014 20:19
B-15-3'	1405A73-006A	Soil	05/10/2014	GC11A	90905
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	7.5	H	1.0	1	06/03/2014 00:33
TPH-Motor Oil (C18-C36)	56	H	5.0	1	06/03/2014 00:33
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	Analytical Comments: e7,e2	
C9	99	H	70-130		06/03/2014 00:33
B-15-5.5'	1405A73-007A	Soil	05/10/2014	GC2B	90905
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	63	H	20	20	06/03/2014 07:57
TPH-Motor Oil (C18-C36)	510	H	100	20	06/03/2014 07:57
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	Analytical Comments: e7,e2	
C9	107	H	70-130		06/03/2014 07:57
B-15-8'	1405A73-008A	Soil	05/10/2014	GC11A	90905
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	39	H	10	10	06/02/2014 22:16
TPH-Motor Oil (C18-C36)	230	H	50	10	06/02/2014 22:16
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	Analytical Comments: e7,e2	
C9	105	H	70-130		06/02/2014 22:16

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 5/28/14 18:36
Date Prepared: 5/28/14

WorkOrder: 1405A73
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-15-10.5'	1405A73-009A	Soil	05/10/2014	GC11B	90905
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND	H	1.0	1	06/01/2014 06:17
TPH-Motor Oil (C18-C36)	ND	H	5.0	1	06/01/2014 06:17
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>		
C9	107	H	70-130		06/01/2014 06:17



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 5/28/14
Date Analyzed: 5/28/14
Instrument: GC22
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1405A73
BatchID: 90885
Extraction Method: SW3550B
Analytical Method: SW8081A/8082
Unit: mg/kg
Sample ID: MB/LCS-90885
1405A73-007AMS/MSD

QC Summary Report for SW8081A/8082

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Aldrin	ND	0.0526	0.0010	0.050	-	105	70-130
a-BHC	ND	-	0.0010	-	-	-	-
b-BHC	ND	-	0.0010	-	-	-	-
d-BHC	ND	-	0.0010	-	-	-	-
g-BHC	ND	0.0531	0.0010	0.050	-	106	70-130
Chlordane (Technical)	ND	-	0.025	-	-	-	-
a-Chlordane	ND	-	0.0010	-	-	-	-
g-Chlordane	ND	-	0.0010	-	-	-	-
p,p-DDD	ND	-	0.0010	-	-	-	-
p,p-DDE	ND	-	0.0010	-	-	-	-
p,p-DDT	ND	0.0523	0.0010	0.050	-	105	70-130
Dieldrin	ND	0.0605	0.0010	0.050	-	121	70-130
Endosulfan I	ND	-	0.0010	-	-	-	-
Endosulfan II	ND	-	0.0010	-	-	-	-
Endosulfan sulfate	ND	-	0.0010	-	-	-	-
Endrin	ND	0.0571	0.0010	0.050	-	114	70-130
Endrin aldehyde	ND	-	0.0010	-	-	-	-
Endrin ketone	ND	-	0.0010	-	-	-	-
Heptachlor	ND	0.0416	0.0010	0.050	-	83.1	70-130
Heptachlor epoxide	ND	-	0.0010	-	-	-	-
Hexachlorobenzene	ND	-	0.010	-	-	-	-
Hexachlorocyclopentadiene	ND	-	0.020	-	-	-	-
Methoxychlor	ND	-	0.0010	-	-	-	-
Toxaphene	ND	-	0.050	-	-	-	-
Surrogate Recovery							
Decachlorobiphenyl	0.0585	0.0577		0.050	117	115	70-130

(Cont.)



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 5/28/14
Date Analyzed: 5/28/14
Instrument: GC22
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1405A73
BatchID: 90885
Extraction Method: SW3550B
Analytical Method: SW8081A/8082
Unit: mg/kg
Sample ID: MB/LCS-90885
1405A73-007AMS/MSD

QC Summary Report for SW8081A/8082

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Aldrin	NR	NR	0	ND<0.05	NR	NR	-	NR	
g-BHC	NR	NR	0	ND<0.05	NR	NR	-	NR	
p,p-DDT	NR	NR	0	ND<0.05	NR	NR	-	NR	
Dieldrin	NR	NR	0	ND<0.05	NR	NR	-	NR	
Endrin	NR	NR	0	ND<0.05	NR	NR	-	NR	
Heptachlor	NR	NR	0	ND<0.05	NR	NR	-	NR	
Surrogate Recovery									
Decachlorobiphenyl	NR	NR	0		NR	NR	-	NR	



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 5/28/14
Date Analyzed: 5/30/14
Instrument: GC10
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1405A73
BatchID: 90881
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/Kg
Sample ID: MB/LCS-90881
1405A79-003AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	0.10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	0.0368	0.0050	0.050	-	73.7	70-130
Benzene	ND	0.0462	0.0050	0.050	-	92.4	70-130
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	0.146	0.050	0.20	-	73.3	70-130
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.0462	0.0050	0.050	-	92.4	70-130
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.0405	0.0040	0.050	-	81	70-130
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.0420	0.0040	0.050	-	83.9	70-130
1,1-Dichloroethene	ND	0.0452	0.0050	0.050	-	90.3	70-130
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-

(Cont.)



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 5/28/14
Date Analyzed: 5/30/14
Instrument: GC10
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1405A73
BatchID: 90881
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/Kg
Sample ID: MB/LCS-90881
1405A79-003AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Diisopropyl ether (DIPE)	ND	0.0406	0.0050	0.050	-	81.3	70-130
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.0398	0.0050	0.050	-	79.6	70-130
Freon 113	ND	-	0.0050	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.0384	0.0050	0.050	-	76.9	70-130
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	0.0470	0.0050	0.050	-	94.1	70-130
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	0.0478	0.0050	0.050	-	95.7	70-130
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Xylenes, Total	ND	-	0.0050	-	-	-	-

Surrogate Recovery

Dibromofluoromethane	0.138	0.189		0.18	110	108	70-130
Toluene-d8	0.125	0.170		0.18	100	97	70-130
4-BFB	0.0127	0.0174		0.018	101	99	70-130

(Cont.)



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 5/28/14
Date Analyzed: 5/30/14
Instrument: GC10
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1405A73
BatchID: 90881
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/Kg
Sample ID: MB/LCS-90881
1405A79-003AMS/MSD

QC Summary Report for SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	0.0354	0.0346	0.050	ND	70.8	69.1,F1	70-130	2.45	30
Benzene	0.0360	0.0366	0.050	ND	72.1	73.1	70-130	1.43	30
t-Butyl alcohol (TBA)	0.155	0.158	0.20	ND	77.4	79	70-130	1.98	30
Chlorobenzene	0.0388	0.0385	0.050	ND	77.5	77	70-130	0.642	30
1,2-Dibromoethane (EDB)	0.0377	0.0380	0.050	ND	75.5	76.1	70-130	0.812	30
1,2-Dichloroethane (1,2-DCA)	0.0340	0.0347	0.050	ND	68,F1	69.5,F1	70-130	2.07	30
1,1-Dichloroethene	0.0393	0.0402	0.050	ND	78.6	80.3	70-130	2.20	30
Diisopropyl ether (DIPE)	0.0365	0.0357	0.050	ND	73	71.4	70-130	2.25	30
Ethyl tert-butyl ether (ETBE)	0.0357	0.0352	0.050	ND	71.5	70.4	70-130	1.57	30
Methyl-t-butyl ether (MTBE)	0.0338	0.0347	0.050	ND	67.6,F1	69.3,F1	70-130	2.57	30
Toluene	0.0403	0.0404	0.050	ND	80.7	80.7	70-130	0	30
Trichloroethene	0.0383	0.0391	0.050	ND	76.6	78.2	70-130	1.98	30
Surrogate Recovery									
Dibromofluoromethane	0.176	0.178	0.18		101	102	70-130	1.04	30
Toluene-d8	0.174	0.174	0.18		99	99	70-130	0	30
4-BFB	0.0175	0.0176	0.018		100	101	70-130	0.764	30



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 5/30/14
Date Analyzed: 5/30/14
Instrument: GC21
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1405A73
BatchID: 90969
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg
Sample ID: MB/LCS-90969
1405B08-006AMS/MSD

QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acenaphthene	ND	3.61	0.25	5	-	72.2	30-130
Acenaphthylene	ND	-	0.25	-	-	-	-
Acetochlor	ND	-	0.25	-	-	-	-
Anthracene	ND	-	0.25	-	-	-	-
Benzidine	ND	-	1.3	-	-	-	-
Benzo (a) anthracene	ND	-	0.25	-	-	-	-
Benzo (b) fluoranthene	ND	-	0.25	-	-	-	-
Benzo (k) fluoranthene	ND	-	0.25	-	-	-	-
Benzo (g,h,i) perylene	ND	-	0.25	-	-	-	-
Benzo (a) pyrene	ND	-	0.25	-	-	-	-
Benzyl Alcohol	ND	-	1.3	-	-	-	-
1,1-Biphenyl	ND	-	0.25	-	-	-	-
Bis (2-chloroethoxy) Methane	ND	-	0.25	-	-	-	-
Bis (2-chloroethyl) Ether	ND	-	0.25	-	-	-	-
Bis (2-chloroisopropyl) Ether	ND	-	0.25	-	-	-	-
Bis (2-ethylhexyl) Adipate	ND	-	0.25	-	-	-	-
Bis (2-ethylhexyl) Phthalate	ND	-	0.25	-	-	-	-
4-Bromophenyl Phenyl Ether	ND	-	0.25	-	-	-	-
Butylbenzyl Phthalate	ND	-	0.25	-	-	-	-
4-Chloroaniline	ND	-	0.25	-	-	-	-
4-Chloro-3-methylphenol	ND	4.85	0.25	5	-	97	30-130
2-Chloronaphthalene	ND	-	0.25	-	-	-	-
2-Chlorophenol	ND	4.58	0.25	5	-	91.6	30-130
4-Chlorophenyl Phenyl Ether	ND	-	0.25	-	-	-	-
Chrysene	ND	-	0.25	-	-	-	-
Dibenzo (a,h) anthracene	ND	-	0.25	-	-	-	-
Dibenzofuran	ND	-	0.25	-	-	-	-
Di-n-butyl Phthalate	ND	-	0.25	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.25	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.25	-	-	-	-
1,4-Dichlorobenzene	ND	3.97	0.25	5	-	79.4	30-130
3,3-Dichlorobenzidine	ND	-	0.50	-	-	-	-
2,4-Dichlorophenol	ND	-	0.25	-	-	-	-
Diethyl Phthalate	ND	-	0.25	-	-	-	-
2,4-Dimethylphenol	ND	-	0.25	-	-	-	-
Dimethyl Phthalate	ND	-	0.25	-	-	-	-
4,6-Dinitro-2-methylphenol	ND	-	1.3	-	-	-	-
2,4-Dinitrophenol	ND	-	6.3	-	-	-	-
2,4-Dinitrotoluene	ND	4.13	0.25	5	-	82.6	30-130
2,6-Dinitrotoluene	ND	-	0.25	-	-	-	-

(Cont.)



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 5/30/14
Date Analyzed: 5/30/14
Instrument: GC21
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1405A73
BatchID: 90969
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg
Sample ID: MB/LCS-90969
1405B08-006AMS/MSD

QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Di-n-octyl Phthalate	ND	-	0.50	-	-	-	-
1,2-Diphenylhydrazine	ND	-	0.25	-	-	-	-
Fluoranthene	ND	-	0.25	-	-	-	-
Fluorene	ND	-	0.25	-	-	-	-
Hexachlorobenzene	ND	-	0.25	-	-	-	-
Hexachlorobutadiene	ND	-	0.25	-	-	-	-
Hexachlorocyclopentadiene	ND	-	1.3	-	-	-	-
Hexachloroethane	ND	-	0.25	-	-	-	-
Indeno (1,2,3-cd) pyrene	ND	-	0.25	-	-	-	-
Isophorone	ND	-	0.25	-	-	-	-
2-Methylnaphthalene	ND	-	0.25	-	-	-	-
2-Methylphenol (o-Cresol)	ND	-	0.25	-	-	-	-
3 &/or 4-Methylphenol (m,p-Cresol)	ND	-	0.25	-	-	-	-
Naphthalene	ND	-	0.25	-	-	-	-
2-Nitroaniline	ND	-	1.3	-	-	-	-
3-Nitroaniline	ND	-	1.3	-	-	-	-
4-Nitroaniline	ND	-	1.3	-	-	-	-
Nitrobenzene	ND	-	0.25	-	-	-	-
2-Nitrophenol	ND	-	1.3	-	-	-	-
4-Nitrophenol	ND	3.64	1.3	5	-	72.9	30-130
N-Nitrosodiphenylamine	ND	-	0.25	-	-	-	-
N-Nitrosodi-n-propylamine	ND	4.88	0.25	5	-	97.5	30-130
Pentachlorophenol	ND	3.17	1.3	5	-	63.3	30-130
Phenanthrene	ND	-	0.25	-	-	-	-
Phenol	ND	4.51	0.25	5	-	90.2	30-130
Pyrene	ND	3.99	0.25	5	-	79.8	30-130
1,2,4-Trichlorobenzene	ND	4.27	0.25	5	-	85.3	30-130
2,4,5-Trichlorophenol	ND	-	0.25	-	-	-	-
2,4,6-Trichlorophenol	ND	-	0.25	-	-	-	-

Surrogate Recovery

2-Fluorophenol	3.93	4.41		5	79	88	30-130
Phenol-d5	3.87	4.33		5	77	87	30-130
Nitrobenzene-d5	3.53	4.05		5	71	81	30-130
2-Fluorobiphenyl	3.34	3.72		5	67	74	30-130
2,4,6-Tribromophenol	2.81	3.19		5	56	64	16-130
4-Terphenyl-d14	4.02	4.62		5	80	92	30-130

(Cont.)



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 5/30/14
Date Analyzed: 5/30/14
Instrument: GC21
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1405A73
BatchID: 90969
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg
Sample ID: MB/LCS-90969
1405B08-006AMS/MSD

QC Summary Report for SW8270C

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Acenaphthene	3.56	3.59	5	ND	71.2	71.7	30-130	0.767	30
4-Chloro-3-methylphenol	4.69	4.63	5	ND	93.7	92.6	30-130	1.14	30
2-Chlorophenol	4.65	4.50	5	ND	93.1	90	30-130	3.41	30
1,4-Dichlorobenzene	4.06	3.66	5	ND	81.2	73.1	30-130	10.4	30
2,4-Dinitrotoluene	4.18	4.06	5	ND	83.7	81.3	30-130	2.88	30
4-Nitrophenol	3.83	3.63	5	ND	76.6	72.7	30-130	5.21	30
N-Nitrosodi-n-propylamine	4.61	4.48	5	ND	92.1	89.5	30-130	2.89	30
Pentachlorophenol	3.88	3.89	5	ND	77.7	77.8	30-130	0.138	30
Phenol	4.56	4.41	5	ND	91.1	88.3	30-130	3.20	30
Pyrene	4.04	3.92	5	ND	80.7	78.4	30-130	2.90	30
1,2,4-Trichlorobenzene	4.21	4.01	5	ND	84.1	80.3	30-130	4.72	30

Surrogate Recovery

2-Fluorophenol	4.40	4.19	5		88	84	30-130	4.98	30
Phenol-d5	4.24	4.18	5		85	84	30-130	1.53	30
Nitrobenzene-d5	3.89	3.76	5		78	75	30-130	3.29	30
2-Fluorobiphenyl	3.65	3.65	5		73	73	30-130	0	30
2,4,6-Tribromophenol	3.26	3.20	5		65	64	16-130	2.00	30
4-Terphenyl-d14	4.55	4.45	5		91	89	30-130	2.19	30



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 5/28/14
Date Analyzed: 5/29/14
Instrument: ICP-MS1
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1405A73
BatchID: 90875
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-90875
1405A18-001AMS/MSD

QC Summary Report for SW6020

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Antimony	ND	54.3	0.50	50	-	109	75-125
Arsenic	ND	54.3	0.50	50	-	109	75-125
Barium	ND	578	5.0	500	-	116	75-125
Beryllium	ND	58.2	0.50	50	-	116	75-125
Cadmium	ND	58.2	0.25	50	-	116	75-125
Chromium	ND	54.7	0.50	50	-	109	75-125
Cobalt	ND	56.6	0.50	50	-	113	75-125
Copper	ND	56.6	0.50	50	-	113	75-125
Lead	ND	55.3	0.50	50	-	111	75-125
Mercury	ND	1.20	0.050	1.25	-	95.7	75-125
Molybdenum	ND	51.9	0.50	50	-	104	75-125
Nickel	ND	55.8	0.50	50	-	112	75-125
Selenium	ND	51.5	0.50	50	-	103	75-125
Silver	ND	57.9	0.50	50	-	116	75-125
Thallium	ND	56.7	0.50	50	-	113	75-125
Vanadium	ND	55.2	0.50	50	-	110	75-125
Zinc	ND	550	5.0	500	-	110	75-125
Surrogate Recovery							
Tb 350.917	599	572		500	120	114	70-130

(Cont.)



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 5/28/14
Date Analyzed: 5/29/14
Instrument: ICP-MS1
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1405A73
BatchID: 90875
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-90875
1405A18-001AMS/MSD

QC Summary Report for SW6020

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Antimony	49.8	54.7	50	ND	99.5	109	75-125	9.51	20
Arsenic	54.7	54.5	50	3.942	102	101	75-125	0.385	20
Barium	648	668	500	115.0	107	111	75-125	3.07	20
Beryllium	47.3	50.4	50	ND	94.7	101	75-125	6.20	20
Cadmium	51.7	54.6	50	ND	103	109	75-125	5.49	20
Chromium	89.8	95.6	50	47.47	84.7	96.3	75-125	6.25	20
Cobalt	54.8	58.8	50	8.949	91.6	99.8	75-125	7.20	20
Copper	60.2	63.3	50	13.66	93.2	99.3	75-125	4.97	20
Lead	60.2	65.3	50	10.94	98.5	109	75-125	8.13	20
Mercury	1.17	1.30	1.25	ND	93.9	104	75-125	9.80	20
Molybdenum	48.5	53.5	50	ND	97	107	75-125	9.77	20
Nickel	86.3	90.5	50	49.29	74,F1	82.4	75-125	4.77	20
Selenium	46.5	53.3	50	ND	93	107	75-125	13.7	20
Silver	53.2	58.3	50	ND	106	117	75-125	9.06	20
Thallium	50.2	54.3	50	ND	100	109	75-125	7.92	20
Vanadium	83.0	85.6	50	34.30	97.4	103	75-125	3.05	20
Zinc	536	551	500	38.85	99.5	102	75-125	2.70	20

Surrogate Recovery

Tb 350.917	522	556	500		104	111	70-130	6.33	20
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Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 6/3/14
Date Analyzed: 6/3/14
Instrument: SKALAR
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1405A73
BatchID: 91103
Extraction Method: SM4500-CN⁻ E
Analytical Method: SM4500-CN⁻ ABCE
Unit: mg/Kg
Sample ID: MB/LCS-91103
1405A73-004AMS/MSD

QC Summary Report for SM4500-CN⁻ ABCE

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Total Cyanide	ND	0.778	0.10	0.80	-	97.3	90-110

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Total Cyanide	0.639	0.753	0.80	0.1559	60.4,F1	74.6,F1	80-120	16.3	20



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 5/28/14
Date Analyzed: 5/29/14
Instrument: GC7
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1405A73
BatchID: 90904
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-90904
1405A53-001AMS/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	0.660	0.40	0.60	-	110	70-130
MTBE	ND	0.0904	0.050	0.10	-	90.4	70-130
Benzene	ND	0.112	0.0050	0.10	-	112	70-130
Toluene	ND	0.109	0.0050	0.10	-	109	70-130
Ethylbenzene	ND	0.117	0.0050	0.10	-	117	70-130
Xylenes	ND	0.360	0.0050	0.30	-	120	70-130

Surrogate Recovery

2-Fluorotoluene	0.116	0.114		0.10	116	114	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
TPH(btex)	0.637	0.643	0.60	ND	106	107	70-130	0.967	20
MTBE	0.0916	0.107	0.10	ND	91.6	107	70-130	15.7	20
Benzene	0.112	0.116	0.10	ND	112	116	70-130	3.62	20
Toluene	0.108	0.111	0.10	ND	108	111	70-130	2.45	20
Ethylbenzene	0.115	0.117	0.10	ND	115	117	70-130	1.85	20
Xylenes	0.352	0.360	0.30	ND	117	120	70-130	2.25	20

Surrogate Recovery

2-Fluorotoluene	0.112	0.114	0.10		112	115	70-130	2.17	20
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Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 5/30/14
Date Analyzed: 5/31/14
Instrument: GC7
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1405A73
BatchID: 90987
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-90987
1405B38-006AMS/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	0.619	0.40	0.60	-	103	70-130
MTBE	ND	0.0814	0.050	0.10	-	81.4	70-130
Benzene	ND	0.112	0.0050	0.10	-	112	70-130
Toluene	ND	0.109	0.0050	0.10	-	109	70-130
Ethylbenzene	ND	0.118	0.0050	0.10	-	118	70-130
Xylenes	ND	0.362	0.0050	0.30	-	121	70-130

Surrogate Recovery

2-Fluorotoluene	0.119	0.115		0.10	119	115	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
TPH(btex)	0.643	0.678	0.60	ND	107	113	70-130	5.30	20
MTBE	0.0764	0.0847	0.10	ND	76.4	84.7	70-130	10.4	20
Benzene	0.108	0.115	0.10	ND	108	115	70-130	5.81	20
Toluene	0.107	0.113	0.10	ND	107	113	70-130	4.76	20
Ethylbenzene	0.114	0.118	0.10	ND	114	118	70-130	3.63	20
Xylenes	0.352	0.365	0.30	ND	117	122	70-130	3.63	20

Surrogate Recovery

2-Fluorotoluene	0.112	0.115	0.10		112	115	70-130	2.79	20
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Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 5/28/14
Date Analyzed: 5/29/14
Instrument: ICP-MS1
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1405A73
BatchID: 90875
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-90875
1405A18-001AMS/MSD

QC Summary Report for SW6020

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Cadmium	ND	58.2	0.25	50	-	116	75-125
Chromium	ND	54.7	0.50	50	-	109	75-125
Lead	ND	55.3	0.50	50	-	111	75-125
Nickel	ND	55.8	0.50	50	-	112	75-125
Zinc	ND	550	5.0	500	-	110	75-125

Surrogate Recovery

Tb 350.917	599	572		500	120	114	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
Cadmium	51.7	54.6	50	ND	103	109	75-125	5.49	20
Chromium	89.8	95.6	50	47.47	84.7	96.3	75-125	6.25	20
Lead	60.2	65.3	50	10.94	98.5	109	75-125	8.13	20
Nickel	86.3	90.5	50	49.29	74,F1	82.4	75-125	4.77	20
Zinc	536	551	500	38.85	99.5	102	75-125	2.70	20

Surrogate Recovery

Tb 350.917	522	556	500		104	111	70-130	6.33	20
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Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 5/28/14
Date Analyzed: 5/29/14
Instrument: ICP-JY
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1405A73
BatchID: 90870
Extraction Method: SW3050B
Analytical Method: SW6010B
Unit: mg/Kg
Sample ID: MB/LCS-90870
1405A50-005AMS/MSD

QC Summary Report for SW6010B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Lead	ND	48.2	5.0	50	-	96.3	75-125
Surrogate Recovery							
Tb 350.917	492	474		500	98	95	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Lead	NR	NR	50	293.2	NR	NR	75-125	NR	25
Surrogate Recovery									
Tb 350.917	531	532	500		106	106	70-130	0	20



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 5/29/14
Date Analyzed: 5/29/14
Instrument: WetChem
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1405A73
BatchID: 90941
Extraction Method: SW9045D
Analytical Method: SW9045D
Unit: $\pm$, pH units @ 25°C

QC Summary Report for pH

SampleID	Sample Result	Sample DF	Dup / Serial Dilution Result	Dup / Serial Dilution DF	Precision	Acceptance Criteria
1405A73-004A	8.89	1	8.88	1	0.01	0.1



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 6/3/14
Date Analyzed: 6/3/14
Instrument: SPECTROPHOTOMETER
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1405A73
BatchID: 91140
Extraction Method: SW9030A/E376.2
Analytical Method: SW9030A/E376.2
Unit: mg/Kg
Sample ID: MB/LCS-91140
1405A73-009AMS/MSD

QC Summary Report for SW9030A/E376.2

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Sulfide	ND	ND	10	50	-	91.7	80-120

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Sulfide	ND	ND	50	ND	82.8	84.9	75-125	2.50	20



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 5/28/14
Date Analyzed: 5/29/14
Instrument: GC6A
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1405A73
BatchID: 90905
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg
Sample ID: MB/LCS-90905
1405A53-001AMS/MSD

QC Summary Report for SW8015B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	41.5	1.0	40	-	104	70-130

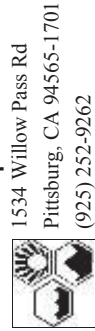
Surrogate Recovery

C9	23.6	23.3		25	94	93	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
TPH-Diesel (C10-C23)	39.7	38.7	40	1.922	94.5	91.9	70-130	2.62	30

Surrogate Recovery

C9	24.2	24.4	25		97	97	70-130	0	30
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WorkOrder: 1405A73 ClientCode: TWRF

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

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

Requested TAT: 5 days

Email: pcusack@langan.com cc/3rd Party:

PO: ProjectNo: #731626701; India Basin

WaterTrax WriteOn EDF Excel EQulS Email HardCopy J-flag ThirdParty

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							
1405A73-001	B-3-3'	Soil	5/3/2014				A											
1405A73-002	B-3-5.5'	Soil	5/3/2014				A											
1405A73-003	B-3-8'	Soil	5/3/2014				A											
1405A73-004	B-4-3'	Soil	5/8/2014				A											
1405A73-005	B-4-6	Soil	5/8/2014				A											
1405A73-006	B-15-3'	Soil	5/10/2014				A											
1405A73-007	B-15-5.5'	Soil	5/10/2014				A											
1405A73-008	B-15-8'	Soil	5/10/2014				A											
1405A73-009	B-15-10.5'	Soil	5/10/2014				A											

Test Legend:

1	8081PCB_S	2	8260B_S	3	8270D_S	4	ASBEST400 (435 CARB)_S	5	CAM17MS_S
6	CN_TOTAL_S	7	G-MBTEx_S	8	LUFTMS_S	9	PB_S	10	PH_S
11	SULFIDE_S	12							

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

Prepared by: Ana Venegas

Comments: SEND HARD COPY

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.



McC Campbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

WORK ORDER SUMMARY

Client Name: TREADWELL & ROLLO
Project: #731626701; India Basin
Comments: SEND HARD COPY

QC Level: LEVEL 2

Client Contact: Peter Cusack

Contact's Email: pcusack@langan.com

Work Order: 1405A73

Date Received: 5/28/2014

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ Fax ☒ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1405A73-001A	B-3-3'	Soil	Multi-Range TPH(g,d,mo) SW6020 (CAM 17) SW8081A/8082 (OC Pesticides+PCBs)	1	Big Stainless Tube	☐	5/3/2014	5 days	☐		
1405A73-002A	B-3-5.5'	Soil	SW6020 (LUFT) Multi-Range TPH(g,d,mo) SW8270C (SVOCs) SW8260B (VOCs)	1	Big Stainless Tube	☐	5/3/2014	5 days	☐		
1405A73-003A	B-3-8'	Soil	SW6010B (Lead) Multi-Range TPH(g,d,mo) Asbestos, 435 CARB 400	1	Big Stainless Tube	☐	5/3/2014	5 days	☐		
1405A73-004A	B-4-3'	Soil	SW9030A/E376.2 (Sulfide) SW9045D (pH) Multi-Range TPH(g,d,mo) Cyanide, Total SW6020 (CAM 17) SW8270C (SVOCs) SW8260B (VOCs)	1	Big Stainless Tube	☐	5/8/2014	5 days	☐		SubOut

*** NOTE:** STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).

Bottle Legend:

Big Stainless Tube =



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WORK ORDER SUMMARY

Client Name: TREADWELL & ROLLO
Project: #731626701; India Basin
Comments: SEND HARD COPY

QC Level: LEVEL 2

Client Contact: Peter Cusack

Contact's Email: pcusack@langan.com

Work Order: 1405A73

Date Received: 5/28/2014

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ Fax ☒ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1405A73-004A	B-4-3'	Soil	SW8081A/8082 (OC Pesticides+PCBs)	1	Big Stainless Tube	☐	5/8/2014	5 days		☐	
1405A73-005A	B-4-6	Soil	SW6020 (LUFT) Multi-Range TPH(g,d,mo)	1	Big Stainless Tube	☐	5/8/2014	5 days		☐	
1405A73-006A	B-15-3'	Soil	Multi-Range TPH(g,d,mo) SW6020 (CAM 17)	1	Big Stainless Tube	☐	5/10/2014	5 days		☐	
1405A73-007A	B-15-5.5'	Soil	Multi-Range TPH(g,d,mo) SW6020 (LUFT) Asbestos, 435 CARB 400 SW8270C (SVOCs) SW8260B (VOCs) SW8081A/8082 (OC Pesticides+PCBs)	1	Big Stainless Tube	☐	5/10/2014	5 days		☐	SubOut
1405A73-008A	B-15-8'	Soil	SW6020 (LUFT)	1	Big Stainless Tube	☐	5/10/2014	5 days		☐	
1405A73-009A	B-15-10.5'	Soil	Multi-Range TPH(g,d,mo) SW9030A/E376.2 (Sulfide) SW9045D (pH) Multi-Range TPH(g,d,mo) Cyanide, Total	1	Big Stainless Tube	☐	5/10/2014	5 days		☐	

*** NOTE:** STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).

Bottle Legend:

Big Stainless Tube =



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WORK ORDER SUMMARY

Client Name: TREADWELL & ROLLO
Project: #731626701; India Basin
Comments: SEND HARD COPY

QC Level: LEVEL 2

Client Contact: Peter Cusack

Contact's Email: pcusack@langan.com

Work Order: 1405A73

Date Received: 5/28/2014

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ Fax ☒ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1405A73-009A	B-15-10.5'	Soil	SW6020 (CAM 17)	1	Big Stainless Tube	☐	5/10/2014	5 days		☐	
			SW8270C (SVOCs)			☐		5 days		☐	
			SW8260B (VOCs)			☐		5 days		☐	

*** NOTE:** STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).

Bottle Legend:

Big Stainless Tube =

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:	India Basin	No. Containers & Preservative Matrix
Job Number:	731626701	
Project Manager/Contact:	KW P Cusack	
Samplers:		
Recorder (Signature Required):	[Signature]	

[illegible]

White Copy - Original Yellow Copy - Laboratory Pink Copy - Field COC Number: 004986



Sample Receipt Checklist

Client Name: **Treadwell & Rollo**

Date and Time Received: **5/28/2014 6:36:39 PM**

Project Name: **#731626701; India Basin**

Login Reviewed by: **Ana Venegas**

WorkOrder N°: **1405A73** Matrix: Soil

Carrier: Rob Pringle (MAI Courier)

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 ☒	
Container/Temp Blank temperature	Cooler Temp: 2.7°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: pH<2; 522: pH<4)?	Yes ☐	No ☐	NA ☒
Samples Received on Ice?	Yes ☒	No ☐	

(Ice Type: WET ICE)

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

Comments: All samples were received out of hold time.



Bulk Asbestos Material Analysis

(Air Resources Board Method 435, June 6, 1991)

McC Campbell Analytical, Inc.
Account Payable
1534 Willow Pass Rd

Pittsburg, CA 94565

Client ID: A31409
Report Number: N006334
Date Received: 05/29/14
Date Analyzed: 06/05/14
Date Printed: 06/05/14

Job ID/Site: 1405A73 - #731626701, Indian Basin

FALI Job ID: A31409

PLM Report Number: N/A

Total Samples Submitted: 2

Total Samples Analyzed: 2

Sample Preparation and Analysis:

Samples were analyzed by the Air Resources Board's Method 435, Determination of Asbestos Content of Serpentine Aggregate. Samples were ground to 200 particle size in the laboratory. Approximately 1 pint was retained for analysis. Samples were prepared for observation according to the guidelines of Exception I and Exception II as defined by the 435 Method. Samples which contained less than 10% asbestos were prepared for observation according to the point count technique as defined by the 435 Method. This analysis was performed with a standard cross-hair reticle.

Sample ID	Lab Number	Layer Description
-----------	------------	-------------------

B-3-8'	11519353	Grey Soil
---------------	----------	------------------

Visual Estimation Results:

Matrix percentage of entire 100

Visual estimation percentage: **None Detected**

Asbestos type(s) detected: None Detected

Comment: This result meets the requirements of Exception I as defined by the 435 Method.

B-15-5.5'	11519354	Grey Soil
------------------	----------	------------------

Visual Estimation Results:

Matrix percentage of entire 100

Visual estimation percentage: **None Detected**

Asbestos type(s) detected: None Detected

Comment: This result meets the requirements of Exception I as defined by the 435 Method.

Tad Thrower, Laboratory Supervisor, Hayward Laboratory

Note: Limit of Quantification (LOQ) = 0.25%. Trace denotes the presence of asbestos below the LOQ. ND = None Detected.

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McC Campbell Analytical, Inc.

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Analytical Report

WorkOrder: 1404200

Report Created for: Treadwell & Rollo
555 Montgomery St., Suite 1300
San Francisco, CA 94111

Project Contact: Peter Cusack
Project P.O.:
Project Name: #731626701; India Basin

Project Received: 04/04/2014

Analytical Report reviewed & approved for release on 04/14/2014 by:

Question about
your data?

[Click here to email
McC Campbell](#)

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.





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Client: Treadwell & Rollo
Project: #731626701; India Basin
WorkOrder: 1404200

95% Interval	95% Confidence Interval
DF	Dilution Factor
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
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ND	Not detected at or above the indicated MDL or RL
NR	Matrix interferences, or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix; or sample diluted due to high matrix or analyte content.
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
TEQ	Toxicity Equivalence

H	samples were analyzed out of holding time
S	spike recovery outside accepted recovery limits
a3	sample diluted due to high organic content.
a4	the reporting limits were raised due to the sample's matrix prohibiting a full volume extraction.
c1	surrogate recovery outside of the control limits due to the dilution of the sample.
c4	surrogate recovery outside of the control limits due to coelution with another peak(s) / cluttered chromatogram.
d1	weakly modified or unmodified gasoline is significant
d7	strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram
e2	diesel range compounds are significant; no recognizable pattern
e7	oil range compounds are significant

E4	MCMC	H-BB	100	100	100	100
----	------	------	-----	-----	-----	-----



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Glossary of Terms & Qualifier Definitions

Client: Treadwell & Rollo
Project: #731626701; India Basin
WorkOrder: 1404200

F-1



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW3550B
Analytical Method: SW8081A/8082
Unit: mg/kg

Organochlorine Pesticides (Basic Target List) + PCBs

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-10-2.5	1404200-001A	Soil	03/24/2014	GC22	89021
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Aldrin	ND		0.050	50	04/08/2014 05:45
a-BHC	ND		0.050	50	04/08/2014 05:45
b-BHC	ND		0.050	50	04/08/2014 05:45
d-BHC	ND		0.050	50	04/08/2014 05:45
g-BHC	ND		0.050	50	04/08/2014 05:45
Chlordane (Technical)	ND		1.2	50	04/08/2014 05:45
a-Chlordane	ND		0.050	50	04/08/2014 05:45
g-Chlordane	ND		0.050	50	04/08/2014 05:45
p,p-DDD	ND		0.050	50	04/08/2014 05:45
p,p-DDE	ND		0.050	50	04/08/2014 05:45
p,p-DDT	ND		0.050	50	04/08/2014 05:45
Dieldrin	ND		0.050	50	04/08/2014 05:45
Endosulfan I	ND		0.050	50	04/08/2014 05:45
Endosulfan II	ND		0.050	50	04/08/2014 05:45
Endosulfan sulfate	ND		0.050	50	04/08/2014 05:45
Endrin	ND		0.050	50	04/08/2014 05:45
Endrin aldehyde	ND		0.050	50	04/08/2014 05:45
Endrin ketone	ND		0.050	50	04/08/2014 05:45
Heptachlor	ND		0.050	50	04/08/2014 05:45
Heptachlor epoxide	ND		0.050	50	04/08/2014 05:45
Hexachlorobenzene	ND		0.50	50	04/08/2014 05:45
Hexachlorocyclopentadiene	ND		1.0	50	04/08/2014 05:45
Methoxychlor	ND		0.050	50	04/08/2014 05:45
Toxaphene	ND		2.5	50	04/08/2014 05:45
Aroclor1016	ND		2.5	50	04/08/2014 05:45
Aroclor1221	ND		2.5	50	04/08/2014 05:45
Aroclor1232	ND		2.5	50	04/08/2014 05:45
Aroclor1242	ND		2.5	50	04/08/2014 05:45
Aroclor1248	ND		2.5	50	04/08/2014 05:45
Aroclor1254	ND		2.5	50	04/08/2014 05:45
Aroclor1260	ND		2.5	50	04/08/2014 05:45
PCBs, total	ND		2.5	50	04/08/2014 05:45
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: a3	
Decachlorobiphenyl	112		70-130		04/08/2014 05:45

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW3550B
Analytical Method: SW8081A/8082
Unit: mg/kg

Organochlorine Pesticides (Basic Target List) + PCBs

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-13-5.5	1404200-006A	Soil	03/25/2014	GC22	89021
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Aldrin	ND		0.010	10	04/08/2014 05:12
a-BHC	ND		0.010	10	04/08/2014 05:12
b-BHC	ND		0.010	10	04/08/2014 05:12
d-BHC	ND		0.010	10	04/08/2014 05:12
g-BHC	ND		0.010	10	04/08/2014 05:12
Chlordane (Technical)	0.27		0.25	10	04/08/2014 05:12
a-Chlordane	0.023		0.010	10	04/08/2014 05:12
g-Chlordane	0.028		0.010	10	04/08/2014 05:12
p,p-DDD	ND		0.010	10	04/08/2014 05:12
p,p-DDE	ND		0.010	10	04/08/2014 05:12
p,p-DDT	ND		0.010	10	04/08/2014 05:12
Dieldrin	0.021		0.010	10	04/08/2014 05:12
Endosulfan I	ND		0.010	10	04/08/2014 05:12
Endosulfan II	ND		0.010	10	04/08/2014 05:12
Endosulfan sulfate	ND		0.010	10	04/08/2014 05:12
Endrin	ND		0.010	10	04/08/2014 05:12
Endrin aldehyde	ND		0.010	10	04/08/2014 05:12
Endrin ketone	ND		0.010	10	04/08/2014 05:12
Heptachlor	ND		0.010	10	04/08/2014 05:12
Heptachlor epoxide	ND		0.010	10	04/08/2014 05:12
Hexachlorobenzene	ND		0.10	10	04/08/2014 05:12
Hexachlorocyclopentadiene	ND		0.20	10	04/08/2014 05:12
Methoxychlor	ND		0.010	10	04/08/2014 05:12
Toxaphene	ND		0.50	10	04/08/2014 05:12
Aroclor1016	ND		0.50	10	04/08/2014 05:12
Aroclor1221	ND		0.50	10	04/08/2014 05:12
Aroclor1232	ND		0.50	10	04/08/2014 05:12
Aroclor1242	ND		0.50	10	04/08/2014 05:12
Aroclor1248	ND		0.50	10	04/08/2014 05:12
Aroclor1254	ND		0.50	10	04/08/2014 05:12
Aroclor1260	ND		0.50	10	04/08/2014 05:12
PCBs, total	ND		0.50	10	04/08/2014 05:12
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Decachlorobiphenyl	90		70-130		04/08/2014 05:12

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW3550B
Analytical Method: SW8081A/8082
Unit: mg/kg

Organochlorine Pesticides (Basic Target List) + PCBs

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-8-3'	1404200-009A	Soil	03/25/2014	GC22	89021
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Aldrin	ND		0.0010	1	04/08/2014 04:38
a-BHC	ND		0.0010	1	04/08/2014 04:38
b-BHC	ND		0.0010	1	04/08/2014 04:38
d-BHC	ND		0.0010	1	04/08/2014 04:38
g-BHC	ND		0.0010	1	04/08/2014 04:38
Chlordane (Technical)	ND		0.025	1	04/08/2014 04:38
a-Chlordane	ND		0.0010	1	04/08/2014 04:38
g-Chlordane	0.0011		0.0010	1	04/08/2014 04:38
p,p-DDD	ND		0.0010	1	04/08/2014 04:38
p,p-DDE	ND		0.0010	1	04/08/2014 04:38
p,p-DDT	ND		0.0010	1	04/08/2014 04:38
Dieldrin	0.0081		0.0010	1	04/08/2014 04:38
Endosulfan I	ND		0.0010	1	04/08/2014 04:38
Endosulfan II	ND		0.0010	1	04/08/2014 04:38
Endosulfan sulfate	ND		0.0010	1	04/08/2014 04:38
Endrin	ND		0.0010	1	04/08/2014 04:38
Endrin aldehyde	ND		0.0010	1	04/08/2014 04:38
Endrin ketone	ND		0.0010	1	04/08/2014 04:38
Heptachlor	ND		0.0010	1	04/08/2014 04:38
Heptachlor epoxide	ND		0.0010	1	04/08/2014 04:38
Hexachlorobenzene	ND		0.010	1	04/08/2014 04:38
Hexachlorocyclopentadiene	ND		0.020	1	04/08/2014 04:38
Methoxychlor	ND		0.0010	1	04/08/2014 04:38
Toxaphene	ND		0.050	1	04/08/2014 04:38
Aroclor1016	ND		0.050	1	04/08/2014 04:38
Aroclor1221	ND		0.050	1	04/08/2014 04:38
Aroclor1232	ND		0.050	1	04/08/2014 04:38
Aroclor1242	ND		0.050	1	04/08/2014 04:38
Aroclor1248	ND		0.050	1	04/08/2014 04:38
Aroclor1254	ND		0.050	1	04/08/2014 04:38
Aroclor1260	ND		0.050	1	04/08/2014 04:38
PCBs, total	ND		0.050	1	04/08/2014 04:38
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Decachlorobiphenyl	80		70-130		04/08/2014 04:38

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW3550B
Analytical Method: SW8081A/8082
Unit: mg/kg

Organochlorine Pesticides (Basic Target List) + PCBs

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-14-3	1404200-012A	Soil	03/26/2014	GC22	89021
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Aldrin	ND		0.0020	2	04/08/2014 04:04
a-BHC	ND		0.0020	2	04/08/2014 04:04
b-BHC	ND		0.0020	2	04/08/2014 04:04
d-BHC	ND		0.0020	2	04/08/2014 04:04
g-BHC	ND		0.0020	2	04/08/2014 04:04
Chlordane (Technical)	ND		0.050	2	04/08/2014 04:04
a-Chlordane	ND		0.0020	2	04/08/2014 04:04
g-Chlordane	ND		0.0020	2	04/08/2014 04:04
p,p-DDD	ND		0.0020	2	04/08/2014 04:04
p,p-DDE	ND		0.0020	2	04/08/2014 04:04
p,p-DDT	ND		0.0020	2	04/08/2014 04:04
Dieldrin	ND		0.0020	2	04/08/2014 04:04
Endosulfan I	ND		0.0020	2	04/08/2014 04:04
Endosulfan II	ND		0.0020	2	04/08/2014 04:04
Endosulfan sulfate	ND		0.0020	2	04/08/2014 04:04
Endrin	ND		0.0020	2	04/08/2014 04:04
Endrin aldehyde	ND		0.0020	2	04/08/2014 04:04
Endrin ketone	ND		0.0020	2	04/08/2014 04:04
Heptachlor	ND		0.0020	2	04/08/2014 04:04
Heptachlor epoxide	ND		0.0020	2	04/08/2014 04:04
Hexachlorobenzene	ND		0.020	2	04/08/2014 04:04
Hexachlorocyclopentadiene	ND		0.040	2	04/08/2014 04:04
Methoxychlor	ND		0.0020	2	04/08/2014 04:04
Toxaphene	ND		0.10	2	04/08/2014 04:04
Aroclor1016	ND		0.10	2	04/08/2014 04:04
Aroclor1221	ND		0.10	2	04/08/2014 04:04
Aroclor1232	ND		0.10	2	04/08/2014 04:04
Aroclor1242	ND		0.10	2	04/08/2014 04:04
Aroclor1248	ND		0.10	2	04/08/2014 04:04
Aroclor1254	ND		0.10	2	04/08/2014 04:04
Aroclor1260	ND		0.10	2	04/08/2014 04:04
PCBs, total	ND		0.10	2	04/08/2014 04:04
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: a3	
Decachlorobiphenyl	84		70-130		04/08/2014 04:04

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW3550B
Analytical Method: SW8081A/8082
Unit: mg/kg

Organochlorine Pesticides (Basic Target List) + PCBs

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-11-3	1404200-019A	Soil	03/26/2014	GC22	89021
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Aldrin	ND		0.010	10	04/08/2014 03:31
a-BHC	ND		0.010	10	04/08/2014 03:31
b-BHC	ND		0.010	10	04/08/2014 03:31
d-BHC	ND		0.010	10	04/08/2014 03:31
g-BHC	ND		0.010	10	04/08/2014 03:31
Chlordane (Technical)	ND		0.25	10	04/08/2014 03:31
a-Chlordane	ND		0.010	10	04/08/2014 03:31
g-Chlordane	ND		0.010	10	04/08/2014 03:31
p,p-DDD	ND		0.010	10	04/08/2014 03:31
p,p-DDE	ND		0.010	10	04/08/2014 03:31
p,p-DDT	ND		0.010	10	04/08/2014 03:31
Dieldrin	ND		0.010	10	04/08/2014 03:31
Endosulfan I	ND		0.010	10	04/08/2014 03:31
Endosulfan II	ND		0.010	10	04/08/2014 03:31
Endosulfan sulfate	ND		0.010	10	04/08/2014 03:31
Endrin	ND		0.010	10	04/08/2014 03:31
Endrin aldehyde	ND		0.010	10	04/08/2014 03:31
Endrin ketone	ND		0.010	10	04/08/2014 03:31
Heptachlor	ND		0.010	10	04/08/2014 03:31
Heptachlor epoxide	ND		0.010	10	04/08/2014 03:31
Hexachlorobenzene	ND		0.10	10	04/08/2014 03:31
Hexachlorocyclopentadiene	ND		0.20	10	04/08/2014 03:31
Methoxychlor	ND		0.010	10	04/08/2014 03:31
Toxaphene	ND		0.50	10	04/08/2014 03:31
Aroclor1016	ND		0.50	10	04/08/2014 03:31
Aroclor1221	ND		0.50	10	04/08/2014 03:31
Aroclor1232	ND		0.50	10	04/08/2014 03:31
Aroclor1242	ND		0.50	10	04/08/2014 03:31
Aroclor1248	ND		0.50	10	04/08/2014 03:31
Aroclor1254	ND		0.50	10	04/08/2014 03:31
Aroclor1260	ND		0.50	10	04/08/2014 03:31
PCBs, total	ND		0.50	10	04/08/2014 03:31
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: a3	
Decachlorobiphenyl	98		70-130		04/08/2014 03:31

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW3550B
Analytical Method: SW8081A/8082
Unit: mg/kg

Organochlorine Pesticides (Basic Target List) + PCBs

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-11-5	1404200-020A	Soil	03/26/2014	GC22	89021
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Aldrin	ND		0.010	10	04/09/2014 20:31
a-BHC	ND		0.010	10	04/09/2014 20:31
b-BHC	ND		0.010	10	04/09/2014 20:31
d-BHC	ND		0.010	10	04/09/2014 20:31
g-BHC	ND		0.010	10	04/09/2014 20:31
Chlordane (Technical)	ND		0.25	10	04/09/2014 20:31
a-Chlordane	ND		0.010	10	04/09/2014 20:31
g-Chlordane	ND		0.010	10	04/09/2014 20:31
p,p-DDD	ND		0.010	10	04/09/2014 20:31
p,p-DDE	ND		0.010	10	04/09/2014 20:31
p,p-DDT	ND		0.010	10	04/09/2014 20:31
Dieldrin	ND		0.010	10	04/09/2014 20:31
Endosulfan I	ND		0.010	10	04/09/2014 20:31
Endosulfan II	ND		0.010	10	04/09/2014 20:31
Endosulfan sulfate	ND		0.010	10	04/09/2014 20:31
Endrin	ND		0.010	10	04/09/2014 20:31
Endrin aldehyde	ND		0.010	10	04/09/2014 20:31
Endrin ketone	ND		0.010	10	04/09/2014 20:31
Heptachlor	ND		0.010	10	04/09/2014 20:31
Heptachlor epoxide	ND		0.010	10	04/09/2014 20:31
Hexachlorobenzene	ND		0.10	10	04/09/2014 20:31
Hexachlorocyclopentadiene	ND		0.20	10	04/09/2014 20:31
Methoxychlor	ND		0.010	10	04/09/2014 20:31
Toxaphene	ND		0.50	10	04/09/2014 20:31
Aroclor1016	ND		0.50	10	04/09/2014 20:31
Aroclor1221	ND		0.50	10	04/09/2014 20:31
Aroclor1232	ND		0.50	10	04/09/2014 20:31
Aroclor1242	ND		0.50	10	04/09/2014 20:31
Aroclor1248	ND		0.50	10	04/09/2014 20:31
Aroclor1254	ND		0.50	10	04/09/2014 20:31
Aroclor1260	ND		0.50	10	04/09/2014 20:31
PCBs, total	ND		0.50	10	04/09/2014 20:31
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: a3	
Decachlorobiphenyl	94		70-130		04/09/2014 20:31

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW3550B
Analytical Method: SW8081A/8082
Unit: mg/kg

Organochlorine Pesticides (Basic Target List) + PCBs

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6-3	1404200-025A	Soil	03/31/2014	GC22	89021
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Aldrin	ND		0.0050	5	04/08/2014 08:00
a-BHC	ND		0.0050	5	04/08/2014 08:00
b-BHC	ND		0.0050	5	04/08/2014 08:00
d-BHC	ND		0.0050	5	04/08/2014 08:00
g-BHC	ND		0.0050	5	04/08/2014 08:00
Chlordane (Technical)	ND		0.12	5	04/08/2014 08:00
a-Chlordane	ND		0.0050	5	04/08/2014 08:00
g-Chlordane	ND		0.0050	5	04/08/2014 08:00
p,p-DDD	ND		0.0050	5	04/08/2014 08:00
p,p-DDE	ND		0.0050	5	04/08/2014 08:00
p,p-DDT	ND		0.0050	5	04/08/2014 08:00
Dieldrin	ND		0.0050	5	04/08/2014 08:00
Endosulfan I	ND		0.0050	5	04/08/2014 08:00
Endosulfan II	ND		0.0050	5	04/08/2014 08:00
Endosulfan sulfate	ND		0.0050	5	04/08/2014 08:00
Endrin	ND		0.0050	5	04/08/2014 08:00
Endrin aldehyde	ND		0.0050	5	04/08/2014 08:00
Endrin ketone	ND		0.0050	5	04/08/2014 08:00
Heptachlor	ND		0.0050	5	04/08/2014 08:00
Heptachlor epoxide	ND		0.0050	5	04/08/2014 08:00
Hexachlorobenzene	ND		0.050	5	04/08/2014 08:00
Hexachlorocyclopentadiene	ND		0.10	5	04/08/2014 08:00
Methoxychlor	ND		0.0050	5	04/08/2014 08:00
Toxaphene	ND		0.25	5	04/08/2014 08:00
Aroclor1016	ND		0.25	5	04/08/2014 08:00
Aroclor1221	ND		0.25	5	04/08/2014 08:00
Aroclor1232	ND		0.25	5	04/08/2014 08:00
Aroclor1242	ND		0.25	5	04/08/2014 08:00
Aroclor1248	ND		0.25	5	04/08/2014 08:00
Aroclor1254	ND		0.25	5	04/08/2014 08:00
Aroclor1260	ND		0.25	5	04/08/2014 08:00
PCBs, total	ND		0.25	5	04/08/2014 08:00
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: a3	
Decachlorobiphenyl	86		70-130		04/08/2014 08:00

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW3550B
Analytical Method: SW8081A/8082
Unit: mg/kg

Organochlorine Pesticides (Basic Target List) + PCBs

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-7-2.5	1404200-030A	Soil	04/02/2014	GC22	89021
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Aldrin	ND		0.20	200	04/08/2014 07:26
a-BHC	ND		0.20	200	04/08/2014 07:26
b-BHC	ND		0.20	200	04/08/2014 07:26
d-BHC	ND		0.20	200	04/08/2014 07:26
g-BHC	ND		0.20	200	04/08/2014 07:26
Chlordane (Technical)	ND		5.0	200	04/08/2014 07:26
a-Chlordane	ND		0.20	200	04/08/2014 07:26
g-Chlordane	ND		0.20	200	04/08/2014 07:26
p,p-DDD	ND		0.20	200	04/08/2014 07:26
p,p-DDE	ND		0.20	200	04/08/2014 07:26
p,p-DDT	ND		0.20	200	04/08/2014 07:26
Dieldrin	ND		0.20	200	04/08/2014 07:26
Endosulfan I	ND		0.20	200	04/08/2014 07:26
Endosulfan II	ND		0.20	200	04/08/2014 07:26
Endosulfan sulfate	ND		0.20	200	04/08/2014 07:26
Endrin	ND		0.20	200	04/08/2014 07:26
Endrin aldehyde	ND		0.20	200	04/08/2014 07:26
Endrin ketone	ND		0.20	200	04/08/2014 07:26
Heptachlor	ND		0.20	200	04/08/2014 07:26
Heptachlor epoxide	ND		0.20	200	04/08/2014 07:26
Hexachlorobenzene	ND		2.0	200	04/08/2014 07:26
Hexachlorocyclopentadiene	ND		4.0	200	04/08/2014 07:26
Methoxychlor	ND		0.20	200	04/08/2014 07:26
Toxaphene	ND		10	200	04/08/2014 07:26
Aroclor1016	ND		10	200	04/08/2014 07:26
Aroclor1221	ND		10	200	04/08/2014 07:26
Aroclor1232	ND		10	200	04/08/2014 07:26
Aroclor1242	ND		10	200	04/08/2014 07:26
Aroclor1248	ND		10	200	04/08/2014 07:26
Aroclor1254	ND		10	200	04/08/2014 07:26
Aroclor1260	ND		10	200	04/08/2014 07:26
PCBs, total	ND		10	200	04/08/2014 07:26
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	Analytical Comments: a3,c4	
Decachlorobiphenyl	262	S	70-130		04/08/2014 07:26



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-10-2.5	1404200-001A	Soil	03/24/2014	GC10	89000
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND	H	0.10	1	04/08/2014 12:09
tert-Amyl methyl ether (TAME)	ND	H	0.0050	1	04/08/2014 12:09
Benzene	ND	H	0.0050	1	04/08/2014 12:09
Bromobenzene	ND	H	0.0050	1	04/08/2014 12:09
Bromochloromethane	ND	H	0.0050	1	04/08/2014 12:09
Bromodichloromethane	ND	H	0.0050	1	04/08/2014 12:09
Bromoform	ND	H	0.0050	1	04/08/2014 12:09
Bromomethane	ND	H	0.0050	1	04/08/2014 12:09
2-Butanone (MEK)	ND	H	0.020	1	04/08/2014 12:09
t-Butyl alcohol (TBA)	ND	H	0.050	1	04/08/2014 12:09
n-Butyl benzene	ND	H	0.0050	1	04/08/2014 12:09
sec-Butyl benzene	ND	H	0.0050	1	04/08/2014 12:09
tert-Butyl benzene	ND	H	0.0050	1	04/08/2014 12:09
Carbon Disulfide	ND	H	0.0050	1	04/08/2014 12:09
Carbon Tetrachloride	ND	H	0.0050	1	04/08/2014 12:09
Chlorobenzene	ND	H	0.0050	1	04/08/2014 12:09
Chloroethane	ND	H	0.0050	1	04/08/2014 12:09
Chloroform	ND	H	0.0050	1	04/08/2014 12:09
Chloromethane	ND	H	0.0050	1	04/08/2014 12:09
2-Chlorotoluene	ND	H	0.0050	1	04/08/2014 12:09
4-Chlorotoluene	ND	H	0.0050	1	04/08/2014 12:09
Dibromochloromethane	ND	H	0.0050	1	04/08/2014 12:09
1,2-Dibromo-3-chloropropane	ND	H	0.0040	1	04/08/2014 12:09
1,2-Dibromoethane (EDB)	ND	H	0.0040	1	04/08/2014 12:09
Dibromomethane	ND	H	0.0050	1	04/08/2014 12:09
1,2-Dichlorobenzene	ND	H	0.0050	1	04/08/2014 12:09
1,3-Dichlorobenzene	ND	H	0.0050	1	04/08/2014 12:09
1,4-Dichlorobenzene	ND	H	0.0050	1	04/08/2014 12:09
Dichlorodifluoromethane	ND	H	0.0050	1	04/08/2014 12:09
1,1-Dichloroethane	ND	H	0.0050	1	04/08/2014 12:09
1,2-Dichloroethane (1,2-DCA)	ND	H	0.0040	1	04/08/2014 12:09
1,1-Dichloroethene	ND	H	0.0050	1	04/08/2014 12:09
cis-1,2-Dichloroethene	ND	H	0.0050	1	04/08/2014 12:09
trans-1,2-Dichloroethene	ND	H	0.0050	1	04/08/2014 12:09
1,2-Dichloropropane	ND	H	0.0050	1	04/08/2014 12:09
1,3-Dichloropropane	ND	H	0.0050	1	04/08/2014 12:09
2,2-Dichloropropane	ND	H	0.0050	1	04/08/2014 12:09
1,1-Dichloropropene	ND	H	0.0050	1	04/08/2014 12:09

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-10-2.5	1404200-001A	Soil	03/24/2014	GC10	89000
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND	H	0.0050	1	04/08/2014 12:09
trans-1,3-Dichloropropene	ND	H	0.0050	1	04/08/2014 12:09
Diisopropyl ether (DIPE)	ND	H	0.0050	1	04/08/2014 12:09
Ethylbenzene	ND	H	0.0050	1	04/08/2014 12:09
Ethyl tert-butyl ether (ETBE)	ND	H	0.0050	1	04/08/2014 12:09
Freon 113	ND	H	0.10	1	04/08/2014 12:09
Hexachlorobutadiene	ND	H	0.0050	1	04/08/2014 12:09
Hexachloroethane	ND	H	0.0050	1	04/08/2014 12:09
2-Hexanone	ND	H	0.0050	1	04/08/2014 12:09
Isopropylbenzene	ND	H	0.0050	1	04/08/2014 12:09
4-Isopropyl toluene	ND	H	0.0050	1	04/08/2014 12:09
Methyl-t-butyl ether (MTBE)	ND	H	0.0050	1	04/08/2014 12:09
Methylene chloride	ND	H	0.0050	1	04/08/2014 12:09
4-Methyl-2-pentanone (MIBK)	ND	H	0.0050	1	04/08/2014 12:09
Naphthalene	ND	H	0.0050	1	04/08/2014 12:09
n-Propyl benzene	ND	H	0.0050	1	04/08/2014 12:09
Styrene	ND	H	0.0050	1	04/08/2014 12:09
1,1,1,2-Tetrachloroethane	ND	H	0.0050	1	04/08/2014 12:09
1,1,2,2-Tetrachloroethane	ND	H	0.0050	1	04/08/2014 12:09
Tetrachloroethene	ND	H	0.0050	1	04/08/2014 12:09
Toluene	ND	H	0.0050	1	04/08/2014 12:09
1,2,3-Trichlorobenzene	ND	H	0.0050	1	04/08/2014 12:09
1,2,4-Trichlorobenzene	ND	H	0.0050	1	04/08/2014 12:09
1,1,1-Trichloroethane	ND	H	0.0050	1	04/08/2014 12:09
1,1,2-Trichloroethane	ND	H	0.0050	1	04/08/2014 12:09
Trichloroethene	ND	H	0.0050	1	04/08/2014 12:09
Trichlorofluoromethane	ND	H	0.0050	1	04/08/2014 12:09
1,2,3-Trichloropropane	ND	H	0.0050	1	04/08/2014 12:09
1,2,4-Trimethylbenzene	ND	H	0.0050	1	04/08/2014 12:09
1,3,5-Trimethylbenzene	ND	H	0.0050	1	04/08/2014 12:09
Vinyl Chloride	ND	H	0.0050	1	04/08/2014 12:09
Xylenes, Total	ND	H	0.0050	1	04/08/2014 12:09
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>		
Dibromofluoromethane	98	H	70-130		04/08/2014 12:09
Toluene-d8	95	H	70-130		04/08/2014 12:09
4-BFB	90	H	70-130		04/08/2014 12:09

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-10-8	1404200-003A	Soil	03/24/2014	GC10	89000
Analytes	Result	Qualifiers	RL	DF	Date Analyzed
Acetone	ND	H	0.10	1	04/08/2014 12:51
tert-Amyl methyl ether (TAME)	ND	H	0.0050	1	04/08/2014 12:51
Benzene	ND	H	0.0050	1	04/08/2014 12:51
Bromobenzene	ND	H	0.0050	1	04/08/2014 12:51
Bromochloromethane	ND	H	0.0050	1	04/08/2014 12:51
Bromodichloromethane	ND	H	0.0050	1	04/08/2014 12:51
Bromoform	ND	H	0.0050	1	04/08/2014 12:51
Bromomethane	ND	H	0.0050	1	04/08/2014 12:51
2-Butanone (MEK)	ND	H	0.020	1	04/08/2014 12:51
t-Butyl alcohol (TBA)	ND	H	0.050	1	04/08/2014 12:51
n-Butyl benzene	ND	H	0.0050	1	04/08/2014 12:51
sec-Butyl benzene	ND	H	0.0050	1	04/08/2014 12:51
tert-Butyl benzene	ND	H	0.0050	1	04/08/2014 12:51
Carbon Disulfide	ND	H	0.0050	1	04/08/2014 12:51
Carbon Tetrachloride	ND	H	0.0050	1	04/08/2014 12:51
Chlorobenzene	ND	H	0.0050	1	04/08/2014 12:51
Chloroethane	ND	H	0.0050	1	04/08/2014 12:51
Chloroform	ND	H	0.0050	1	04/08/2014 12:51
Chloromethane	ND	H	0.0050	1	04/08/2014 12:51
2-Chlorotoluene	ND	H	0.0050	1	04/08/2014 12:51
4-Chlorotoluene	ND	H	0.0050	1	04/08/2014 12:51
Dibromochloromethane	ND	H	0.0050	1	04/08/2014 12:51
1,2-Dibromo-3-chloropropane	ND	H	0.0040	1	04/08/2014 12:51
1,2-Dibromoethane (EDB)	ND	H	0.0040	1	04/08/2014 12:51
Dibromomethane	ND	H	0.0050	1	04/08/2014 12:51
1,2-Dichlorobenzene	ND	H	0.0050	1	04/08/2014 12:51
1,3-Dichlorobenzene	ND	H	0.0050	1	04/08/2014 12:51
1,4-Dichlorobenzene	ND	H	0.0050	1	04/08/2014 12:51
Dichlorodifluoromethane	ND	H	0.0050	1	04/08/2014 12:51
1,1-Dichloroethane	ND	H	0.0050	1	04/08/2014 12:51
1,2-Dichloroethane (1,2-DCA)	ND	H	0.0040	1	04/08/2014 12:51
1,1-Dichloroethene	ND	H	0.0050	1	04/08/2014 12:51
cis-1,2-Dichloroethene	ND	H	0.0050	1	04/08/2014 12:51
trans-1,2-Dichloroethene	ND	H	0.0050	1	04/08/2014 12:51
1,2-Dichloropropane	ND	H	0.0050	1	04/08/2014 12:51
1,3-Dichloropropane	ND	H	0.0050	1	04/08/2014 12:51
2,2-Dichloropropane	ND	H	0.0050	1	04/08/2014 12:51
1,1-Dichloropropene	ND	H	0.0050	1	04/08/2014 12:51

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-10-8	1404200-003A	Soil	03/24/2014	GC10	89000
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND	H	0.0050	1	04/08/2014 12:51
trans-1,3-Dichloropropene	ND	H	0.0050	1	04/08/2014 12:51
Diisopropyl ether (DIPE)	ND	H	0.0050	1	04/08/2014 12:51
Ethylbenzene	ND	H	0.0050	1	04/08/2014 12:51
Ethyl tert-butyl ether (ETBE)	ND	H	0.0050	1	04/08/2014 12:51
Freon 113	ND	H	0.10	1	04/08/2014 12:51
Hexachlorobutadiene	ND	H	0.0050	1	04/08/2014 12:51
Hexachloroethane	ND	H	0.0050	1	04/08/2014 12:51
2-Hexanone	ND	H	0.0050	1	04/08/2014 12:51
Isopropylbenzene	ND	H	0.0050	1	04/08/2014 12:51
4-Isopropyl toluene	ND	H	0.0050	1	04/08/2014 12:51
Methyl-t-butyl ether (MTBE)	ND	H	0.0050	1	04/08/2014 12:51
Methylene chloride	ND	H	0.0050	1	04/08/2014 12:51
4-Methyl-2-pentanone (MIBK)	ND	H	0.0050	1	04/08/2014 12:51
Naphthalene	ND	H	0.0050	1	04/08/2014 12:51
n-Propyl benzene	ND	H	0.0050	1	04/08/2014 12:51
Styrene	ND	H	0.0050	1	04/08/2014 12:51
1,1,1,2-Tetrachloroethane	ND	H	0.0050	1	04/08/2014 12:51
1,1,2,2-Tetrachloroethane	ND	H	0.0050	1	04/08/2014 12:51
Tetrachloroethene	ND	H	0.0050	1	04/08/2014 12:51
Toluene	ND	H	0.0050	1	04/08/2014 12:51
1,2,3-Trichlorobenzene	ND	H	0.0050	1	04/08/2014 12:51
1,2,4-Trichlorobenzene	ND	H	0.0050	1	04/08/2014 12:51
1,1,1-Trichloroethane	ND	H	0.0050	1	04/08/2014 12:51
1,1,2-Trichloroethane	ND	H	0.0050	1	04/08/2014 12:51
Trichloroethene	ND	H	0.0050	1	04/08/2014 12:51
Trichlorofluoromethane	ND	H	0.0050	1	04/08/2014 12:51
1,2,3-Trichloropropane	ND	H	0.0050	1	04/08/2014 12:51
1,2,4-Trimethylbenzene	ND	H	0.0050	1	04/08/2014 12:51
1,3,5-Trimethylbenzene	ND	H	0.0050	1	04/08/2014 12:51
Vinyl Chloride	ND	H	0.0050	1	04/08/2014 12:51
Xylenes, Total	ND	H	0.0050	1	04/08/2014 12:51
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>		
Dibromofluoromethane	99	H	70-130		04/08/2014 12:51
Toluene-d8	93	H	70-130		04/08/2014 12:51
4-BFB	94	H	70-130		04/08/2014 12:51

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-13-5.5	1404200-006A	Soil	03/25/2014	GC10	89000
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	04/08/2014 13:33
tert-Amyl methyl ether (TAME)	ND		0.0050	1	04/08/2014 13:33
Benzene	ND		0.0050	1	04/08/2014 13:33
Bromobenzene	ND		0.0050	1	04/08/2014 13:33
Bromochloromethane	ND		0.0050	1	04/08/2014 13:33
Bromodichloromethane	ND		0.0050	1	04/08/2014 13:33
Bromoform	ND		0.0050	1	04/08/2014 13:33
Bromomethane	ND		0.0050	1	04/08/2014 13:33
2-Butanone (MEK)	ND		0.020	1	04/08/2014 13:33
t-Butyl alcohol (TBA)	ND		0.050	1	04/08/2014 13:33
n-Butyl benzene	ND		0.0050	1	04/08/2014 13:33
sec-Butyl benzene	ND		0.0050	1	04/08/2014 13:33
tert-Butyl benzene	ND		0.0050	1	04/08/2014 13:33
Carbon Disulfide	ND		0.0050	1	04/08/2014 13:33
Carbon Tetrachloride	ND		0.0050	1	04/08/2014 13:33
Chlorobenzene	ND		0.0050	1	04/08/2014 13:33
Chloroethane	ND		0.0050	1	04/08/2014 13:33
Chloroform	ND		0.0050	1	04/08/2014 13:33
Chloromethane	ND		0.0050	1	04/08/2014 13:33
2-Chlorotoluene	ND		0.0050	1	04/08/2014 13:33
4-Chlorotoluene	ND		0.0050	1	04/08/2014 13:33
Dibromochloromethane	ND		0.0050	1	04/08/2014 13:33
1,2-Dibromo-3-chloropropane	ND		0.0040	1	04/08/2014 13:33
1,2-Dibromoethane (EDB)	ND		0.0040	1	04/08/2014 13:33
Dibromomethane	ND		0.0050	1	04/08/2014 13:33
1,2-Dichlorobenzene	ND		0.0050	1	04/08/2014 13:33
1,3-Dichlorobenzene	ND		0.0050	1	04/08/2014 13:33
1,4-Dichlorobenzene	ND		0.0050	1	04/08/2014 13:33
Dichlorodifluoromethane	ND		0.0050	1	04/08/2014 13:33
1,1-Dichloroethane	ND		0.0050	1	04/08/2014 13:33
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	04/08/2014 13:33
1,1-Dichloroethene	ND		0.0050	1	04/08/2014 13:33
cis-1,2-Dichloroethene	ND		0.0050	1	04/08/2014 13:33
trans-1,2-Dichloroethene	ND		0.0050	1	04/08/2014 13:33
1,2-Dichloropropane	ND		0.0050	1	04/08/2014 13:33
1,3-Dichloropropane	ND		0.0050	1	04/08/2014 13:33
2,2-Dichloropropane	ND		0.0050	1	04/08/2014 13:33
1,1-Dichloropropene	ND		0.0050	1	04/08/2014 13:33

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-13-5.5	1404200-006A	Soil	03/25/2014	GC10	89000
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND		0.0050	1	04/08/2014 13:33
trans-1,3-Dichloropropene	ND		0.0050	1	04/08/2014 13:33
Diisopropyl ether (DIPE)	ND		0.0050	1	04/08/2014 13:33
Ethylbenzene	ND		0.0050	1	04/08/2014 13:33
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	04/08/2014 13:33
Freon 113	ND		0.10	1	04/08/2014 13:33
Hexachlorobutadiene	ND		0.0050	1	04/08/2014 13:33
Hexachloroethane	ND		0.0050	1	04/08/2014 13:33
2-Hexanone	ND		0.0050	1	04/08/2014 13:33
Isopropylbenzene	ND		0.0050	1	04/08/2014 13:33
4-Isopropyl toluene	ND		0.0050	1	04/08/2014 13:33
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	04/08/2014 13:33
Methylene chloride	ND		0.0050	1	04/08/2014 13:33
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	04/08/2014 13:33
Naphthalene	ND		0.0050	1	04/08/2014 13:33
n-Propyl benzene	ND		0.0050	1	04/08/2014 13:33
Styrene	ND		0.0050	1	04/08/2014 13:33
1,1,1,2-Tetrachloroethane	ND		0.0050	1	04/08/2014 13:33
1,1,2,2-Tetrachloroethane	ND		0.0050	1	04/08/2014 13:33
Tetrachloroethene	ND		0.0050	1	04/08/2014 13:33
Toluene	ND		0.0050	1	04/08/2014 13:33
1,2,3-Trichlorobenzene	ND		0.0050	1	04/08/2014 13:33
1,2,4-Trichlorobenzene	ND		0.0050	1	04/08/2014 13:33
1,1,1-Trichloroethane	ND		0.0050	1	04/08/2014 13:33
1,1,2-Trichloroethane	ND		0.0050	1	04/08/2014 13:33
Trichloroethene	ND		0.0050	1	04/08/2014 13:33
Trichlorofluoromethane	ND		0.0050	1	04/08/2014 13:33
1,2,3-Trichloropropane	ND		0.0050	1	04/08/2014 13:33
1,2,4-Trimethylbenzene	ND		0.0050	1	04/08/2014 13:33
1,3,5-Trimethylbenzene	ND		0.0050	1	04/08/2014 13:33
Vinyl Chloride	ND		0.0050	1	04/08/2014 13:33
Xylenes, Total	ND		0.0050	1	04/08/2014 13:33
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	98		70-130		04/08/2014 13:33
Toluene-d8	94		70-130		04/08/2014 13:33
4-BFB	100		70-130		04/08/2014 13:33

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-14-3	1404200-012A	Soil	03/26/2014	GC10	89000
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	04/08/2014 14:26
tert-Amyl methyl ether (TAME)	ND		0.0050	1	04/08/2014 14:26
Benzene	ND		0.0050	1	04/08/2014 14:26
Bromobenzene	ND		0.0050	1	04/08/2014 14:26
Bromochloromethane	ND		0.0050	1	04/08/2014 14:26
Bromodichloromethane	ND		0.0050	1	04/08/2014 14:26
Bromoform	ND		0.0050	1	04/08/2014 14:26
Bromomethane	ND		0.0050	1	04/08/2014 14:26
2-Butanone (MEK)	ND		0.020	1	04/08/2014 14:26
t-Butyl alcohol (TBA)	ND		0.050	1	04/08/2014 14:26
n-Butyl benzene	ND		0.0050	1	04/08/2014 14:26
sec-Butyl benzene	ND		0.0050	1	04/08/2014 14:26
tert-Butyl benzene	ND		0.0050	1	04/08/2014 14:26
Carbon Disulfide	ND		0.0050	1	04/08/2014 14:26
Carbon Tetrachloride	ND		0.0050	1	04/08/2014 14:26
Chlorobenzene	ND		0.0050	1	04/08/2014 14:26
Chloroethane	ND		0.0050	1	04/08/2014 14:26
Chloroform	ND		0.0050	1	04/08/2014 14:26
Chloromethane	ND		0.0050	1	04/08/2014 14:26
2-Chlorotoluene	ND		0.0050	1	04/08/2014 14:26
4-Chlorotoluene	ND		0.0050	1	04/08/2014 14:26
Dibromochloromethane	ND		0.0050	1	04/08/2014 14:26
1,2-Dibromo-3-chloropropane	ND		0.0040	1	04/08/2014 14:26
1,2-Dibromoethane (EDB)	ND		0.0040	1	04/08/2014 14:26
Dibromomethane	ND		0.0050	1	04/08/2014 14:26
1,2-Dichlorobenzene	ND		0.0050	1	04/08/2014 14:26
1,3-Dichlorobenzene	ND		0.0050	1	04/08/2014 14:26
1,4-Dichlorobenzene	ND		0.0050	1	04/08/2014 14:26
Dichlorodifluoromethane	ND		0.0050	1	04/08/2014 14:26
1,1-Dichloroethane	ND		0.0050	1	04/08/2014 14:26
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	04/08/2014 14:26
1,1-Dichloroethene	ND		0.0050	1	04/08/2014 14:26
cis-1,2-Dichloroethene	ND		0.0050	1	04/08/2014 14:26
trans-1,2-Dichloroethene	ND		0.0050	1	04/08/2014 14:26
1,2-Dichloropropane	ND		0.0050	1	04/08/2014 14:26
1,3-Dichloropropane	ND		0.0050	1	04/08/2014 14:26
2,2-Dichloropropane	ND		0.0050	1	04/08/2014 14:26
1,1-Dichloropropene	ND		0.0050	1	04/08/2014 14:26

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-14-3	1404200-012A	Soil	03/26/2014	GC10	89000
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND		0.0050	1	04/08/2014 14:26
trans-1,3-Dichloropropene	ND		0.0050	1	04/08/2014 14:26
Diisopropyl ether (DIPE)	ND		0.0050	1	04/08/2014 14:26
Ethylbenzene	ND		0.0050	1	04/08/2014 14:26
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	04/08/2014 14:26
Freon 113	ND		0.10	1	04/08/2014 14:26
Hexachlorobutadiene	ND		0.0050	1	04/08/2014 14:26
Hexachloroethane	ND		0.0050	1	04/08/2014 14:26
2-Hexanone	ND		0.0050	1	04/08/2014 14:26
Isopropylbenzene	ND		0.0050	1	04/08/2014 14:26
4-Isopropyl toluene	ND		0.0050	1	04/08/2014 14:26
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	04/08/2014 14:26
Methylene chloride	ND		0.0050	1	04/08/2014 14:26
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	04/08/2014 14:26
Naphthalene	ND		0.0050	1	04/08/2014 14:26
n-Propyl benzene	ND		0.0050	1	04/08/2014 14:26
Styrene	ND		0.0050	1	04/08/2014 14:26
1,1,1,2-Tetrachloroethane	ND		0.0050	1	04/08/2014 14:26
1,1,2,2-Tetrachloroethane	ND		0.0050	1	04/08/2014 14:26
Tetrachloroethene	ND		0.0050	1	04/08/2014 14:26
Toluene	ND		0.0050	1	04/08/2014 14:26
1,2,3-Trichlorobenzene	ND		0.0050	1	04/08/2014 14:26
1,2,4-Trichlorobenzene	ND		0.0050	1	04/08/2014 14:26
1,1,1-Trichloroethane	ND		0.0050	1	04/08/2014 14:26
1,1,2-Trichloroethane	ND		0.0050	1	04/08/2014 14:26
Trichloroethene	ND		0.0050	1	04/08/2014 14:26
Trichlorofluoromethane	ND		0.0050	1	04/08/2014 14:26
1,2,3-Trichloropropane	ND		0.0050	1	04/08/2014 14:26
1,2,4-Trimethylbenzene	ND		0.0050	1	04/08/2014 14:26
1,3,5-Trimethylbenzene	ND		0.0050	1	04/08/2014 14:26
Vinyl Chloride	ND		0.0050	1	04/08/2014 14:26
Xylenes, Total	ND		0.0050	1	04/08/2014 14:26
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	99		70-130		04/08/2014 14:26
Toluene-d8	97		70-130		04/08/2014 14:26
4-BFB	98		70-130		04/08/2014 14:26

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-14-5.5	1404200-013A	Soil	03/26/2014	GC10	89000
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	04/08/2014 15:08
tert-Amyl methyl ether (TAME)	ND		0.0050	1	04/08/2014 15:08
Benzene	ND		0.0050	1	04/08/2014 15:08
Bromobenzene	ND		0.0050	1	04/08/2014 15:08
Bromochloromethane	ND		0.0050	1	04/08/2014 15:08
Bromodichloromethane	ND		0.0050	1	04/08/2014 15:08
Bromoform	ND		0.0050	1	04/08/2014 15:08
Bromomethane	ND		0.0050	1	04/08/2014 15:08
2-Butanone (MEK)	ND		0.020	1	04/08/2014 15:08
t-Butyl alcohol (TBA)	ND		0.050	1	04/08/2014 15:08
n-Butyl benzene	ND		0.0050	1	04/08/2014 15:08
sec-Butyl benzene	ND		0.0050	1	04/08/2014 15:08
tert-Butyl benzene	ND		0.0050	1	04/08/2014 15:08
Carbon Disulfide	ND		0.0050	1	04/08/2014 15:08
Carbon Tetrachloride	ND		0.0050	1	04/08/2014 15:08
Chlorobenzene	ND		0.0050	1	04/08/2014 15:08
Chloroethane	ND		0.0050	1	04/08/2014 15:08
Chloroform	ND		0.0050	1	04/08/2014 15:08
Chloromethane	ND		0.0050	1	04/08/2014 15:08
2-Chlorotoluene	ND		0.0050	1	04/08/2014 15:08
4-Chlorotoluene	ND		0.0050	1	04/08/2014 15:08
Dibromochloromethane	ND		0.0050	1	04/08/2014 15:08
1,2-Dibromo-3-chloropropane	ND		0.0040	1	04/08/2014 15:08
1,2-Dibromoethane (EDB)	ND		0.0040	1	04/08/2014 15:08
Dibromomethane	ND		0.0050	1	04/08/2014 15:08
1,2-Dichlorobenzene	ND		0.0050	1	04/08/2014 15:08
1,3-Dichlorobenzene	ND		0.0050	1	04/08/2014 15:08
1,4-Dichlorobenzene	ND		0.0050	1	04/08/2014 15:08
Dichlorodifluoromethane	ND		0.0050	1	04/08/2014 15:08
1,1-Dichloroethane	ND		0.0050	1	04/08/2014 15:08
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	04/08/2014 15:08
1,1-Dichloroethene	ND		0.0050	1	04/08/2014 15:08
cis-1,2-Dichloroethene	ND		0.0050	1	04/08/2014 15:08
trans-1,2-Dichloroethene	ND		0.0050	1	04/08/2014 15:08
1,2-Dichloropropane	ND		0.0050	1	04/08/2014 15:08
1,3-Dichloropropane	ND		0.0050	1	04/08/2014 15:08
2,2-Dichloropropane	ND		0.0050	1	04/08/2014 15:08
1,1-Dichloropropene	ND		0.0050	1	04/08/2014 15:08

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-14-5.5	1404200-013A	Soil	03/26/2014	GC10	89000
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND		0.0050	1	04/08/2014 15:08
trans-1,3-Dichloropropene	ND		0.0050	1	04/08/2014 15:08
Diisopropyl ether (DIPE)	ND		0.0050	1	04/08/2014 15:08
Ethylbenzene	ND		0.0050	1	04/08/2014 15:08
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	04/08/2014 15:08
Freon 113	ND		0.10	1	04/08/2014 15:08
Hexachlorobutadiene	ND		0.0050	1	04/08/2014 15:08
Hexachloroethane	ND		0.0050	1	04/08/2014 15:08
2-Hexanone	ND		0.0050	1	04/08/2014 15:08
Isopropylbenzene	ND		0.0050	1	04/08/2014 15:08
4-Isopropyl toluene	ND		0.0050	1	04/08/2014 15:08
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	04/08/2014 15:08
Methylene chloride	ND		0.0050	1	04/08/2014 15:08
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	04/08/2014 15:08
Naphthalene	ND		0.0050	1	04/08/2014 15:08
n-Propyl benzene	ND		0.0050	1	04/08/2014 15:08
Styrene	ND		0.0050	1	04/08/2014 15:08
1,1,1,2-Tetrachloroethane	ND		0.0050	1	04/08/2014 15:08
1,1,2,2-Tetrachloroethane	ND		0.0050	1	04/08/2014 15:08
Tetrachloroethene	ND		0.0050	1	04/08/2014 15:08
Toluene	ND		0.0050	1	04/08/2014 15:08
1,2,3-Trichlorobenzene	ND		0.0050	1	04/08/2014 15:08
1,2,4-Trichlorobenzene	ND		0.0050	1	04/08/2014 15:08
1,1,1-Trichloroethane	ND		0.0050	1	04/08/2014 15:08
1,1,2-Trichloroethane	ND		0.0050	1	04/08/2014 15:08
Trichloroethene	ND		0.0050	1	04/08/2014 15:08
Trichlorofluoromethane	ND		0.0050	1	04/08/2014 15:08
1,2,3-Trichloropropane	ND		0.0050	1	04/08/2014 15:08
1,2,4-Trimethylbenzene	ND		0.0050	1	04/08/2014 15:08
1,3,5-Trimethylbenzene	ND		0.0050	1	04/08/2014 15:08
Vinyl Chloride	ND		0.0050	1	04/08/2014 15:08
Xylenes, Total	ND		0.0050	1	04/08/2014 15:08
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	99		70-130		04/08/2014 15:08
Toluene-d8	94		70-130		04/08/2014 15:08
4-BFB	101		70-130		04/08/2014 15:08

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-9-5.5	1404200-016A	Soil	03/25/2014	GC10	89000
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	04/08/2014 15:50
tert-Amyl methyl ether (TAME)	ND		0.0050	1	04/08/2014 15:50
Benzene	ND		0.0050	1	04/08/2014 15:50
Bromobenzene	ND		0.0050	1	04/08/2014 15:50
Bromochloromethane	ND		0.0050	1	04/08/2014 15:50
Bromodichloromethane	ND		0.0050	1	04/08/2014 15:50
Bromoform	ND		0.0050	1	04/08/2014 15:50
Bromomethane	ND		0.0050	1	04/08/2014 15:50
2-Butanone (MEK)	ND		0.020	1	04/08/2014 15:50
t-Butyl alcohol (TBA)	ND		0.050	1	04/08/2014 15:50
n-Butyl benzene	ND		0.0050	1	04/08/2014 15:50
sec-Butyl benzene	ND		0.0050	1	04/08/2014 15:50
tert-Butyl benzene	ND		0.0050	1	04/08/2014 15:50
Carbon Disulfide	ND		0.0050	1	04/08/2014 15:50
Carbon Tetrachloride	ND		0.0050	1	04/08/2014 15:50
Chlorobenzene	ND		0.0050	1	04/08/2014 15:50
Chloroethane	ND		0.0050	1	04/08/2014 15:50
Chloroform	ND		0.0050	1	04/08/2014 15:50
Chloromethane	ND		0.0050	1	04/08/2014 15:50
2-Chlorotoluene	ND		0.0050	1	04/08/2014 15:50
4-Chlorotoluene	ND		0.0050	1	04/08/2014 15:50
Dibromochloromethane	ND		0.0050	1	04/08/2014 15:50
1,2-Dibromo-3-chloropropane	ND		0.0040	1	04/08/2014 15:50
1,2-Dibromoethane (EDB)	ND		0.0040	1	04/08/2014 15:50
Dibromomethane	ND		0.0050	1	04/08/2014 15:50
1,2-Dichlorobenzene	ND		0.0050	1	04/08/2014 15:50
1,3-Dichlorobenzene	ND		0.0050	1	04/08/2014 15:50
1,4-Dichlorobenzene	ND		0.0050	1	04/08/2014 15:50
Dichlorodifluoromethane	ND		0.0050	1	04/08/2014 15:50
1,1-Dichloroethane	ND		0.0050	1	04/08/2014 15:50
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	04/08/2014 15:50
1,1-Dichloroethene	ND		0.0050	1	04/08/2014 15:50
cis-1,2-Dichloroethene	0.017		0.0050	1	04/08/2014 15:50
trans-1,2-Dichloroethene	ND		0.0050	1	04/08/2014 15:50
1,2-Dichloropropane	ND		0.0050	1	04/08/2014 15:50
1,3-Dichloropropane	ND		0.0050	1	04/08/2014 15:50
2,2-Dichloropropane	ND		0.0050	1	04/08/2014 15:50
1,1-Dichloropropene	ND		0.0050	1	04/08/2014 15:50

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-9-5.5	1404200-016A	Soil	03/25/2014	GC10	89000
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND		0.0050	1	04/08/2014 15:50
trans-1,3-Dichloropropene	ND		0.0050	1	04/08/2014 15:50
Diisopropyl ether (DIPE)	ND		0.0050	1	04/08/2014 15:50
Ethylbenzene	ND		0.0050	1	04/08/2014 15:50
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	04/08/2014 15:50
Freon 113	ND		0.10	1	04/08/2014 15:50
Hexachlorobutadiene	ND		0.0050	1	04/08/2014 15:50
Hexachloroethane	ND		0.0050	1	04/08/2014 15:50
2-Hexanone	ND		0.0050	1	04/08/2014 15:50
Isopropylbenzene	ND		0.0050	1	04/08/2014 15:50
4-Isopropyl toluene	ND		0.0050	1	04/08/2014 15:50
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	04/08/2014 15:50
Methylene chloride	ND		0.0050	1	04/08/2014 15:50
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	04/08/2014 15:50
Naphthalene	ND		0.0050	1	04/08/2014 15:50
n-Propyl benzene	ND		0.0050	1	04/08/2014 15:50
Styrene	ND		0.0050	1	04/08/2014 15:50
1,1,1,2-Tetrachloroethane	ND		0.0050	1	04/08/2014 15:50
1,1,2,2-Tetrachloroethane	ND		0.0050	1	04/08/2014 15:50
Tetrachloroethene	ND		0.0050	1	04/08/2014 15:50
Toluene	ND		0.0050	1	04/08/2014 15:50
1,2,3-Trichlorobenzene	ND		0.0050	1	04/08/2014 15:50
1,2,4-Trichlorobenzene	ND		0.0050	1	04/08/2014 15:50
1,1,1-Trichloroethane	ND		0.0050	1	04/08/2014 15:50
1,1,2-Trichloroethane	ND		0.0050	1	04/08/2014 15:50
Trichloroethene	ND		0.0050	1	04/08/2014 15:50
Trichlorofluoromethane	ND		0.0050	1	04/08/2014 15:50
1,2,3-Trichloropropane	ND		0.0050	1	04/08/2014 15:50
1,2,4-Trimethylbenzene	ND		0.0050	1	04/08/2014 15:50
1,3,5-Trimethylbenzene	ND		0.0050	1	04/08/2014 15:50
Vinyl Chloride	ND		0.0050	1	04/08/2014 15:50
Xylenes, Total	ND		0.0050	1	04/08/2014 15:50
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	99		70-130		04/08/2014 15:50
Toluene-d8	94		70-130		04/08/2014 15:50
4-BFB	102		70-130		04/08/2014 15:50

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-11-3	1404200-019A	Soil	03/26/2014	GC10	89000
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	04/08/2014 16:32
tert-Amyl methyl ether (TAME)	ND		0.0050	1	04/08/2014 16:32
Benzene	ND		0.0050	1	04/08/2014 16:32
Bromobenzene	ND		0.0050	1	04/08/2014 16:32
Bromochloromethane	ND		0.0050	1	04/08/2014 16:32
Bromodichloromethane	ND		0.0050	1	04/08/2014 16:32
Bromoform	ND		0.0050	1	04/08/2014 16:32
Bromomethane	ND		0.0050	1	04/08/2014 16:32
2-Butanone (MEK)	ND		0.020	1	04/08/2014 16:32
t-Butyl alcohol (TBA)	ND		0.050	1	04/08/2014 16:32
n-Butyl benzene	ND		0.0050	1	04/08/2014 16:32
sec-Butyl benzene	ND		0.0050	1	04/08/2014 16:32
tert-Butyl benzene	ND		0.0050	1	04/08/2014 16:32
Carbon Disulfide	ND		0.0050	1	04/08/2014 16:32
Carbon Tetrachloride	ND		0.0050	1	04/08/2014 16:32
Chlorobenzene	ND		0.0050	1	04/08/2014 16:32
Chloroethane	ND		0.0050	1	04/08/2014 16:32
Chloroform	ND		0.0050	1	04/08/2014 16:32
Chloromethane	ND		0.0050	1	04/08/2014 16:32
2-Chlorotoluene	ND		0.0050	1	04/08/2014 16:32
4-Chlorotoluene	ND		0.0050	1	04/08/2014 16:32
Dibromochloromethane	ND		0.0050	1	04/08/2014 16:32
1,2-Dibromo-3-chloropropane	ND		0.0040	1	04/08/2014 16:32
1,2-Dibromoethane (EDB)	ND		0.0040	1	04/08/2014 16:32
Dibromomethane	ND		0.0050	1	04/08/2014 16:32
1,2-Dichlorobenzene	ND		0.0050	1	04/08/2014 16:32
1,3-Dichlorobenzene	ND		0.0050	1	04/08/2014 16:32
1,4-Dichlorobenzene	ND		0.0050	1	04/08/2014 16:32
Dichlorodifluoromethane	ND		0.0050	1	04/08/2014 16:32
1,1-Dichloroethane	ND		0.0050	1	04/08/2014 16:32
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	04/08/2014 16:32
1,1-Dichloroethene	ND		0.0050	1	04/08/2014 16:32
cis-1,2-Dichloroethene	ND		0.0050	1	04/08/2014 16:32
trans-1,2-Dichloroethene	ND		0.0050	1	04/08/2014 16:32
1,2-Dichloropropane	ND		0.0050	1	04/08/2014 16:32
1,3-Dichloropropane	ND		0.0050	1	04/08/2014 16:32
2,2-Dichloropropane	ND		0.0050	1	04/08/2014 16:32
1,1-Dichloropropene	ND		0.0050	1	04/08/2014 16:32

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-11-3	1404200-019A	Soil	03/26/2014	GC10	89000
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND		0.0050	1	04/08/2014 16:32
trans-1,3-Dichloropropene	ND		0.0050	1	04/08/2014 16:32
Diisopropyl ether (DIPE)	ND		0.0050	1	04/08/2014 16:32
Ethylbenzene	ND		0.0050	1	04/08/2014 16:32
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	04/08/2014 16:32
Freon 113	ND		0.10	1	04/08/2014 16:32
Hexachlorobutadiene	ND		0.0050	1	04/08/2014 16:32
Hexachloroethane	ND		0.0050	1	04/08/2014 16:32
2-Hexanone	ND		0.0050	1	04/08/2014 16:32
Isopropylbenzene	ND		0.0050	1	04/08/2014 16:32
4-Isopropyl toluene	ND		0.0050	1	04/08/2014 16:32
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	04/08/2014 16:32
Methylene chloride	ND		0.0050	1	04/08/2014 16:32
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	04/08/2014 16:32
Naphthalene	ND		0.0050	1	04/08/2014 16:32
n-Propyl benzene	ND		0.0050	1	04/08/2014 16:32
Styrene	ND		0.0050	1	04/08/2014 16:32
1,1,1,2-Tetrachloroethane	ND		0.0050	1	04/08/2014 16:32
1,1,2,2-Tetrachloroethane	ND		0.0050	1	04/08/2014 16:32
Tetrachloroethene	ND		0.0050	1	04/08/2014 16:32
Toluene	ND		0.0050	1	04/08/2014 16:32
1,2,3-Trichlorobenzene	ND		0.0050	1	04/08/2014 16:32
1,2,4-Trichlorobenzene	ND		0.0050	1	04/08/2014 16:32
1,1,1-Trichloroethane	ND		0.0050	1	04/08/2014 16:32
1,1,2-Trichloroethane	ND		0.0050	1	04/08/2014 16:32
Trichloroethene	ND		0.0050	1	04/08/2014 16:32
Trichlorofluoromethane	ND		0.0050	1	04/08/2014 16:32
1,2,3-Trichloropropane	ND		0.0050	1	04/08/2014 16:32
1,2,4-Trimethylbenzene	ND		0.0050	1	04/08/2014 16:32
1,3,5-Trimethylbenzene	ND		0.0050	1	04/08/2014 16:32
Vinyl Chloride	ND		0.0050	1	04/08/2014 16:32
Xylenes, Total	ND		0.0050	1	04/08/2014 16:32
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	100		70-130		04/08/2014 16:32
Toluene-d8	95		70-130		04/08/2014 16:32
4-BFB	102		70-130		04/08/2014 16:32

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-12-5.5	1404200-022A	Soil	03/26/2014	GC10	89000
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	04/08/2014 02:57
tert-Amyl methyl ether (TAME)	ND		0.0050	1	04/08/2014 02:57
Benzene	ND		0.0050	1	04/08/2014 02:57
Bromobenzene	ND		0.0050	1	04/08/2014 02:57
Bromochloromethane	ND		0.0050	1	04/08/2014 02:57
Bromodichloromethane	ND		0.0050	1	04/08/2014 02:57
Bromoform	ND		0.0050	1	04/08/2014 02:57
Bromomethane	ND		0.0050	1	04/08/2014 02:57
2-Butanone (MEK)	ND		0.020	1	04/08/2014 02:57
t-Butyl alcohol (TBA)	ND		0.050	1	04/08/2014 02:57
n-Butyl benzene	ND		0.0050	1	04/08/2014 02:57
sec-Butyl benzene	ND		0.0050	1	04/08/2014 02:57
tert-Butyl benzene	ND		0.0050	1	04/08/2014 02:57
Carbon Disulfide	ND		0.0050	1	04/08/2014 02:57
Carbon Tetrachloride	ND		0.0050	1	04/08/2014 02:57
Chlorobenzene	ND		0.0050	1	04/08/2014 02:57
Chloroethane	ND		0.0050	1	04/08/2014 02:57
Chloroform	ND		0.0050	1	04/08/2014 02:57
Chloromethane	ND		0.0050	1	04/08/2014 02:57
2-Chlorotoluene	ND		0.0050	1	04/08/2014 02:57
4-Chlorotoluene	ND		0.0050	1	04/08/2014 02:57
Dibromochloromethane	ND		0.0050	1	04/08/2014 02:57
1,2-Dibromo-3-chloropropane	ND		0.0040	1	04/08/2014 02:57
1,2-Dibromoethane (EDB)	ND		0.0040	1	04/08/2014 02:57
Dibromomethane	ND		0.0050	1	04/08/2014 02:57
1,2-Dichlorobenzene	ND		0.0050	1	04/08/2014 02:57
1,3-Dichlorobenzene	ND		0.0050	1	04/08/2014 02:57
1,4-Dichlorobenzene	ND		0.0050	1	04/08/2014 02:57
Dichlorodifluoromethane	ND		0.0050	1	04/08/2014 02:57
1,1-Dichloroethane	ND		0.0050	1	04/08/2014 02:57
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	04/08/2014 02:57
1,1-Dichloroethene	ND		0.0050	1	04/08/2014 02:57
cis-1,2-Dichloroethene	ND		0.0050	1	04/08/2014 02:57
trans-1,2-Dichloroethene	ND		0.0050	1	04/08/2014 02:57
1,2-Dichloropropane	ND		0.0050	1	04/08/2014 02:57
1,3-Dichloropropane	ND		0.0050	1	04/08/2014 02:57
2,2-Dichloropropane	ND		0.0050	1	04/08/2014 02:57
1,1-Dichloropropene	ND		0.0050	1	04/08/2014 02:57

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-12-5.5	1404200-022A	Soil	03/26/2014	GC10	89000
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND		0.0050	1	04/08/2014 02:57
trans-1,3-Dichloropropene	ND		0.0050	1	04/08/2014 02:57
Diisopropyl ether (DIPE)	ND		0.0050	1	04/08/2014 02:57
Ethylbenzene	ND		0.0050	1	04/08/2014 02:57
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	04/08/2014 02:57
Freon 113	ND		0.10	1	04/08/2014 02:57
Hexachlorobutadiene	ND		0.0050	1	04/08/2014 02:57
Hexachloroethane	ND		0.0050	1	04/08/2014 02:57
2-Hexanone	ND		0.0050	1	04/08/2014 02:57
Isopropylbenzene	ND		0.0050	1	04/08/2014 02:57
4-Isopropyl toluene	ND		0.0050	1	04/08/2014 02:57
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	04/08/2014 02:57
Methylene chloride	ND		0.0050	1	04/08/2014 02:57
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	04/08/2014 02:57
Naphthalene	ND		0.0050	1	04/08/2014 02:57
n-Propyl benzene	ND		0.0050	1	04/08/2014 02:57
Styrene	ND		0.0050	1	04/08/2014 02:57
1,1,1,2-Tetrachloroethane	ND		0.0050	1	04/08/2014 02:57
1,1,2,2-Tetrachloroethane	ND		0.0050	1	04/08/2014 02:57
Tetrachloroethene	ND		0.0050	1	04/08/2014 02:57
Toluene	ND		0.0050	1	04/08/2014 02:57
1,2,3-Trichlorobenzene	ND		0.0050	1	04/08/2014 02:57
1,2,4-Trichlorobenzene	ND		0.0050	1	04/08/2014 02:57
1,1,1-Trichloroethane	ND		0.0050	1	04/08/2014 02:57
1,1,2-Trichloroethane	ND		0.0050	1	04/08/2014 02:57
Trichloroethene	ND		0.0050	1	04/08/2014 02:57
Trichlorofluoromethane	ND		0.0050	1	04/08/2014 02:57
1,2,3-Trichloropropane	ND		0.0050	1	04/08/2014 02:57
1,2,4-Trimethylbenzene	ND		0.0050	1	04/08/2014 02:57
1,3,5-Trimethylbenzene	ND		0.0050	1	04/08/2014 02:57
Vinyl Chloride	ND		0.0050	1	04/08/2014 02:57
Xylenes, Total	ND		0.0050	1	04/08/2014 02:57
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	99		70-130		04/08/2014 02:57
Toluene-d8	96		70-130		04/08/2014 02:57
4-BFB	99		70-130		04/08/2014 02:57

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6-3	1404200-025A	Soil	03/31/2014	GC10	89000
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	04/08/2014 17:57
tert-Amyl methyl ether (TAME)	ND		0.0050	1	04/08/2014 17:57
Benzene	ND		0.0050	1	04/08/2014 17:57
Bromobenzene	ND		0.0050	1	04/08/2014 17:57
Bromochloromethane	ND		0.0050	1	04/08/2014 17:57
Bromodichloromethane	ND		0.0050	1	04/08/2014 17:57
Bromoform	ND		0.0050	1	04/08/2014 17:57
Bromomethane	ND		0.0050	1	04/08/2014 17:57
2-Butanone (MEK)	ND		0.020	1	04/08/2014 17:57
t-Butyl alcohol (TBA)	ND		0.050	1	04/08/2014 17:57
n-Butyl benzene	ND		0.0050	1	04/08/2014 17:57
sec-Butyl benzene	ND		0.0050	1	04/08/2014 17:57
tert-Butyl benzene	ND		0.0050	1	04/08/2014 17:57
Carbon Disulfide	ND		0.0050	1	04/08/2014 17:57
Carbon Tetrachloride	ND		0.0050	1	04/08/2014 17:57
Chlorobenzene	ND		0.0050	1	04/08/2014 17:57
Chloroethane	ND		0.0050	1	04/08/2014 17:57
Chloroform	ND		0.0050	1	04/08/2014 17:57
Chloromethane	ND		0.0050	1	04/08/2014 17:57
2-Chlorotoluene	ND		0.0050	1	04/08/2014 17:57
4-Chlorotoluene	ND		0.0050	1	04/08/2014 17:57
Dibromochloromethane	ND		0.0050	1	04/08/2014 17:57
1,2-Dibromo-3-chloropropane	ND		0.0040	1	04/08/2014 17:57
1,2-Dibromoethane (EDB)	ND		0.0040	1	04/08/2014 17:57
Dibromomethane	ND		0.0050	1	04/08/2014 17:57
1,2-Dichlorobenzene	ND		0.0050	1	04/08/2014 17:57
1,3-Dichlorobenzene	ND		0.0050	1	04/08/2014 17:57
1,4-Dichlorobenzene	ND		0.0050	1	04/08/2014 17:57
Dichlorodifluoromethane	ND		0.0050	1	04/08/2014 17:57
1,1-Dichloroethane	ND		0.0050	1	04/08/2014 17:57
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	04/08/2014 17:57
1,1-Dichloroethene	ND		0.0050	1	04/08/2014 17:57
cis-1,2-Dichloroethene	ND		0.0050	1	04/08/2014 17:57
trans-1,2-Dichloroethene	ND		0.0050	1	04/08/2014 17:57
1,2-Dichloropropane	ND		0.0050	1	04/08/2014 17:57
1,3-Dichloropropane	ND		0.0050	1	04/08/2014 17:57
2,2-Dichloropropane	ND		0.0050	1	04/08/2014 17:57
1,1-Dichloropropene	ND		0.0050	1	04/08/2014 17:57

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6-3	1404200-025A	Soil	03/31/2014	GC10	89000
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND		0.0050	1	04/08/2014 17:57
trans-1,3-Dichloropropene	ND		0.0050	1	04/08/2014 17:57
Diisopropyl ether (DIPE)	ND		0.0050	1	04/08/2014 17:57
Ethylbenzene	ND		0.0050	1	04/08/2014 17:57
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	04/08/2014 17:57
Freon 113	ND		0.10	1	04/08/2014 17:57
Hexachlorobutadiene	ND		0.0050	1	04/08/2014 17:57
Hexachloroethane	ND		0.0050	1	04/08/2014 17:57
2-Hexanone	ND		0.0050	1	04/08/2014 17:57
Isopropylbenzene	ND		0.0050	1	04/08/2014 17:57
4-Isopropyl toluene	ND		0.0050	1	04/08/2014 17:57
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	04/08/2014 17:57
Methylene chloride	ND		0.0050	1	04/08/2014 17:57
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	04/08/2014 17:57
Naphthalene	ND		0.0050	1	04/08/2014 17:57
n-Propyl benzene	ND		0.0050	1	04/08/2014 17:57
Styrene	ND		0.0050	1	04/08/2014 17:57
1,1,1,2-Tetrachloroethane	ND		0.0050	1	04/08/2014 17:57
1,1,2,2-Tetrachloroethane	ND		0.0050	1	04/08/2014 17:57
Tetrachloroethene	ND		0.0050	1	04/08/2014 17:57
Toluene	ND		0.0050	1	04/08/2014 17:57
1,2,3-Trichlorobenzene	ND		0.0050	1	04/08/2014 17:57
1,2,4-Trichlorobenzene	ND		0.0050	1	04/08/2014 17:57
1,1,1-Trichloroethane	ND		0.0050	1	04/08/2014 17:57
1,1,2-Trichloroethane	ND		0.0050	1	04/08/2014 17:57
Trichloroethene	ND		0.0050	1	04/08/2014 17:57
Trichlorofluoromethane	ND		0.0050	1	04/08/2014 17:57
1,2,3-Trichloropropane	ND		0.0050	1	04/08/2014 17:57
1,2,4-Trimethylbenzene	ND		0.0050	1	04/08/2014 17:57
1,3,5-Trimethylbenzene	ND		0.0050	1	04/08/2014 17:57
Vinyl Chloride	ND		0.0050	1	04/08/2014 17:57
Xylenes, Total	ND		0.0050	1	04/08/2014 17:57
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	103		70-130		04/08/2014 17:57
Toluene-d8	96		70-130		04/08/2014 17:57
4-BFB	100		70-130		04/08/2014 17:57

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6-10	1404200-028A	Soil	03/31/2014	GC10	89000
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	04/09/2014 03:48
tert-Amyl methyl ether (TAME)	ND		0.0050	1	04/09/2014 03:48
Benzene	ND		0.0050	1	04/09/2014 03:48
Bromobenzene	ND		0.0050	1	04/09/2014 03:48
Bromochloromethane	ND		0.0050	1	04/09/2014 03:48
Bromodichloromethane	ND		0.0050	1	04/09/2014 03:48
Bromoform	ND		0.0050	1	04/09/2014 03:48
Bromomethane	ND		0.0050	1	04/09/2014 03:48
2-Butanone (MEK)	ND		0.020	1	04/09/2014 03:48
t-Butyl alcohol (TBA)	ND		0.050	1	04/09/2014 03:48
n-Butyl benzene	ND		0.0050	1	04/09/2014 03:48
sec-Butyl benzene	ND		0.0050	1	04/09/2014 03:48
tert-Butyl benzene	ND		0.0050	1	04/09/2014 03:48
Carbon Disulfide	ND		0.0050	1	04/09/2014 03:48
Carbon Tetrachloride	ND		0.0050	1	04/09/2014 03:48
Chlorobenzene	ND		0.0050	1	04/09/2014 03:48
Chloroethane	ND		0.0050	1	04/09/2014 03:48
Chloroform	ND		0.0050	1	04/09/2014 03:48
Chloromethane	ND		0.0050	1	04/09/2014 03:48
2-Chlorotoluene	ND		0.0050	1	04/09/2014 03:48
4-Chlorotoluene	ND		0.0050	1	04/09/2014 03:48
Dibromochloromethane	ND		0.0050	1	04/09/2014 03:48
1,2-Dibromo-3-chloropropane	ND		0.0040	1	04/09/2014 03:48
1,2-Dibromoethane (EDB)	ND		0.0040	1	04/09/2014 03:48
Dibromomethane	ND		0.0050	1	04/09/2014 03:48
1,2-Dichlorobenzene	ND		0.0050	1	04/09/2014 03:48
1,3-Dichlorobenzene	ND		0.0050	1	04/09/2014 03:48
1,4-Dichlorobenzene	ND		0.0050	1	04/09/2014 03:48
Dichlorodifluoromethane	ND		0.0050	1	04/09/2014 03:48
1,1-Dichloroethane	ND		0.0050	1	04/09/2014 03:48
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	04/09/2014 03:48
1,1-Dichloroethene	ND		0.0050	1	04/09/2014 03:48
cis-1,2-Dichloroethene	ND		0.0050	1	04/09/2014 03:48
trans-1,2-Dichloroethene	ND		0.0050	1	04/09/2014 03:48
1,2-Dichloropropane	ND		0.0050	1	04/09/2014 03:48
1,3-Dichloropropane	ND		0.0050	1	04/09/2014 03:48
2,2-Dichloropropane	ND		0.0050	1	04/09/2014 03:48
1,1-Dichloropropene	ND		0.0050	1	04/09/2014 03:48

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6-10	1404200-028A	Soil	03/31/2014	GC10	89000
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND		0.0050	1	04/09/2014 03:48
trans-1,3-Dichloropropene	ND		0.0050	1	04/09/2014 03:48
Diisopropyl ether (DIPE)	ND		0.0050	1	04/09/2014 03:48
Ethylbenzene	ND		0.0050	1	04/09/2014 03:48
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	04/09/2014 03:48
Freon 113	ND		0.10	1	04/09/2014 03:48
Hexachlorobutadiene	ND		0.0050	1	04/09/2014 03:48
Hexachloroethane	ND		0.0050	1	04/09/2014 03:48
2-Hexanone	ND		0.0050	1	04/09/2014 03:48
Isopropylbenzene	ND		0.0050	1	04/09/2014 03:48
4-Isopropyl toluene	ND		0.0050	1	04/09/2014 03:48
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	04/09/2014 03:48
Methylene chloride	ND		0.0050	1	04/09/2014 03:48
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	04/09/2014 03:48
Naphthalene	ND		0.0050	1	04/09/2014 03:48
n-Propyl benzene	ND		0.0050	1	04/09/2014 03:48
Styrene	ND		0.0050	1	04/09/2014 03:48
1,1,1,2-Tetrachloroethane	ND		0.0050	1	04/09/2014 03:48
1,1,2,2-Tetrachloroethane	ND		0.0050	1	04/09/2014 03:48
Tetrachloroethene	ND		0.0050	1	04/09/2014 03:48
Toluene	ND		0.0050	1	04/09/2014 03:48
1,2,3-Trichlorobenzene	ND		0.0050	1	04/09/2014 03:48
1,2,4-Trichlorobenzene	ND		0.0050	1	04/09/2014 03:48
1,1,1-Trichloroethane	ND		0.0050	1	04/09/2014 03:48
1,1,2-Trichloroethane	ND		0.0050	1	04/09/2014 03:48
Trichloroethene	ND		0.0050	1	04/09/2014 03:48
Trichlorofluoromethane	ND		0.0050	1	04/09/2014 03:48
1,2,3-Trichloropropane	ND		0.0050	1	04/09/2014 03:48
1,2,4-Trimethylbenzene	ND		0.0050	1	04/09/2014 03:48
1,3,5-Trimethylbenzene	ND		0.0050	1	04/09/2014 03:48
Vinyl Chloride	ND		0.0050	1	04/09/2014 03:48
Xylenes, Total	ND		0.0050	1	04/09/2014 03:48
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	101		70-130		04/09/2014 03:48
Toluene-d8	95		70-130		04/09/2014 03:48
4-BFB	102		70-130		04/09/2014 03:48

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-7-5	1404200-031A	Soil	04/02/2014	GC10	89000
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	04/09/2014 04:30
tert-Amyl methyl ether (TAME)	ND		0.0050	1	04/09/2014 04:30
Benzene	ND		0.0050	1	04/09/2014 04:30
Bromobenzene	ND		0.0050	1	04/09/2014 04:30
Bromochloromethane	ND		0.0050	1	04/09/2014 04:30
Bromodichloromethane	ND		0.0050	1	04/09/2014 04:30
Bromoform	ND		0.0050	1	04/09/2014 04:30
Bromomethane	ND		0.0050	1	04/09/2014 04:30
2-Butanone (MEK)	ND		0.020	1	04/09/2014 04:30
t-Butyl alcohol (TBA)	ND		0.050	1	04/09/2014 04:30
n-Butyl benzene	ND		0.0050	1	04/09/2014 04:30
sec-Butyl benzene	ND		0.0050	1	04/09/2014 04:30
tert-Butyl benzene	ND		0.0050	1	04/09/2014 04:30
Carbon Disulfide	ND		0.0050	1	04/09/2014 04:30
Carbon Tetrachloride	ND		0.0050	1	04/09/2014 04:30
Chlorobenzene	ND		0.0050	1	04/09/2014 04:30
Chloroethane	ND		0.0050	1	04/09/2014 04:30
Chloroform	ND		0.0050	1	04/09/2014 04:30
Chloromethane	ND		0.0050	1	04/09/2014 04:30
2-Chlorotoluene	ND		0.0050	1	04/09/2014 04:30
4-Chlorotoluene	ND		0.0050	1	04/09/2014 04:30
Dibromochloromethane	ND		0.0050	1	04/09/2014 04:30
1,2-Dibromo-3-chloropropane	ND		0.0040	1	04/09/2014 04:30
1,2-Dibromoethane (EDB)	ND		0.0040	1	04/09/2014 04:30
Dibromomethane	ND		0.0050	1	04/09/2014 04:30
1,2-Dichlorobenzene	ND		0.0050	1	04/09/2014 04:30
1,3-Dichlorobenzene	ND		0.0050	1	04/09/2014 04:30
1,4-Dichlorobenzene	ND		0.0050	1	04/09/2014 04:30
Dichlorodifluoromethane	ND		0.0050	1	04/09/2014 04:30
1,1-Dichloroethane	ND		0.0050	1	04/09/2014 04:30
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	04/09/2014 04:30
1,1-Dichloroethene	ND		0.0050	1	04/09/2014 04:30
cis-1,2-Dichloroethene	ND		0.0050	1	04/09/2014 04:30
trans-1,2-Dichloroethene	ND		0.0050	1	04/09/2014 04:30
1,2-Dichloropropane	ND		0.0050	1	04/09/2014 04:30
1,3-Dichloropropane	ND		0.0050	1	04/09/2014 04:30
2,2-Dichloropropane	ND		0.0050	1	04/09/2014 04:30
1,1-Dichloropropene	ND		0.0050	1	04/09/2014 04:30

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-7-5	1404200-031A	Soil	04/02/2014	GC10	89000
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND		0.0050	1	04/09/2014 04:30
trans-1,3-Dichloropropene	ND		0.0050	1	04/09/2014 04:30
Diisopropyl ether (DIPE)	ND		0.0050	1	04/09/2014 04:30
Ethylbenzene	ND		0.0050	1	04/09/2014 04:30
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	04/09/2014 04:30
Freon 113	ND		0.10	1	04/09/2014 04:30
Hexachlorobutadiene	ND		0.0050	1	04/09/2014 04:30
Hexachloroethane	ND		0.0050	1	04/09/2014 04:30
2-Hexanone	ND		0.0050	1	04/09/2014 04:30
Isopropylbenzene	ND		0.0050	1	04/09/2014 04:30
4-Isopropyl toluene	ND		0.0050	1	04/09/2014 04:30
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	04/09/2014 04:30
Methylene chloride	ND		0.0050	1	04/09/2014 04:30
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	04/09/2014 04:30
Naphthalene	ND		0.0050	1	04/09/2014 04:30
n-Propyl benzene	ND		0.0050	1	04/09/2014 04:30
Styrene	ND		0.0050	1	04/09/2014 04:30
1,1,1,2-Tetrachloroethane	ND		0.0050	1	04/09/2014 04:30
1,1,2,2-Tetrachloroethane	ND		0.0050	1	04/09/2014 04:30
Tetrachloroethene	ND		0.0050	1	04/09/2014 04:30
Toluene	ND		0.0050	1	04/09/2014 04:30
1,2,3-Trichlorobenzene	ND		0.0050	1	04/09/2014 04:30
1,2,4-Trichlorobenzene	ND		0.0050	1	04/09/2014 04:30
1,1,1-Trichloroethane	ND		0.0050	1	04/09/2014 04:30
1,1,2-Trichloroethane	ND		0.0050	1	04/09/2014 04:30
Trichloroethene	ND		0.0050	1	04/09/2014 04:30
Trichlorofluoromethane	ND		0.0050	1	04/09/2014 04:30
1,2,3-Trichloropropane	ND		0.0050	1	04/09/2014 04:30
1,2,4-Trimethylbenzene	ND		0.0050	1	04/09/2014 04:30
1,3,5-Trimethylbenzene	ND		0.0050	1	04/09/2014 04:30
Vinyl Chloride	ND		0.0050	1	04/09/2014 04:30
Xylenes, Total	ND		0.0050	1	04/09/2014 04:30
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	101		70-130		04/09/2014 04:30
Toluene-d8	95		70-130		04/09/2014 04:30
4-BFB	101		70-130		04/09/2014 04:30



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/8/14

WorkOrder: 1404200
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-10-2.5	1404200-001A	Soil	03/24/2014	GC17	89060
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	ND	H	20	10	04/08/2014 22:07
Acenaphthylene	ND	H	20	10	04/08/2014 22:07
Acetochlor	ND	H	20	10	04/08/2014 22:07
Anthracene	ND	H	20	10	04/08/2014 22:07
Benzidine	ND	H	100	10	04/08/2014 22:07
Benzo (a) anthracene	ND	H	20	10	04/08/2014 22:07
Benzo (b) fluoranthene	ND	H	20	10	04/08/2014 22:07
Benzo (k) fluoranthene	ND	H	20	10	04/08/2014 22:07
Benzo (g,h,i) perylene	ND	H	20	10	04/08/2014 22:07
Benzo (a) pyrene	ND	H	20	10	04/08/2014 22:07
Benzyl Alcohol	ND	H	100	10	04/08/2014 22:07
1,1-Biphenyl	ND	H	20	10	04/08/2014 22:07
Bis (2-chloroethoxy) Methane	ND	H	20	10	04/08/2014 22:07
Bis (2-chloroethyl) Ether	ND	H	20	10	04/08/2014 22:07
Bis (2-chloroisopropyl) Ether	ND	H	20	10	04/08/2014 22:07
Bis (2-ethylhexyl) Adipate	ND	H	20	10	04/08/2014 22:07
Bis (2-ethylhexyl) Phthalate	ND	H	20	10	04/08/2014 22:07
4-Bromophenyl Phenyl Ether	ND	H	20	10	04/08/2014 22:07
Butylbenzyl Phthalate	ND	H	20	10	04/08/2014 22:07
4-Chloroaniline	ND	H	20	10	04/08/2014 22:07
4-Chloro-3-methylphenol	ND	H	20	10	04/08/2014 22:07
2-Chloronaphthalene	ND	H	20	10	04/08/2014 22:07
2-Chlorophenol	ND	H	20	10	04/08/2014 22:07
4-Chlorophenyl Phenyl Ether	ND	H	20	10	04/08/2014 22:07
Chrysene	ND	H	20	10	04/08/2014 22:07
Dibenzo (a,h) anthracene	ND	H	20	10	04/08/2014 22:07
Dibenzofuran	ND	H	20	10	04/08/2014 22:07
Di-n-butyl Phthalate	ND	H	20	10	04/08/2014 22:07
1,2-Dichlorobenzene	ND	H	20	10	04/08/2014 22:07
1,3-Dichlorobenzene	ND	H	20	10	04/08/2014 22:07
1,4-Dichlorobenzene	ND	H	20	10	04/08/2014 22:07
3,3-Dichlorobenzidine	ND	H	40	10	04/08/2014 22:07
2,4-Dichlorophenol	ND	H	20	10	04/08/2014 22:07
Diethyl Phthalate	ND	H	20	10	04/08/2014 22:07
2,4-Dimethylphenol	ND	H	20	10	04/08/2014 22:07
Dimethyl Phthalate	ND	H	20	10	04/08/2014 22:07
4,6-Dinitro-2-methylphenol	ND	H	100	10	04/08/2014 22:07
2,4-Dinitrophenol	ND	H	500	10	04/08/2014 22:07

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/8/14

WorkOrder: 1404200
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-10-2.5	1404200-001A	Soil	03/24/2014	GC17	89060
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrotoluene	ND	H	20	10	04/08/2014 22:07
2,6-Dinitrotoluene	ND	H	20	10	04/08/2014 22:07
Di-n-octyl Phthalate	ND	H	40	10	04/08/2014 22:07
1,2-Diphenylhydrazine	ND	H	20	10	04/08/2014 22:07
Fluoranthene	ND	H	20	10	04/08/2014 22:07
Fluorene	ND	H	20	10	04/08/2014 22:07
Hexachlorobenzene	ND	H	20	10	04/08/2014 22:07
Hexachlorobutadiene	ND	H	20	10	04/08/2014 22:07
Hexachlorocyclopentadiene	ND	H	100	10	04/08/2014 22:07
Hexachloroethane	ND	H	20	10	04/08/2014 22:07
Indeno (1,2,3-cd) pyrene	ND	H	20	10	04/08/2014 22:07
Isophorone	ND	H	20	10	04/08/2014 22:07
2-Methylnaphthalene	ND	H	20	10	04/08/2014 22:07
2-Methylphenol (o-Cresol)	ND	H	20	10	04/08/2014 22:07
3 &/or 4-Methylphenol (m,p-Cresol)	ND	H	20	10	04/08/2014 22:07
Naphthalene	ND	H	20	10	04/08/2014 22:07
2-Nitroaniline	ND	H	100	10	04/08/2014 22:07
3-Nitroaniline	ND	H	100	10	04/08/2014 22:07
4-Nitroaniline	ND	H	100	10	04/08/2014 22:07
Nitrobenzene	ND	H	20	10	04/08/2014 22:07
2-Nitrophenol	ND	H	100	10	04/08/2014 22:07
4-Nitrophenol	ND	H	100	10	04/08/2014 22:07
N-Nitrosodiphenylamine	ND	H	20	10	04/08/2014 22:07
N-Nitrosodi-n-propylamine	ND	H	20	10	04/08/2014 22:07
Pentachlorophenol	ND	H	100	10	04/08/2014 22:07
Phenanthrene	ND	H	20	10	04/08/2014 22:07
Phenol	ND	H	20	10	04/08/2014 22:07
Pyrene	ND	H	20	10	04/08/2014 22:07
1,2,4-Trichlorobenzene	ND	H	20	10	04/08/2014 22:07
2,4,5-Trichlorophenol	ND	H	20	10	04/08/2014 22:07
2,4,6-Trichlorophenol	ND	H	20	10	04/08/2014 22:07

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/8/14

WorkOrder: 1404200
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-10-2.5	1404200-001A	Soil	03/24/2014	GC17	89060
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	Analytical Comments: a3,a4	
2-Fluorophenol	97	H	30-130		04/08/2014 22:07
Phenol-d5	84	H	30-130		04/08/2014 22:07
Nitrobenzene-d5	88	H	30-130		04/08/2014 22:07
2-Fluorobiphenyl	93	H	30-130		04/08/2014 22:07
2,4,6-Tribromophenol	30	H	30-130		04/08/2014 22:07
4-Terphenyl-d14	107	H	30-130		04/08/2014 22:07

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/8/14

WorkOrder: 1404200
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-10-8	1404200-003A	Soil	03/24/2014	GC17	89060
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	ND	H	2.0	1	04/08/2014 20:14
Acenaphthylene	ND	H	2.0	1	04/08/2014 20:14
Acetochlor	ND	H	2.0	1	04/08/2014 20:14
Anthracene	ND	H	2.0	1	04/08/2014 20:14
Benzidine	ND	H	10	1	04/08/2014 20:14
Benzo (a) anthracene	ND	H	2.0	1	04/08/2014 20:14
Benzo (b) fluoranthene	ND	H	2.0	1	04/08/2014 20:14
Benzo (k) fluoranthene	ND	H	2.0	1	04/08/2014 20:14
Benzo (g,h,i) perylene	ND	H	2.0	1	04/08/2014 20:14
Benzo (a) pyrene	ND	H	2.0	1	04/08/2014 20:14
Benzyl Alcohol	ND	H	10	1	04/08/2014 20:14
1,1-Biphenyl	ND	H	2.0	1	04/08/2014 20:14
Bis (2-chloroethoxy) Methane	ND	H	2.0	1	04/08/2014 20:14
Bis (2-chloroethyl) Ether	ND	H	2.0	1	04/08/2014 20:14
Bis (2-chloroisopropyl) Ether	ND	H	2.0	1	04/08/2014 20:14
Bis (2-ethylhexyl) Adipate	ND	H	2.0	1	04/08/2014 20:14
Bis (2-ethylhexyl) Phthalate	ND	H	2.0	1	04/08/2014 20:14
4-Bromophenyl Phenyl Ether	ND	H	2.0	1	04/08/2014 20:14
Butylbenzyl Phthalate	ND	H	2.0	1	04/08/2014 20:14
4-Chloroaniline	ND	H	2.0	1	04/08/2014 20:14
4-Chloro-3-methylphenol	ND	H	2.0	1	04/08/2014 20:14
2-Chloronaphthalene	ND	H	2.0	1	04/08/2014 20:14
2-Chlorophenol	ND	H	2.0	1	04/08/2014 20:14
4-Chlorophenyl Phenyl Ether	ND	H	2.0	1	04/08/2014 20:14
Chrysene	ND	H	2.0	1	04/08/2014 20:14
Dibenzo (a,h) anthracene	ND	H	2.0	1	04/08/2014 20:14
Dibenzofuran	ND	H	2.0	1	04/08/2014 20:14
Di-n-butyl Phthalate	ND	H	2.0	1	04/08/2014 20:14
1,2-Dichlorobenzene	ND	H	2.0	1	04/08/2014 20:14
1,3-Dichlorobenzene	ND	H	2.0	1	04/08/2014 20:14
1,4-Dichlorobenzene	ND	H	2.0	1	04/08/2014 20:14
3,3-Dichlorobenzidine	ND	H	4.0	1	04/08/2014 20:14
2,4-Dichlorophenol	ND	H	2.0	1	04/08/2014 20:14
Diethyl Phthalate	ND	H	2.0	1	04/08/2014 20:14
2,4-Dimethylphenol	ND	H	2.0	1	04/08/2014 20:14
Dimethyl Phthalate	ND	H	2.0	1	04/08/2014 20:14
4,6-Dinitro-2-methylphenol	ND	H	10	1	04/08/2014 20:14
2,4-Dinitrophenol	ND	H	50	1	04/08/2014 20:14

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/8/14

WorkOrder: 1404200
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-10-8	1404200-003A	Soil	03/24/2014	GC17	89060
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrotoluene	ND	H	2.0	1	04/08/2014 20:14
2,6-Dinitrotoluene	ND	H	2.0	1	04/08/2014 20:14
Di-n-octyl Phthalate	ND	H	4.0	1	04/08/2014 20:14
1,2-Diphenylhydrazine	ND	H	2.0	1	04/08/2014 20:14
Fluoranthene	ND	H	2.0	1	04/08/2014 20:14
Fluorene	ND	H	2.0	1	04/08/2014 20:14
Hexachlorobenzene	ND	H	2.0	1	04/08/2014 20:14
Hexachlorobutadiene	ND	H	2.0	1	04/08/2014 20:14
Hexachlorocyclopentadiene	ND	H	10	1	04/08/2014 20:14
Hexachloroethane	ND	H	2.0	1	04/08/2014 20:14
Indeno (1,2,3-cd) pyrene	ND	H	2.0	1	04/08/2014 20:14
Isophorone	ND	H	2.0	1	04/08/2014 20:14
2-Methylnaphthalene	ND	H	2.0	1	04/08/2014 20:14
2-Methylphenol (o-Cresol)	ND	H	2.0	1	04/08/2014 20:14
3 &/or 4-Methylphenol (m,p-Cresol)	ND	H	2.0	1	04/08/2014 20:14
Naphthalene	ND	H	2.0	1	04/08/2014 20:14
2-Nitroaniline	ND	H	10	1	04/08/2014 20:14
3-Nitroaniline	ND	H	10	1	04/08/2014 20:14
4-Nitroaniline	ND	H	10	1	04/08/2014 20:14
Nitrobenzene	ND	H	2.0	1	04/08/2014 20:14
2-Nitrophenol	ND	H	10	1	04/08/2014 20:14
4-Nitrophenol	ND	H	10	1	04/08/2014 20:14
N-Nitrosodiphenylamine	ND	H	2.0	1	04/08/2014 20:14
N-Nitrosodi-n-propylamine	ND	H	2.0	1	04/08/2014 20:14
Pentachlorophenol	ND	H	10	1	04/08/2014 20:14
Phenanthrene	ND	H	2.0	1	04/08/2014 20:14
Phenol	ND	H	2.0	1	04/08/2014 20:14
Pyrene	ND	H	2.0	1	04/08/2014 20:14
1,2,4-Trichlorobenzene	ND	H	2.0	1	04/08/2014 20:14
2,4,5-Trichlorophenol	ND	H	2.0	1	04/08/2014 20:14
2,4,6-Trichlorophenol	ND	H	2.0	1	04/08/2014 20:14

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/8/14

WorkOrder: 1404200
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-10-8	1404200-003A	Soil	03/24/2014	GC17	89060
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	Analytical Comments: a4	
2-Fluorophenol	86	H	30-130		04/08/2014 20:14
Phenol-d5	84	H	30-130		04/08/2014 20:14
Nitrobenzene-d5	81	H	30-130		04/08/2014 20:14
2-Fluorobiphenyl	82	H	30-130		04/08/2014 20:14
2,4,6-Tribromophenol	67	H	30-130		04/08/2014 20:14
4-Terphenyl-d14	83	H	30-130		04/08/2014 20:14

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/8/14

WorkOrder: 1404200
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-13-5.5	1404200-006A	Soil	03/25/2014	GC17	89060
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	ND		4.0	2	04/08/2014 20:42
Acenaphthylene	ND		4.0	2	04/08/2014 20:42
Acetochlor	ND		4.0	2	04/08/2014 20:42
Anthracene	ND		4.0	2	04/08/2014 20:42
Benzidine	ND		21	2	04/08/2014 20:42
Benzo (a) anthracene	ND		4.0	2	04/08/2014 20:42
Benzo (b) fluoranthene	ND		4.0	2	04/08/2014 20:42
Benzo (k) fluoranthene	ND		4.0	2	04/08/2014 20:42
Benzo (g,h,i) perylene	ND		4.0	2	04/08/2014 20:42
Benzo (a) pyrene	ND		4.0	2	04/08/2014 20:42
Benzyl Alcohol	ND		21	2	04/08/2014 20:42
1,1-Biphenyl	ND		4.0	2	04/08/2014 20:42
Bis (2-chloroethoxy) Methane	ND		4.0	2	04/08/2014 20:42
Bis (2-chloroethyl) Ether	ND		4.0	2	04/08/2014 20:42
Bis (2-chloroisopropyl) Ether	ND		4.0	2	04/08/2014 20:42
Bis (2-ethylhexyl) Adipate	ND		4.0	2	04/08/2014 20:42
Bis (2-ethylhexyl) Phthalate	ND		4.0	2	04/08/2014 20:42
4-Bromophenyl Phenyl Ether	ND		4.0	2	04/08/2014 20:42
Butylbenzyl Phthalate	ND		4.0	2	04/08/2014 20:42
4-Chloroaniline	ND		4.0	2	04/08/2014 20:42
4-Chloro-3-methylphenol	ND		4.0	2	04/08/2014 20:42
2-Chloronaphthalene	ND		4.0	2	04/08/2014 20:42
2-Chlorophenol	ND		4.0	2	04/08/2014 20:42
4-Chlorophenyl Phenyl Ether	ND		4.0	2	04/08/2014 20:42
Chrysene	ND		4.0	2	04/08/2014 20:42
Dibenzo (a,h) anthracene	ND		4.0	2	04/08/2014 20:42
Dibenzofuran	ND		4.0	2	04/08/2014 20:42
Di-n-butyl Phthalate	ND		4.0	2	04/08/2014 20:42
1,2-Dichlorobenzene	ND		4.0	2	04/08/2014 20:42
1,3-Dichlorobenzene	ND		4.0	2	04/08/2014 20:42
1,4-Dichlorobenzene	ND		4.0	2	04/08/2014 20:42
3,3-Dichlorobenzidine	ND		8.0	2	04/08/2014 20:42
2,4-Dichlorophenol	ND		4.0	2	04/08/2014 20:42
Diethyl Phthalate	ND		4.0	2	04/08/2014 20:42
2,4-Dimethylphenol	ND		4.0	2	04/08/2014 20:42
Dimethyl Phthalate	ND		4.0	2	04/08/2014 20:42
4,6-Dinitro-2-methylphenol	ND		21	2	04/08/2014 20:42
2,4-Dinitrophenol	ND		100	2	04/08/2014 20:42

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/8/14

WorkOrder: 1404200
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-13-5.5	1404200-006A	Soil	03/25/2014	GC17	89060
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrotoluene	ND		4.0	2	04/08/2014 20:42
2,6-Dinitrotoluene	ND		4.0	2	04/08/2014 20:42
Di-n-octyl Phthalate	ND		8.0	2	04/08/2014 20:42
1,2-Diphenylhydrazine	ND		4.0	2	04/08/2014 20:42
Fluoranthene	ND		4.0	2	04/08/2014 20:42
Fluorene	ND		4.0	2	04/08/2014 20:42
Hexachlorobenzene	ND		4.0	2	04/08/2014 20:42
Hexachlorobutadiene	ND		4.0	2	04/08/2014 20:42
Hexachlorocyclopentadiene	ND		21	2	04/08/2014 20:42
Hexachloroethane	ND		4.0	2	04/08/2014 20:42
Indeno (1,2,3-cd) pyrene	ND		4.0	2	04/08/2014 20:42
Isophorone	ND		4.0	2	04/08/2014 20:42
2-Methylnaphthalene	ND		4.0	2	04/08/2014 20:42
2-Methylphenol (o-Cresol)	ND		4.0	2	04/08/2014 20:42
3 &/or 4-Methylphenol (m,p-Cresol)	ND		4.0	2	04/08/2014 20:42
Naphthalene	ND		4.0	2	04/08/2014 20:42
2-Nitroaniline	ND		21	2	04/08/2014 20:42
3-Nitroaniline	ND		21	2	04/08/2014 20:42
4-Nitroaniline	ND		21	2	04/08/2014 20:42
Nitrobenzene	ND		4.0	2	04/08/2014 20:42
2-Nitrophenol	ND		21	2	04/08/2014 20:42
4-Nitrophenol	ND		21	2	04/08/2014 20:42
N-Nitrosodiphenylamine	ND		4.0	2	04/08/2014 20:42
N-Nitrosodi-n-propylamine	ND		4.0	2	04/08/2014 20:42
Pentachlorophenol	ND		21	2	04/08/2014 20:42
Phenanthrene	ND		4.0	2	04/08/2014 20:42
Phenol	ND		4.0	2	04/08/2014 20:42
Pyrene	ND		4.0	2	04/08/2014 20:42
1,2,4-Trichlorobenzene	ND		4.0	2	04/08/2014 20:42
2,4,5-Trichlorophenol	ND		4.0	2	04/08/2014 20:42
2,4,6-Trichlorophenol	ND		4.0	2	04/08/2014 20:42

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/8/14

WorkOrder: 1404200
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-13-5.5	1404200-006A	Soil	03/25/2014	GC17	89060
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	Analytical Comments: a3,a4,c1	
2-Fluorophenol	97		30-130		04/08/2014 20:42
Phenol-d5	92		30-130		04/08/2014 20:42
Nitrobenzene-d5	92		30-130		04/08/2014 20:42
2-Fluorobiphenyl	95		30-130		04/08/2014 20:42
2,4,6-Tribromophenol	23	S	30-130		04/08/2014 20:42
4-Terphenyl-d14	100		30-130		04/08/2014 20:42

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/8/14

WorkOrder: 1404200
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-14-3	1404200-012A	Soil	03/26/2014	GC17	89060
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	ND		2.0	1	04/08/2014 19:45
Acenaphthylene	ND		2.0	1	04/08/2014 19:45
Acetochlor	ND		2.0	1	04/08/2014 19:45
Anthracene	ND		2.0	1	04/08/2014 19:45
Benzidine	ND		10	1	04/08/2014 19:45
Benzo (a) anthracene	ND		2.0	1	04/08/2014 19:45
Benzo (b) fluoranthene	ND		2.0	1	04/08/2014 19:45
Benzo (k) fluoranthene	ND		2.0	1	04/08/2014 19:45
Benzo (g,h,i) perylene	ND		2.0	1	04/08/2014 19:45
Benzo (a) pyrene	ND		2.0	1	04/08/2014 19:45
Benzyl Alcohol	ND		10	1	04/08/2014 19:45
1,1-Biphenyl	ND		2.0	1	04/08/2014 19:45
Bis (2-chloroethoxy) Methane	ND		2.0	1	04/08/2014 19:45
Bis (2-chloroethyl) Ether	ND		2.0	1	04/08/2014 19:45
Bis (2-chloroisopropyl) Ether	ND		2.0	1	04/08/2014 19:45
Bis (2-ethylhexyl) Adipate	ND		2.0	1	04/08/2014 19:45
Bis (2-ethylhexyl) Phthalate	ND		2.0	1	04/08/2014 19:45
4-Bromophenyl Phenyl Ether	ND		2.0	1	04/08/2014 19:45
Butylbenzyl Phthalate	ND		2.0	1	04/08/2014 19:45
4-Chloroaniline	ND		2.0	1	04/08/2014 19:45
4-Chloro-3-methylphenol	ND		2.0	1	04/08/2014 19:45
2-Chloronaphthalene	ND		2.0	1	04/08/2014 19:45
2-Chlorophenol	ND		2.0	1	04/08/2014 19:45
4-Chlorophenyl Phenyl Ether	ND		2.0	1	04/08/2014 19:45
Chrysene	ND		2.0	1	04/08/2014 19:45
Dibenzo (a,h) anthracene	ND		2.0	1	04/08/2014 19:45
Dibenzofuran	ND		2.0	1	04/08/2014 19:45
Di-n-butyl Phthalate	ND		2.0	1	04/08/2014 19:45
1,2-Dichlorobenzene	ND		2.0	1	04/08/2014 19:45
1,3-Dichlorobenzene	ND		2.0	1	04/08/2014 19:45
1,4-Dichlorobenzene	ND		2.0	1	04/08/2014 19:45
3,3-Dichlorobenzidine	ND		4.0	1	04/08/2014 19:45
2,4-Dichlorophenol	ND		2.0	1	04/08/2014 19:45
Diethyl Phthalate	ND		2.0	1	04/08/2014 19:45
2,4-Dimethylphenol	ND		2.0	1	04/08/2014 19:45
Dimethyl Phthalate	ND		2.0	1	04/08/2014 19:45
4,6-Dinitro-2-methylphenol	ND		10	1	04/08/2014 19:45
2,4-Dinitrophenol	ND		50	1	04/08/2014 19:45

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/8/14

WorkOrder: 1404200
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-14-3	1404200-012A	Soil	03/26/2014	GC17	89060
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrotoluene	ND		2.0	1	04/08/2014 19:45
2,6-Dinitrotoluene	ND		2.0	1	04/08/2014 19:45
Di-n-octyl Phthalate	ND		4.0	1	04/08/2014 19:45
1,2-Diphenylhydrazine	ND		2.0	1	04/08/2014 19:45
Fluoranthene	ND		2.0	1	04/08/2014 19:45
Fluorene	ND		2.0	1	04/08/2014 19:45
Hexachlorobenzene	ND		2.0	1	04/08/2014 19:45
Hexachlorobutadiene	ND		2.0	1	04/08/2014 19:45
Hexachlorocyclopentadiene	ND		10	1	04/08/2014 19:45
Hexachloroethane	ND		2.0	1	04/08/2014 19:45
Indeno (1,2,3-cd) pyrene	ND		2.0	1	04/08/2014 19:45
Isophorone	ND		2.0	1	04/08/2014 19:45
2-Methylnaphthalene	ND		2.0	1	04/08/2014 19:45
2-Methylphenol (o-Cresol)	ND		2.0	1	04/08/2014 19:45
3 &/or 4-Methylphenol (m,p-Cresol)	ND		2.0	1	04/08/2014 19:45
Naphthalene	ND		2.0	1	04/08/2014 19:45
2-Nitroaniline	ND		10	1	04/08/2014 19:45
3-Nitroaniline	ND		10	1	04/08/2014 19:45
4-Nitroaniline	ND		10	1	04/08/2014 19:45
Nitrobenzene	ND		2.0	1	04/08/2014 19:45
2-Nitrophenol	ND		10	1	04/08/2014 19:45
4-Nitrophenol	ND		10	1	04/08/2014 19:45
N-Nitrosodiphenylamine	ND		2.0	1	04/08/2014 19:45
N-Nitrosodi-n-propylamine	ND		2.0	1	04/08/2014 19:45
Pentachlorophenol	ND		10	1	04/08/2014 19:45
Phenanthrene	ND		2.0	1	04/08/2014 19:45
Phenol	ND		2.0	1	04/08/2014 19:45
Pyrene	ND		2.0	1	04/08/2014 19:45
1,2,4-Trichlorobenzene	ND		2.0	1	04/08/2014 19:45
2,4,5-Trichlorophenol	ND		2.0	1	04/08/2014 19:45
2,4,6-Trichlorophenol	ND		2.0	1	04/08/2014 19:45

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/8/14

WorkOrder: 1404200
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-14-3	1404200-012A	Soil	03/26/2014	GC17	89060
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: a4	
2-Fluorophenol	92		30-130		04/08/2014 19:45
Phenol-d5	86		30-130		04/08/2014 19:45
Nitrobenzene-d5	82		30-130		04/08/2014 19:45
2-Fluorobiphenyl	83		30-130		04/08/2014 19:45
2,4,6-Tribromophenol	80		30-130		04/08/2014 19:45
4-Terphenyl-d14	85		30-130		04/08/2014 19:45

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/8/14

WorkOrder: 1404200
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-14-5.5	1404200-013A	Soil	03/26/2014	GC17	89060
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	ND		2.0	1	04/08/2014 18:17
Acenaphthylene	ND		2.0	1	04/08/2014 18:17
Acetochlor	ND		2.0	1	04/08/2014 18:17
Anthracene	ND		2.0	1	04/08/2014 18:17
Benzidine	ND		10	1	04/08/2014 18:17
Benzo (a) anthracene	ND		2.0	1	04/08/2014 18:17
Benzo (b) fluoranthene	ND		2.0	1	04/08/2014 18:17
Benzo (k) fluoranthene	ND		2.0	1	04/08/2014 18:17
Benzo (g,h,i) perylene	ND		2.0	1	04/08/2014 18:17
Benzo (a) pyrene	ND		2.0	1	04/08/2014 18:17
Benzyl Alcohol	ND		10	1	04/08/2014 18:17
1,1-Biphenyl	ND		2.0	1	04/08/2014 18:17
Bis (2-chloroethoxy) Methane	ND		2.0	1	04/08/2014 18:17
Bis (2-chloroethyl) Ether	ND		2.0	1	04/08/2014 18:17
Bis (2-chloroisopropyl) Ether	ND		2.0	1	04/08/2014 18:17
Bis (2-ethylhexyl) Adipate	ND		2.0	1	04/08/2014 18:17
Bis (2-ethylhexyl) Phthalate	ND		2.0	1	04/08/2014 18:17
4-Bromophenyl Phenyl Ether	ND		2.0	1	04/08/2014 18:17
Butylbenzyl Phthalate	ND		2.0	1	04/08/2014 18:17
4-Chloroaniline	ND		2.0	1	04/08/2014 18:17
4-Chloro-3-methylphenol	ND		2.0	1	04/08/2014 18:17
2-Chloronaphthalene	ND		2.0	1	04/08/2014 18:17
2-Chlorophenol	ND		2.0	1	04/08/2014 18:17
4-Chlorophenyl Phenyl Ether	ND		2.0	1	04/08/2014 18:17
Chrysene	ND		2.0	1	04/08/2014 18:17
Dibenzo (a,h) anthracene	ND		2.0	1	04/08/2014 18:17
Dibenzofuran	ND		2.0	1	04/08/2014 18:17
Di-n-butyl Phthalate	ND		2.0	1	04/08/2014 18:17
1,2-Dichlorobenzene	ND		2.0	1	04/08/2014 18:17
1,3-Dichlorobenzene	ND		2.0	1	04/08/2014 18:17
1,4-Dichlorobenzene	ND		2.0	1	04/08/2014 18:17
3,3-Dichlorobenzidine	ND		4.0	1	04/08/2014 18:17
2,4-Dichlorophenol	ND		2.0	1	04/08/2014 18:17
Diethyl Phthalate	ND		2.0	1	04/08/2014 18:17
2,4-Dimethylphenol	ND		2.0	1	04/08/2014 18:17
Dimethyl Phthalate	ND		2.0	1	04/08/2014 18:17
4,6-Dinitro-2-methylphenol	ND		10	1	04/08/2014 18:17
2,4-Dinitrophenol	ND		50	1	04/08/2014 18:17

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/8/14

WorkOrder: 1404200
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-14-5.5	1404200-013A	Soil	03/26/2014	GC17	89060
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrotoluene	ND		2.0	1	04/08/2014 18:17
2,6-Dinitrotoluene	ND		2.0	1	04/08/2014 18:17
Di-n-octyl Phthalate	ND		4.0	1	04/08/2014 18:17
1,2-Diphenylhydrazine	ND		2.0	1	04/08/2014 18:17
Fluoranthene	ND		2.0	1	04/08/2014 18:17
Fluorene	ND		2.0	1	04/08/2014 18:17
Hexachlorobenzene	ND		2.0	1	04/08/2014 18:17
Hexachlorobutadiene	ND		2.0	1	04/08/2014 18:17
Hexachlorocyclopentadiene	ND		10	1	04/08/2014 18:17
Hexachloroethane	ND		2.0	1	04/08/2014 18:17
Indeno (1,2,3-cd) pyrene	ND		2.0	1	04/08/2014 18:17
Isophorone	ND		2.0	1	04/08/2014 18:17
2-Methylnaphthalene	ND		2.0	1	04/08/2014 18:17
2-Methylphenol (o-Cresol)	ND		2.0	1	04/08/2014 18:17
3 &/or 4-Methylphenol (m,p-Cresol)	ND		2.0	1	04/08/2014 18:17
Naphthalene	ND		2.0	1	04/08/2014 18:17
2-Nitroaniline	ND		10	1	04/08/2014 18:17
3-Nitroaniline	ND		10	1	04/08/2014 18:17
4-Nitroaniline	ND		10	1	04/08/2014 18:17
Nitrobenzene	ND		2.0	1	04/08/2014 18:17
2-Nitrophenol	ND		10	1	04/08/2014 18:17
4-Nitrophenol	ND		10	1	04/08/2014 18:17
N-Nitrosodiphenylamine	ND		2.0	1	04/08/2014 18:17
N-Nitrosodi-n-propylamine	ND		2.0	1	04/08/2014 18:17
Pentachlorophenol	ND		10	1	04/08/2014 18:17
Phenanthrene	ND		2.0	1	04/08/2014 18:17
Phenol	ND		2.0	1	04/08/2014 18:17
Pyrene	ND		2.0	1	04/08/2014 18:17
1,2,4-Trichlorobenzene	ND		2.0	1	04/08/2014 18:17
2,4,5-Trichlorophenol	ND		2.0	1	04/08/2014 18:17
2,4,6-Trichlorophenol	ND		2.0	1	04/08/2014 18:17

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/8/14

WorkOrder: 1404200
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-14-5.5	1404200-013A	Soil	03/26/2014	GC17	89060
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: a4	
2-Fluorophenol	99		30-130		04/08/2014 18:17
Phenol-d5	90		30-130		04/08/2014 18:17
Nitrobenzene-d5	89		30-130		04/08/2014 18:17
2-Fluorobiphenyl	89		30-130		04/08/2014 18:17
2,4,6-Tribromophenol	91		30-130		04/08/2014 18:17
4-Terphenyl-d14	92		30-130		04/08/2014 18:17

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/8/14

WorkOrder: 1404200
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-9-5.5	1404200-016A	Soil	03/25/2014	GC17	89060
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	ND		40	20	04/08/2014 22:36
Acenaphthylene	ND		40	20	04/08/2014 22:36
Acetochlor	ND		40	20	04/08/2014 22:36
Anthracene	ND		40	20	04/08/2014 22:36
Benzidine	ND		210	20	04/08/2014 22:36
Benzo (a) anthracene	ND		40	20	04/08/2014 22:36
Benzo (b) fluoranthene	ND		40	20	04/08/2014 22:36
Benzo (k) fluoranthene	ND		40	20	04/08/2014 22:36
Benzo (g,h,i) perylene	ND		40	20	04/08/2014 22:36
Benzo (a) pyrene	ND		40	20	04/08/2014 22:36
Benzyl Alcohol	ND		210	20	04/08/2014 22:36
1,1-Biphenyl	ND		40	20	04/08/2014 22:36
Bis (2-chloroethoxy) Methane	ND		40	20	04/08/2014 22:36
Bis (2-chloroethyl) Ether	ND		40	20	04/08/2014 22:36
Bis (2-chloroisopropyl) Ether	ND		40	20	04/08/2014 22:36
Bis (2-ethylhexyl) Adipate	ND		40	20	04/08/2014 22:36
Bis (2-ethylhexyl) Phthalate	ND		40	20	04/08/2014 22:36
4-Bromophenyl Phenyl Ether	ND		40	20	04/08/2014 22:36
Butylbenzyl Phthalate	ND		40	20	04/08/2014 22:36
4-Chloroaniline	ND		40	20	04/08/2014 22:36
4-Chloro-3-methylphenol	ND		40	20	04/08/2014 22:36
2-Chloronaphthalene	ND		40	20	04/08/2014 22:36
2-Chlorophenol	ND		40	20	04/08/2014 22:36
4-Chlorophenyl Phenyl Ether	ND		40	20	04/08/2014 22:36
Chrysene	ND		40	20	04/08/2014 22:36
Dibenzo (a,h) anthracene	ND		40	20	04/08/2014 22:36
Dibenzofuran	ND		40	20	04/08/2014 22:36
Di-n-butyl Phthalate	ND		40	20	04/08/2014 22:36
1,2-Dichlorobenzene	ND		40	20	04/08/2014 22:36
1,3-Dichlorobenzene	ND		40	20	04/08/2014 22:36
1,4-Dichlorobenzene	ND		40	20	04/08/2014 22:36
3,3-Dichlorobenzidine	ND		80	20	04/08/2014 22:36
2,4-Dichlorophenol	ND		40	20	04/08/2014 22:36
Diethyl Phthalate	ND		40	20	04/08/2014 22:36
2,4-Dimethylphenol	ND		40	20	04/08/2014 22:36
Dimethyl Phthalate	ND		40	20	04/08/2014 22:36
4,6-Dinitro-2-methylphenol	ND		210	20	04/08/2014 22:36
2,4-Dinitrophenol	ND		1000	20	04/08/2014 22:36

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/8/14

WorkOrder: 1404200
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-9-5.5	1404200-016A	Soil	03/25/2014	GC17	89060
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrotoluene	ND		40	20	04/08/2014 22:36
2,6-Dinitrotoluene	ND		40	20	04/08/2014 22:36
Di-n-octyl Phthalate	ND		80	20	04/08/2014 22:36
1,2-Diphenylhydrazine	ND		40	20	04/08/2014 22:36
Fluoranthene	ND		40	20	04/08/2014 22:36
Fluorene	ND		40	20	04/08/2014 22:36
Hexachlorobenzene	ND		40	20	04/08/2014 22:36
Hexachlorobutadiene	ND		40	20	04/08/2014 22:36
Hexachlorocyclopentadiene	ND		210	20	04/08/2014 22:36
Hexachloroethane	ND		40	20	04/08/2014 22:36
Indeno (1,2,3-cd) pyrene	ND		40	20	04/08/2014 22:36
Isophorone	ND		40	20	04/08/2014 22:36
2-Methylnaphthalene	ND		40	20	04/08/2014 22:36
2-Methylphenol (o-Cresol)	ND		40	20	04/08/2014 22:36
3 &/or 4-Methylphenol (m,p-Cresol)	ND		40	20	04/08/2014 22:36
Naphthalene	ND		40	20	04/08/2014 22:36
2-Nitroaniline	ND		210	20	04/08/2014 22:36
3-Nitroaniline	ND		210	20	04/08/2014 22:36
4-Nitroaniline	ND		210	20	04/08/2014 22:36
Nitrobenzene	ND		40	20	04/08/2014 22:36
2-Nitrophenol	ND		210	20	04/08/2014 22:36
4-Nitrophenol	ND		210	20	04/08/2014 22:36
N-Nitrosodiphenylamine	ND		40	20	04/08/2014 22:36
N-Nitrosodi-n-propylamine	ND		40	20	04/08/2014 22:36
Pentachlorophenol	ND		210	20	04/08/2014 22:36
Phenanthrene	ND		40	20	04/08/2014 22:36
Phenol	ND		40	20	04/08/2014 22:36
Pyrene	ND		40	20	04/08/2014 22:36
1,2,4-Trichlorobenzene	ND		40	20	04/08/2014 22:36
2,4,5-Trichlorophenol	ND		40	20	04/08/2014 22:36
2,4,6-Trichlorophenol	ND		40	20	04/08/2014 22:36

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/8/14

WorkOrder: 1404200
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-9-5.5	1404200-016A	Soil	03/25/2014	GC17	89060
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: a3,a4	
2-Fluorophenol	91		30-130		04/08/2014 22:36
Phenol-d5	66		30-130		04/08/2014 22:36
Nitrobenzene-d5	77		30-130		04/08/2014 22:36
2-Fluorobiphenyl	101		30-130		04/08/2014 22:36
2,4,6-Tribromophenol	88		30-130		04/08/2014 22:36
4-Terphenyl-d14	103		30-130		04/08/2014 22:36

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/8/14

WorkOrder: 1404200
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-11-3	1404200-019A	Soil	03/26/2014	GC17	89060
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	ND		10	5	04/08/2014 21:10
Acenaphthylene	ND		10	5	04/08/2014 21:10
Acetochlor	ND		10	5	04/08/2014 21:10
Anthracene	ND		10	5	04/08/2014 21:10
Benzidine	ND		52	5	04/08/2014 21:10
Benzo (a) anthracene	ND		10	5	04/08/2014 21:10
Benzo (b) fluoranthene	ND		10	5	04/08/2014 21:10
Benzo (k) fluoranthene	ND		10	5	04/08/2014 21:10
Benzo (g,h,i) perylene	ND		10	5	04/08/2014 21:10
Benzo (a) pyrene	ND		10	5	04/08/2014 21:10
Benzyl Alcohol	ND		52	5	04/08/2014 21:10
1,1-Biphenyl	ND		10	5	04/08/2014 21:10
Bis (2-chloroethoxy) Methane	ND		10	5	04/08/2014 21:10
Bis (2-chloroethyl) Ether	ND		10	5	04/08/2014 21:10
Bis (2-chloroisopropyl) Ether	ND		10	5	04/08/2014 21:10
Bis (2-ethylhexyl) Adipate	ND		10	5	04/08/2014 21:10
Bis (2-ethylhexyl) Phthalate	ND		10	5	04/08/2014 21:10
4-Bromophenyl Phenyl Ether	ND		10	5	04/08/2014 21:10
Butylbenzyl Phthalate	ND		10	5	04/08/2014 21:10
4-Chloroaniline	ND		10	5	04/08/2014 21:10
4-Chloro-3-methylphenol	ND		10	5	04/08/2014 21:10
2-Chloronaphthalene	ND		10	5	04/08/2014 21:10
2-Chlorophenol	ND		10	5	04/08/2014 21:10
4-Chlorophenyl Phenyl Ether	ND		10	5	04/08/2014 21:10
Chrysene	ND		10	5	04/08/2014 21:10
Dibenzo (a,h) anthracene	ND		10	5	04/08/2014 21:10
Dibenzofuran	ND		10	5	04/08/2014 21:10
Di-n-butyl Phthalate	ND		10	5	04/08/2014 21:10
1,2-Dichlorobenzene	ND		10	5	04/08/2014 21:10
1,3-Dichlorobenzene	ND		10	5	04/08/2014 21:10
1,4-Dichlorobenzene	ND		10	5	04/08/2014 21:10
3,3-Dichlorobenzidine	ND		20	5	04/08/2014 21:10
2,4-Dichlorophenol	ND		10	5	04/08/2014 21:10
Diethyl Phthalate	ND		10	5	04/08/2014 21:10
2,4-Dimethylphenol	ND		10	5	04/08/2014 21:10
Dimethyl Phthalate	ND		10	5	04/08/2014 21:10
4,6-Dinitro-2-methylphenol	ND		52	5	04/08/2014 21:10
2,4-Dinitrophenol	ND		250	5	04/08/2014 21:10

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/8/14

WorkOrder: 1404200
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-11-3	1404200-019A	Soil	03/26/2014	GC17	89060
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrotoluene	ND		10	5	04/08/2014 21:10
2,6-Dinitrotoluene	ND		10	5	04/08/2014 21:10
Di-n-octyl Phthalate	ND		20	5	04/08/2014 21:10
1,2-Diphenylhydrazine	ND		10	5	04/08/2014 21:10
Fluoranthene	ND		10	5	04/08/2014 21:10
Fluorene	ND		10	5	04/08/2014 21:10
Hexachlorobenzene	ND		10	5	04/08/2014 21:10
Hexachlorobutadiene	ND		10	5	04/08/2014 21:10
Hexachlorocyclopentadiene	ND		52	5	04/08/2014 21:10
Hexachloroethane	ND		10	5	04/08/2014 21:10
Indeno (1,2,3-cd) pyrene	ND		10	5	04/08/2014 21:10
Isophorone	ND		10	5	04/08/2014 21:10
2-Methylnaphthalene	ND		10	5	04/08/2014 21:10
2-Methylphenol (o-Cresol)	ND		10	5	04/08/2014 21:10
3 &/or 4-Methylphenol (m,p-Cresol)	ND		10	5	04/08/2014 21:10
Naphthalene	ND		10	5	04/08/2014 21:10
2-Nitroaniline	ND		52	5	04/08/2014 21:10
3-Nitroaniline	ND		52	5	04/08/2014 21:10
4-Nitroaniline	ND		52	5	04/08/2014 21:10
Nitrobenzene	ND		10	5	04/08/2014 21:10
2-Nitrophenol	ND		52	5	04/08/2014 21:10
4-Nitrophenol	ND		52	5	04/08/2014 21:10
N-Nitrosodiphenylamine	ND		10	5	04/08/2014 21:10
N-Nitrosodi-n-propylamine	ND		10	5	04/08/2014 21:10
Pentachlorophenol	ND		52	5	04/08/2014 21:10
Phenanthrene	ND		10	5	04/08/2014 21:10
Phenol	ND		10	5	04/08/2014 21:10
Pyrene	ND		10	5	04/08/2014 21:10
1,2,4-Trichlorobenzene	ND		10	5	04/08/2014 21:10
2,4,5-Trichlorophenol	ND		10	5	04/08/2014 21:10
2,4,6-Trichlorophenol	ND		10	5	04/08/2014 21:10

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/8/14

WorkOrder: 1404200
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-11-3	1404200-019A	Soil	03/26/2014	GC17	89060
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: a3,a4	
2-Fluorophenol	110		30-130		04/08/2014 21:10
Phenol-d5	99		30-130		04/08/2014 21:10
Nitrobenzene-d5	97		30-130		04/08/2014 21:10
2-Fluorobiphenyl	104		30-130		04/08/2014 21:10
2,4,6-Tribromophenol	37		30-130		04/08/2014 21:10
4-Terphenyl-d14	111		30-130		04/08/2014 21:10

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/8/14

WorkOrder: 1404200
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-12-5.5	1404200-022A	Soil	03/26/2014	GC17	89108
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	ND		0.25	1	04/08/2014 16:19
Acenaphthylene	ND		0.25	1	04/08/2014 16:19
Acetochlor	ND		0.25	1	04/08/2014 16:19
Anthracene	ND		0.25	1	04/08/2014 16:19
Benzidine	ND		1.3	1	04/08/2014 16:19
Benzo (a) anthracene	ND		0.25	1	04/08/2014 16:19
Benzo (b) fluoranthene	ND		0.25	1	04/08/2014 16:19
Benzo (k) fluoranthene	ND		0.25	1	04/08/2014 16:19
Benzo (g,h,i) perylene	ND		0.25	1	04/08/2014 16:19
Benzo (a) pyrene	ND		0.25	1	04/08/2014 16:19
Benzyl Alcohol	ND		1.3	1	04/08/2014 16:19
1,1-Biphenyl	ND		0.25	1	04/08/2014 16:19
Bis (2-chloroethoxy) Methane	ND		0.25	1	04/08/2014 16:19
Bis (2-chloroethyl) Ether	ND		0.25	1	04/08/2014 16:19
Bis (2-chloroisopropyl) Ether	ND		0.25	1	04/08/2014 16:19
Bis (2-ethylhexyl) Adipate	ND		0.25	1	04/08/2014 16:19
Bis (2-ethylhexyl) Phthalate	ND		0.25	1	04/08/2014 16:19
4-Bromophenyl Phenyl Ether	ND		0.25	1	04/08/2014 16:19
Butylbenzyl Phthalate	ND		0.25	1	04/08/2014 16:19
4-Chloroaniline	ND		0.25	1	04/08/2014 16:19
4-Chloro-3-methylphenol	ND		0.25	1	04/08/2014 16:19
2-Chloronaphthalene	ND		0.25	1	04/08/2014 16:19
2-Chlorophenol	ND		0.25	1	04/08/2014 16:19
4-Chlorophenyl Phenyl Ether	ND		0.25	1	04/08/2014 16:19
Chrysene	ND		0.25	1	04/08/2014 16:19
Dibenzo (a,h) anthracene	ND		0.25	1	04/08/2014 16:19
Dibenzofuran	ND		0.25	1	04/08/2014 16:19
Di-n-butyl Phthalate	ND		0.25	1	04/08/2014 16:19
1,2-Dichlorobenzene	ND		0.25	1	04/08/2014 16:19
1,3-Dichlorobenzene	ND		0.25	1	04/08/2014 16:19
1,4-Dichlorobenzene	ND		0.25	1	04/08/2014 16:19
3,3-Dichlorobenzidine	ND		0.50	1	04/08/2014 16:19
2,4-Dichlorophenol	ND		0.25	1	04/08/2014 16:19
Diethyl Phthalate	ND		0.25	1	04/08/2014 16:19
2,4-Dimethylphenol	ND		0.25	1	04/08/2014 16:19
Dimethyl Phthalate	ND		0.25	1	04/08/2014 16:19
4,6-Dinitro-2-methylphenol	ND		1.3	1	04/08/2014 16:19
2,4-Dinitrophenol	ND		6.3	1	04/08/2014 16:19

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/8/14

WorkOrder: 1404200
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-12-5.5	1404200-022A	Soil	03/26/2014	GC17	89108
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrotoluene	ND		0.25	1	04/08/2014 16:19
2,6-Dinitrotoluene	ND		0.25	1	04/08/2014 16:19
Di-n-octyl Phthalate	ND		0.50	1	04/08/2014 16:19
1,2-Diphenylhydrazine	ND		0.25	1	04/08/2014 16:19
Fluoranthene	ND		0.25	1	04/08/2014 16:19
Fluorene	ND		0.25	1	04/08/2014 16:19
Hexachlorobenzene	ND		0.25	1	04/08/2014 16:19
Hexachlorobutadiene	ND		0.25	1	04/08/2014 16:19
Hexachlorocyclopentadiene	ND		1.3	1	04/08/2014 16:19
Hexachloroethane	ND		0.25	1	04/08/2014 16:19
Indeno (1,2,3-cd) pyrene	ND		0.25	1	04/08/2014 16:19
Isophorone	ND		0.25	1	04/08/2014 16:19
2-Methylnaphthalene	ND		0.25	1	04/08/2014 16:19
2-Methylphenol (o-Cresol)	ND		0.25	1	04/08/2014 16:19
3 &/or 4-Methylphenol (m,p-Cresol)	ND		0.25	1	04/08/2014 16:19
Naphthalene	ND		0.25	1	04/08/2014 16:19
2-Nitroaniline	ND		1.3	1	04/08/2014 16:19
3-Nitroaniline	ND		1.3	1	04/08/2014 16:19
4-Nitroaniline	ND		1.3	1	04/08/2014 16:19
Nitrobenzene	ND		0.25	1	04/08/2014 16:19
2-Nitrophenol	ND		1.3	1	04/08/2014 16:19
4-Nitrophenol	ND		1.3	1	04/08/2014 16:19
N-Nitrosodiphenylamine	ND		0.25	1	04/08/2014 16:19
N-Nitrosodi-n-propylamine	ND		0.25	1	04/08/2014 16:19
Pentachlorophenol	ND		1.3	1	04/08/2014 16:19
Phenanthrene	ND		0.25	1	04/08/2014 16:19
Phenol	ND		0.25	1	04/08/2014 16:19
Pyrene	ND		0.25	1	04/08/2014 16:19
1,2,4-Trichlorobenzene	ND		0.25	1	04/08/2014 16:19
2,4,5-Trichlorophenol	ND		0.25	1	04/08/2014 16:19
2,4,6-Trichlorophenol	ND		0.25	1	04/08/2014 16:19

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/8/14

WorkOrder: 1404200
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-12-5.5	1404200-022A	Soil	03/26/2014	GC17	89108
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorophenol	89		30-130		04/08/2014 16:19
Phenol-d5	84		30-130		04/08/2014 16:19
Nitrobenzene-d5	75		30-130		04/08/2014 16:19
2-Fluorobiphenyl	75		30-130		04/08/2014 16:19
2,4,6-Tribromophenol	83		30-130		04/08/2014 16:19
4-Terphenyl-d14	89		30-130		04/08/2014 16:19

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/8/14

WorkOrder: 1404200
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6-3	1404200-025A	Soil	03/31/2014	GC17	89108
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	ND		2.0	1	04/08/2014 19:16
Acenaphthylene	ND		2.0	1	04/08/2014 19:16
Acetochlor	ND		2.0	1	04/08/2014 19:16
Anthracene	ND		2.0	1	04/08/2014 19:16
Benzidine	ND		10	1	04/08/2014 19:16
Benzo (a) anthracene	ND		2.0	1	04/08/2014 19:16
Benzo (b) fluoranthene	ND		2.0	1	04/08/2014 19:16
Benzo (k) fluoranthene	ND		2.0	1	04/08/2014 19:16
Benzo (g,h,i) perylene	ND		2.0	1	04/08/2014 19:16
Benzo (a) pyrene	ND		2.0	1	04/08/2014 19:16
Benzyl Alcohol	ND		10	1	04/08/2014 19:16
1,1-Biphenyl	ND		2.0	1	04/08/2014 19:16
Bis (2-chloroethoxy) Methane	ND		2.0	1	04/08/2014 19:16
Bis (2-chloroethyl) Ether	ND		2.0	1	04/08/2014 19:16
Bis (2-chloroisopropyl) Ether	ND		2.0	1	04/08/2014 19:16
Bis (2-ethylhexyl) Adipate	ND		2.0	1	04/08/2014 19:16
Bis (2-ethylhexyl) Phthalate	ND		2.0	1	04/08/2014 19:16
4-Bromophenyl Phenyl Ether	ND		2.0	1	04/08/2014 19:16
Butylbenzyl Phthalate	ND		2.0	1	04/08/2014 19:16
4-Chloroaniline	ND		2.0	1	04/08/2014 19:16
4-Chloro-3-methylphenol	ND		2.0	1	04/08/2014 19:16
2-Chloronaphthalene	ND		2.0	1	04/08/2014 19:16
2-Chlorophenol	ND		2.0	1	04/08/2014 19:16
4-Chlorophenyl Phenyl Ether	ND		2.0	1	04/08/2014 19:16
Chrysene	ND		2.0	1	04/08/2014 19:16
Dibenzo (a,h) anthracene	ND		2.0	1	04/08/2014 19:16
Dibenzofuran	ND		2.0	1	04/08/2014 19:16
Di-n-butyl Phthalate	ND		2.0	1	04/08/2014 19:16
1,2-Dichlorobenzene	ND		2.0	1	04/08/2014 19:16
1,3-Dichlorobenzene	ND		2.0	1	04/08/2014 19:16
1,4-Dichlorobenzene	ND		2.0	1	04/08/2014 19:16
3,3-Dichlorobenzidine	ND		4.0	1	04/08/2014 19:16
2,4-Dichlorophenol	ND		2.0	1	04/08/2014 19:16
Diethyl Phthalate	ND		2.0	1	04/08/2014 19:16
2,4-Dimethylphenol	ND		2.0	1	04/08/2014 19:16
Dimethyl Phthalate	ND		2.0	1	04/08/2014 19:16
4,6-Dinitro-2-methylphenol	ND		10	1	04/08/2014 19:16
2,4-Dinitrophenol	ND		50	1	04/08/2014 19:16

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/8/14

WorkOrder: 1404200
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6-3	1404200-025A	Soil	03/31/2014	GC17	89108
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrotoluene	ND		2.0	1	04/08/2014 19:16
2,6-Dinitrotoluene	ND		2.0	1	04/08/2014 19:16
Di-n-octyl Phthalate	ND		4.0	1	04/08/2014 19:16
1,2-Diphenylhydrazine	ND		2.0	1	04/08/2014 19:16
Fluoranthene	ND		2.0	1	04/08/2014 19:16
Fluorene	ND		2.0	1	04/08/2014 19:16
Hexachlorobenzene	ND		2.0	1	04/08/2014 19:16
Hexachlorobutadiene	ND		2.0	1	04/08/2014 19:16
Hexachlorocyclopentadiene	ND		10	1	04/08/2014 19:16
Hexachloroethane	ND		2.0	1	04/08/2014 19:16
Indeno (1,2,3-cd) pyrene	ND		2.0	1	04/08/2014 19:16
Isophorone	ND		2.0	1	04/08/2014 19:16
2-Methylnaphthalene	ND		2.0	1	04/08/2014 19:16
2-Methylphenol (o-Cresol)	ND		2.0	1	04/08/2014 19:16
3 &/or 4-Methylphenol (m,p-Cresol)	ND		2.0	1	04/08/2014 19:16
Naphthalene	ND		2.0	1	04/08/2014 19:16
2-Nitroaniline	ND		10	1	04/08/2014 19:16
3-Nitroaniline	ND		10	1	04/08/2014 19:16
4-Nitroaniline	ND		10	1	04/08/2014 19:16
Nitrobenzene	ND		2.0	1	04/08/2014 19:16
2-Nitrophenol	ND		10	1	04/08/2014 19:16
4-Nitrophenol	ND		10	1	04/08/2014 19:16
N-Nitrosodiphenylamine	ND		2.0	1	04/08/2014 19:16
N-Nitrosodi-n-propylamine	ND		2.0	1	04/08/2014 19:16
Pentachlorophenol	ND		10	1	04/08/2014 19:16
Phenanthrene	ND		2.0	1	04/08/2014 19:16
Phenol	ND		2.0	1	04/08/2014 19:16
Pyrene	ND		2.0	1	04/08/2014 19:16
1,2,4-Trichlorobenzene	ND		2.0	1	04/08/2014 19:16
2,4,5-Trichlorophenol	ND		2.0	1	04/08/2014 19:16
2,4,6-Trichlorophenol	ND		2.0	1	04/08/2014 19:16

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/8/14

WorkOrder: 1404200
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6-3	1404200-025A	Soil	03/31/2014	GC17	89108
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: a4	
2-Fluorophenol	96		30-130		04/08/2014 19:16
Phenol-d5	87		30-130		04/08/2014 19:16
Nitrobenzene-d5	80		30-130		04/08/2014 19:16
2-Fluorobiphenyl	80		30-130		04/08/2014 19:16
2,4,6-Tribromophenol	89		30-130		04/08/2014 19:16
4-Terphenyl-d14	84		30-130		04/08/2014 19:16

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/8/14

WorkOrder: 1404200
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6-10	1404200-028A	Soil	03/31/2014	GC17	89108
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	ND		10	5	04/08/2014 21:39
Acenaphthylene	ND		10	5	04/08/2014 21:39
Acetochlor	ND		10	5	04/08/2014 21:39
Anthracene	ND		10	5	04/08/2014 21:39
Benzidine	ND		52	5	04/08/2014 21:39
Benzo (a) anthracene	ND		10	5	04/08/2014 21:39
Benzo (b) fluoranthene	ND		10	5	04/08/2014 21:39
Benzo (k) fluoranthene	ND		10	5	04/08/2014 21:39
Benzo (g,h,i) perylene	ND		10	5	04/08/2014 21:39
Benzo (a) pyrene	ND		10	5	04/08/2014 21:39
Benzyl Alcohol	ND		52	5	04/08/2014 21:39
1,1-Biphenyl	ND		10	5	04/08/2014 21:39
Bis (2-chloroethoxy) Methane	ND		10	5	04/08/2014 21:39
Bis (2-chloroethyl) Ether	ND		10	5	04/08/2014 21:39
Bis (2-chloroisopropyl) Ether	ND		10	5	04/08/2014 21:39
Bis (2-ethylhexyl) Adipate	ND		10	5	04/08/2014 21:39
Bis (2-ethylhexyl) Phthalate	ND		10	5	04/08/2014 21:39
4-Bromophenyl Phenyl Ether	ND		10	5	04/08/2014 21:39
Butylbenzyl Phthalate	ND		10	5	04/08/2014 21:39
4-Chloroaniline	ND		10	5	04/08/2014 21:39
4-Chloro-3-methylphenol	ND		10	5	04/08/2014 21:39
2-Chloronaphthalene	ND		10	5	04/08/2014 21:39
2-Chlorophenol	ND		10	5	04/08/2014 21:39
4-Chlorophenyl Phenyl Ether	ND		10	5	04/08/2014 21:39
Chrysene	ND		10	5	04/08/2014 21:39
Dibenzo (a,h) anthracene	ND		10	5	04/08/2014 21:39
Dibenzofuran	ND		10	5	04/08/2014 21:39
Di-n-butyl Phthalate	ND		10	5	04/08/2014 21:39
1,2-Dichlorobenzene	ND		10	5	04/08/2014 21:39
1,3-Dichlorobenzene	ND		10	5	04/08/2014 21:39
1,4-Dichlorobenzene	ND		10	5	04/08/2014 21:39
3,3-Dichlorobenzidine	ND		20	5	04/08/2014 21:39
2,4-Dichlorophenol	ND		10	5	04/08/2014 21:39
Diethyl Phthalate	ND		10	5	04/08/2014 21:39
2,4-Dimethylphenol	ND		10	5	04/08/2014 21:39
Dimethyl Phthalate	ND		10	5	04/08/2014 21:39
4,6-Dinitro-2-methylphenol	ND		52	5	04/08/2014 21:39
2,4-Dinitrophenol	ND		250	5	04/08/2014 21:39

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/8/14

WorkOrder: 1404200
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6-10	1404200-028A	Soil	03/31/2014	GC17	89108
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrotoluene	ND		10	5	04/08/2014 21:39
2,6-Dinitrotoluene	ND		10	5	04/08/2014 21:39
Di-n-octyl Phthalate	ND		20	5	04/08/2014 21:39
1,2-Diphenylhydrazine	ND		10	5	04/08/2014 21:39
Fluoranthene	ND		10	5	04/08/2014 21:39
Fluorene	ND		10	5	04/08/2014 21:39
Hexachlorobenzene	ND		10	5	04/08/2014 21:39
Hexachlorobutadiene	ND		10	5	04/08/2014 21:39
Hexachlorocyclopentadiene	ND		52	5	04/08/2014 21:39
Hexachloroethane	ND		10	5	04/08/2014 21:39
Indeno (1,2,3-cd) pyrene	ND		10	5	04/08/2014 21:39
Isophorone	ND		10	5	04/08/2014 21:39
2-Methylnaphthalene	ND		10	5	04/08/2014 21:39
2-Methylphenol (o-Cresol)	ND		10	5	04/08/2014 21:39
3 &/or 4-Methylphenol (m,p-Cresol)	ND		10	5	04/08/2014 21:39
Naphthalene	ND		10	5	04/08/2014 21:39
2-Nitroaniline	ND		52	5	04/08/2014 21:39
3-Nitroaniline	ND		52	5	04/08/2014 21:39
4-Nitroaniline	ND		52	5	04/08/2014 21:39
Nitrobenzene	ND		10	5	04/08/2014 21:39
2-Nitrophenol	ND		52	5	04/08/2014 21:39
4-Nitrophenol	ND		52	5	04/08/2014 21:39
N-Nitrosodiphenylamine	ND		10	5	04/08/2014 21:39
N-Nitrosodi-n-propylamine	ND		10	5	04/08/2014 21:39
Pentachlorophenol	ND		52	5	04/08/2014 21:39
Phenanthrene	ND		10	5	04/08/2014 21:39
Phenol	ND		10	5	04/08/2014 21:39
Pyrene	ND		10	5	04/08/2014 21:39
1,2,4-Trichlorobenzene	ND		10	5	04/08/2014 21:39
2,4,5-Trichlorophenol	ND		10	5	04/08/2014 21:39
2,4,6-Trichlorophenol	ND		10	5	04/08/2014 21:39

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/8/14

WorkOrder: 1404200
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6-10	1404200-028A	Soil	03/31/2014	GC17	89108
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: a3,a4	
2-Fluorophenol	106		30-130		04/08/2014 21:39
Phenol-d5	98		30-130		04/08/2014 21:39
Nitrobenzene-d5	98		30-130		04/08/2014 21:39
2-Fluorobiphenyl	99		30-130		04/08/2014 21:39
2,4,6-Tribromophenol	97		30-130		04/08/2014 21:39
4-Terphenyl-d14	110		30-130		04/08/2014 21:39

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/8/14

WorkOrder: 1404200
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-7-5	1404200-031A	Soil	04/02/2014	GC17	89108
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	ND		0.25	1	04/08/2014 17:18
Acenaphthylene	ND		0.25	1	04/08/2014 17:18
Acetochlor	ND		0.25	1	04/08/2014 17:18
Anthracene	ND		0.25	1	04/08/2014 17:18
Benzidine	ND		1.3	1	04/08/2014 17:18
Benzo (a) anthracene	ND		0.25	1	04/08/2014 17:18
Benzo (b) fluoranthene	ND		0.25	1	04/08/2014 17:18
Benzo (k) fluoranthene	ND		0.25	1	04/08/2014 17:18
Benzo (g,h,i) perylene	ND		0.25	1	04/08/2014 17:18
Benzo (a) pyrene	ND		0.25	1	04/08/2014 17:18
Benzyl Alcohol	ND		1.3	1	04/08/2014 17:18
1,1-Biphenyl	ND		0.25	1	04/08/2014 17:18
Bis (2-chloroethoxy) Methane	ND		0.25	1	04/08/2014 17:18
Bis (2-chloroethyl) Ether	ND		0.25	1	04/08/2014 17:18
Bis (2-chloroisopropyl) Ether	ND		0.25	1	04/08/2014 17:18
Bis (2-ethylhexyl) Adipate	ND		0.25	1	04/08/2014 17:18
Bis (2-ethylhexyl) Phthalate	ND		0.25	1	04/08/2014 17:18
4-Bromophenyl Phenyl Ether	ND		0.25	1	04/08/2014 17:18
Butylbenzyl Phthalate	ND		0.25	1	04/08/2014 17:18
4-Chloroaniline	ND		0.25	1	04/08/2014 17:18
4-Chloro-3-methylphenol	ND		0.25	1	04/08/2014 17:18
2-Chloronaphthalene	ND		0.25	1	04/08/2014 17:18
2-Chlorophenol	ND		0.25	1	04/08/2014 17:18
4-Chlorophenyl Phenyl Ether	ND		0.25	1	04/08/2014 17:18
Chrysene	ND		0.25	1	04/08/2014 17:18
Dibenzo (a,h) anthracene	ND		0.25	1	04/08/2014 17:18
Dibenzofuran	ND		0.25	1	04/08/2014 17:18
Di-n-butyl Phthalate	ND		0.25	1	04/08/2014 17:18
1,2-Dichlorobenzene	ND		0.25	1	04/08/2014 17:18
1,3-Dichlorobenzene	ND		0.25	1	04/08/2014 17:18
1,4-Dichlorobenzene	ND		0.25	1	04/08/2014 17:18
3,3-Dichlorobenzidine	ND		0.50	1	04/08/2014 17:18
2,4-Dichlorophenol	ND		0.25	1	04/08/2014 17:18
Diethyl Phthalate	ND		0.25	1	04/08/2014 17:18
2,4-Dimethylphenol	ND		0.25	1	04/08/2014 17:18
Dimethyl Phthalate	ND		0.25	1	04/08/2014 17:18
4,6-Dinitro-2-methylphenol	ND		1.3	1	04/08/2014 17:18
2,4-Dinitrophenol	ND		6.3	1	04/08/2014 17:18

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/8/14

WorkOrder: 1404200
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-7-5	1404200-031A	Soil	04/02/2014	GC17	89108
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrotoluene	ND		0.25	1	04/08/2014 17:18
2,6-Dinitrotoluene	ND		0.25	1	04/08/2014 17:18
Di-n-octyl Phthalate	ND		0.50	1	04/08/2014 17:18
1,2-Diphenylhydrazine	ND		0.25	1	04/08/2014 17:18
Fluoranthene	ND		0.25	1	04/08/2014 17:18
Fluorene	ND		0.25	1	04/08/2014 17:18
Hexachlorobenzene	ND		0.25	1	04/08/2014 17:18
Hexachlorobutadiene	ND		0.25	1	04/08/2014 17:18
Hexachlorocyclopentadiene	ND		1.3	1	04/08/2014 17:18
Hexachloroethane	ND		0.25	1	04/08/2014 17:18
Indeno (1,2,3-cd) pyrene	ND		0.25	1	04/08/2014 17:18
Isophorone	ND		0.25	1	04/08/2014 17:18
2-Methylnaphthalene	ND		0.25	1	04/08/2014 17:18
2-Methylphenol (o-Cresol)	ND		0.25	1	04/08/2014 17:18
3 &/or 4-Methylphenol (m,p-Cresol)	ND		0.25	1	04/08/2014 17:18
Naphthalene	ND		0.25	1	04/08/2014 17:18
2-Nitroaniline	ND		1.3	1	04/08/2014 17:18
3-Nitroaniline	ND		1.3	1	04/08/2014 17:18
4-Nitroaniline	ND		1.3	1	04/08/2014 17:18
Nitrobenzene	ND		0.25	1	04/08/2014 17:18
2-Nitrophenol	ND		1.3	1	04/08/2014 17:18
4-Nitrophenol	ND		1.3	1	04/08/2014 17:18
N-Nitrosodiphenylamine	ND		0.25	1	04/08/2014 17:18
N-Nitrosodi-n-propylamine	ND		0.25	1	04/08/2014 17:18
Pentachlorophenol	ND		1.3	1	04/08/2014 17:18
Phenanthrene	ND		0.25	1	04/08/2014 17:18
Phenol	ND		0.25	1	04/08/2014 17:18
Pyrene	ND		0.25	1	04/08/2014 17:18
1,2,4-Trichlorobenzene	ND		0.25	1	04/08/2014 17:18
2,4,5-Trichlorophenol	ND		0.25	1	04/08/2014 17:18
2,4,6-Trichlorophenol	ND		0.25	1	04/08/2014 17:18

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/8/14

WorkOrder: 1404200
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-7-5	1404200-031A	Soil	04/02/2014	GC17	89108
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorophenol	90		30-130		04/08/2014 17:18
Phenol-d5	85		30-130		04/08/2014 17:18
Nitrobenzene-d5	74		30-130		04/08/2014 17:18
2-Fluorobiphenyl	74		30-130		04/08/2014 17:18
2,4,6-Tribromophenol	83		30-130		04/08/2014 17:18
4-Terphenyl-d14	85		30-130		04/08/2014 17:18



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-10-2.5	1404200-001A	Soil/TOTAL	03/24/2014	ICP-MS1	89005
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Antimony	1.2		0.50	1	04/08/2014 09:58
Arsenic	3.8		0.50	1	04/08/2014 09:58
Barium	170		5.0	1	04/08/2014 09:58
Beryllium	ND		0.50	1	04/08/2014 09:58
Cadmium	0.26		0.25	1	04/08/2014 09:58
Chromium	54		0.50	1	04/08/2014 09:58
Cobalt	12		0.50	1	04/08/2014 09:58
Copper	32		0.50	1	04/08/2014 09:58
Lead	140		5.0	10	04/09/2014 05:09
Mercury	0.22		0.050	1	04/08/2014 09:58
Molybdenum	ND		0.50	1	04/08/2014 09:58
Nickel	100		5.0	10	04/09/2014 05:09
Selenium	ND		0.50	1	04/08/2014 09:58
Silver	ND		0.50	1	04/08/2014 09:58
Thallium	ND		0.50	1	04/08/2014 09:58
Vanadium	68		0.50	1	04/08/2014 09:58
Zinc	120		5.0	1	04/08/2014 09:58
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	105		70-130		04/08/2014 09:58

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-13-5.5	1404200-006A	Soil/TOTAL	03/25/2014	ICP-MS1	89005
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Antimony	0.50		0.50	1	04/08/2014 12:29
Arsenic	3.9		0.50	1	04/08/2014 12:29
Barium	86		5.0	1	04/08/2014 12:29
Beryllium	ND		0.50	1	04/08/2014 12:29
Cadmium	ND		0.25	1	04/08/2014 12:29
Chromium	40		0.50	1	04/08/2014 12:29
Cobalt	8.4		0.50	1	04/08/2014 12:29
Copper	16		0.50	1	04/08/2014 12:29
Lead	25		0.50	1	04/08/2014 12:29
Mercury	0.14		0.050	1	04/08/2014 12:29
Molybdenum	ND		0.50	1	04/08/2014 12:29
Nickel	35		0.50	1	04/08/2014 12:29
Selenium	ND		0.50	1	04/08/2014 12:29
Silver	ND		0.50	1	04/08/2014 12:29
Thallium	ND		0.50	1	04/08/2014 12:29
Vanadium	47		0.50	1	04/08/2014 12:29
Zinc	58		5.0	1	04/08/2014 12:29
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	111		70-130		04/08/2014 12:29

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-8-3'	1404200-009A	Soil/TOTAL	03/25/2014	ICP-MS1	89005
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Antimony	ND		0.50	1	04/08/2014 12:16
Arsenic	3.8		0.50	1	04/08/2014 12:16
Barium	180		5.0	1	04/08/2014 12:16
Beryllium	ND		0.50	1	04/08/2014 12:16
Cadmium	ND		0.25	1	04/08/2014 12:16
Chromium	31		0.50	1	04/08/2014 12:16
Cobalt	6.3		0.50	1	04/08/2014 12:16
Copper	24		0.50	1	04/08/2014 12:16
Lead	63		0.50	1	04/08/2014 12:16
Mercury	0.087		0.050	1	04/08/2014 12:16
Molybdenum	ND		0.50	1	04/08/2014 12:16
Nickel	41		0.50	1	04/08/2014 12:16
Selenium	ND		0.50	1	04/08/2014 12:16
Silver	ND		0.50	1	04/08/2014 12:16
Thallium	ND		0.50	1	04/08/2014 12:16
Vanadium	34		0.50	1	04/08/2014 12:16
Zinc	72		5.0	1	04/08/2014 12:16
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	104		70-130		04/08/2014 12:16

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-14-3	1404200-012A	Soil/TOTAL	03/26/2014	ICP-MS1	89005
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Antimony	0.93		0.50	1	04/08/2014 12:41
Arsenic	2.3		0.50	1	04/08/2014 12:41
Barium	53		5.0	1	04/08/2014 12:41
Beryllium	ND		0.50	1	04/08/2014 12:41
Cadmium	ND		0.25	1	04/08/2014 12:41
Chromium	330		10	20	04/09/2014 05:53
Cobalt	77		0.50	1	04/08/2014 12:41
Copper	21		0.50	1	04/08/2014 12:41
Lead	48		0.50	1	04/08/2014 12:41
Mercury	0.16		0.050	1	04/08/2014 12:41
Molybdenum	ND		0.50	1	04/08/2014 12:41
Nickel	1300		10	20	04/09/2014 05:53
Selenium	ND		0.50	1	04/08/2014 12:41
Silver	ND		0.50	1	04/08/2014 12:41
Thallium	ND		0.50	1	04/08/2014 12:41
Vanadium	32		0.50	1	04/08/2014 12:41
Zinc	64		5.0	1	04/08/2014 12:41
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	118		70-130		04/08/2014 12:41

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-9-3	1404200-015A	Soil/TOTAL	03/25/2014	ICP-MS1	89005
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Antimony	0.67		0.50	1	04/08/2014 12:54
Arsenic	5.2		0.50	1	04/08/2014 12:54
Barium	150		5.0	1	04/08/2014 12:54
Beryllium	ND		0.50	1	04/08/2014 12:54
Cadmium	ND		0.25	1	04/08/2014 12:54
Chromium	73		0.50	1	04/08/2014 12:54
Cobalt	16		0.50	1	04/08/2014 12:54
Copper	25		0.50	1	04/08/2014 12:54
Lead	120		5.0	10	04/09/2014 06:05
Mercury	0.33		0.050	1	04/08/2014 12:54
Molybdenum	1.3		0.50	1	04/08/2014 12:54
Nickel	160		5.0	10	04/09/2014 06:05
Selenium	ND		0.50	1	04/08/2014 12:54
Silver	ND		0.50	1	04/08/2014 12:54
Thallium	ND		0.50	1	04/08/2014 12:54
Vanadium	44		0.50	1	04/08/2014 12:54
Zinc	110		5.0	1	04/08/2014 12:54
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	104		70-130		04/08/2014 12:54

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-11-5	1404200-020A	Soil/TOTAL	03/26/2014	ICP-MS1	89023
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Antimony	1.1		0.50	1	04/08/2014 13:31
Arsenic	5.8		0.50	1	04/08/2014 13:31
Barium	70		5.0	1	04/08/2014 13:31
Beryllium	ND		0.50	1	04/08/2014 13:31
Cadmium	0.32		0.25	1	04/08/2014 13:31
Chromium	70		0.50	1	04/08/2014 13:31
Cobalt	11		0.50	1	04/08/2014 13:31
Copper	42		0.50	1	04/08/2014 13:31
Lead	65		0.50	1	04/08/2014 13:31
Mercury	0.37		0.050	1	04/08/2014 13:31
Molybdenum	0.51		0.50	1	04/08/2014 13:31
Nickel	71		0.50	1	04/08/2014 13:31
Selenium	ND		0.50	1	04/08/2014 13:31
Silver	ND		0.50	1	04/08/2014 13:31
Thallium	ND		0.50	1	04/08/2014 13:31
Vanadium	49		0.50	1	04/08/2014 13:31
Zinc	120		5.0	1	04/08/2014 13:31
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	104		70-130		04/08/2014 13:31

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-12-10.5	1404200-024A	Soil/TOTAL	03/26/2014	ICP-MS1	89023
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Antimony	ND		0.50	1	04/08/2014 13:50
Arsenic	2.2		0.50	1	04/08/2014 13:50
Barium	40		5.0	1	04/08/2014 13:50
Beryllium	ND		0.50	1	04/08/2014 13:50
Cadmium	ND		0.25	1	04/08/2014 13:50
Chromium	130		5.0	10	04/09/2014 06:31
Cobalt	16		0.50	1	04/08/2014 13:50
Copper	9.9		0.50	1	04/08/2014 13:50
Lead	2.8		0.50	1	04/08/2014 13:50
Mercury	ND		0.050	1	04/08/2014 13:50
Molybdenum	ND		0.50	1	04/08/2014 13:50
Nickel	450		5.0	10	04/09/2014 06:31
Selenium	ND		0.50	1	04/08/2014 13:50
Silver	ND		0.50	1	04/08/2014 13:50
Thallium	ND		0.50	1	04/08/2014 13:50
Vanadium	43		0.50	1	04/08/2014 13:50
Zinc	28		5.0	1	04/08/2014 13:50
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	107		70-130		04/08/2014 13:50

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6-10	1404200-028A	Soil/TOTAL	03/31/2014	ICP-MS1	89023
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Antimony	1.6		0.50	1	04/08/2014 14:03
Arsenic	8.0		0.50	1	04/08/2014 14:03
Barium	170		5.0	1	04/08/2014 14:03
Beryllium	ND		0.50	1	04/08/2014 14:03
Cadmium	0.49		0.25	1	04/08/2014 14:03
Chromium	83		0.50	1	04/08/2014 14:03
Cobalt	16		0.50	1	04/08/2014 14:03
Copper	59		0.50	1	04/08/2014 14:03
Lead	92		5.0	10	04/09/2014 06:56
Mercury	0.38		0.050	1	04/08/2014 14:03
Molybdenum	0.52		0.50	1	04/08/2014 14:03
Nickel	75		0.50	1	04/08/2014 14:03
Selenium	ND		0.50	1	04/08/2014 14:03
Silver	ND		0.50	1	04/08/2014 14:03
Thallium	ND		0.50	1	04/08/2014 14:03
Vanadium	66		0.50	1	04/08/2014 14:03
Zinc	230		5.0	1	04/08/2014 14:03
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	123		70-130		04/08/2014 14:03

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-7-5	1404200-031A	Soil/TOTAL	04/02/2014	ICP-MS1	89023
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Antimony	ND		0.50	1	04/08/2014 14:53
Arsenic	3.3		0.50	1	04/08/2014 14:53
Barium	15		5.0	1	04/08/2014 14:53
Beryllium	ND		0.50	1	04/08/2014 14:53
Cadmium	ND		0.25	1	04/08/2014 14:53
Chromium	30		0.50	1	04/08/2014 14:53
Cobalt	4.3		0.50	1	04/08/2014 14:53
Copper	3.4		0.50	1	04/08/2014 14:53
Lead	5.0		0.50	1	04/08/2014 14:53
Mercury	ND		0.050	1	04/08/2014 14:53
Molybdenum	ND		0.50	1	04/08/2014 14:53
Nickel	20		0.50	1	04/08/2014 14:53
Selenium	ND		0.50	1	04/08/2014 14:53
Silver	ND		0.50	1	04/08/2014 14:53
Thallium	ND		0.50	1	04/08/2014 14:53
Vanadium	27		0.50	1	04/08/2014 14:53
Zinc	15		5.0	1	04/08/2014 14:53
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	109		70-130		04/08/2014 14:53



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/9/14

WorkOrder: 1404200
Extraction Method: SM4500-CN⁻ E
Analytical Method: SM4500-CN⁻ ABCE
Unit: mg/Kg

Cyanide, Total

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-10-2.5	1404200-001A	Soil	03/24/2014	SKALAR	89157

<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Total Cyanide	ND	H	0.10	1	04/10/2014 15:18

B-13-10.5	1404200-008A	Soil	03/25/2014	SKALAR	89157
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<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Total Cyanide	ND	H	0.10	1	04/10/2014 15:44

B-14-3	1404200-012A	Soil	03/26/2014	SKALAR	89157
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<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Total Cyanide	ND	H	0.10	1	04/10/2014 15:55

B-11-5	1404200-020A	Soil	03/26/2014	SKALAR	89157
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<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Total Cyanide	ND	H	0.10	1	04/10/2014 15:59

B-6-10	1404200-028A	Soil	03/31/2014	SKALAR	89157
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<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Total Cyanide	0.25		0.10	1	04/10/2014 16:02

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/9/14

WorkOrder: 1404200
Extraction Method: SM4500-CN⁻ E
Analytical Method: SM4500-CN⁻ ABCE
Unit: mg/Kg

Cyanide, Total

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-7-5	1404200-031A	Soil	04/02/2014	SKALAR	89157
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Total Cyanide	ND		0.10	1	04/10/2014 16:06



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14-4/11/14

WorkOrder: 1404200
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/ExtType	Date Collected	Instrument	Batch ID
B-10-2.5	1404200-001A	Soil	03/24/2014	GC7	89004
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND	H	1.0	1	04/08/2014 14:30
MTBE	---		0.050	1	04/08/2014 14:30
Benzene	---		0.0050	1	04/08/2014 14:30
Toluene	---		0.0050	1	04/08/2014 14:30
Ethylbenzene	---		0.0050	1	04/08/2014 14:30
Xylenes	---		0.0050	1	04/08/2014 14:30
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>		
2-Fluorotoluene	96	H	70-130		04/08/2014 14:30

B-10-5.5	1404200-002A	Soil	03/24/2014	GC7	89004
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	1.7	H	1.0	1	04/08/2014 15:01
MTBE	---		0.050	1	04/08/2014 15:01
Benzene	---		0.0050	1	04/08/2014 15:01
Toluene	---		0.0050	1	04/08/2014 15:01
Ethylbenzene	---		0.0050	1	04/08/2014 15:01
Xylenes	---		0.0050	1	04/08/2014 15:01
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	Analytical Comments: d7	
2-Fluorotoluene	94	H	70-130		04/08/2014 15:01

B-10-8	1404200-003A	Soil	03/24/2014	GC7	89004
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	1.1	H	1.0	1	04/08/2014 15:32
MTBE	---		0.050	1	04/08/2014 15:32
Benzene	---		0.0050	1	04/08/2014 15:32
Toluene	---		0.0050	1	04/08/2014 15:32
Ethylbenzene	---		0.0050	1	04/08/2014 15:32
Xylenes	---		0.0050	1	04/08/2014 15:32
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	Analytical Comments: d7	
2-Fluorotoluene	88	H	70-130		04/08/2014 15:32

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14-4/11/14

WorkOrder: 1404200
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/ExtType	Date Collected	Instrument	Batch ID
B-10-10.5	1404200-004A	Soil	03/24/2014	GC7	89004
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	1.7	H	1.0	1	04/08/2014 16:03
MTBE	---		0.050	1	04/08/2014 16:03
Benzene	---		0.0050	1	04/08/2014 16:03
Toluene	---		0.0050	1	04/08/2014 16:03
Ethylbenzene	---		0.0050	1	04/08/2014 16:03
Xylenes	---		0.0050	1	04/08/2014 16:03
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	Analytical Comments: d7	
2-Fluorotoluene	95	H	70-130		04/08/2014 16:03
B-13-3	1404200-005A	Soil	03/25/2014	GC19	89004
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	2.9		1.0	1	04/08/2014 15:16
MTBE	---		0.050	1	04/08/2014 15:16
Benzene	---		0.0050	1	04/08/2014 15:16
Toluene	---		0.0050	1	04/08/2014 15:16
Ethylbenzene	---		0.0050	1	04/08/2014 15:16
Xylenes	---		0.0050	1	04/08/2014 15:16
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: d7	
2-Fluorotoluene	89		70-130		04/08/2014 15:16
B-13-5.5	1404200-006A	Soil	03/25/2014	GC19	89004
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	2.8		1.0	1	04/08/2014 16:19
MTBE	---		0.050	1	04/08/2014 16:19
Benzene	---		0.0050	1	04/08/2014 16:19
Toluene	---		0.0050	1	04/08/2014 16:19
Ethylbenzene	---		0.0050	1	04/08/2014 16:19
Xylenes	---		0.0050	1	04/08/2014 16:19
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: d7	
2-Fluorotoluene	88		70-130		04/08/2014 16:19

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14-4/11/14

WorkOrder: 1404200
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/ExtType	Date Collected	Instrument	Batch ID
B-13-8	1404200-007A	Soil	03/25/2014	GC19	89004
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		1.0	1	04/08/2014 17:21
MTBE	---		0.050	1	04/08/2014 17:21
Benzene	---		0.0050	1	04/08/2014 17:21
Toluene	---		0.0050	1	04/08/2014 17:21
Ethylbenzene	---		0.0050	1	04/08/2014 17:21
Xylenes	---		0.0050	1	04/08/2014 17:21
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	97		70-130		04/08/2014 17:21

B-13-10.5	1404200-008A	Soil	03/25/2014	GC19	89004
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	1.5		1.0	1	04/08/2014 17:53
MTBE	---		0.050	1	04/08/2014 17:53
Benzene	---		0.0050	1	04/08/2014 17:53
Toluene	---		0.0050	1	04/08/2014 17:53
Ethylbenzene	---		0.0050	1	04/08/2014 17:53
Xylenes	---		0.0050	1	04/08/2014 17:53
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: d7	
2-Fluorotoluene	86		70-130		04/08/2014 17:53

B-8-3'	1404200-009A	Soil	03/25/2014	GC19	89004
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		1.0	1	04/08/2014 18:24
MTBE	---		0.050	1	04/08/2014 18:24
Benzene	---		0.0050	1	04/08/2014 18:24
Toluene	---		0.0050	1	04/08/2014 18:24
Ethylbenzene	---		0.0050	1	04/08/2014 18:24
Xylenes	---		0.0050	1	04/08/2014 18:24
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	83		70-130		04/08/2014 18:24

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14-4/11/14

WorkOrder: 1404200
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/ExtType	Date Collected	Instrument	Batch ID
B-8-5'	1404200-010A	Soil	03/25/2014	GC19	89004
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		1.0	1	04/08/2014 18:55
MTBE	---		0.050	1	04/08/2014 18:55
Benzene	---		0.0050	1	04/08/2014 18:55
Toluene	---		0.0050	1	04/08/2014 18:55
Ethylbenzene	---		0.0050	1	04/08/2014 18:55
Xylenes	---		0.0050	1	04/08/2014 18:55
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	95		70-130		04/08/2014 18:55
B-8-10.5	1404200-011A	Soil	03/25/2014	GC19	89154
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	1.2	H	1.0	1	04/09/2014 19:13
MTBE	---		0.050	1	04/09/2014 19:13
Benzene	---		0.0050	1	04/09/2014 19:13
Toluene	---		0.0050	1	04/09/2014 19:13
Ethylbenzene	---		0.0050	1	04/09/2014 19:13
Xylenes	---		0.0050	1	04/09/2014 19:13
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	Analytical Comments: d7	
2-Fluorotoluene	95	H	70-130		04/09/2014 19:13
B-14-3	1404200-012A	Soil	03/26/2014	GC19	89004
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		1.0	1	04/08/2014 19:57
MTBE	---		0.050	1	04/08/2014 19:57
Benzene	---		0.0050	1	04/08/2014 19:57
Toluene	---		0.0050	1	04/08/2014 19:57
Ethylbenzene	---		0.0050	1	04/08/2014 19:57
Xylenes	---		0.0050	1	04/08/2014 19:57
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	97		70-130		04/08/2014 19:57

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14-4/11/14

WorkOrder: 1404200
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/ExtType	Date Collected	Instrument	Batch ID
B-14-5.5	1404200-013A	Soil	03/26/2014	GC19	89154
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	2.2		1.0	1	04/09/2014 20:14
MTBE	---		0.050	1	04/09/2014 20:14
Benzene	---		0.0050	1	04/09/2014 20:14
Toluene	---		0.0050	1	04/09/2014 20:14
Ethylbenzene	---		0.0050	1	04/09/2014 20:14
Xylenes	---		0.0050	1	04/09/2014 20:14
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: d7	
2-Fluorotoluene	94		70-130		04/09/2014 20:14

B-14-7.5	1404200-014A	Soil	03/26/2014	GC19	89004
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	1.9		1.0	1	04/08/2014 20:58
MTBE	---		0.050	1	04/08/2014 20:58
Benzene	---		0.0050	1	04/08/2014 20:58
Toluene	---		0.0050	1	04/08/2014 20:58
Ethylbenzene	---		0.0050	1	04/08/2014 20:58
Xylenes	---		0.0050	1	04/08/2014 20:58
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: d7	
2-Fluorotoluene	94		70-130		04/08/2014 20:58

B-9-3	1404200-015A	Soil	03/25/2014	GC19	89004
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	4.1		1.0	1	04/08/2014 21:59
MTBE	---		0.050	1	04/08/2014 21:59
Benzene	---		0.0050	1	04/08/2014 21:59
Toluene	---		0.0050	1	04/08/2014 21:59
Ethylbenzene	---		0.0050	1	04/08/2014 21:59
Xylenes	---		0.0050	1	04/08/2014 21:59
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: d7	
2-Fluorotoluene	88		70-130		04/08/2014 21:59

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14-4/11/14

WorkOrder: 1404200
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/ExtType	Date Collected	Instrument	Batch ID
B-9-5.5	1404200-016A	Soil	03/25/2014	GC19	89004
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	2.0		1.0	1	04/08/2014 22:30
MTBE	---		0.050	1	04/08/2014 22:30
Benzene	---		0.0050	1	04/08/2014 22:30
Toluene	---		0.0050	1	04/08/2014 22:30
Ethylbenzene	---		0.0050	1	04/08/2014 22:30
Xylenes	---		0.0050	1	04/08/2014 22:30
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: d1	
2-Fluorotoluene	94		70-130		04/08/2014 22:30
B-9-8	1404200-017A	Soil	03/25/2014	GC19	89004
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		1.0	1	04/08/2014 23:00
MTBE	---		0.050	1	04/08/2014 23:00
Benzene	---		0.0050	1	04/08/2014 23:00
Toluene	---		0.0050	1	04/08/2014 23:00
Ethylbenzene	---		0.0050	1	04/08/2014 23:00
Xylenes	---		0.0050	1	04/08/2014 23:00
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	100		70-130		04/08/2014 23:00
B-9-10	1404200-018A	Soil	03/25/2014	GC19	89004
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	7.0	H	3.3	3.3	04/09/2014 14:35
MTBE	---		0.17	3.3	04/09/2014 14:35
Benzene	---		0.017	3.3	04/09/2014 14:35
Toluene	---		0.017	3.3	04/09/2014 14:35
Ethylbenzene	---		0.017	3.3	04/09/2014 14:35
Xylenes	---		0.017	3.3	04/09/2014 14:35
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	Analytical Comments: d7	
2-Fluorotoluene	94	H	70-130		04/09/2014 14:35

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14-4/11/14

WorkOrder: 1404200
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/ExtType	Date Collected	Instrument	Batch ID
B-11-3	1404200-019A	Soil	03/26/2014	GC19	89020
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		1.0	1	04/09/2014 01:32
MTBE	---		0.050	1	04/09/2014 01:32
Benzene	---		0.0050	1	04/09/2014 01:32
Toluene	---		0.0050	1	04/09/2014 01:32
Ethylbenzene	---		0.0050	1	04/09/2014 01:32
Xylenes	---		0.0050	1	04/09/2014 01:32
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	104		70-130		04/09/2014 01:32
B-11-5	1404200-020A	Soil	03/26/2014	GC19	89020
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	4.2		1.0	1	04/09/2014 02:02
MTBE	---		0.050	1	04/09/2014 02:02
Benzene	---		0.0050	1	04/09/2014 02:02
Toluene	---		0.0050	1	04/09/2014 02:02
Ethylbenzene	---		0.0050	1	04/09/2014 02:02
Xylenes	---		0.0050	1	04/09/2014 02:02
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: d7	
2-Fluorotoluene	92		70-130		04/09/2014 02:02
B-12-3	1404200-021A	Soil	03/26/2014	GC19	89020
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	1.7		1.0	1	04/09/2014 00:01
MTBE	---		0.050	1	04/09/2014 00:01
Benzene	---		0.0050	1	04/09/2014 00:01
Toluene	---		0.0050	1	04/09/2014 00:01
Ethylbenzene	---		0.0050	1	04/09/2014 00:01
Xylenes	---		0.0050	1	04/09/2014 00:01
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: d7	
2-Fluorotoluene	93		70-130		04/09/2014 00:01

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14-4/11/14

WorkOrder: 1404200
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/ExtType	Date Collected	Instrument	Batch ID
B-12-5.5	1404200-022A	Soil	03/26/2014	GC7	89020
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		1.0	1	04/08/2014 09:20
MTBE	---		0.050	1	04/08/2014 09:20
Benzene	---		0.0050	1	04/08/2014 09:20
Toluene	---		0.0050	1	04/08/2014 09:20
Ethylbenzene	---		0.0050	1	04/08/2014 09:20
Xylenes	---		0.0050	1	04/08/2014 09:20
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	103		70-130		04/08/2014 09:20

B-12-8	1404200-023A	Soil	03/26/2014	GC7	89020
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		1.0	1	04/08/2014 09:50
MTBE	---		0.050	1	04/08/2014 09:50
Benzene	---		0.0050	1	04/08/2014 09:50
Toluene	---		0.0050	1	04/08/2014 09:50
Ethylbenzene	---		0.0050	1	04/08/2014 09:50
Xylenes	---		0.0050	1	04/08/2014 09:50
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	97		70-130		04/08/2014 09:50

B-12-10.5	1404200-024A	Soil	03/26/2014	GC7	89020
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		1.0	1	04/08/2014 10:20
MTBE	---		0.050	1	04/08/2014 10:20
Benzene	---		0.0050	1	04/08/2014 10:20
Toluene	---		0.0050	1	04/08/2014 10:20
Ethylbenzene	---		0.0050	1	04/08/2014 10:20
Xylenes	---		0.0050	1	04/08/2014 10:20
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	94		70-130		04/08/2014 10:20

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14-4/11/14

WorkOrder: 1404200
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/ExtType	Date Collected	Instrument	Batch ID
B-6-3	1404200-025A	Soil	03/31/2014	GC19	89104
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		1.0	1	04/09/2014 20:44
MTBE	---		0.050	1	04/09/2014 20:44
Benzene	---		0.0050	1	04/09/2014 20:44
Toluene	---		0.0050	1	04/09/2014 20:44
Ethylbenzene	---		0.0050	1	04/09/2014 20:44
Xylenes	---		0.0050	1	04/09/2014 20:44
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	97		70-130		04/09/2014 20:44

B-6-5.5	1404200-026A	Soil	03/31/2014	GC19	89020
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	3.5		1.0	1	04/09/2014 13:33
MTBE	---		0.050	1	04/09/2014 13:33
Benzene	---		0.0050	1	04/09/2014 13:33
Toluene	---		0.0050	1	04/09/2014 13:33
Ethylbenzene	---		0.0050	1	04/09/2014 13:33
Xylenes	---		0.0050	1	04/09/2014 13:33
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: d7	
2-Fluorotoluene	89		70-130		04/09/2014 13:33

B-6-10	1404200-028A	Soil	03/31/2014	GC19	89246
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		1.0	1	04/11/2014 23:44
MTBE	---		0.050	1	04/11/2014 23:44
Benzene	---		0.0050	1	04/11/2014 23:44
Toluene	---		0.0050	1	04/11/2014 23:44
Ethylbenzene	---		0.0050	1	04/11/2014 23:44
Xylenes	---		0.0050	1	04/11/2014 23:44
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	106		70-130		04/11/2014 23:44

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14-4/11/14

WorkOrder: 1404200
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/ExtType	Date Collected	Instrument	Batch ID
B-6-15.5	1404200-029A	Soil	03/31/2014	GC19	89104
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		1.0	1	04/09/2014 21:14
MTBE	---		0.050	1	04/09/2014 21:14
Benzene	---		0.0050	1	04/09/2014 21:14
Toluene	---		0.0050	1	04/09/2014 21:14
Ethylbenzene	---		0.0050	1	04/09/2014 21:14
Xylenes	---		0.0050	1	04/09/2014 21:14
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	93		70-130		04/09/2014 21:14

B-7-2.5	1404200-030A	Soil	04/02/2014	GC19	89020
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		1.0	1	04/09/2014 15:06
MTBE	---		0.050	1	04/09/2014 15:06
Benzene	---		0.0050	1	04/09/2014 15:06
Toluene	---		0.0050	1	04/09/2014 15:06
Ethylbenzene	---		0.0050	1	04/09/2014 15:06
Xylenes	---		0.0050	1	04/09/2014 15:06
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	99		70-130		04/09/2014 15:06

B-7-5	1404200-031A	Soil	04/02/2014	GC19	89020
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		1.0	1	04/09/2014 06:31
MTBE	---		0.050	1	04/09/2014 06:31
Benzene	---		0.0050	1	04/09/2014 06:31
Toluene	---		0.0050	1	04/09/2014 06:31
Ethylbenzene	---		0.0050	1	04/09/2014 06:31
Xylenes	---		0.0050	1	04/09/2014 06:31
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	95		70-130		04/09/2014 06:31

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14-4/11/14

WorkOrder: 1404200
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/ExtType	Date Collected	Instrument	Batch ID
B-7-8	1404200-032A	Soil	04/02/2014	GC19	89246
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		1.0	1	04/12/2014 00:14
MTBE	---		0.050	1	04/12/2014 00:14
Benzene	---		0.0050	1	04/12/2014 00:14
Toluene	---		0.0050	1	04/12/2014 00:14
Ethylbenzene	---		0.0050	1	04/12/2014 00:14
Xylenes	---		0.0050	1	04/12/2014 00:14
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	104		70-130		04/12/2014 00:14

B-7-15.5	1404200-034A	Soil	04/02/2014	GC19	89020
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		1.0	1	04/08/2014 07:30
MTBE	---		0.050	1	04/08/2014 07:30
Benzene	---		0.0050	1	04/08/2014 07:30
Toluene	---		0.0050	1	04/08/2014 07:30
Ethylbenzene	---		0.0050	1	04/08/2014 07:30
Xylenes	---		0.0050	1	04/08/2014 07:30
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	99		70-130		04/08/2014 07:30



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

LUFT 5 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-10-5.5	1404200-002A	Soil/TOTAL	03/24/2014	ICP-MS1	89005

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	ND	0.25	1	04/08/2014 10:04
Chromium	42	0.50	1	04/08/2014 10:04
Lead	16	0.50	1	04/08/2014 10:04
Nickel	35	0.50	1	04/08/2014 10:04
Zinc	66	5.0	1	04/08/2014 10:04
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Tb 350.917	109	70-130		04/08/2014 10:04

B-10-10.5	1404200-004A	Soil/TOTAL	03/24/2014	ICP-MS1	89005
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<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	ND	0.25	1	04/08/2014 10:23
Chromium	57	0.50	1	04/08/2014 10:23
Lead	21	0.50	1	04/08/2014 10:23
Nickel	54	0.50	1	04/08/2014 10:23
Zinc	44	5.0	1	04/08/2014 10:23
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Tb 350.917	121	70-130		04/08/2014 10:23

B-13-8	1404200-007A	Soil/TOTAL	03/25/2014	ICP-MS1	89005
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<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	ND	0.25	1	04/08/2014 12:10
Chromium	39	0.50	1	04/08/2014 12:10
Lead	13	0.50	1	04/08/2014 12:10
Nickel	37	0.50	1	04/08/2014 12:10
Zinc	54	5.0	1	04/08/2014 12:10
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Tb 350.917	101	70-130		04/08/2014 12:10

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

LUFT 5 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-8-10.5	1404200-011A	Soil/TOTAL	03/25/2014	ICP-MS1	89005

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	0.39	0.25	1	04/08/2014 12:35
Chromium	53	0.50	1	04/08/2014 12:35
Lead	840	10	20	04/09/2014 05:47
Nickel	55	0.50	1	04/08/2014 12:35
Zinc	250	5.0	1	04/08/2014 12:35
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Tb 350.917	104	70-130		04/08/2014 12:35

B-14-5.5	1404200-013A	Soil/TOTAL	03/26/2014	ICP-MS1	89005
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<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	ND	0.25	1	04/08/2014 12:47
Chromium	200	5.0	10	04/09/2014 05:59
Lead	92	5.0	10	04/09/2014 05:59
Nickel	760	5.0	10	04/09/2014 05:59
Zinc	110	5.0	1	04/08/2014 12:47
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Tb 350.917	101	70-130		04/08/2014 12:47

B-9-5.5	1404200-016A	Soil/TOTAL	03/25/2014	ICP-MS1	89005
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<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	ND	0.25	1	04/08/2014 13:00
Chromium	43	0.50	1	04/08/2014 13:00
Lead	40	0.50	1	04/08/2014 13:00
Nickel	46	0.50	1	04/08/2014 13:00
Zinc	65	5.0	1	04/08/2014 13:00
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Tb 350.917	102	70-130		04/08/2014 13:00

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

LUFT 5 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-9-10	1404200-018A	Soil/TOTAL	03/25/2014	ICP-MS1	89005
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	ND		0.25	1	04/08/2014 13:06
Chromium	50		0.50	1	04/08/2014 13:06
Lead	120		5.0	10	04/09/2014 06:12
Nickel	43		0.50	1	04/08/2014 13:06
Zinc	96		5.0	1	04/08/2014 13:06
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	103		70-130		04/08/2014 13:06
B-11-3	1404200-019A	Soil/TOTAL	03/26/2014	ICP-MS1	89005
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	ND		0.25	1	04/08/2014 13:25
Chromium	68		0.50	1	04/08/2014 13:25
Lead	21		0.50	1	04/08/2014 13:25
Nickel	49		0.50	1	04/08/2014 13:25
Zinc	68		5.0	1	04/08/2014 13:25
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	105		70-130		04/08/2014 13:25
B-12-5.5	1404200-022A	Soil/TOTAL	03/26/2014	ICP-MS1	89023
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	ND		0.25	1	04/08/2014 13:38
Chromium	130		5.0	10	04/09/2014 06:18
Lead	5.6		0.50	1	04/08/2014 13:38
Nickel	270		5.0	10	04/09/2014 06:18
Zinc	41		5.0	1	04/08/2014 13:38
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	123		70-130		04/08/2014 13:38

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

LUFT 5 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-12-8	1404200-023A	Soil/TOTAL	03/26/2014	ICP-MS1	89023
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	ND		0.25	1	04/08/2014 13:44
Chromium	180		5.0	10	04/09/2014 06:24
Lead	4.9		0.50	1	04/08/2014 13:44
Nickel	500		5.0	10	04/09/2014 06:24
Zinc	38		5.0	1	04/08/2014 13:44
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	107		70-130		04/08/2014 13:44

B-6-5.5	1404200-026A	Soil/TOTAL	03/31/2014	ICP-MS1	89023
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	1.7		0.25	1	04/08/2014 13:56
Chromium	70		0.50	1	04/08/2014 13:56
Lead	120		5.0	10	04/09/2014 06:37
Nickel	73		0.50	1	04/08/2014 13:56
Zinc	120		5.0	1	04/08/2014 13:56
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	112		70-130		04/08/2014 13:56

B-6-15.5	1404200-029A	Soil/TOTAL	03/31/2014	ICP-MS1	89023
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	ND		0.25	1	04/08/2014 14:09
Chromium	59		0.50	1	04/08/2014 14:09
Lead	48		0.50	1	04/08/2014 14:09
Nickel	28		0.50	1	04/08/2014 14:09
Zinc	55		5.0	1	04/08/2014 14:09
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	106		70-130		04/08/2014 14:09

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

LUFT 5 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-7-2.5	1404200-030A	Soil/TOTAL	04/02/2014	ICP-MS1	89023
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	0.39		0.25	1	04/08/2014 14:15
Chromium	35		0.50	1	04/08/2014 14:15
Lead	29		0.50	1	04/08/2014 14:15
Nickel	48		0.50	1	04/08/2014 14:15
Zinc	93		5.0	1	04/08/2014 14:15
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	104		70-130		04/08/2014 14:15



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

Lead

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-10-8	1404200-003A	Soil/TOTAL	03/24/2014	ICP-MS1	89091
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	16		0.50	1	04/09/2014 04:08
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	105		70-130		04/09/2014 04:08
B-13-3	1404200-005A	Soil/TOTAL	03/25/2014	ICP-MS1	89091
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	42		0.50	1	04/09/2014 04:13
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	106		70-130		04/09/2014 04:13
B-13-10.5	1404200-008A	Soil/TOTAL	03/25/2014	ICP-MS1	89091
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	59		0.50	1	04/09/2014 04:17
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	107		70-130		04/09/2014 04:17
B-8-5'	1404200-010A	Soil/TOTAL	03/25/2014	ICP-MS1	89091
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	240		5.0	10	04/09/2014 12:29
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	105		70-130		04/09/2014 12:29
B-14-7.5	1404200-014A	Soil/TOTAL	03/26/2014	ICP-MS1	89091
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	49		0.50	1	04/09/2014 04:38
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	117		70-130		04/09/2014 04:38

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

Lead

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-9-8	1404200-017A	Soil/TOTAL	03/25/2014	ICP-MS1	89091
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	57		0.50	1	04/09/2014 04:42
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	100		70-130		04/09/2014 04:42
B-12-3	1404200-021A	Soil/TOTAL	03/26/2014	ICP-MS1	89091
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	120		5.0	10	04/09/2014 12:33
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	99		70-130		04/09/2014 12:33
B-6-3	1404200-025A	Soil/TOTAL	03/31/2014	ICP-MS1	89091
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	140		5.0	10	04/09/2014 12:37
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	108		70-130		04/09/2014 12:37
B-7-8	1404200-032A	Soil/TOTAL	04/02/2014	ICP-MS1	89091
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	200		5.0	10	04/09/2014 12:43
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	108		70-130		04/09/2014 12:43
B-7-15.5	1404200-034A	Soil/TOTAL	04/02/2014	ICP-MS1	89091
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	75		0.50	1	04/09/2014 04:58
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	105		70-130		04/09/2014 04:58



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/7/14

WorkOrder: 1404200
Extraction Method: SW9045D
Analytical Method: SW9045D
Unit: $\pm$, pH units @ 25°C

pH

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-10-2.5	1404200-001A	Soil	03/24/2014	WetChem	89082

<u>Analytes</u>	<u>Result</u>	<u>Accuracy</u>	<u>DF</u>	<u>Date Analyzed</u>
pH	10.2	0.1	1	04/07/2014 20:31

B-13-10.5	1404200-008A	Soil	03/25/2014	WetChem	89082
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<u>Analytes</u>	<u>Result</u>	<u>Accuracy</u>	<u>DF</u>	<u>Date Analyzed</u>
pH	8.51	0.1	1	04/07/2014 20:37

B-14-3	1404200-012A	Soil	03/26/2014	WetChem	89082
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<u>Analytes</u>	<u>Result</u>	<u>Accuracy</u>	<u>DF</u>	<u>Date Analyzed</u>
pH	8.03	0.1	1	04/07/2014 20:40

B-11-5	1404200-020A	Soil	03/26/2014	WetChem	89082
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<u>Analytes</u>	<u>Result</u>	<u>Accuracy</u>	<u>DF</u>	<u>Date Analyzed</u>
pH	7.69	0.1	1	04/07/2014 20:43

B-6-10	1404200-028A	Soil	03/31/2014	WetChem	89082
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<u>Analytes</u>	<u>Result</u>	<u>Accuracy</u>	<u>DF</u>	<u>Date Analyzed</u>
pH	8.26	0.1	1	04/07/2014 20:46

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/7/14

WorkOrder: 1404200
Extraction Method: SW9045D
Analytical Method: SW9045D
Unit: $\pm$, pH units @ 25°C

pH

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-7-5	1404200-031A	Soil	04/02/2014	WetChem	89082
<u>Analytes</u>	<u>Result</u>		<u>Accuracy</u>	<u>DF</u>	<u>Date Analyzed</u>
pH	8.40		0.1	1	04/07/2014 20:49



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/10/14

WorkOrder: 1404200
Extraction Method: SW9030A/E376.2
Analytical Method: SW9030A/E376.2
Unit: mg/Kg

Acid Soluble Sulfide

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-10-2.5	1404200-001A	Soil	03/24/2014	SPECTROPHOTOMETER	89058

<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Sulfide	ND	H	10	1	04/10/2014 15:45

B-13-10.5	1404200-008A	Soil	03/25/2014	SPECTROPHOTOMETER	89058
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<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Sulfide	ND	H	10	1	04/10/2014 15:50

B-14-3	1404200-012A	Soil	03/26/2014	SPECTROPHOTOMETER	89058
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<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Sulfide	ND	H	10	1	04/10/2014 15:55

B-11-5	1404200-020A	Soil	03/26/2014	SPECTROPHOTOMETER	89058
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<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Sulfide	ND	H	10	1	04/10/2014 16:00

B-6-10	1404200-028A	Soil	03/31/2014	SPECTROPHOTOMETER	89058
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<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Sulfide	ND	H	10	1	04/10/2014 16:05

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/10/14

WorkOrder: 1404200
Extraction Method: SW9030A/E376.2
Analytical Method: SW9030A/E376.2
Unit: mg/Kg

Acid Soluble Sulfide

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-7-5	1404200-031A	Soil	04/02/2014	SPECTROPHOTOMETER	89058
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Sulfide	ND	H	10	1	04/10/2014 16:10



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW3550B/3630C
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-10-2.5	1404200-001A	Soil	03/24/2014	GC11B	89018
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	48		20	20	04/09/2014 21:47
TPH-Motor Oil (C18-C36)	730		100	20	04/09/2014 21:47
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	118		70-130		04/09/2014 21:47
B-10-5.5	1404200-002A	Soil	03/24/2014	GC2B	89018
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	40		2.0	2	04/10/2014 23:15
TPH-Motor Oil (C18-C36)	140		10	2	04/10/2014 23:15
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	115		70-130		04/10/2014 23:15
B-10-8	1404200-003A	Soil	03/24/2014	GC6B	89018
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	26		2.0	1	04/10/2014 00:40
TPH-Motor Oil (C18-C36)	120		5.0	1	04/10/2014 00:40
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	109		70-130		04/10/2014 00:40
B-10-10.5	1404200-004A	Soil	03/24/2014	GC11A	89018
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	16		5.0	5	04/12/2014 12:04
TPH-Motor Oil (C18-C36)	230		25	5	04/12/2014 12:04
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	118		70-130		04/12/2014 12:04

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW3550B/3630C
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-13-3	1404200-005A	Soil	03/25/2014	GC11B	89018
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	20		5.0	5	04/12/2014 14:21
TPH-Motor Oil (C18-C36)	170		25	5	04/12/2014 14:21
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	105		70-130		04/12/2014 14:21
B-13-5.5	1404200-006A	Soil	03/25/2014	GC9a	89018
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	38		5.0	5	04/12/2014 11:40
TPH-Motor Oil (C18-C36)	360		25	5	04/12/2014 11:40
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	117		70-130		04/12/2014 11:40
B-13-8	1404200-007A	Soil	03/25/2014	GC11A	89018
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	12		2.0	1	04/11/2014 08:56
TPH-Motor Oil (C18-C36)	130		5.0	1	04/11/2014 08:56
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	120		70-130		04/11/2014 08:56
B-13-10.5	1404200-008A	Soil	03/25/2014	GC11A	89018
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	36		10	10	04/12/2014 17:46
TPH-Motor Oil (C18-C36)	610		50	10	04/12/2014 17:46
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	118		70-130		04/12/2014 17:46

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW3550B/3630C
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-8-3'	1404200-009A	Soil	03/25/2014	GC9a	89018
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	9.3		2.0	1	04/08/2014 21:05
TPH-Motor Oil (C18-C36)	22		5.0	1	04/08/2014 21:05
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	117		70-130		04/08/2014 21:05
B-8-5'	1404200-010A	Soil	03/25/2014	GC9a	89018
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	5.6		2.0	1	04/10/2014 18:31
TPH-Motor Oil (C18-C36)	34		5.0	1	04/10/2014 18:31
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	120		70-130		04/10/2014 18:31
B-8-10.5	1404200-011A	Soil	03/25/2014	GC2B	89018
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	37		2.0	1	04/10/2014 19:27
TPH-Motor Oil (C18-C36)	130		5.0	1	04/10/2014 19:27
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	109		70-130		04/10/2014 19:27
B-14-3	1404200-012A	Soil	03/26/2014	GC11B	89018
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	9.0		2.0	2	04/11/2014 20:04
TPH-Motor Oil (C18-C36)	46		10	2	04/11/2014 20:04
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	106		70-130		04/11/2014 20:04

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW3550B/3630C
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-14-5.5	1404200-013A	Soil	03/26/2014	GC9a	89018
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	12		2.0	1	04/10/2014 21:52
TPH-Motor Oil (C18-C36)	57		5.0	1	04/10/2014 21:52
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	120		70-130		04/10/2014 21:52
B-14-7.5	1404200-014A	Soil	03/26/2014	GC6B	89018
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	10		2.0	1	04/10/2014 01:52
TPH-Motor Oil (C18-C36)	53		5.0	1	04/10/2014 01:52
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	111		70-130		04/10/2014 01:52
B-9-3	1404200-015A	Soil	03/25/2014	GC11B	89018
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	22		10	10	04/11/2014 23:30
TPH-Motor Oil (C18-C36)	230		50	10	04/11/2014 23:30
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	105		70-130		04/11/2014 23:30
B-9-5.5	1404200-016A	Soil	03/25/2014	GC9a	89018
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	140		50	50	04/12/2014 17:15
TPH-Motor Oil (C18-C36)	2800		250	50	04/12/2014 17:15
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	119		70-130		04/12/2014 17:15

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW3550B/3630C
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-9-8	1404200-017A	Soil	03/25/2014	GC11B	89018
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	17		2.0	1	04/12/2014 04:04
TPH-Motor Oil (C18-C36)	100		5.0	1	04/12/2014 04:04
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	108		70-130		04/12/2014 04:04
B-9-10	1404200-018A	Soil	03/25/2014	GC11A	89018
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	210		50	50	04/09/2014 10:37
TPH-Motor Oil (C18-C36)	330		250	50	04/09/2014 10:37
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	104		70-130		04/09/2014 10:37
B-11-3	1404200-019A	Soil	03/26/2014	GC2A	89018
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	34		10	10	04/10/2014 18:11
TPH-Motor Oil (C18-C36)	330		50	10	04/10/2014 18:11
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	92		70-130		04/10/2014 18:11
B-11-5	1404200-020A	Soil	03/26/2014	GC11A	89018
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	25		2.0	1	04/09/2014 07:11
TPH-Motor Oil (C18-C36)	62		5.0	1	04/09/2014 07:11
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	126		70-130		04/09/2014 07:11

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW3550B/3630C
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-12-3	1404200-021A	Soil	03/26/2014	GC6B	89024
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	9.5		2.0	2	04/11/2014 02:36
TPH-Motor Oil (C18-C36)	25		10	2	04/11/2014 02:36
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	117		70-130		04/11/2014 02:36
B-12-5.5	1404200-022A	Soil	03/26/2014	GC6B	89024
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND		2.0	1	04/09/2014 17:21
TPH-Motor Oil (C18-C36)	ND		5.0	1	04/09/2014 17:21
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
C9	109		70-130		04/09/2014 17:21
B-12-8	1404200-023A	Soil	03/26/2014	GC6B	89024
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND		2.0	1	04/11/2014 00:11
TPH-Motor Oil (C18-C36)	ND		5.0	1	04/11/2014 00:11
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
C9	107		70-130		04/11/2014 00:11
B-12-10.5	1404200-024A	Soil	03/26/2014	GC6B	89024
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND		2.0	1	04/10/2014 05:26
TPH-Motor Oil (C18-C36)	ND		5.0	1	04/10/2014 05:26
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
C9	123		70-130		04/10/2014 05:26

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW3550B/3630C
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6-3	1404200-025A	Soil	03/31/2014	GC2A	89024
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	36		2.0	1	04/11/2014 04:17
TPH-Motor Oil (C18-C36)	150		5.0	1	04/11/2014 04:17
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	91		70-130		04/11/2014 04:17
B-6-5.5	1404200-026A	Soil	03/31/2014	GC11B	89024
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	110		20	20	04/12/2014 09:47
TPH-Motor Oil (C18-C36)	740		100	20	04/12/2014 09:47
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	117		70-130		04/12/2014 09:47
B-6-10	1404200-028A	Soil	03/31/2014	GC2B	89024
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	45		10	10	04/09/2014 07:41
TPH-Motor Oil (C18-C36)	370		50	10	04/09/2014 07:41
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	126		70-130		04/09/2014 07:41
B-6-15.5	1404200-029A	Soil	03/31/2014	GC6B	89024
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	4.2		2.0	1	04/10/2014 07:49
TPH-Motor Oil (C18-C36)	9.1		5.0	1	04/10/2014 07:49
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	122		70-130		04/10/2014 07:49

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14

WorkOrder: 1404200
Extraction Method: SW3550B/3630C
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-7-2.5	1404200-030A	Soil	04/02/2014	GC9a	89024
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	130		50	50	04/14/2014 12:20
TPH-Motor Oil (C18-C36)	2600		250	50	04/14/2014 12:20
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	105		70-130		04/14/2014 12:20
B-7-5	1404200-031A	Soil	04/02/2014	GC6B	89024
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND		2.0	1	04/11/2014 20:19
TPH-Motor Oil (C18-C36)	ND		5.0	1	04/11/2014 20:19
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e2	
C9	118		70-130		04/11/2014 20:19
B-7-8	1404200-032A	Soil	04/02/2014	GC2B	89024
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	68		2.0	2	04/11/2014 04:17
TPH-Motor Oil (C18-C36)	230		10	2	04/11/2014 04:17
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	125		70-130		04/11/2014 04:17
B-7-15.5	1404200-034A	Soil	04/02/2014	GC9a	89024
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	9.5		2.0	1	04/09/2014 00:26
TPH-Motor Oil (C18-C36)	38		5.0	1	04/09/2014 00:26
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	118		70-130		04/09/2014 00:26



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 4/4/14
Date Analyzed: 4/7/14
Instrument: GC22
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1404200
BatchID: 89021
Extraction Method: SW3550B
Analytical Method: SW8081A/8082
Unit: mg/kg
Sample ID: MB/LCS-89021
1404200-030AMS/MSD

QC Summary Report for SW8081A/8082

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Aldrin	ND	0.05064	0.0010	0.050	-	101	70-130
a-BHC	ND	-	0.0010	-	-	-	-
b-BHC	ND	-	0.0010	-	-	-	-
d-BHC	ND	-	0.0010	-	-	-	-
g-BHC	ND	0.05484	0.0010	0.050	-	110	70-130
Chlordane (Technical)	ND	-	0.025	-	-	-	-
a-Chlordane	ND	-	0.0010	-	-	-	-
g-Chlordane	ND	-	0.0010	-	-	-	-
p,p-DDD	ND	-	0.0010	-	-	-	-
p,p-DDE	ND	-	0.0010	-	-	-	-
p,p-DDT	ND	0.04753	0.0010	0.050	-	95.1	70-130
Dieldrin	ND	0.05567	0.0010	0.050	-	111	70-130
Endosulfan I	ND	-	0.0010	-	-	-	-
Endosulfan II	ND	-	0.0010	-	-	-	-
Endosulfan sulfate	ND	-	0.0010	-	-	-	-
Endrin	ND	0.05252	0.0010	0.050	-	105	70-130
Endrin aldehyde	ND	-	0.0010	-	-	-	-
Endrin ketone	ND	-	0.0010	-	-	-	-
Heptachlor	ND	0.04821	0.0010	0.050	-	96.4	70-130
Heptachlor epoxide	ND	-	0.0010	-	-	-	-
Hexachlorobenzene	ND	-	0.010	-	-	-	-
Hexachlorocyclopentadiene	ND	-	0.020	-	-	-	-
Methoxychlor	ND	-	0.0010	-	-	-	-
Toxaphene	ND	-	0.050	-	-	-	-
Surrogate Recovery							
Decachlorobiphenyl	0.04215	0.0416		0.050	84	83	70-130

(Cont.)



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 4/4/14
Date Analyzed: 4/7/14
Instrument: GC22
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1404200
BatchID: 89021
Extraction Method: SW3550B
Analytical Method: SW8081A/8082
Unit: mg/kg
Sample ID: MB/LCS-89021
1404200-030AMS/MSD

QC Summary Report for SW8081A/8082

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Aldrin	NR	NR	0	ND<0.2	NR	NR	-	NR	
g-BHC	NR	NR	0	ND<0.2	NR	NR	-	NR	
p,p-DDT	NR	NR	0	ND<0.2	NR	NR	-	NR	
Dieldrin	NR	NR	0	ND<0.2	NR	NR	-	NR	
Endrin	NR	NR	0	ND<0.2	NR	NR	-	NR	
Heptachlor	NR	NR	0	ND<0.2	NR	NR	-	NR	
Surrogate Recovery									
Decachlorobiphenyl	NR	NR	0		NR	NR	-	NR	



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 4/4/14
Date Analyzed: 4/7/14
Instrument: GC10
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1404200
BatchID: 89000
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/Kg
Sample ID: MB/LCS-89000
1404179-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	0.10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	0.04368	0.0050	0.050	-	87.4	70-130
Benzene	ND	0.04726	0.0050	0.050	-	94.5	70-130
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	0.18	0.050	0.20	-	90	70-130
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.04831	0.0050	0.050	-	96.6	70-130
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.04986	0.0040	0.050	-	99.7	70-130
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.04266	0.0040	0.050	-	85.3	70-130
1,1-Dichloroethene	ND	0.0384	0.0050	0.050	-	76.8	70-130
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-

(Cont.)



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 4/4/14
Date Analyzed: 4/7/14
Instrument: GC10
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1404200
BatchID: 89000
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/Kg
Sample ID: MB/LCS-89000
1404179-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Diisopropyl ether (DIPE)	ND	0.04394	0.0050	0.050	-	87.9	70-130
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.04407	0.0050	0.050	-	88.1	70-130
Freon 113	ND	-	0.0050	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.04478	0.0050	0.050	-	89.6	70-130
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	0.05157	0.0050	0.050	-	103	70-130
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	0.04705	0.0050	0.050	-	94.1	70-130
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Xylenes, Total	ND	-	0.0050	-	-	-	-

Surrogate Recovery

Dibromofluoromethane	0.1219	0.1695	0.18	97	97	70-130
Toluene-d8	0.1207	0.1628	0.18	97	93	70-130
4-BFB	0.01279	0.01782	0.018	102	102	70-130

(Cont.)



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 4/4/14
Date Analyzed: 4/7/14
Instrument: GC10
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1404200
BatchID: 89000
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/Kg
Sample ID: MB/LCS-89000
1404179-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	0.03447	0.03586	0.050	ND	68.9,F1	71.7	70-130	3.94	30
Benzene	0.03565	0.03729	0.050	ND	71.3	74.6	70-130	4.51	30
t-Butyl alcohol (TBA)	0.1456	0.1554	0.20	ND	72.8	77.7	70-130	6.48	30
Chlorobenzene	0.03652	0.03759	0.050	ND	73	75.2	70-130	2.87	30
1,2-Dibromoethane (EDB)	0.03606	0.03862	0.050	ND	72.1	77.2	70-130	6.85	30
1,2-Dichloroethane (1,2-DCA)	0.03312	0.03477	0.050	ND	66.2,F1	69.5,F1	70-130	4.84	30
1,1-Dichloroethene	0.08262	0.0811	0.050	ND	165,F1	162,F1	70-130	1.86	30
Diisopropyl ether (DIPE)	0.03367	0.03525	0.050	ND	67.3,F1	70.5	70-130	4.58	30
Ethyl tert-butyl ether (ETBE)	0.03399	0.03564	0.050	ND	68,F1	71.3	70-130	4.76	30
Methyl-t-butyl ether (MTBE)	0.03557	0.03672	0.050	ND	71.1	73.4	70-130	3.17	30
Toluene	0.03762	0.03914	0.050	ND	75.2	78.3	70-130	3.95	30
Trichloroethene	0.08429	0.08269	0.050	ND	169,F1	165,F1	70-130	1.91	30
Surrogate Recovery									
Dibromofluoromethane	0.1287	0.1288	0.18		74	74	70-130	0	30
Toluene-d8	0.1489	0.1494	0.18		85	85	70-130	0	30
4-BFB	0.01651	0.01654	0.018		94	95	70-130	0.151	30



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 4/7/14
Date Analyzed: 4/7/14
Instrument: GC21
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1404200
BatchID: 89060
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg
Sample ID: MB/LCS-89060
1404210-001AMS/MSD

QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acenaphthene	ND	3.387	0.25	5	-	67.7	30-130
Acenaphthylene	ND	-	0.25	-	-	-	-
Acetochlor	ND	-	0.25	-	-	-	-
Anthracene	ND	-	0.25	-	-	-	-
Benzidine	ND	-	1.3	-	-	-	-
Benzo (a) anthracene	ND	-	0.25	-	-	-	-
Benzo (b) fluoranthene	ND	-	0.25	-	-	-	-
Benzo (k) fluoranthene	ND	-	0.25	-	-	-	-
Benzo (g,h,i) perylene	ND	-	0.25	-	-	-	-
Benzo (a) pyrene	ND	-	0.25	-	-	-	-
Benzyl Alcohol	ND	-	1.3	-	-	-	-
1,1-Biphenyl	ND	-	0.25	-	-	-	-
Bis (2-chloroethoxy) Methane	ND	-	0.25	-	-	-	-
Bis (2-chloroethyl) Ether	ND	-	0.25	-	-	-	-
Bis (2-chloroisopropyl) Ether	ND	-	0.25	-	-	-	-
Bis (2-ethylhexyl) Adipate	ND	-	0.25	-	-	-	-
Bis (2-ethylhexyl) Phthalate	ND	-	0.25	-	-	-	-
4-Bromophenyl Phenyl Ether	ND	-	0.25	-	-	-	-
Butylbenzyl Phthalate	ND	-	0.25	-	-	-	-
4-Chloroaniline	ND	-	0.25	-	-	-	-
4-Chloro-3-methylphenol	ND	4.251	0.25	5	-	85	30-130
2-Chloronaphthalene	ND	-	0.25	-	-	-	-
2-Chlorophenol	ND	4.182	0.25	5	-	83.6	30-130
4-Chlorophenyl Phenyl Ether	ND	-	0.25	-	-	-	-
Chrysene	ND	-	0.25	-	-	-	-
Dibenzo (a,h) anthracene	ND	-	0.25	-	-	-	-
Dibenzofuran	ND	-	0.25	-	-	-	-
Di-n-butyl Phthalate	ND	-	0.25	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.25	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.25	-	-	-	-
1,4-Dichlorobenzene	ND	3.574	0.25	5	-	71.5	30-130
3,3-Dichlorobenzidine	ND	-	0.50	-	-	-	-
2,4-Dichlorophenol	ND	-	0.25	-	-	-	-
Diethyl Phthalate	ND	-	0.25	-	-	-	-
2,4-Dimethylphenol	ND	-	0.25	-	-	-	-
Dimethyl Phthalate	ND	-	0.25	-	-	-	-
4,6-Dinitro-2-methylphenol	ND	-	1.3	-	-	-	-
2,4-Dinitrophenol	ND	-	6.3	-	-	-	-
2,4-Dinitrotoluene	ND	4.123	0.25	5	-	82.5	30-130
2,6-Dinitrotoluene	ND	-	0.25	-	-	-	-

(Cont.)



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 4/7/14
Date Analyzed: 4/7/14
Instrument: GC21
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1404200
BatchID: 89060
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg
Sample ID: MB/LCS-89060
1404210-001AMS/MSD

QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Di-n-octyl Phthalate	ND	-	0.50	-	-	-	-
1,2-Diphenylhydrazine	ND	-	0.25	-	-	-	-
Fluoranthene	ND	-	0.25	-	-	-	-
Fluorene	ND	-	0.25	-	-	-	-
Hexachlorobenzene	ND	-	0.25	-	-	-	-
Hexachlorobutadiene	ND	-	0.25	-	-	-	-
Hexachlorocyclopentadiene	ND	-	1.3	-	-	-	-
Hexachloroethane	ND	-	0.25	-	-	-	-
Indeno (1,2,3-cd) pyrene	ND	-	0.25	-	-	-	-
Isophorone	ND	-	0.25	-	-	-	-
2-Methylnaphthalene	ND	-	0.25	-	-	-	-
2-Methylphenol (o-Cresol)	ND	-	0.25	-	-	-	-
3 &/or 4-Methylphenol (m,p-Cresol)	ND	-	0.25	-	-	-	-
Naphthalene	ND	-	0.25	-	-	-	-
2-Nitroaniline	ND	-	1.3	-	-	-	-
3-Nitroaniline	ND	-	1.3	-	-	-	-
4-Nitroaniline	ND	-	1.3	-	-	-	-
Nitrobenzene	ND	-	0.25	-	-	-	-
2-Nitrophenol	ND	-	1.3	-	-	-	-
4-Nitrophenol	ND	3.321	1.3	5	-	66.4	30-130
N-Nitrosodiphenylamine	ND	-	0.25	-	-	-	-
N-Nitrosodi-n-propylamine	ND	3.101	0.25	5	-	62	30-130
Pentachlorophenol	ND	3.579	1.3	5	-	71.6	30-130
Phenanthrene	ND	-	0.25	-	-	-	-
Phenol	ND	3.997	0.25	5	-	79.9	30-130
Pyrene	ND	3.809	0.25	5	-	76.2	30-130
1,2,4-Trichlorobenzene	ND	4.01	0.25	5	-	80.2	30-130
2,4,5-Trichlorophenol	ND	-	0.25	-	-	-	-
2,4,6-Trichlorophenol	ND	-	0.25	-	-	-	-

Surrogate Recovery

2-Fluorophenol	4.441	3.831		5	89	77	30-130
Phenol-d5	4.39	3.867		5	88	77	30-130
Nitrobenzene-d5	3.928	3.548		5	79	71	30-130
2-Fluorobiphenyl	4.093	3.511		5	82	70	30-130
2,4,6-Tribromophenol	3.283	3.124		5	66	62	30-130
4-Terphenyl-d14	4.515	3.987		5	90	80	30-130

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Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 4/7/14
Date Analyzed: 4/7/14
Instrument: GC21
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1404200
BatchID: 89060
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg
Sample ID: MB/LCS-89060
1404210-001AMS/MSD

QC Summary Report for SW8270C

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Acenaphthene	NR	NR	0	ND<10	NR	NR	-	NR	
4-Chloro-3-methylphenol	NR	NR	0	ND<10	NR	NR	-	NR	
2-Chlorophenol	NR	NR	0	ND<10	NR	NR	-	NR	
1,4-Dichlorobenzene	NR	NR	0	ND<10	NR	NR	-	NR	
2,4-Dinitrotoluene	NR	NR	0	ND<10	NR	NR	-	NR	
4-Nitrophenol	NR	NR	0	ND<52	NR	NR	-	NR	
N-Nitrosodi-n-propylamine	NR	NR	0	ND<10	NR	NR	-	NR	
Pentachlorophenol	NR	NR	0	ND<52	NR	NR	-	NR	
Phenol	NR	NR	0	ND<10	NR	NR	-	NR	
Pyrene	NR	NR	0	ND<10	NR	NR	-	NR	
1,2,4-Trichlorobenzene	NR	NR	0	ND<10	NR	NR	-	NR	

Surrogate Recovery

2-Fluorophenol	NR	NR	0		NR	NR	-	NR	
Phenol-d5	NR	NR	0		NR	NR	-	NR	
Nitrobenzene-d5	NR	NR	0		NR	NR	-	NR	
2-Fluorobiphenyl	NR	NR	0		NR	NR	-	NR	
2,4,6-Tribromophenol	NR	NR	0		NR	NR	-	NR	
4-Terphenyl-d14	NR	NR	0		NR	NR	-	NR	

(Cont.)



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 4/8/14
Date Analyzed: 4/8/14
Instrument: GC17, GC21
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1404200
BatchID: 89108
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg
Sample ID: MB/LCS-89108
1404200-028AMS/MSD

QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acenaphthene	ND	3.867	0.25	5	-	77.3	30-130
Acenaphthylene	ND	-	0.25	-	-	-	-
Acetochlor	ND	-	0.25	-	-	-	-
Anthracene	ND	-	0.25	-	-	-	-
Benzidine	ND	-	1.3	-	-	-	-
Benzo (a) anthracene	ND	-	0.25	-	-	-	-
Benzo (b) fluoranthene	ND	-	0.25	-	-	-	-
Benzo (k) fluoranthene	ND	-	0.25	-	-	-	-
Benzo (g,h,i) perylene	ND	-	0.25	-	-	-	-
Benzo (a) pyrene	ND	-	0.25	-	-	-	-
Benzyl Alcohol	ND	-	1.3	-	-	-	-
1,1-Biphenyl	ND	-	0.25	-	-	-	-
Bis (2-chloroethoxy) Methane	ND	-	0.25	-	-	-	-
Bis (2-chloroethyl) Ether	ND	-	0.25	-	-	-	-
Bis (2-chloroisopropyl) Ether	ND	-	0.25	-	-	-	-
Bis (2-ethylhexyl) Adipate	ND	-	0.25	-	-	-	-
Bis (2-ethylhexyl) Phthalate	ND	-	0.25	-	-	-	-
4-Bromophenyl Phenyl Ether	ND	-	0.25	-	-	-	-
Butylbenzyl Phthalate	ND	-	0.25	-	-	-	-
4-Chloroaniline	ND	-	0.25	-	-	-	-
4-Chloro-3-methylphenol	ND	4.869	0.25	5	-	97.4	30-130
2-Chloronaphthalene	ND	-	0.25	-	-	-	-
2-Chlorophenol	ND	4.772	0.25	5	-	95.4	30-130
4-Chlorophenyl Phenyl Ether	ND	-	0.25	-	-	-	-
Chrysene	ND	-	0.25	-	-	-	-
Dibenzo (a,h) anthracene	ND	-	0.25	-	-	-	-
Dibenzofuran	ND	-	0.25	-	-	-	-
Di-n-butyl Phthalate	ND	-	0.25	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.25	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.25	-	-	-	-
1,4-Dichlorobenzene	ND	4	0.25	5	-	80	30-130
3,3-Dichlorobenzidine	ND	-	0.50	-	-	-	-
2,4-Dichlorophenol	ND	-	0.25	-	-	-	-
Diethyl Phthalate	ND	-	0.25	-	-	-	-
2,4-Dimethylphenol	ND	-	0.25	-	-	-	-
Dimethyl Phthalate	ND	-	0.25	-	-	-	-
4,6-Dinitro-2-methylphenol	ND	-	1.3	-	-	-	-
2,4-Dinitrophenol	ND	-	6.3	-	-	-	-
2,4-Dinitrotoluene	ND	4.887	0.25	5	-	97.7	30-130
2,6-Dinitrotoluene	ND	-	0.25	-	-	-	-

(Cont.)



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 4/8/14
Date Analyzed: 4/8/14
Instrument: GC17, GC21
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1404200
BatchID: 89108
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg
Sample ID: MB/LCS-89108
1404200-028AMS/MSD

QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Di-n-octyl Phthalate	ND	-	0.50	-	-	-	-
1,2-Diphenylhydrazine	ND	-	0.25	-	-	-	-
Fluoranthene	ND	-	0.25	-	-	-	-
Fluorene	ND	-	0.25	-	-	-	-
Hexachlorobenzene	ND	-	0.25	-	-	-	-
Hexachlorobutadiene	ND	-	0.25	-	-	-	-
Hexachlorocyclopentadiene	ND	-	1.3	-	-	-	-
Hexachloroethane	ND	-	0.25	-	-	-	-
Indeno (1,2,3-cd) pyrene	ND	-	0.25	-	-	-	-
Isophorone	ND	-	0.25	-	-	-	-
2-Methylnaphthalene	ND	-	0.25	-	-	-	-
2-Methylphenol (o-Cresol)	ND	-	0.25	-	-	-	-
3 &/or 4-Methylphenol (m,p-Cresol)	ND	-	0.25	-	-	-	-
Naphthalene	ND	-	0.25	-	-	-	-
2-Nitroaniline	ND	-	1.3	-	-	-	-
3-Nitroaniline	ND	-	1.3	-	-	-	-
4-Nitroaniline	ND	-	1.3	-	-	-	-
Nitrobenzene	ND	-	0.25	-	-	-	-
2-Nitrophenol	ND	-	1.3	-	-	-	-
4-Nitrophenol	ND	3.751	1.3	5	-	75	30-130
N-Nitrosodiphenylamine	ND	-	0.25	-	-	-	-
N-Nitrosodi-n-propylamine	ND	3.392	0.25	5	-	67.8	30-130
Pentachlorophenol	ND	4.404	1.3	5	-	88.1	30-130
Phenanthrene	ND	-	0.25	-	-	-	-
Phenol	ND	4.432	0.25	5	-	88.6	30-130
Pyrene	ND	4.284	0.25	5	-	85.7	30-130
1,2,4-Trichlorobenzene	ND	4.719	0.25	5	-	94.4	30-130
2,4,5-Trichlorophenol	ND	-	0.25	-	-	-	-
2,4,6-Trichlorophenol	ND	-	0.25	-	-	-	-

Surrogate Recovery

2-Fluorophenol	3.985	4.027		5	80	81	30-130
Phenol-d5	3.674	3.925		5	73	78	30-130
Nitrobenzene-d5	3.59	3.722		5	72	74	30-130
2-Fluorobiphenyl	3.65	3.789		5	73	76	30-130
2,4,6-Tribromophenol	3.582	3.126		5	72	63	30-130
4-Terphenyl-d14	4.101	4.29		5	82	86	30-130

(Cont.)



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 4/8/14
Date Analyzed: 4/8/14
Instrument: GC17, GC21
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1404200
BatchID: 89108
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg
Sample ID: MB/LCS-89108
1404200-028AMS/MSD

QC Summary Report for SW8270C

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Acenaphthene	NR	NR	0	ND<10	NR	NR	-	NR	
4-Chloro-3-methylphenol	NR	NR	0	ND<10	NR	NR	-	NR	
2-Chlorophenol	NR	NR	0	ND<10	NR	NR	-	NR	
1,4-Dichlorobenzene	NR	NR	0	ND<10	NR	NR	-	NR	
2,4-Dinitrotoluene	NR	NR	0	ND<10	NR	NR	-	NR	
4-Nitrophenol	NR	NR	0	ND<52	NR	NR	-	NR	
N-Nitrosodi-n-propylamine	NR	NR	0	ND<10	NR	NR	-	NR	
Pentachlorophenol	NR	NR	0	ND<52	NR	NR	-	NR	
Phenol	NR	NR	0	ND<10	NR	NR	-	NR	
Pyrene	NR	NR	0	ND<10	NR	NR	-	NR	
1,2,4-Trichlorobenzene	NR	NR	0	ND<10	NR	NR	-	NR	

Surrogate Recovery

2-Fluorophenol	NR	NR	0		NR	NR	-	NR	
Phenol-d5	NR	NR	0		NR	NR	-	NR	
Nitrobenzene-d5	NR	NR	0		NR	NR	-	NR	
2-Fluorobiphenyl	NR	NR	0		NR	NR	-	NR	
2,4,6-Tribromophenol	NR	NR	0		NR	NR	-	NR	
4-Terphenyl-d14	NR	NR	0		NR	NR	-	NR	



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 4/4/14
Date Analyzed: 4/5/14
Instrument: ICP-MS1
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1404200
BatchID: 89005
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-89005
1404184-012AMS/MSD

QC Summary Report for SW6020

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Antimony	ND	47.42	0.50	50	-	94.8	75-125
Arsenic	ND	48.28	0.50	50	-	96.6	75-125
Barium	ND	466.8	5.0	500	-	93.4	75-125
Beryllium	ND	47.26	0.50	50	-	94.5	75-125
Cadmium	ND	48.03	0.25	50	-	96.1	75-125
Chromium	ND	47.31	0.50	50	-	94.6	75-125
Cobalt	ND	50.14	0.50	50	-	100	75-125
Copper	ND	47.63	0.50	50	-	95.3	75-125
Lead	ND	49.38	0.50	50	-	98.8	75-125
Mercury	ND	1.123	0.050	1.25	-	89.8	75-125
Molybdenum	ND	46.72	0.50	50	-	93.4	75-125
Nickel	ND	46.92	0.50	50	-	93.8	75-125
Selenium	ND	47.38	0.50	50	-	94.8	75-125
Silver	ND	45.73	0.50	50	-	91.5	75-125
Thallium	ND	49.43	0.50	50	-	98.9	75-125
Vanadium	ND	47.43	0.50	50	-	94.9	75-125
Zinc	ND	481	5.0	500	-	96.2	75-125
Surrogate Recovery							
Tb 350.917	549.2	495.5		500	110	99	70-130

(Cont.)



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 4/4/14
Date Analyzed: 4/5/14
Instrument: ICP-MS1
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1404200
BatchID: 89005
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-89005
1404184-012AMS/MSD

QC Summary Report for SW6020

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Antimony	90.42	64.91	50	22	136,F1	84.9	75-125	32.8,F1	20
Arsenic	56.86	60.48	50	4.5	105	112	75-125	6.17	20
Barium	697.3	791.4	500	120	115	134,F1	75-125	12.6	20
Beryllium	44.88	50.26	50	ND	89.8	101	75-125	11.3	20
Cadmium	48.34	56.18	50	ND	96.7	112	75-125	15.0	20
Chromium	107	566.2	50	38.77	136,F1	1050,F1	75-125	136,F1	20
Cobalt	54.44	80.85	50	4.1	101	154,F1	75-125	39,F1	20
Copper	NR	NR	50	91	NR	NR	75-125	NR	20
Lead	NR	NR	50	860	NR	NR	75-125	NR	20
Mercury	1.201	1.388	1.25	0.091	88.8	104	75-125	14.4	20
Molybdenum	47.05	55.63	50	ND	94.1	111	75-125	16.7	20
Nickel	117.6	652.5	50	38.70	158,F1	1230,F1	75-125	139,F1	20
Selenium	47.45	52.08	50	ND	94.9	104	75-125	9.30	20
Silver	45.95	52.37	50	ND	91.9	105	75-125	13.1	20
Thallium	47.59	56.27	50	ND	95.2	113	75-125	16.7	20
Vanadium	78.14	90.61	50	18	120	144,F1	75-125	14.8	20
Zinc	974.1	1006	500	341.6	127,F1	133,F1	75-125	3.22	20
Surrogate Recovery									
Tb 350.917	496.7	576.6	500		99	115	70-130	14.9	20

(Cont.)



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 4/4/14
Date Analyzed: 4/8/14
Instrument: ICP-MS1
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1404200
BatchID: 89023
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-89023
1404200-031AMS/MSD

QC Summary Report for SW6020

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Antimony	ND	50.52	0.50	50	-	101	75-125
Arsenic	ND	50.45	0.50	50	-	101	75-125
Barium	ND	498.4	5.0	500	-	99.7	75-125
Beryllium	ND	46.78	0.50	50	-	93.6	75-125
Cadmium	ND	51.19	0.25	50	-	102	75-125
Chromium	ND	48.81	0.50	50	-	97.6	75-125
Cobalt	ND	51.79	0.50	50	-	104	75-125
Copper	ND	48.04	0.50	50	-	96.1	75-125
Lead	ND	51.72	0.50	50	-	103	75-125
Mercury	ND	1.151	0.050	1.25	-	92.1	75-125
Molybdenum	ND	47.32	0.50	50	-	94.6	75-125
Nickel	ND	47.95	0.50	50	-	95.9	75-125
Selenium	ND	50.96	0.50	50	-	102	75-125
Silver	ND	47.56	0.50	50	-	95.1	75-125
Thallium	ND	51.88	0.50	50	-	104	75-125
Vanadium	ND	49.83	0.50	50	-	99.7	75-125
Zinc	ND	507.6	5.0	500	-	102	75-125
Surrogate Recovery							
Tb 350.917	518.3	523.4		500	104	105	70-130

(Cont.)



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 4/4/14
Date Analyzed: 4/8/14
Instrument: ICP-MS1
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1404200
BatchID: 89023
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-89023
1404200-031AMS/MSD

QC Summary Report for SW6020

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Antimony	53.07	52.91	50	ND	106	106	75-125	0	20
Arsenic	55.53	58.3	50	3.290	104	110	75-125	4.87	20
Barium	542.3	538.5	500	15.13	105	105	75-125	0	20
Beryllium	47.56	47.24	50	ND	95.1	94.5	75-125	0.675	20
Cadmium	53.17	52.97	50	ND	106	106	75-125	0	20
Chromium	83.43	84.44	50	29.80	107	109	75-125	1.20	20
Cobalt	56.7	56.83	50	4.283	105	105	75-125	0	20
Copper	52.31	53.31	50	3.362	97.9	99.9	75-125	1.89	20
Lead	60.48	57.67	50	4.992	111	105	75-125	4.76	20
Mercury	1.197	1.212	1.25	ND	95.8	97	75-125	1.25	20
Molybdenum	50.1	50.02	50	ND	100	100	75-125	0	20
Nickel	68.81	69.47	50	19.70	98.2	99.5	75-125	0.955	20
Selenium	51.49	51.34	50	ND	103	103	75-125	0	20
Silver	49.56	49.43	50	ND	99.1	98.9	75-125	0.263	20
Thallium	53.92	53.49	50	ND	108	107	75-125	0.801	20
Vanadium	79.65	80.05	50	27.23	105	106	75-125	0.501	20
Zinc	530.8	542.3	500	15.22	103	105	75-125	2.14	20
Surrogate Recovery									
Tb 350.917	544	545.3	500		109	109	70-130	0	20



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 4/9/14
Date Analyzed: 4/10/14
Instrument: SKALAR
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1404200
BatchID: 89157
Extraction Method: SM4500-CN⁻ E
Analytical Method: SM4500-CN⁻ ABCE
Unit: mg/Kg
Sample ID: MB/LCS-89157
1404200-008AMS/MSD

QC Summary Report for SM4500-CN⁻ ABCE

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Total Cyanide	ND	0.8312	0.10	0.80	-	104	90-110

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Total Cyanide	0.7647	0.8003	0.80	ND	95.6	100	80-120	4.55	20



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 4/4/14
Date Analyzed: 4/7/14
Instrument: GC7
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1404200
BatchID: 89004
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-89004
1404184-011AMS/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	0.6094	0.40	0.60	-	102	70-130
MTBE	ND	0.09954	0.050	0.10	-	99.5	70-130
Benzene	ND	0.1065	0.0050	0.10	-	107	70-130
Toluene	ND	0.1059	0.0050	0.10	-	106	70-130
Ethylbenzene	ND	0.1092	0.0050	0.10	-	109	70-130
Xylenes	ND	0.3328	0.0050	0.30	-	111	70-130

Surrogate Recovery

2-Fluorotoluene	0.1065	0.105		0.10	106	105	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
TPH(btex)	0.5858	0.5736	0.60	ND	97.6	95.6	70-130	2.11	20
MTBE	0.08091	0.08584	0.10	ND	80.9	85.8	70-130	5.92	20
Benzene	0.08726	0.09231	0.10	ND	87.3	92.3	70-130	5.62	20
Toluene	0.08883	0.09426	0.10	ND	88.8	94.3	70-130	5.93	20
Ethylbenzene	0.09148	0.09648	0.10	ND	91.5	96.5	70-130	5.32	20
Xylenes	0.288	0.2952	0.30	ND	96	98.4	70-130	2.45	20

Surrogate Recovery

2-Fluorotoluene	0.08464	0.09062	0.10		85	91	70-130	6.82	20
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Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 4/4/14
Date Analyzed: 4/8/14
Instrument: GC19
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1404200
BatchID: 89020
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-89020
1404200-034AMS/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	0.5089	0.40	0.60	-	84.8	70-130
MTBE	ND	0.09036	0.050	0.10	-	90.4	70-130
Benzene	ND	0.1045	0.0050	0.10	-	104	70-130
Toluene	ND	0.1049	0.0050	0.10	-	105	70-130
Ethylbenzene	ND	0.1041	0.0050	0.10	-	104	70-130
Xylenes	ND	0.3227	0.0050	0.30	-	108	70-130

Surrogate Recovery

2-Fluorotoluene	0.1089	0.1058		0.10	109	106	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
TPH(btex)	0.4592	0.5021	0.60	ND	76.5	83.7	70-130	8.93	20
MTBE	0.07182	0.08451	0.10	ND	71.8	84.5	70-130	16.2	20
Benzene	0.08938	0.1007	0.10	ND	89.4	101	70-130	11.9	20
Toluene	0.09044	0.1017	0.10	ND	90.4	102	70-130	11.7	20
Ethylbenzene	0.0901	0.1013	0.10	ND	90.1	101	70-130	11.7	20
Xylenes	0.28	0.3128	0.30	ND	93.3	104	70-130	11.1	20

Surrogate Recovery

2-Fluorotoluene	0.09231	0.1002	0.10		92	100	70-130	8.19	20
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Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 4/8/14
Date Analyzed: 4/8/14
Instrument: GC7
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1404200
BatchID: 89104
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-89104
1404258-001AMS/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	0.6065	0.40	0.60	-	101	70-130
MTBE	ND	0.09248	0.050	0.10	-	92.5	70-130
Benzene	ND	0.09904	0.0050	0.10	-	99	70-130
Toluene	ND	0.1004	0.0050	0.10	-	100	70-130
Ethylbenzene	ND	0.1043	0.0050	0.10	-	104	70-130
Xylenes	ND	0.3196	0.0050	0.30	-	107	70-130

Surrogate Recovery

2-Fluorotoluene	0.1001	0.1023		0.10	100	102	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
TPH(btex)	0.5804	0.6134	0.60	ND	96.7	102	70-130	5.53	20
MTBE	0.09158	0.09598	0.10	ND	91.6	96	70-130	4.69	20
Benzene	0.09618	0.09703	0.10	ND	96.2	97	70-130	0.879	20
Toluene	0.09874	0.09978	0.10	ND	98.7	99.8	70-130	1.05	20
Ethylbenzene	0.1021	0.1039	0.10	ND	102	104	70-130	1.70	20
Xylenes	0.3151	0.3212	0.30	ND	105	107	70-130	1.91	20

Surrogate Recovery

2-Fluorotoluene	0.0991	0.09735	0.10		99	97	70-130	1.77	20
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Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 4/9/14
Date Analyzed: 4/9/14
Instrument: GC7
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1404200
BatchID: 89154
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-89154
1404327-001AMS/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	0.6433	0.40	0.60	-	107	70-130
MTBE	ND	0.09235	0.050	0.10	-	92.4	70-130
Benzene	ND	0.1071	0.0050	0.10	-	107	70-130
Toluene	ND	0.1068	0.0050	0.10	-	107	70-130
Ethylbenzene	ND	0.1108	0.0050	0.10	-	111	70-130
Xylenes	ND	0.3376	0.0050	0.30	-	113	70-130

Surrogate Recovery

2-Fluorotoluene	0.1094	0.1022		0.10	109	102	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
TPH(btex)	NR	NR	0	16	NR	NR	-	NR	
MTBE	NR	NR	0	ND<1	NR	NR	-	NR	
Benzene	NR	NR	0	ND<0.1	NR	NR	-	NR	
Toluene	NR	NR	0	0.19	NR	NR	-	NR	
Ethylbenzene	NR	NR	0	ND<0.1	NR	NR	-	NR	
Xylenes	NR	NR	0	ND<0.1	NR	NR	-	NR	

Surrogate Recovery

2-Fluorotoluene	NR	NR	0		NR	NR	-	NR	
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Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 4/4/14
Date Analyzed: 4/5/14
Instrument: ICP-MS1
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1404200
BatchID: 89005
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-89005
1404184-012AMS/MSD

QC Summary Report for SW6020

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Cadmium	ND	48.03	0.25	50	-	96.1	75-125
Chromium	ND	47.31	0.50	50	-	94.6	75-125
Lead	ND	49.38	0.50	50	-	98.8	75-125
Nickel	ND	46.92	0.50	50	-	93.8	75-125
Zinc	ND	481	5.0	500	-	96.2	75-125

Surrogate Recovery

Tb 350.917	549.2	495.5		500	110	99	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
Cadmium	48.34	56.18	50	ND	96.7	112	75-125	15.0	20
Chromium	107	566.2	50	38.77	136,F1	1050,F1	75-125	136,F1	20
Lead	NR	NR	50	860	NR	NR	75-125	NR	20
Nickel	117.6	652.5	50	38.70	158,F1	1230,F1	75-125	139,F1	20
Zinc	974.1	1006	500	341.6	127,F1	133,F1	75-125	3.22	20

Surrogate Recovery

Tb 350.917	496.7	576.6	500		99	115	70-130	14.9	20
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Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 4/4/14
Date Analyzed: 4/8/14
Instrument: ICP-MS1
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1404200
BatchID: 89023
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-89023
1404200-031AMS/MSD

QC Summary Report for SW6020

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Cadmium	ND	51.19	0.25	50	-	102	75-125
Chromium	ND	48.81	0.50	50	-	97.6	75-125
Lead	ND	51.72	0.50	50	-	103	75-125
Nickel	ND	47.95	0.50	50	-	95.9	75-125
Zinc	ND	507.6	5.0	500	-	102	75-125

Surrogate Recovery

Tb 350.917	518.3	523.4		500	104	105	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
Cadmium	53.17	52.97	50	ND	106	106	75-125	0	20
Chromium	83.43	84.44	50	29.80	107	109	75-125	1.20	20
Lead	60.48	57.67	50	4.992	111	105	75-125	4.76	20
Nickel	68.81	69.47	50	19.70	98.2	99.5	75-125	0.955	20
Zinc	530.8	542.3	500	15.22	103	105	75-125	2.14	20

Surrogate Recovery

Tb 350.917	544	545.3	500		109	109	70-130	0	20
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Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 4/4/14
Date Analyzed: 4/8/14
Instrument: ICP-MS1
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1404200
BatchID: 89091
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-89091
1404183-007AMS/MSD

QC Summary Report for SW6020

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Lead	ND	53.25	0.50	50	-	106	75-125
Surrogate Recovery							
Tb 350.917	530.7	537.7		500	106	108	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Lead	NR	NR	50	1381	NR	NR	75-125	NR	20
Surrogate Recovery									
Tb 350.917	528.5	516.8	500		106	103	70-130	2.24	20



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 4/7/14
Date Analyzed: 4/7/14
Instrument: WetChem
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1404200
BatchID: 89082
Extraction Method: SW9045D
Analytical Method: SW9045D
Unit: $\pm$, pH units @ 25°C

QC Summary Report for SW9045D (pH)

SampleID	Sample Result	Sample DF	Dup / Serial Dilution Result	Dup / Serial Dilution DF	Precision	Acceptance Criteria
1404200-001A	10.2	1	10.2	1	0	0.1



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 4/7/14
Date Analyzed: 4/10/14
Instrument: SPECTROPHOTOMETER
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1404200
BatchID: 89058
Extraction Method: SW9030A/E376.2
Analytical Method: SW9030A/E376.2
Unit: mg/Kg
Sample ID: MB/LCS-89058
1404200-031AMS/MSD

QC Summary Report for SW9030A/E376.2

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Sulfide	ND	ND	10	50	-	97.6	80-120

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Sulfide	ND	ND	50	ND	86	75.3	75-125	13.2	20



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 4/4/14
Date Analyzed: 4/7/14 - 4/8/14
Instrument: GC6B
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1404200
BatchID: 89018
Extraction Method: SW3550B/3630C
Analytical Method: SW8015B
Unit: mg/Kg
Sample ID: MB/LCS-89018
1404200-020AMS/MSD

QC Summary Report for SW8015B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	41.87	1.0	40	-	105	70-130

Surrogate Recovery

C9	24.9	26.58		25	100	106	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
TPH-Diesel (C10-C23)	63.27	65.29	40	24.82	96.1	101	70-130	3.14	30

Surrogate Recovery

C9	22.64	23.27	25		91	93	70-130	2.76	30
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Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 4/4/14
Date Analyzed: 4/7/14
Instrument: GC6B
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1404200
BatchID: 89024
Extraction Method: SW3550B/3630C
Analytical Method: SW8015B
Unit: mg/Kg
Sample ID: MB/LCS-89024
1404200-034AMS/MSD

QC Summary Report for SW8015B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	50.55	1.0	40	-	126	70-130

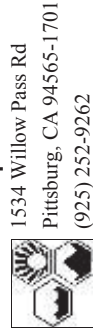
Surrogate Recovery

C9	25.22	27.16		25	101	109	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
TPH-Diesel (C10-C23)	55.2	56.19	40	9.483	114	117	70-130	1.77	30

Surrogate Recovery

C9	29.64	29.41	25		119	118	70-130	0.763	30
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WorkOrder: 1404200 ClientCode: TWRf

WaterTrax WriteOn EDF Excel EQulS Email HardCopy J-flag ThirdParty

Report to: Peter Cusack Treadwell & Rollo 555 Montgomery St., Suite 1300 San Francisco, CA 94111 (415) 955-5244 FAX: (415) 955-9041 Bill to: Accounts Payable Treadwell & Rollo 555 Montgomery St., Suite 1300 San Francisco, CA 94111 Requested TAT: 5 days Date Received: 04/04/2014 Date Printed: 04/04/2014

					Requested Tests (See legend below)											
Lab ID	Client ID	Matrix	Collection Date	Hold	1	2	3	4	5	6	7	8	9	10	11	12
1404200-001	B-10-2.5	Soil	3/24/2014	☐	A	A	A		A	A			A	A	A	
1404200-002	B-10-5.5	Soil	3/24/2014	☐							A				A	
1404200-003	B-10-8	Soil	3/24/2014	☐		A	A	A				A			A	
1404200-004	B-10-10.5	Soil	3/24/2014	☐							A				A	
1404200-005	B-13-3	Soil	3/25/2014	☐								A			A	
1404200-006	B-13-5.5	Soil	3/25/2014	☐	A	A	A		A						A	
1404200-007	B-13-8	Soil	3/25/2014	☐							A				A	
1404200-008	B-13-10.5	Soil	3/25/2014	☐						A		A	A	A	A	
1404200-009	B-8-3'	Soil	3/25/2014	☐	A				A						A	
1404200-010	B-8-5'	Soil	3/25/2014	☐								A			A	
1404200-011	B-8-10.5	Soil	3/25/2014	☐							A				A	
1404200-012	B-14-3	Soil	3/26/2014	☐	A	A	A		A	A			A	A	A	
1404200-013	B-14-5.5	Soil	3/26/2014	☐		A	A				A				A	
1404200-014	B-14-7.5	Soil	3/26/2014	☐								A			A	
1404200-015	B-9-3	Soil	3/25/2014	☐					A						A	
1404200-016	B-9-5.5	Soil	3/25/2014	☐		A	A				A				A	

Test Legend:

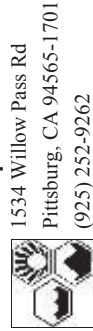
1 8081PCB_S 2 8260B_S 3 8270D_S 4 ASBEST400 (435 CARB)_S 5 CAM17MS_S 6 CN_TOTAL_S 7 LUFTMS_S 8 PB_S 9 PH_S 10 SULFIDE_S 11 TPH(DMO)WSG_S 12

The following SampleIDs: 001A, 002A, 003A, 004A, 005A, 006A, 007A, 008A, 009A, 010A, 011A, 012A, 013A, 014A, 015A, 016A, 017A, 018A, 019A, 020A, 021A, 022A, 023A, 024A, 025A, 026A, 028A, 029A, 030A, 031A, 032A, 034A contain testgroup.

Prepared by: Ana Venegas

Comments: SEND HARD COPY

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.



☐ 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: #731626701; India Basin

Bill to:

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

Requested TAT: 5 days

Date Received: 04/04/2014

Date Printed: 04/04/2014

WorkOrder: 1404200 ClientCode: TWRf

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
1404200-017	B-9-8	Soil	3/25/2014	☐								A			A	
1404200-018	B-9-10	Soil	3/25/2014	☐							A				A	
1404200-019	B-11-3	Soil	3/26/2014	☐	A	A	A				A				A	
1404200-020	B-11-5	Soil	3/26/2014	☐	A				A	A			A	A	A	
1404200-021	B-12-3	Soil	3/26/2014	☐								A			A	
1404200-022	B-12-5.5	Soil	3/26/2014	☐		A	A				A				A	
1404200-023	B-12-8	Soil	3/26/2014	☐				A			A				A	
1404200-024	B-12-10.5	Soil	3/26/2014	☐					A						A	
1404200-025	B-6-3	Soil	3/31/2014	☐	A	A	A					A			A	
1404200-026	B-6-5.5	Soil	3/31/2014	☐							A				A	
1404200-028	B-6-10	Soil	3/31/2014	☐		A	A		A	A			A	A	A	
1404200-029	B-6-15.5	Soil	3/31/2014	☐							A				A	
1404200-030	B-7-2.5	Soil	4/2/2014	☐	A						A				A	
1404200-031	B-7-5	Soil	4/2/2014	☐		A	A		A	A			A	A	A	
1404200-032	B-7-8	Soil	4/2/2014	☐								A			A	
1404200-034	B-7-15.5	Soil	4/2/2014	☐								A			A	

Test Legend:

1	8081PCB_S	2	8260B_S
6	CN_TOTAL_S	7	LUFTMS_S
11	TPH(DMO)WSG_S	12	

3	8270D_S
8	PB_S

4	ASBEST400 (435 CARB)_S
9	PH_S

5	CAM17MS_S
10	SULFIDE_S

The following SampleIDs: 001A, 002A, 003A, 004A, 005A, 006A, 007A, 008A, 009A, 010A, 011A, 012A, 013A, 014A, 015A, 016A, 017A, 018A, 019A, 020A, 021A, 022A, 023A, 024A, 025A, 026A, 028A, 029A, 030A, 031A, 032A, 034A contain testgroup.

Prepared by: Ana Venegas

Comments: SEND HARD COPY

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.



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http://www.mccampbell.com / E-mail: main@mccampbell.com

WORK ORDER SUMMARY

Client Name: TREADWELL & ROLLO
Project: #731626701; India Basin
Comments: SEND HARD COPY

QC Level: LEVEL 2
Client Contact: Peter Cusack
Contact's Email: pcusack@langan.com
Work Order: 1404200
Date Received: 4/4/2014

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ Fax ☒ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1404200-001A	B-10-2.5	Soil	Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up	1	Big Stainless Tube	☐	3/24/2014	5 days		☐	
			SW9030A/E376.2 (Sulfide)			☐		5 days		☐	
			SW9045D (pH)			☐		5 days		☐	
			Cyanide, Total			☐		5 days		☐	
			SW6020 (CAM 17)			☐		5 days		☐	
			SW8270C (SVOCs)			☐		5 days		☐	
			SW8260B (VOCs)			☐		5 days		☐	
			SW8081A/8082 (OC Pesticides+PCBs)			☐		5 days		☐	
1404200-002A	B-10-5.5	Soil	SW6020 (LUFT)	1	Big Stainless Tube	☐	3/24/2014	5 days		☐	
			Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up			☐		5 days		☐	
1404200-003A	B-10-8	Soil	SW6010B (Lead)	1	Big Stainless Tube	☐	3/24/2014	5 days		☐	
			Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up			☐		5 days		☐	
			Asbestos, 435 CARB 400			☐		5 days		☐	SubOut
			SW8270C (SVOCs)			☐		5 days		☐	
			SW8260B (VOCs)			☐		5 days		☐	

*** NOTE:** STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).

Bottle Legend:

Big Stainless Tube =
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Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1404200-004A	B-10-10.5	Soil	Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up SW6020 (LUFT)	1	Big Stainless Tube	☐	3/24/2014	5 days		☐	
1404200-005A	B-13-3	Soil	SW6010B (Lead) Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up	1	Big Stainless Tube	☐	3/25/2014	5 days		☐	
1404200-006A	B-13-5.5	Soil	Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up SW6020 (CAM 17) SW8270C (SVOCs) SW8260B (VOCs) SW8081A/8082 (OC Pesticides+PCBs)	1	Big Stainless Tube	☐	3/25/2014	5 days		☐	
1404200-007A	B-13-8	Soil	SW6020 (LUFT) Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up	1	Big Stainless Tube	☐	3/25/2014	5 days		☐	
1404200-008A	B-13-10.5	Soil	Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up SW9030A/E376.2 (Sulfide) SW9045D (pH) SW6010B (Lead)	1	Big Stainless Tube	☐	3/25/2014	5 days		☐	

*** NOTE: STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).**

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Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment	Hold	SubOut
1404200-008A	B-13-10.5	Soil	Cyanide, Total	1	Big Stainless Tube	☐	3/25/2014	5 days		☐	
1404200-009A	B-8-3'	Soil	Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up SW6020 (CAM 17) SW8081A/8082 (OC Pesticides+PCBs)	1	Big Stainless Tube	☐	3/25/2014	5 days		☐	
1404200-010A	B-8-5'	Soil	SW6010B (Lead) Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up	1	Big Stainless Tube	☐	3/25/2014	5 days		☐	
1404200-011A	B-8-10.5	Soil	SW6020 (LUFT) Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up	1	Big Stainless Tube	☐	3/25/2014	5 days		☐	
1404200-012A	B-14-3	Soil	Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up SW9030A/E376.2 (Sulfide) SW9045D (pH) Cyanide, Total SW6020 (CAM 17) SW8270C (SVOCs) SW8260B (VOCs)	1	Big Stainless Tube	☐	3/26/2014	5 days		☐	

*** NOTE:** STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).

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Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1404200-012A	B-14-3	Soil	SW8081A/8082 (OC Pesticides+PCBs)	1	Big Stainless Tube	☐	3/26/2014	5 days		☐	
1404200-013A	B-14-5.5	Soil	SW6020 (LUFT) Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up SW8270C (SVOCs) SW8260B (VOCs)	1	Big Stainless Tube	☐	3/26/2014	5 days		☐	
1404200-014A	B-14-7.5	Soil	SW6010B (Lead) Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up	1	Big Stainless Tube	☐	3/26/2014	5 days		☐	
1404200-015A	B-9-3	Soil	Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up SW6020 (CAM 17)	1	Big Stainless Tube	☐	3/25/2014	5 days		☐	
1404200-016A	B-9-5.5	Soil	SW6020 (LUFT) Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up SW8270C (SVOCs) SW8260B (VOCs)	1	Big Stainless Tube	☐	3/25/2014	5 days		☐	
1404200-017A	B-9-8	Soil	Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up SW6010B (Lead)	1	Big Stainless Tube	☐	3/25/2014	5 days		☐	

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Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1404200-018A	B-9-10	Soil	SW6020 (LUFT) Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up	1	Big Stainless Tube	☐	3/25/2014	5 days		☐	
1404200-019A	B-11-3	Soil	SW6020 (LUFT) Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up SW8270C (SVOCs) SW8260B (VOCs) SW8081A/8082 (OC Pesticides+PCBs)	1	Big Stainless Tube	☐	3/26/2014	5 days		☐	
1404200-020A	B-11-5	Soil	Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up SW9030A/E376.2 (Sulfide) SW9045D (pH) Cyanide, Total SW6020 (CAM 17) SW8081A/8082 (OC Pesticides+PCBs)	1	Big Stainless Tube	☐	3/26/2014	5 days		☐	
1404200-021A	B-12-3	Soil	SW6010B (Lead) Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up	1	Big Stainless Tube	☐	3/26/2014	5 days		☐	

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Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1404200-022A	B-12-5.5	Soil	SW6020 (LUFT)	1	Big Stainless Tube	☐	3/26/2014	5 days		☐	
			Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up			☐		5 days		☐	
			SW8270C (SVOCs)			☐		5 days		☐	
			SW8260B (VOCs)			☐		5 days		☐	
1404200-023A	B-12-8	Soil	SW6020 (LUFT)	1	Big Stainless Tube	☐	3/26/2014	5 days		☐	
			Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up			☐		5 days		☐	
			Asbestos, 435 CARB 400			☐		5 days		☐	SubOut
1404200-024A	B-12-10.5	Soil	Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up	1	Big Stainless Tube	☐	3/26/2014	5 days		☐	
			SW6020 (CAM 17)			☐		5 days		☐	
1404200-025A	B-6-3	Soil	Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up	1	Big Stainless Tube	☐	3/31/2014	5 days		☐	
			SW6010B (Lead)			☐		5 days		☐	
			SW8270C (SVOCs)			☐		5 days		☐	
			SW8260B (VOCs)			☐		5 days		☐	
			SW8081A/8082 (OC Pesticides+PCBs)			☐		5 days		☐	
1404200-026A	B-6-5.5	Soil	SW6020 (LUFT)	1	Big Stainless Tube	☐	3/31/2014	5 days		☐	

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WORK ORDER SUMMARY

Client Name: TREADWELL & ROLLO
Project: #731626701; India Basin
Comments: SEND HARD COPY

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

Work Order: 1404200
Date Received: 4/4/2014

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ Fax ☒ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1404200-026A	B-6-5.5	Soil	Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up	1	Big Stainless Tube	☐	3/31/2014	5 days		☐	
1404200-027A	B-6-8	Soil		1	Big Stainless Tube	☐	3/31/2014			☒	
1404200-028A	B-6-10	Soil	SW9030A/E376.2 (Sulfide)	1	Big Stainless Tube	☐	3/31/2014	5 days		☐	
			SW9045D (pH)			☐		5 days		☐	
			Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up			☐		5 days		☐	
			Cyanide, Total			☐		5 days		☐	
			SW6020 (CAM 17)			☐		5 days		☐	
			SW8270C (SVOCs)			☐		5 days		☐	
			SW8260B (VOCs)			☐		5 days		☐	
1404200-029A	B-6-15.5	Soil	Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up	1	Big Stainless Tube	☐	3/31/2014	5 days		☐	
			SW6020 (LUFT)			☐		5 days		☐	
1404200-030A	B-7-2.5	Soil	SW6020 (LUFT)	1	Big Stainless Tube	☐	4/2/2014	5 days		☐	
			Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up			☐		5 days		☐	
			SW8081A/8082 (OC Pesticides+PCBs)			☐		5 days		☐	
1404200-031A	B-7-5	Soil	SW9030A/E376.2 (Sulfide)	1	Big Stainless Tube	☐	4/2/2014	5 days		☐	

*** NOTE: STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).**

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Date Received: 4/4/2014

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Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1404200-031A	B-7-5	Soil	SW9045D (pH)	1	Big Stainless Tube	☐	4/2/2014	5 days		☐	
			Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up			☐		5 days		☐	
			Cyanide, Total			☐		5 days		☐	
			SW6020 (CAM 17)			☐		5 days		☐	
			SW8270C (SVOCs)			☐		5 days		☐	
			SW8260B (VOCs)			☐		5 days		☐	
1404200-032A	B-7-8	Soil	SW6010B (Lead)	1	Big Stainless Tube	☐	4/2/2014	5 days		☐	
			Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up			☐		5 days		☐	
1404200-033A	B-7-10.5	Soil		1	Big Stainless Tube	☐	4/2/2014			☒	
1404200-034A	B-7-15.5	Soil	Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up	1	Big Stainless Tube	☐	4/2/2014	5 days		☐	
			SW6010B (Lead)			☐		5 days		☐	

*** NOTE:** STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).

Bottle Legend:

Big Stainless Tube =
Big Stainless Tube =

1401200

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: INDIA BASIN
Job Number: 731626701
Project Manager/Contact: PCW
Samplers: KW
Recorder (Signature Required): [Signature]

Turnaround Time
Normal

No. Containers & Preservative

Analysis Requested

Field Sample Identification No.	Date	Time	Lab Sample No.	Matrix	No. Containers & Preservative	Soil	Water	Other	HCL	H ₂ SO ₄	HNO ₃	Ice	Other	Hold
B-10-2.5	3/24/14					X								X
B-10-5.5	3/24/14					X								X
B-10-8	3/24/14					X								X
B-10-10.5	3/24/14					X								X
B-13-3	3/25/14					X								X
B-13-5.5	3/25/14					X								X
B-13-8	3/25/14					X								X
B-13-10.5	3/25/14					X								X
B-8-3	3/25/14					X								X
B-8-5	3/25/14					X								X
B-8-10.5	3/25/14					X								X
B-14-3	3/24/14					X								X
B-14-5.5	3/24/14					X								X
B-14-7.5	3/26/14					X								X

Relinquished by: (Signature)	<u>[Signature]</u>	Date	<u>4/4/14</u>	Time	<u>1405</u>
Relinquished by: (Signature)	<u>[Signature]</u>	Date	<u>4/4/14</u>	Time	<u>1530</u>
Relinquished by: (Signature)	<u>[Signature]</u>	Date		Time	

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

White Copy - Original

Yellow Copy - Laboratory

Pink Copy - Field
COC Number: **004984**

ICE# 25
GOOD CONDITION
HEAD SPACE ABSENT
DECHLORINATED IN LAB
PRESERVATION
VOAS
O&G
METALS
OTHER

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: India Basin
Job Number: 731626701
Project Manager/Contact: R. Cusack
Samplers: Robert Cusack
Recorder (Signature Required): Robert Cusack

Analysis Requested

Analysis Requested	Hold	Silica gel clean-up
TCB's - 79% chloride	X	X
SVOC's	X	X
VOC's	X	X
TPH & MO	X	X
APM 17 Metals	X	X
LEL 5 Metals	X	X
Total Lead	X	X
Asbestos (ARB)	X	X
PH	X	X
Cyanide	X	X
Sulfide	X	X

No. Containers & Preservative

Matrix	Soil	Water	Other	HCL	H ₂ SO ₄	HNO ₃	Ice	Other
Soil	X	X	X	X	X	X	X	X
Water	X	X	X	X	X	X	X	X
Other	X	X	X	X	X	X	X	X

Field Sample Identification No.	Date	Time	Lab Sample No.	Matrix	No. Containers & Preservative	Analysis Requested	Remarks
B-9-3	3/25/14			Soil	X	TCB's - 79% chloride	
B-9-5.5	3/25/14			Water	X	SVOC's	
B-9-8	3/25/14			Other	X	VOC's	
B-9-10	3/25/14			Soil	X	TPH & MO	
B-11-3	3/26/14			Soil	X	TCB's - 79% chloride	
B-11-5	3/26/14			Water	X	SVOC's	
B-12-3	3/26/14			Other	X	VOC's	
B-12-5.5	3/26/14			Soil	X	TPH & MO	
B-12-8	3/26/14			Water	X	SVOC's	
B-12-10.5	3/26/14			Other	X	VOC's	
B-6-3	3/31/14			Soil	X	TCB's - 79% chloride	
B-6-5.5	3/31/14			Water	X	SVOC's	
B-6-8	3/31/14			Other	X	VOC's	
B-6-10	3/31/14			Soil	X	TPH & MO	
Relinquished by: (Signature)	<u>Robert Cusack</u>	Date <u>4/4/14</u>	Time <u>1400</u>	Received by: (Signature)	<u>Robert Cusack</u>	Date <u>4/4/14</u>	Time <u>1400</u>
Relinquished by: (Signature)	<u>Robert Cusack</u>	Date <u>4/4/14</u>	Time <u>1530</u>	Received by: (Signature)	<u>Robert Cusack</u>	Date <u>4/4/14</u>	Time <u>1530</u>
Relinquished by: (Signature)	<u>Robert Cusack</u>	Date <u>4/4/14</u>	Time <u>1530</u>	Received by: (Signature)	<u>Robert Cusack</u>	Date <u>4/4/14</u>	Time <u>1530</u>
Sent to Laboratory (Name):	<u>McGarphall</u>						
Laboratory Comments/Notes:							

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

White Copy - Original

Yellow Copy - Laboratory

Pink Copy - Field

COC Number: **004982**

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: 916.585.7412/Fax: 916.585.7412

Recorder (Signature Required): Th (Wady

Time /

COC Number:



Sample Receipt Checklist

Client Name: **Treadwell & Rollo**

Date and Time Received: **4/4/2014 8:38:34 PM**

Project Name: **#731626701; India Basin**

Login Reviewed by: **Ana Venegas**

WorkOrder N°: **1404200**

Matrix: Soil

Carrier: Rob Pringle (MAI Courier)

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 ☐	
Container/Temp Blank temperature	Cooler Temp: 2.5°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☐	No ☐	NA ☒
Sample labels checked for correct preservation?	Yes ☒	No ☐	
Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☒
Samples Received on Ice?	Yes ☒	No ☐	

(Ice Type: WET ICE)

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

Comments:



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1404200 A

Report Created for: Treadwell & Rollo
555 Montgomery St., Suite 1300
San Francisco, CA 94111

Project Contact: Peter Cusack
Project P.O.:
Project Name: #731626701; India Basin

Project Received: 04/04/2014

Analytical Report reviewed & approved for release on 05/05/2014 by:

Question about
your data?

[Click here to email
McC Campbell](#)

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: #731626701; India Basin
WorkOrder: 1404200

Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
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
ND	Not detected at or above the indicated MDL or RL
NR	Matrix interferences, or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix; or sample diluted due to high matrix or analyte content.
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
TEQ	Toxicity Equivalence

Analytical Qualifier

H	samples were analyzed out of holding time
S	spike recovery outside accepted recovery limits
a3	sample diluted due to high organic content.
a4	the reporting limits were raised due to the sample's matrix prohibiting a full volume extraction.
c1	surrogate recovery outside of the control limits due to the dilution of the sample.
c4	surrogate recovery outside of the control limits due to coelution with another peak(s) / cluttered chromatogram.
d1	weakly modified or unmodified gasoline is significant
d7	strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram
e2	diesel range compounds are significant; no recognizable pattern
e7	oil range compounds are significant



Glossary of Terms & Qualifier Definitions

Client: Treadwell & Rollo
Project: #731626701; India Basin
WorkOrder: 1404200

Quality Control Qualifiers

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



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/30/14

WorkOrder: 1404200
Extraction Method: CA Title 22
Analytical Method: SW6010B
Unit: mg/L

Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-10-10.5	1404200-004A	Soil/WET	03/24/2014	ICP-JY	89885

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Chromium	0.37	0.050	1	05/02/2014 21:44

B-14-3	1404200-012A	Soil/WET	03/26/2014	ICP-JY	89902
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<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Chromium	0.62	0.050	1	05/02/2014 21:51

B-11-3	1404200-019A	Soil/WET	03/26/2014	ICP-JY	89902
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<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Chromium	0.54	0.050	1	05/02/2014 21:55

B-12-5.5	1404200-022A	Soil/WET	03/26/2014	ICP-JY	89902
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<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Chromium	0.13	0.050	1	05/02/2014 22:00

B-12-8	1404200-023A	Soil/WET	03/26/2014	ICP-JY	89902
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<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Chromium	0.091	0.050	1	05/02/2014 22:02

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/30/14

WorkOrder: 1404200
Extraction Method: CA Title 22
Analytical Method: SW6010B
Unit: mg/L

Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-12-10.5	1404200-024A	Soil/WET	03/26/2014	ICP-JY	89902

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Chromium	0.074	0.050	1	05/02/2014 22:05

B-6-15.5	1404200-029A	Soil/WET	03/31/2014	ICP-JY	89902
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<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Chromium	0.28	0.050	1	05/02/2014 22:12



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/30/14-5/3/14

WorkOrder: 1404200
Extraction Method: CA Title 22
Analytical Method: SW6010B
Unit: mg/L

Lead & Chromium

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-10-2.5	1404200-001A	Soil/WET	03/24/2014	ICP-JY	89885

Analytes	Result	RL	DE	Date Analyzed
Chromium	0.33	0.050	1	05/02/2014 21:41
Lead	7.5	0.20	1	05/02/2014 21:41

B-9-3	1404200-015A	Soil/WET	03/25/2014	ICP-JY	89902
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Analytes	Result	RL	DE	Date Analyzed
Chromium	0.36	0.050	1	05/02/2014 21:53
Lead	10	0.20	1	05/02/2014 21:53

B-9-10	1404200-018A	Soil/WET	03/25/2014	ICP-JY	89902
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Analytes	Result	RL	DE	Date Analyzed
Chromium	0.59	0.050	1	05/05/2014 14:44
Lead	10	0.20	1	05/05/2014 14:44

B-11-5	1404200-020A	Soil/WET	03/26/2014	ICP-JY	89902
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Analytes	Result	RL	DE	Date Analyzed
Chromium	0.34	0.050	1	05/02/2014 21:58
Lead	2.8	0.20	1	05/02/2014 21:58

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/30/14-5/3/14

WorkOrder: 1404200
Extraction Method: CA Title 22
Analytical Method: SW6010B
Unit: mg/L

Lead & Chromium

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6-5.5	1404200-026A	Soil/WET	03/31/2014	ICP-JY	89902
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Chromium	0.66		0.050	1	05/02/2014 22:09
Lead	7.9		0.20	1	05/02/2014 22:09

B-6-10	1404200-028A	Soil/WET	03/31/2014	ICP-JY	89902
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Chromium	0.34		0.050	1	05/05/2014 14:50
Lead	6.0		0.20	1	05/05/2014 14:50



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/30/14-5/3/14

WorkOrder: 1404200
Extraction Method: CA Title 22
Analytical Method: SW6010B
Unit: mg/L

Lead

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-13-10.5	1404200-008A	Soil/WET	03/25/2014	ICP-JY	89885

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Lead	0.51	0.20	1	05/05/2014 14:22

B-8-3'	1404200-009A	Soil/WET	03/25/2014	ICP-JY	89902
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<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Lead	0.49	0.20	1	05/05/2014 14:31

B-8-5'	1404200-010A	Soil/WET	03/25/2014	ICP-JY	89902
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<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Lead	3.7	0.20	1	05/05/2014 14:33

B-8-10.5	1404200-011A	Soil/WET	03/25/2014	ICP-JY	89902
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<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Lead	9.0	0.20	1	05/05/2014 14:36

B-14-5.5	1404200-013A	Soil/WET	03/26/2014	ICP-JY	89902
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<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Lead	3.8	0.20	1	05/05/2014 14:39

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/30/14-5/3/14

WorkOrder: 1404200
Extraction Method: CA Title 22
Analytical Method: SW6010B
Unit: mg/L

Lead

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-9-8	1404200-017A	Soil/WET	03/25/2014	ICP-JY	89902

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Lead	2.9	0.20	1	05/05/2014 14:41

B-12-3	1404200-021A	Soil/WET	03/26/2014	ICP-JY	89902
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<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Lead	7.0	0.20	1	05/05/2014 14:47

B-6-3	1404200-025A	Soil/WET	03/31/2014	ICP-JY	89902
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<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Lead	9.8	0.20	1	05/02/2014 22:07

B-7-8	1404200-032A	Soil/WET	04/02/2014	ICP-JY	89902
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<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Lead	7.7	0.20	1	05/05/2014 15:03

B-7-15.5	1404200-034A	Soil/WET	04/02/2014	ICP-JY	89902
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<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Lead	2.1	0.20	1	05/05/2014 15:06



Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 4/29/14
Date Analyzed: 5/1/14 - 5/2/14
Instrument: ICP-JY
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1404200
BatchID: 89885
Extraction Method: CA Title 22
Analytical Method: SW6010B
Unit: mg/L
Sample ID: MB/LCS-89885
1404961-001AMS/MSD

QC Summary Report for SW6010B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Chromium	ND	0.928	0.050	1	-	92.8	75-125
Lead	ND	0.766	0.20	1	-	76.6	75-125

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Chromium	0.986	0.959	1	0.05141	93.4	90.8	70-130	2.75	30
Lead	N/A	N/A	N/A	N/A	N/A	N/A	-	N/A	

(Cont.)



Quality Control Report

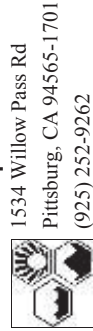
Client: Treadwell & Rollo
Date Prepared: 4/30/14
Date Analyzed: 5/5/14
Instrument: ICP-JY
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1404200
BatchID: 89902
Extraction Method: CA Title 22
Analytical Method: SW6010B
Unit: mg/L
Sample ID: MB/LCS-89902
1404200-028AMS/MSD

QC Summary Report for SW6010B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Chromium	ND	0.974	0.050	1	-	97.4	75-125
Lead	ND	1.04	0.20	1	-	104	75-125

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Chromium	1.34	1.34	1	0.3402	99.8	100	70-130	0.447	30
Lead	NR	NR	1	5.958	NR	NR	70-130	NR	30



WorkOrder: 1404200 A ClientCode: TWRF

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ Fax ☒ 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: 555 Montgomery St., Suite 1300

ProjectNo: #731626701; India Basin

Bill to:

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

Requested TAT: 5 days

Date Received: 04/04/2014

Date Add-On: 04/30/2014

Date Printed: 04/30/2014

					Requested Tests (See legend below)											
Lab ID	Client ID	Matrix	Collection Date	Hold	1	2	3	4	5	6	7	8	9	10	11	12
1404200-001	B-10-2.5	Soil	3/24/2014	☐			A									
1404200-004	B-10-10.5	Soil	3/24/2014	☐	A											
1404200-008	B-13-10.5	Soil	3/25/2014	☐		A										
1404200-009	B-8-3'	Soil	3/25/2014	☐		A										
1404200-010	B-8-5'	Soil	3/25/2014	☐		A										
1404200-011	B-8-10.5	Soil	3/25/2014	☐		A										
1404200-012	B-14-3	Soil	3/26/2014	☐	A											
1404200-013	B-14-5.5	Soil	3/26/2014	☐		A										
1404200-015	B-9-3	Soil	3/25/2014	☐			A									
1404200-017	B-9-8	Soil	3/25/2014	☐		A										
1404200-018	B-9-10	Soil	3/25/2014	☐			A									
1404200-019	B-11-3	Soil	3/26/2014	☐	A											
1404200-020	B-11-5	Soil	3/26/2014	☐			A									
1404200-021	B-12-3	Soil	3/26/2014	☐		A										
1404200-022	B-12-5.5	Soil	3/26/2014	☐	A											

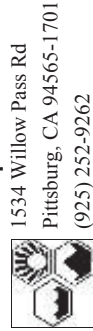
Test Legend:

1	STLC_METALS_S	2	STLC_PB_S	3	STLC_PBCR_S	4	5
6		7		8		9	10
11		12					

Comments: SEND HARD COPY. STLC's added 4/30/14 STAT.

Prepared by: Ana Venegas
Add-On Prepared By: Maria Venegas

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.



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

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

ProjectNo: #731626701; India Basin

WorkOrder: 1404200 **A** **ClientCode:** TWRF

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ Fax ☒ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to: Peter Cusack
Requested TAT: 5 days
Date Received: 04/04/2014
Date Add-On: 04/30/2014
Date Printed: 04/30/2014

				Requested Tests (See legend below)												
Lab ID	Client ID	Matrix	Collection Date	Hold	1	2	3	4	5	6	7	8	9	10	11	12
1404200-023	B-12-8	Soil	3/26/2014	☐	A											
1404200-024	B-12-10.5	Soil	3/26/2014	☐	A											
1404200-025	B-6-3	Soil	3/31/2014	☐		A										
1404200-026	B-6-5.5	Soil	3/31/2014	☐			A									
1404200-028	B-6-10	Soil	3/31/2014	☐			A									
1404200-029	B-6-15.5	Soil	3/31/2014	☐	A											
1404200-032	B-7-8	Soil	4/2/2014	☐		A										
1404200-034	B-7-15.5	Soil	4/2/2014	☐		A										

Test Legend:

1	STLC_METALS_S	2	STLC_PB_S	3	STLC_PBCR_S	4	5
6		7		8		9	10
11		12					

Prepared by: Ana Venegas
Add-On Prepared By: Maria Venegas

Comments: SEND HARD COPY. STLC's added 4/30/14 STAT.

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.



McC Campbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

WORK ORDER SUMMARY

Client Name: TREADWELL & ROLLO

QC Level: LEVEL 2

Work Order: 1404200

Project: #731626701; India Basin

Client Contact: Peter Cusack

Date Received: 4/4/2014

Comments: SEND HARD COPY. STLC's added 4/30/14 STAT.

Contact's Email: pcusack@langan.com

Date Add-On: 4/30/2014

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1404200-001A	B-10-2.5	Soil	SW6010B (Chromium & Lead) (STLC)	1	Big Stainless Tube	3/24/2014	5 days*		☐	
1404200-004A	B-10-10.5	Soil	SW6010B (Metals) (STLC) <Chromium>	1	Big Stainless Tube	3/24/2014	5 days*		☐	
1404200-008A	B-13-10.5	Soil	SW6010B (Lead) (STLC)	1	Big Stainless Tube	3/25/2014	5 days*		☐	
1404200-009A	B-8-3'	Soil	SW6010B (Lead) (STLC)	1	Big Stainless Tube	3/25/2014	5 days*		☐	
1404200-010A	B-8-5'	Soil	SW6010B (Lead) (STLC)	1	Big Stainless Tube	3/25/2014	5 days*		☐	
1404200-011A	B-8-10.5	Soil	SW6010B (Lead) (STLC)	1	Big Stainless Tube	3/25/2014	5 days*		☐	
1404200-012A	B-14-3	Soil	SW6010B (Metals) (STLC) <Chromium>	1	Big Stainless Tube	3/26/2014	5 days*		☐	
1404200-013A	B-14-5.5	Soil	SW6010B (Lead) (STLC)	1	Big Stainless Tube	3/26/2014	5 days*		☐	
1404200-015A	B-9-3	Soil	SW6010B (Chromium & Lead) (STLC)	1	Big Stainless Tube	3/25/2014	5 days*		☐	
1404200-017A	B-9-8	Soil	SW6010B (Lead) (STLC)	1	Big Stainless Tube	3/25/2014	5 days*		☐	
1404200-018A	B-9-10	Soil	SW6010B (Chromium & Lead) (STLC)	1	Big Stainless Tube	3/25/2014	5 days*		☐	
1404200-019A	B-11-3	Soil	SW6010B (Metals) (STLC) <Chromium>	1	Big Stainless Tube	3/26/2014	5 days*		☐	
1404200-020A	B-11-5	Soil	SW6010B (Chromium & Lead) (STLC)	1	Big Stainless Tube	3/26/2014	5 days*		☐	
1404200-021A	B-12-3	Soil	SW6010B (Lead) (STLC)	1	Big Stainless Tube	3/26/2014	5 days*		☐	
1404200-022A	B-12-5.5	Soil	SW6010B (Metals) (STLC) <Chromium>	1	Big Stainless Tube	3/26/2014	5 days*		☐	
1404200-023A	B-12-8	Soil	SW6010B (Metals) (STLC) <Chromium>	1	Big Stainless Tube	3/26/2014	5 days*		☐	
1404200-024A	B-12-10.5	Soil	SW6010B (Metals) (STLC) <Chromium>	1	Big Stainless Tube	3/26/2014	5 days*		☐	
1404200-025A	B-6-3	Soil	SW6010B (Lead) (STLC)	1	Big Stainless Tube	3/31/2014	5 days*		☐	

*** NOTE:** STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).

Bottle Legend:

Big Stainless Tube =

Big Stainless Tube =



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http://www.mccampbell.com / E-mail: main@mccampbell.com

WORK ORDER SUMMARY

Client Name: TREADWELL & ROLLO

QC Level: LEVEL 2

Work Order: 1404200

Project: #731626701; India Basin

Client Contact: Peter Cusack

Date Received: 4/4/2014

Comments: SEND HARD COPY. STLC's added 4/30/14 STAT.

Contact's Email: pcusack@langan.com

Date Add-On: 4/30/2014

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1404200-026A	B-6-5.5	Soil	SW6010B (Chromium & Lead) (STLC)	1	Big Stainless Tube	3/31/2014	5 days*		☐	
1404200-028A	B-6-10	Soil	SW6010B (Chromium & Lead) (STLC)	1	Big Stainless Tube	3/31/2014	5 days*		☐	
1404200-029A	B-6-15.5	Soil	SW6010B (Metals) (STLC) <Chromium>	1	Big Stainless Tube	3/31/2014	5 days*		☐	
1404200-032A	B-7-8	Soil	SW6010B (Lead) (STLC)	1	Big Stainless Tube	4/2/2014	5 days*		☐	
1404200-034A	B-7-15.5	Soil	SW6010B (Lead) (STLC)	1	Big Stainless Tube	4/2/2014	5 days*		☐	

*** NOTE:** STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).

Bottle Legend:

Big Stainless Tube =

Big Stainless Tube =

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: INDIA BASIN
Job Number: 731626701
Project Manager/Contact: KW P. Cusack
Samplers: KW P. Cusack
Recorder (Signature Required): [Signature]

Turnaround Time
Normal

Field Sample Identification No.	Date	Time	Lab Sample No.	Matrix			No. Containers & Preservative			Analysis Requested	Remarks
				Soil	Water	Other	HCL	H ₂ SO ₄	HNO ₃		
B-10-2.5	3/24/14			X						TFH, d, mo	
B-10-5.5	3/24/14			X						VOCs	
B-10-8	3/24/14			X						SVCs	
B-10-10.5	3/24/14			X						PCBs + Pesticides	
B-13-3	3/25/14			X						CHM 17 Methyl	
B-13-5.5	3/25/14			X						LCFT 5 Methyl	
B-13-8	3/25/14			X						Total Lead	
B-13-10.5	3/25/14			X						Asbestos (Grab)	
B-8-3	3/25/14			X						Cyanide	
B-8-5	3/25/14			X						PH	
B-8-10.5	3/25/14			X						Sulfides	
B-14-3	3/24/14			X						Silica gel clean-up	
B-14-5.5	3/24/14			X						Hot Stic Pb	
B-14-7.5	3/26/14			X						Hot Stic Pb	
Relinquished by: (Signature) <u>[Signature]</u> Date <u>4/4/14</u> Time <u>1900</u>											
Relinquished by: (Signature) <u>[Signature]</u> Date <u>4/9/14</u> Time <u>1530</u>											
Relinquished by: (Signature) <u>[Signature]</u> Date <u>4/24/14</u> Time <u>1530</u>											

Sent to Laboratory (Name): McCampbell
Laboratory Comments/Notes: added 4/30/14 STAT

Method of Shipment
☐ Hand Carried ☒ Private Courier (Co. Name) ☐ Fed Ex ☐ Airborne ☐ UPS

White Copy - Original

Yellow Copy - Laboratory

COC Number: **004984**

ICE/IT 25
GOOD CONDITION ☐ APPROPRIATE CONTAINERS
HEAD SPACE ABSENT ☐ PRESERVED IN LAB
DECLORINATED IN LAB ☐ VOAS ☐ O&G ☐ METALS ☐ OTHER

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: India Basin

Job Number: 231626701

Project Manager/Contact: P. Cusack

Samplers: W. J. Cusack

Recorder (Signature Required): [Signature]

Turnaround Time
Normal

Field Sample Identification No.	Date	Time	Lab Sample No.	No. Containers & Preservative						
				Matrix	Soil	Water	Other	HCL	H ₂ SO ₄	HNO ₃

Field Sample Identification No.	Date	Time	Lab Sample No.	Soil	Water	Other	HCL	H ₂ SO ₄	HNO ₃	Ice	Other	TPH	VOL _g	SVO ₁	PCB	CHM	LUT	Total	Ashe ₃	pH	SC ₁₆	
B-9-3	3/25/14			X	X					X		X	X	X	X	X	X	X				
B-9-5.5	3/25/14			X	X					X		X	X	X	X	X	X	X				
B-9-8	3/25/14			X	X					X		X	X	X	X	X	X	X				
B-9-10	3/25/14			X	X					X		X	X	X	X	X	X	X				
B-11-3	3/26/14			X	X					X		X	X	X	X	X	X	X				
B-11-5	3/26/14			X	X					X		X	X	X	X	X	X	X				
B-12-3	3/26/14			X	X					X		X	X	X	X	X	X	X				
B-12-5.5	3/26/14			X	X					X		X	X	X	X	X	X	X				
B-12-8	3/26/14			X	X					X		X	X	X	X	X	X	X				
B-12-10.5	3/26/14			X	X					X		X	X	X	X	X	X	X				
B-6-3	3/31/14			X	X					X		X	X	X	X	X	X	X				
B-6-5.5	3/31/14			X	X					X		X	X	X	X	X	X	X				
B-6-8	3/31/14			X	X					X		X	X	X	X	X	X	X				
B-6-10	3/31/14			X	X					X		X	X	X	X	X	X	X				

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
<u>[Signature]</u>	3/4/14	1400	<u>[Signature]</u>	4/4/14	1408
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
<u>[Signature]</u>	3/4/14	1530	<u>[Signature]</u>	4/4/14	1530
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
<u>[Signature]</u>	3/4/14	1530	<u>[Signature]</u>	4/4/14	1530

Sent to Laboratory (Name): McGarrphall

Laboratory Comments/Notes:

Method of Shipment: ☒ Lab courier ☐ Fed Ex ☐ Airborne ☐ UPS

Hand Carried ☐ Private Courier (Co. Name)

White Copy - Original Yellow Copy - Laboratory Pink Copy - Field

COC Number: **004982**

Site Name:

Job Number:

Project Manager\Contact:

Samplers:

Recorder (Signature Required):

Indra Basin

731 626701

contact: Pwack

Required): KCW Puffy Grade

Turnaround Time /

[illegible]

White Copy - Original

Yellow Copy - Laboratory

Pink Copy - Field

COC Number: 004983



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1404200 B

Report Created for: Treadwell & Rollo
555 Montgomery St., Suite 1300
San Francisco, CA 94111

Project Contact: Peter Cusack
Project P.O.:
Project Name: #731626701; India Basin

Project Received: 04/04/2014

Analytical Report reviewed & approved for release on 05/27/2014 by:

Question about
your data?

[Click here to email
McC Campbell](#)

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: #731626701; India Basin
WorkOrder: 1404200

Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
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
ND	Not detected at or above the indicated MDL or RL
NR	Matrix interferences, or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix; or sample diluted due to high matrix or analyte content.
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
TEQ	Toxicity Equivalence

Analytical Qualifiers

H	samples were analyzed out of holding time
S	spike recovery outside accepted recovery limits
a3	sample diluted due to high organic content.
a4	the reporting limits were raised due to the sample's matrix prohibiting a full volume extraction.
c1	surrogate recovery outside of the control limits due to the dilution of the sample.
c4	surrogate recovery outside of the control limits due to coelution with another peak(s) / cluttered chromatogram.
d1	weakly modified or unmodified gasoline is significant
d7	strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram
e2	diesel range compounds are significant; no recognizable pattern
e7	oil range compounds are significant

Quality Control Qualifiers

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



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 5/22/14

WorkOrder: 1404200
Extraction Method: SW1311/SW3050B
Analytical Method: SW6010B
Unit: mg/L

Lead

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-10-2.5	1404200-001A	Soil/TCLP	03/24/2014	ICP-JY	90694

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Lead	ND	0.20	1	05/23/2014 20:41

B-8-10.5	1404200-011A	Soil/TCLP	03/25/2014	ICP-JY	90694
----------	--------------	-----------	------------	--------	-------

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Lead	ND	0.20	1	05/23/2014 20:43

B-9-3	1404200-015A	Soil/TCLP	03/25/2014	ICP-JY	90694
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<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Lead	0.28	0.20	1	05/23/2014 20:46

B-9-10	1404200-018A	Soil/TCLP	03/25/2014	ICP-JY	90694
--------	--------------	-----------	------------	--------	-------

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Lead	ND	0.20	1	05/23/2014 20:48

B-12-3	1404200-021A	Soil/TCLP	03/26/2014	ICP-JY	90694
--------	--------------	-----------	------------	--------	-------

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Lead	ND	0.20	1	05/23/2014 20:51

(Cont.)



Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 5/22/14

WorkOrder: 1404200
Extraction Method: SW1311/SW3050B
Analytical Method: SW6010B
Unit: mg/L

Lead

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6-3	1404200-025A	Soil/TCLP	03/31/2014	ICP-JY	90694

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	ND	0.20	1	05/23/2014 20:53

B-6-5.5	1404200-026A	Soil/TCLP	03/31/2014	ICP-JY	90694
---------	--------------	-----------	------------	--------	-------

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	0.64	0.20	1	05/23/2014 20:55

B-6-10	1404200-028A	Soil/TCLP	03/31/2014	ICP-JY	90694
--------	--------------	-----------	------------	--------	-------

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	ND	0.20	1	05/23/2014 20:58

B-7-8	1404200-032A	Soil/TCLP	04/02/2014	ICP-JY	90694
-------	--------------	-----------	------------	--------	-------

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	0.33	0.20	1	05/23/2014 21:05



Quality Control Report

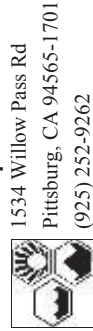
Client: Treadwell & Rollo
Date Prepared: 5/21/14
Date Analyzed: 5/23/14
Instrument: ICP-JY
Matrix: Soil
Project: #731626701; India Basin

WorkOrder: 1404200
BatchID: 90694
Extraction Method: SW1311/SW3050B
Analytical Method: SW6010B
Unit: mg/L
Sample ID: MB/LCS-90694
1405689-001AMS/MSD

QC Summary Report for SW6010B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Lead	ND	0.907	0.20	1	-	90.7	75-125

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Lead	0.919	0.806	1	ND	91.9	80.6	70-130	13.1	30



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

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

Request TAT: 5 days

Date Received: 04/04/2014
Date Add-On: 05/22/2014
Date Printed: 05/22/2014

WorkOrder: 1404200 **B** **ClientCode:** TWRF

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ Fax ☒ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

				Requested Tests (See legend below)												
Lab ID	Client ID	Matrix	Collection Date	Hold	1	2	3	4	5	6	7	8	9	10	11	12
1404200-001	B-10-2.5	Soil	3/24/2014	☐	A											
1404200-011	B-8-10.5	Soil	3/25/2014	☐	A											
1404200-015	B-9-3	Soil	3/25/2014	☐	A											
1404200-018	B-9-10	Soil	3/25/2014	☐	A											
1404200-021	B-12-3	Soil	3/26/2014	☐	A											
1404200-025	B-6-3	Soil	3/31/2014	☐	A											
1404200-026	B-6-5.5	Soil	3/31/2014	☐	A											
1404200-028	B-6-10	Soil	3/31/2014	☐	A											
1404200-032	B-7-8	Soil	4/2/2014	☐	A											

Test Legend:

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

Comments: SEND HARD COPY. STLC's added 4/30/14 STAT. TCLP's added 5/22/14 1Day TAT

Prepared by: Ana Venegas
Add-On Prepared By: Maria Venegas

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.



McC Campbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

WORK ORDER SUMMARY

Client Name: TREADWELL & ROLLO

Project: #731626701; India Basin

Comments: SEND HARD COPY. STLC's added 4/30/14 STAT. TCLP's added 5/22/14 1Day TAT

QC Level: LEVEL 2

Client Contact: Peter Cusack

Contact's Email: pcusack@langan.com

Work Order: 1404200

Date Received: 4/4/2014

Date Add-On: 5/22/2014

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1404200-001A	B-10-2.5	Soil	SW6010B (Lead) (TCLP)	1	Big Stainless Tube	3/24/2014	1 day*		☐	
1404200-011A	B-8-10.5	Soil	SW6010B (Lead) (TCLP)	1	Big Stainless Tube	3/25/2014	1 day*		☐	
1404200-015A	B-9-3	Soil	SW6010B (Lead) (TCLP)	1	Big Stainless Tube	3/25/2014	1 day*		☐	
1404200-018A	B-9-10	Soil	SW6010B (Lead) (TCLP)	1	Big Stainless Tube	3/25/2014	1 day*		☐	
1404200-021A	B-12-3	Soil	SW6010B (Lead) (TCLP)	1	Big Stainless Tube	3/26/2014	1 day*		☐	
1404200-025A	B-6-3	Soil	SW6010B (Lead) (TCLP)	1	Big Stainless Tube	3/31/2014	1 day*		☐	
1404200-026A	B-6-5.5	Soil	SW6010B (Lead) (TCLP)	1	Big Stainless Tube	3/31/2014	1 day*		☐	
1404200-028A	B-6-10	Soil	SW6010B (Lead) (TCLP)	1	Big Stainless Tube	3/31/2014	1 day*		☐	
1404200-032A	B-7-8	Soil	SW6010B (Lead) (TCLP)	1	Big Stainless Tube	4/2/2014	1 day*		☐	

*** NOTE:** STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).

Bottle Legend:

Big Stainless Tube =

Big Stainless Tube =

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: Indira Basin
Job Number: 731026701
Project Manager/Contact: KW PCW
Samplers: KLW PCW
Recorder (Signature Required): [Signature]

Turnaround Time
Normal

Field Sample Identification No.	Date	Time	Lab Sample No.	Matrix			No. Containers & Preservative					
				Soil	Water	Other	HCL	H ₂ SO ₄	HNO ₃	Ice	Other	
B-10-2.5	3/24/14			X								
B-10-5.5	3/24/14			X								
B-10-8	3/24/14			X								
B-10-10.5	3/24/14			X								
B-13-3	3/25/14			X								
B-13-5.5	3/25/14			X								
B-13-8	3/25/14			X								
B-13-10.5	3/25/14			X								
B-8-3	3/25/14			X								
B-8-5	3/25/14			X								
B-8-10.5	3/25/14			X								
B-14-3	3/24/14			X								
B-14-5.5	3/24/14			X								
B-14-7.5	3/26/14			X								
Relinquished by: (Signature)	<u>[Signature]</u>	Date	4/4/14									
Relinquished by: (Signature)	<u>[Signature]</u>	Date	4/9/14									
Relinquished by: (Signature)	<u>[Signature]</u>	Date										
Sent to Laboratory (Name):	<u>McCampbell</u>											
Laboratory Comments/Notes:	<u>added 4/30/14 STAT</u>											

White Copy - Original Yellow Copy - Laboratory

Pink Copy - Field

COC Number: **004984**

ICE # 645
GOOD CONDITION ☒ APPROPRIATE CONTAINERS
HEAD SPACE ABSENT ☒
DECHLORINATED IN LAB ☒ PRESERVED IN LAB
PRESERVATION VOAS ☒ Q&G ☒ METALS ☒ OTHER

COC Number: 004982

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: India Basin
Job Number: 731626701
Project Manager/Contact: PCusack
Samplers: KCB
Recorder (Signature Required): Patty Crade

Turnaround Time
Normal

Field Sample Identification No.	Date	Time	Lab Sample No.	Matrix			No. Containers & Preservative					Analysis Requested										Remarks					
				Soil	Water	Other	HCL	H ₂ SO ₄	HNO ₃	Ice	Other	TPH	VOCs	SVOCs	PCBs	PAHs	Lead	Cadmium	Copper	Zinc	Chloride		Sulfide	Silica gel clean-up	Stic Pb	Stic Cu	
B-6-15.5	3/31/14			X																							
B-7-2.5	4/2/14			X																							
B-7-5	4/2/14			X																							
B-7-8	4/2/14			X																							
B-7-10.5	4/2/14			X																							
B-7-15.5	4/2/14			X																							
Relinquished by: (Signature) <u>[Signature]</u> Date <u>4/4/14</u> Time <u>1900</u>																											
Relinquished by: (Signature) <u>[Signature]</u> Date <u>4/9/14</u> Time <u>1530</u>																											
Relinquished by: (Signature) <u>[Signature]</u> Date <u>4/4/14</u> Time <u>1536</u>																											
Sent to Laboratory (Name): <u>McCampbell</u>																											
Laboratory Comments/Notes:																											

White Copy - Original

Yellow Copy - Laboratory

Pink Copy - Field

COC Number: **004983**

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



Bulk Asbestos Material Analysis

(Air Resources Board Method 435, June 6, 1991)

McC Campbell Analytical, Inc.
Account Payable
1534 Willow Pass Rd

Pittsburg, CA 94565

Client ID: A31409
Report Number: N006201
Date Received: 04/08/14
Date Analyzed: 04/15/14
Date Printed: 04/15/14

Job ID/Site: 1404200 - 731626701, India Basin

FALI Job ID: A31409

PLM Report Number: N/A

Total Samples Submitted: 2

Total Samples Analyzed: 2

Sample Preparation and Analysis:

Samples were analyzed by the Air Resources Board's Method 435, Determination of Asbestos Content of Serpentine Aggregate. Samples were ground to 200 particle size in the laboratory. Approximately 1 pint was retained for analysis. Samples were prepared for observation according to the guidelines of Exception I and Exception II as defined by the 435 Method. Samples which contained less than 10% asbestos were prepared for observation according to the point count technique as defined by the 435 Method. This analysis was performed with a standard cross-hair reticle.

Sample ID	Lab Number	Layer Description
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B-10-8	11501620	Grey Soil
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Visual Estimation Results:

Matrix percentage of entire 100

Visual estimation percentage: **None Detected**

Asbestos type(s) detected: None Detected

Comment: This result meets the requirements of Exception I as defined by the 435 Method.

B-12-8	11501621	Grey Soil
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Visual Estimation Results:

Matrix percentage of entire 100

Visual estimation percentage: **None Detected**

Asbestos type(s) detected: None Detected

Comment: This result meets the requirements of Exception I as defined by the 435 Method.

Tad Thrower, Laboratory Supervisor, Hayward Laboratory

Note: Limit of Quantification (LOQ) = 0.25%. Trace denotes the presence of asbestos below the LOQ. ND = None Detected.

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