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## UNDERGROUND TANK REMOVAL AND SOIL & GROUNDWATER SAMPLING REPORT THE COLONY DEVELOPMENT AT JACK LONDON SQUARE 311 SECOND STREET Oakland, California

The 311 Company, LLC Oakland, California

> 29 November 2007 Project No. 4568.02



29 November2007 4568.02

Ms. Donna Drogos Alameda County Health Care Services Agency 1131 Harbor Bay Parkway, 2nd Floor Alameda, CA 94502

Subject: Underground Tank Removal and Soil & Groundwater Sampling Report The Colony Development at Jack London Square 311 Second Street Oakland, California RO0002906/Global ID SL0600180448

Dear Ms. Drogos:

On behalf of the 311 Company, LLC, Treadwell & Rollo, Inc. (Treadwell & Rollo) is pleased to present this Underground Tank Removal and Soil & Groundwater Sampling Report. We declare, under penalty of perjury, that the information and/or recommendations contained in the attached report are true and correct to the best of our knowledge.

This report includes details of the tank removal activities and additional sampling activities which were performed at the Site in October 2007. It fulfills the requirements stated in the 29 October 2007 letter from Alameda County Health Care Services Agency (ACHCSA). Please review this report and let us know if all issues pertaining to the "Responses to Technical Comments and Addendum to the Site Management Plan" (SMP Addendum) dated 15 August 2007 have been appropriately addressed. A Site Mitigation Completion Report detailing all site mitigation activities performed during construction of will be submitted under separate cover, after construction has been completed. If you have any questions, please contact us at (510) 874-4500.

Sincerely yours, TREADWELL & ROLLO, INC.

Eric T. Morita

Project Geologist 45680205.OAK

David R. Kleesattel, PG Senior Geologist



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The 311 Company, LLC Oakland, California

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#### UNDERGROUND TANK REMOVAL AND SOIL & GROUNDWATER SAMPLING REPORT THE COLONY DEVELOPMENT AT JACK LONDON SQUARE 311 SECOND STREET Oakland, California

#### 1.0 INTRODUCTION

This Underground Tank Removal & Soil and Groundwater Report has been prepared by Treadwell & Rollo Inc. (Treadwell & Rollo) on behalf of The 311 Company, LLC for the property located at 311 Second Street in Oakland, California (Site) (Figure 1). The Site is rectangular and is bound to the northwest by asphalt parking and offices of the Jack London Square Bath Gallery (130 Webster Street), to the northeast by Second Street, to the southeast by Harrison Street, and to the southwest by the Amtrak railway. It is currently being redeveloped into six levels of residential over two levels of above-grade parking and extends across the entire footprint of the Site. With the exception of raised beds for landscaping, no exposed soil is anticipated upon completion of the development.

This report includes details of the tank removal activities and additional sampling activities which were performed at the Site in October 2007. The purpose of this report was to (1) document tank removal activities, (2) investigate potential sources of contamination that would explain previous detections of Total Petroleum Hydrocarbons (TPH) quantified as gasoline (TPH-g) in boring B-3 and TPH quantified as diesel fuel (TPH-d) in boring B-6, and (3) evaluate whether groundwater at the Site would be acceptable as a future source of municipal or domestic water.

This report has been prepared with the intention of obtaining formal approval of the Site Management Plan (SMP) (T&R, 2007a) and the *Response to Technical Comments and Addendum to the Site Management Plan* (SMP Addendum) (T&R, 2007b). On 29 October 2007, ACHCSA granted contingent approval of the SMP and SMP Addendum and requested the information within this report be submitted by 30 November 2007 to determine whether environmental contingencies have been appropriately completed (ACHCSA, 2007b).

#### 2.0 BACKGROUND

From 1889 through at least 1903, the Site was occupied by 1-story residential dwellings and a railroad signal house on the southwest corner of the Site. By approximately 1911, buildings on the eastern-southeastern part of the Site were replaced by 2-story commercial stores. The northern edge of the Site

was replaced by a warehouse and sheds. A 2-story warehouse building occupied by Southern Pacific Company was constructed adjoining the northeastern corner of the Site.

By 1950, the buildings were replaced by a rectangular, 1-story steel fabricating and welding shop in the center of the Site. The building was approximately 90 feet wide fronting Harrison Street by 125 feet and was set approximately 100 feet back (west) of 2nd Street. The Site also contained an office in the southeastern corner of the Site, and an unlabeled circular feature (diameter of approximately 10 feet) next to a small 1-story structure in the in the northeast corner of the Site. This steel fabricating and welding shop existed at the Site from approximately 1950 to 1959.

A 1950 Sanborn Map revealed the presence of an off-Site tank which stored bunker oil. The tank was located approximately 35 north of the Site and 25 feet west of 2nd Street in the 2-story warehouse building that was formerly occupied by Southern Pacific Company (Present day address of 130 Webster Street). The off-Site tank was listed in Sanborn Maps from 1950 through 1960.

According to accounts by George Meyer, a previous owner of the Site, the Site was vacant from 1976 to 1978. Mr. Meyer purchased the Site in 1978 and operated Meyer's Plumbing, a plumbing supply warehouse (containing pipes, fittings, and tools), which occupied the Site until 2006. An underground storage tank (UST) with an approximate capacity of 1,000-gallons was identified in the southwest corner of the Site. According to Mr. Meyer, the UST had been sealed prior to his purchase of the Site and that the tank was not operated during his ownership.

Between 1993 and 1996, a series of environmental investigations were performed at the Site in pursuit of tank closure (Blymyer, 1993a,b; AllPro, 1996). The 1993 investigation by Blymyer indicated that the UST was filled with concrete and closed-in-place (Blymyer, 1993b). Sample locations (SB-1, SB-2, and B3 to B6) are shown on Figure 2 and laboratory analytical results are summarized on Tables 1-4. Laboratory analytical results indicated that diesel contamination existed adjacent to the UST between the depths of 5.5 to 7.5 feet below ground surface (bgs). The direction of groundwater flow was inferred to be to the southwest toward the Oakland Inner Harbor. TPH-d was not detected in soil in the down-gradient location (to the southwest), although these soil samples were collected from 4.5 to 5.0 feet bgs.

Lead was detected in groundwater in borings B3 to B6 (AllPro, 1996). Metals adsorbed to sediment can mobilize into solution under acidic conditions. A review of the chain-of-custody from the 1996 investigation revealed that the water samples were preserved in acid before being submitted to the

laboratory where they were filtered to remove sediments (AllPro, 1996). Therefore, lead concentrations in B3 to B6 do not represent soluble lead concentrations in groundwater. Based on the results of these investigations and its use as commercial property, a No Further Action (NFA) letter was issued for the UST case by ACHCSA on 18 June 1996

In 2005, the Site was being considered as a potential residential development prompting additional investigation at the Site which included a Phase I Environmental Site Assessment (ESA) (Secor, 2005a) and subsequent field investigations (Secor, 2005b; Secor, 2006). These investigations revealed the presence of petroleum hydrocarbons, metals, and halogenated volatile organic compounds (HVOCs) (a.k.a. chlorinated solvents) in soil and groundwater at the Site. Sample locations included B-1 through B-4, B-6, B-10, and SW-1 through SW-4 (Figure 2). It should be noted that the 2005 investigation by Secor included sample locations named B-3 through B-6 which are not to be confused with sample locations B3 to B6 by Blymyer in 1996.

Results of the 2005 and 2006 investigations are summarized on Tables 1-4. TPH-d was identified downgradient of the UST in groundwater (B-1), TPH-g in groundwater up-gradient of the UST (B-3), and TPH-d and HVOCs in groundwater collected from the northern corner of the Site (B-6). Although TPH-d and TPH-mo were detected in soil and groundwater, there was no indication that the samples were analyzed with silica gel cleanup which removes the biological interference that can occur when analyzing for extractable hydrocarbons. Therefore, elevated concentrations of TPH-d and TPH-mo during the 2005 and 2006 investigations may be elevated based on by-products of biological activity which was detected in the range of TPH-d and TPH-mo.

To investigate potential sources of TPH and HVOCs which may have migrated onto the Site, borings SW-1 through SW-4 were drilled along the northeastern perimeter of the Site along 2<sup>nd</sup> Street (inferred up-gradient direction). In addition, boring SW-5 was advanced in the inferred down-gradient direction from the Site along Harrison Street. HVOCs were detected in groundwater samples in the inferred up-gradient direction (SW-1 through SW-4) but no off-Site sources of lead or TPH were detected.

In 2007, the 311 Company purchased the Site with plans to demolish the warehouse building and redevelop the Site into six levels of residential over two levels of above-grade parking. Redevelopment plans included covering the entire footprint of the Site which would effectively "cap" contaminated soil and groundwater and mitigate exposure to future residents (engineered control). In addition, redevelopment plans included having a deed restriction for the Site to prevent future users from

disturbing the Cap (administrative control). A Site Management Plan (SMP) was prepared and submitted to ACHCSA detailing the procedures that would be performed (handling of contaminated soil and groundwater) during redevelopment (T&R, 2007a).

The ACHCSA was concerned that previously unknown sources of contamination could exist at the Site based on (1) chronological gaps in historical Site-use information that would indicate otherwise, and because of previous detections of (2) lead in soil and groundwater, (3) TPH-g in groundwater up-gradient of the UST in B-3, and (4) TPH-d in groundwater up-gradient of the UST in B-6. If sources existed and remained at the Site after construction, contamination in groundwater would have the potential to migrate off-Site and affect other properties. Based on these concerns, the ACHCSA submitted Technical Comments to the SMP requesting that additional information be submitted before the SMP could be approved (ACHCSA, 2007a).

On behalf of the 311 Company, LLC, Treadwell & Rollo addressed these concerns by submitting the *Response to Technical Comments and Addendum to the Site Management Plan* (SMP Addendum) to the ACHCSA on 15 August 2007 (T&R, 2007b). The SMP Addendum included a review of past Sanborn Fire Insurance Maps which revealed that there were no potential sources of lead or TPH which were likely to have been used at the Site. In addition, it included activities that would investigate potential sources of lead and TPH around sample locations B-3 and B-6.

ACHCSA reviewed the SMP Addendum and concurred that no sources of lead are likely to have existed at the Site (ACHCSA, 2007b). Due to the elevated presence of lead at the Site, the ACHCSA indicated that lead concentrations exceeding residential ESLs are to be characterized and noted on a Site map which will be included in the deed restriction. Tank removal activities were to include additional excavation to cleanup goals specified by the ACHCSA letter dated 24 April 2006. These cleanup goals included the removal of TPH-d in soil to 500 mg/kg, TPH-g in soil to 400 mg/kg, TPH-d in groundwater to 2.5 mg/L, and TPH-g in groundwater to 5 mg/L. In addition, an additional soil and groundwater investigation was to be performed around borings B-3 and B-6 to evaluate the possibility that a previously unidentified source of TPH remained at the Site. The ACHCSA granted conditional approval of the SMP Addendum provided that an Underground Tank Removal and Soil & Groundwater Report be submitted by 30 November 2007. The contingencies have been addressed in this report.

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#### 3.0 SCOPE OF SERVICES

The scope of services included the removal of the UST, over-excavation of soil surrounding the UST, and performing soil and groundwater sampling activities around previous boring locations B-3 and B-6 to evaluate a possible undiscovered source of TPH at the Site.

#### 3.1 Removal of the UST

The 311 Company, LLC retained the services of Environmental Resources Group (ERG) to remove the UST at the Site in September and October 2007. ERG is a Licensed Hazardous Substance Removal and Remedial Actions Contractor (#740879). Details of the tank removal activities including supporting documentation are provided in the *Underground Storage Tank Removal Report, 311 2<sup>nd</sup> Street, Oakland California* by ERG dated 20 November 2007 (Appendix A) (ERG, 2007).

Prior to tank removal activities, ERG notified Underground Services Alert (USA) to delineate major utility lines in the area around the UST, contracted a utility locator to identify the limits of the tank, obtained a tank removal permit from the Oakland Fire Prevention Bureau (Permit #T07-0048), and notified the Bay Area Air Quality Management District. An EPA ID Waste generator number for the Site was obtained for disposal (CAC002621813). Copies of the permits, notifications, and inspection records are presented in Appendix A.

During the preliminary inspection of the UST (Figure 2), ERG discovered that the tank was filled with oily water and not with concrete as previously reported (Blymyer, 1993a). ERG contacted Clearwater Environmental to remove and dispose of the oily water. The UST was then triple rinsed with a high-pressure water sprayer and Simple Green Cleaner. A total of 1,050 gallons of oily water and rinsate water was transported at a proper off-Site receiving facility by Clearwater Environmental. The Uniform Hazardous Waste Manifests are provided in Appendix A.

Tank removal activities were performed by ERG on 3 October 2007 under the guidance of personnel from the Oakland Fire Prevention Bureau. Treadwell & Rollo personnel was also at the Site to observe tank removal activities and to provide sampling activities (Section 3.2).

The UST was oriented with the long end extending northwest-southeast. The top of the UST was exposed at a depth of approximately 3.5 feet below ground surface (bgs). The ambient air environment

was continuously monitored with a photo-ionization detector (PID) equipped with a Lower Explosive Limit (LEL) meter and was verified as being a breathable atmosphere for workers during the tank removal activities. Approximately 200 lbs of dry ice was poured into the tank and verified as being inert (by the Oakland Fire Prevention Bureau) based on the LEL readings and known fuel components (Photograph 2). Soil surrounding the tank was then removed and placed on plastic sheeting. The tank was removed and placed on a truck and was noted to be a single wall, steel UST, approximately 12 feet long and four feet in diameter. A crack was observed in the southeastern corner of the tank. The 1,000-gallon UST was transported by Ecology Control Industries to their facility at 255 Parr Boulevard in Richmond, California.

#### 3.2 Over-Excavation and Confirmation Sampling Around the UST

As a contingency for approval, the ACHCSA required that after removal of the UST, surrounding soil or groundwater containing TPH-g or TPH-d at concentrations above specified cleanup goals were to be removed (ACHCSA, 2007b). During tank removal activities, discolored soils were observed adjacent to the tank on all sides at approximately 8 feet bgs (the tank was buried from approximately 3.5 to 7.5 feet bgs).

On 5 October 2007 and 11 October 2007, discolored soil with moderate to strong petroleum odor and elevated VOC readings (using a PID) was over-excavated, stockpiled on plastic sheeting, and covered at the end of the day. Soil excavation was performed with an excavator supplied by ERG. Soil samples were collected from the excavator bucket in stainless steel tubes, wrapped in Teflon<sup>®</sup>, capped, labeled, placed in an ice-chilled cooler. All samples were transported to Torrent Laboratories of Milpitas, California (a California Certified Laboratory) under Chain-of-Custody protocol.

#### 3.2.1 Over-Excavation and Sampling - 5 October 2007

Soil was over-excavated to 12 feet bgs. Soil samples were collected beneath the tank along the northeast end (UST-1A-12.0) and southwest end (UST-2-12.0) from 12 to 12.5 feet bgs. The excavation pit was then extended horizontally removing additional discolored soil to 12 feet bgs, with sidewall samples collected from 8.0 to 8.5 feet bgs (where discolored soil was primarily observed). Relative to the former UST location, soil was over-excavated and sampled 25 feet to the northeast (UST-25A-8.0), 12 feet to the southeast (UST-12B-8.0), 10 feet to the southwest (UST-10C-8.0), and 6 feet to the northwest (UST-6D-8.0). A grab groundwater sample was collected from groundwater that had infiltrated the excavated area and placed in an ice-chilled cooler (UST-GW-12.0). The grab groundwater



was placed in an unpreserved, laboratory supplied container which was filtered and preserved at the laboratory on the day of collection.

In accordance with the SMP and SMP Addendum, soil samples were analyzed for the following chemicals:

- TPH-d and TPH-mo with silica gel cleanup by EPA Method 8015M/3630C
- Selected VOCs by EPA Method 8260B which include:
  - TPH-g
  - Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX)
  - Fuel Oxygenates Methyl tert-butyl ether (MTBE), Ethyl tert-butyl ether (ETBE), Diisopropyl ether (DIPE), and tert-Amyl methyl ether (TAME)
  - Lead Scavengers Ethylene Dibromide (EDB) and Ethylene Dichloride (EDC)
- Total Lead by EPA Method 6010B.

The grab groundwater sample was analyzed for the above chemicals (same as the soil samples) and additionally analyzed for:

- Organic Lead by Method SW3510C
- Total Dissolved Solids (TDS) by EPA Method 160.1.

Laboratory analytical results for the 5 October 2007 are summarized on Tables 1-4 and complete laboratory analytical reports are provided in Appendix B. TPH detected in soil and groundwater is also presented on Figures 3 and 4, respectively.

The range of TPH concentrations detected in the soil samples included TPH-g from 1.29 to 424 mg/kg, TPH-d from 2.2 to 5.8 mg/kg, TPH-mo detected only in UST-6D-8.0 at 6.34 mg/kg. BTEX was only detected in soil sample UST-12B-8.0 at low concentrations that were below the ESL for residential land use, direct exposure scenario (Table K-1 of RWQCB, 2005). Lead was detected in all soil samples with concentrations ranging from 1.8 to 210 mg/kg. Although a number of samples had lead concentrations that were generally above background conditions, all concentrations were below the 2003 lead in soil ESL for residential land-use that assumes no consumption of home grown produce cultivated in lead affected soil. Because lead is prevalent in other parts of the Site and because a deed restriction will be applied to the Site for lead, additional soil excavation for lead removal was not performed. No detected concentrations in soil exceeded hazardous waste criteria.



The grab groundwater sample (UST-GW-12.0) had detected concentrations of TPH-g at 293  $\mu$ g/L, low concentrations of BTEX that were below the ESL for residential land use, direct exposure scenario (Table K-1 of RWQCB, 2005), and TDS at 920 mg/L. Total lead and organic lead were not detected above method detection limits.

The laboratory analytical results indicated that with the exception of soil sample UST-12B, all samples (soil and groundwater) were below cleanup goals. As previously stated, the cleanup goals for the tank removal are TPH-d in soil at 500 mg/kg, TPH-g in soil at 400 mg/kg, TPH-d in groundwater at 2.5 mg/L, and TPH-g in groundwater at 5 mg/L (ACHCSA, 2006). Soil sample UST-12B-8.0 exceeded cleanup goals for TPH-g in soil with a concentration of 424 mg/kg.

Based on the exceedence of the cleanup goal for TPH in UST-12B, additional soil would need to be excavated to the northeast.

#### 3.2.2 Over-Excavation and Sampling - 11 October 2007

Treadwell & Rollo and ERG personnel returned to the Site on 11 October 2007 to excavate additional soil northeast of soil sample UST-12B-8.0. Relative to the former UST location, additional soil was excavated and sampled 27 feet to the northeast at a depth of 8.0 to 8.5 feet bgs (UST-27B-8.0). This soil sample was analyzed for TPH-g by EPA Method 8260B and TPH-d with silica gel cleanup by EPA Method 8015B.

Laboratory analytical results for soil sample UST-27B-8.0 are summarized on Table 1 and Figure 3 with complete laboratory analytical reports provided in Appendix B. TPH-g was detected in soil at 1.29 mg/kg and was not detected above laboratory method detection limits for TPH-d. Because both TPH-g and TPH-d were below cleanup goals, no additional soil excavation was performed at the Site.

#### 3.3 Soil and Groundwater Sampling

As a contingency for approval, the ACHCSA required that a soil and groundwater investigation be performed at the Site to evaluate if an unknown source of TPH-g existed around B-3 and if an unknown source of TPH-d existed around B-6 (Figure 2) (ACHCSA, 2007b).

Treadwell & Rollo retained the services of RSI Drilling, Inc. to advance five borings at the Site for the collection of soil and groundwater samples (TR-1 to TR-5) (Figure 2). Prior to the start of drilling

activities, Treadwell & Rollo obtained a drilling permit from Alameda County Public Works (Permit W2007-1040), notified Underground Services Alert (USA ticket #371293), and retained the services of a private utility locator (Precision Locating of Brentwood, CA) to perform additional clearance of the proposed boring locations.

Drilling activities were performed at the Site on 16 October 2007. All borings were advanced to groundwater using direct push technology (DPT) equipped with a dual-tube sampler. Continuous cores of soil were collected in clear PVC liners. Soil samples were collected in cut six-inch sections, wrapped in Teflon ®, capped, labeled, and placed in an ice-chilled cooler. Grab groundwater samples were collected in an ice-chilled cooler. All samples were transported to Torrent Laboratories of Milpitas, California (a California Certified Laboratory) under Chain-of-Custody protocol.

Selected soil and groundwater samples from TR-1 through TR-3 were analyzed for the chemicals:

- TPH-d and TPH-mo with silica gel cleanup by EPA Method 8015M/3630C (all soil and groundwater samples)
- TPH quantified as bunker oil (TPH-bo) with silica gel cleanup by EPA Method 8015 (in soil and groundwater from TR-1 and TR-2 only)
- TPH-g by EPA Method 8260B (soil and groundwater in TR-3 only)
- TDS by EPA by EPA Method 160.1 (all groundwater samples)

Soil and groundwater samples from TR-4 and TR-5 were placed on hold depending on the results from TR-1 through TR-3. Borings TR-4 and TR-5 were extra locations that were performed in addition to the proposed locations discussed in the SMP Addendum.

Laboratory analytical results for the 16 October 2007 soil and groundwater sampling event are summarized on Tables 1 and 4 with complete laboratory analytical reports provided in Appendix B. TPH detected in soil and groundwater is presented on Figures 3 and 4, respectively.

The subsurface geology encountered at the Site in borings TR-1 through TR-5 generally consisted of silty sand with gravel from 0 to 4 inches bgs and was underlain by silty sand to a maximum observed depth of 16 feet bgs. No discolored soil or soil with petroleum odors was encountered during drilling activities. The un-stabilized depth to groundwater encountered during field activities was approximately 10 feet

bgs. Soil samples were collected near the top of the groundwater table in each boring (9.5 to 10.0 feet bgs) where petroleum hydrocarbons would most likely be encountered. The boring logs are provided in Appendix C.

#### 3.3.1 Soil and Groundwater Sampling Around B-3

TPH-g was previously detected in groundwater from boring B-3 at a concentration of 5.3 mg/L. During tank removal and soil excavation activities, discolored soil was observed at approximately 8 feet bgs that extended from the tank as a continuous plume approximately 27 feet to the northeast. Boring B-3 was located approximately 15 feet northeast of the tank, and was within the area of discolored soil which was removed during tank removal activities. Soil samples were collected between the tank and boring B-3 (UST-12B-8.0) and northeast of boring B-3 (UST-27B-8.0) during over-excavation activities (Tables 1-4). Based on field observations and sampling results during over-excavation activities, the source of TPH-g previously detected in boring B-3 was from the recently removed tank.

Boring TR-3, located approximately 60 feet northeast of boring B-3, was advanced to depth of 15 feet bgs. All chemicals analyzed in the soil (TR-3-9.5) and groundwater (TR-3-GW) samples collected from boring TR-3 were not detected above laboratory method detection limits (Tables 1 and 4) (Figures 3 and 4). These chemicals included TPH-g, TPH-d, and TPH-mo. TDS in groundwater from TR-3 was 700 mg/L.

#### 3.3.2 Soil and Groundwater Sampling Around B-6

TPH-d was previously detected in groundwater at B-6 at a concentration of 8.1 mg/L. To investigate if an unknown source of TPH-d existed in this area, borings were advanced in the inferred up-gradient (TR-1) and down-gradient (TR-2) directions relative to boring B-6 (Figure 2). Boring TR-1 was placed between the adjoining property fence and boring B-6 to investigate if possible bunker oil had migrated from the adjoining property (130 Webster Street) where a bunker oil tank had previously been operated in 1950.

All chemicals analyzed for in the soil (TR-1-9.5 and TR-2-9.5) and groundwater (TR-1-GW, and TR-2-GW) samples from borings TR-1 and TR-2 were not detected above the laboratory method detection limits. These chemicals included TPH-d, TPH-mo, and TPH-bo. TDS in groundwater from TR-1 and TR-2 was 460 mg/L and 440 mg/L, respectively.

#### 4.0 DISCUSSION

The purpose of this report was to (1) document tank removal activities, (2) investigate potential sources of contamination that would explain previous detections of TPH-g in boring B-3 and TPH-d in boring B-6, and (3) evaluate if groundwater at the Site would be acceptable as a municipal or domestic source of water.

During tank removal activities, the 1,000-gallon UST was found to be improperly closed. Although Blymyer previously documented that this tank was filled with concrete and closed-in-place (Blymyer, 1993b), during removal activities ERG observed that the tank filled with approximately 1,000 gallons of oily water. Tank removal activities, including the off-Site disposal of oily water and scrap metal, were performed in accordance with all local, state, and federal regulations.

Results of the October 2007 investigations indicate that the source TPH-g in boring B-3 was from fuel that migrated from the UST. Although the direction of groundwater flow was inferred to be to the southwest toward the Oakland Harbor in past reports, the water table is tidally influenced and therefore the direction groundwater flow could have also been to the northeast (variable). Regardless of the direction of groundwater flow, discolored soil was observed extending from the tank to the northeast and more importantly, to the northwest where it was previously detected in boring B-3. This indicates that the source of contamination previously detected B-3 was from the tank and not from a previously unknown source at the Site.

TPH-d previously detected in groundwater from boring B-6 at 8.1 mg/L may have been from biological interference associated with the breakdown of naturally occurring organics (i.e., naturally occurring vegetable oils and fats) which was detected within the range of diesel fuel compounds. Upon review of the previous laboratory analytical report for groundwater sample B-6 (Secor, 2005b), the TPH-d analysis did not include silica gel cleanup which removes the biological effect which can contribute to the detection of TPH-d. In October 2007, soil and groundwater samples from borings TR-1 and TR-2 were analyzed for TPH-d and included the silica gel cleanup method. Results indicate that all soil and groundwater samples were not detected above laboratory method detection limits. In addition, there was no discolored soil collected from TR-1, TR-2, and previous boring B-6 (reviewed the boring log from Secor). Based on this information, either the source contributing to the low concentrations of TPH-d in groundwater is very localized around boring B-6 or the previous TPH-d detection was not representative of refined petroleum hydrocarbons. In our opinion, there is no source of TPH-d around boring B-6.

Groundwater at the Site was also evaluated as a possible drinking water source. The RWQCB Resolution 88-63 (a.k.a., Adoption of Policy Entitled "Sources of Drinking Water") defines groundwater to be suitable, or potentially suitable as a municipal or domestic water supply if (1) TDS concentrations in groundwater are less than 3,000 mg/L, (2) there is contamination either by natural or human causes that cannot be reasonably treated, or (3) if a single well installed at the property cannot sustain a yield of 200 gallons per day. TDS concentrations in groundwater from the Site ranged from 440 to 920 mg/L (below the TDS criteria of 3,000 mg/L). Nevertheless, groundwater at the Site is non-potable based on the presence of HVOC contamination in groundwater at the Site (B-3 and B-6) which has migrated onto the Site from an off-Site source (SW-1 through SW-4). Because the source of HVOC contamination is not at the Site, no amount of excavation or treatment at the Site will remove the future presence of HVOCs in groundwater. Therefore, water at the Site is currently not a viable source for domestic or municipal water use.

#### 5.0 CONCLUSIONS AND RECOMMENDATIONS

Treadwell & Rollo has completed the Underground Tank Removal & Soil and Groundwater Report on behalf of The 311 Company, LLC for the property located at 311 Second Street in Oakland, California. The purpose of this report was to (1) document tank removal activities, (2) investigate potential sources of contamination that would explain previous detections of TPH-g in boring B-3 and TPH-d in boring B-6, and (3) evaluate if groundwater at the Site would be acceptable as a municipal or domestic source of water. Based on the results of this investigation, the following conclusions are made:

- The 1,000-gallon UST located in the southern corner of the Site was properly removed according to local, state, and federal regulations.
- All source material surrounding the former UST was over-excavated to cleanup goals specified by ACHCSA.
- The source of TPH-g previously detected in groundwater from boring B-3 is from the tank which was recently removed.
- The source of TPH-d previously detected in groundwater from boring B-6 is either localized around boring B-6 or never existed at the Site.
- Groundwater at the Site is not acceptable as a municipal or domestic source of water based on the presence of HVOCs which are migrating onto the Site from an off-Site source.

No further investigation is recommended. Because sources of contamination have either been identified or eliminated from consideration, we request formal approval of the SMP and SMP Addendum be granted. A subsequent report detailing all site mitigation activities performed during the development of the Site will be submitted under separate cover at a future date (upon completion of the development).

#### 6.0 LIMITATIONS

Treadwell & Rollo prepared this report on behalf of The 311 Company, LLC. All conclusions and recommendations in this report concerning the Site are the professional opinions of the Treadwell & Rollo personnel involved with the project, and this report should not be considered a legal interpretation of existing environmental regulations. Opinions presented herein apply to Site conditions existing at the time of our assessment, and cannot necessarily be taken to apply to Site changes or conditions of which we are not aware and have not had the opportunity to evaluate.



#### REFERENCES

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FIGURES





PARKING

EXPLANATION

TR-1 🔶	Approximate location of boring by Treadwell & Rollo, Inc., in 2007
UST-25A ●	Approximate location of sample collected during soil excavation by Treadwell & Rollo, Inc., in 2007
SB-1 ●	Approximate location of boring by Blymyer Engineers, Inc., in 1993
B6 -	Approximate location of boring by AllPro Environmental Corporation, in 1996
<b>B-6</b> $\oplus$	Approximate location of boring by Secor International, Inc., in 2005
SW-1 🔶	Approximate location of boring by Secor International, Inc., in 2006
	Site boundary
x x	Fence line





Date 11/09/07

Project No. 4568.02

Figure 2





	EXPLANATION						
TR-1 🔶	Approximate location of boring by Treadwell & Rollo, Inc., in 2007						
UST-25A ●	Approximate location of sample collected during soil excavation by Treadwell & Rollo, Inc., in 2007						
SB-1 ●	Approximate location of boring by Blymyer Engineers, Inc., in 1993						
B6 🔶	Approximate location of boring by AllPro Environmental Corporation, in 1996						
<b>B-6</b>	Approximate location of boring by Secor International, Inc., in 2005						
SW-1	Approximate location of boring by Secor International, Inc., in 2006						
	Site boundary						
x x	Fence line						
<b></b>	Death is fast below						
6							

Sample ID	ground surface				
Chemical	Concentrations				
Name	(mg/kg)				



	EXPLANATION
TR-1 🔶	Approximate location of boring by Treadwell & Rollo, Inc., in 2007
UST-25A •	Approximate location of sample collected during soil excavation by Treadwell & Rollo, Inc., in 2007
SB-1 ●	Approximate location of boring by Blymyer Engineers, Inc., in 1993
B6 -	Approximate location of boring by AllPro Environmental Corporation, in 1996
<b>B-6</b>	Approximate location of boring by Secor International, Inc., in 2005
SW-1	Approximate location of boring by Secor International, Inc., in 2006
	Site boundary
x x	Fence line

Sample ID	
Chemical Name	Concentrations ( $\mu$ g/L)

All concentrations in micrograms per liter ( $\mu$ g/L)

TPH-g - Total petroleum hydrocarbons quantified as gasoline TPH-d - Total petroleum hydrocarbons quantified as diesel fuel TPH-mo - Total petroleum hydrocarbons quantified as motor oil TPH-bo - Total petroleum hydrocarbons quantified as bunker oil < 61 - Concentration not detected above indicated laboratory method detection limit \* - Silica gel cleanup x - Laboratory flag indicating that pattern does not match typical gasoline THE COLONY DEVELOPMENT 311 2ND STREET Oakland, California TOTAL PETROLEUM HYDROCARBONS **IN GROUNDWATER - OCTOBER 2007** Date 11/08/07 Project No. 4568.02 Figure 4

Date \*

TABLES



#### TABLE 1 Total Petroleum Hydrocarbons in Soil 311 Second Street Oakland, California

		Sample				
	Sample	Depth	TPH-g	TPH-d	TPH-mo	TPH-bo
Sample ID	Date	feet	mg/kg	mg/kg	mg/kg	mg/kg
SB-1	9/15/1993	5.5-6.0	<1.0	4.2	NA	NA
SB-2	9/15/1993	7.0-7.5	34	15,000	NA	NA
B3	3/20/1996	4.5-5.0	<1.0	<1.0	NA	NA
B4	3/20/1996	4.5-5.0	<1.0	<1.0	NA	NA
B5	3/20/1996	4.5-5.0	<1.0	<1.0	NA	NA
B6	3/20/1996	4.5-5.0	<1.0	16	NA	NA
B-1	5/3/2005	5.0-5.5	<0.5	44	NA	NA
B-1	5/3/2005	10-10.5	<0.5	6	NA	NA
B-2	5/3/2005	6.0-6.5	<0.5	39	NA	NA
B-3	5/3/2005	2.0-2.5	<0.5	NA	NA	NA
B-3	5/3/2005	5.0-5.5	1.1	NA	NA	NA
B-3	5/3/2005	7.0-7.5	160	390	NA	NA
B-3	5/3/2005	12.0-12.5	<0.5	<0.1	NA	NA
B-4	5/3/2005	5.0-5.5	<0.5	<0.1	NA	NA
B-6	5/3/2005	2.0-2.5	<0.5	NA	NA	NA
B-6	5/3/2005	5.0-5.5	<0.5	NA	NA	NA
B-6	5/3/2005	8.0-8.5	<0.5	<0.1	NA	NA
B-6	5/3/2005	12.0-12.5	<0.5	<0.1	NA	NA
B-10	5/3/2005	2.0-2.5	<0.5	NA	NA	NA
B-10	5/3/2005	5.0-5.5	<0.5	NA	NA	NA
UST-1A	10/5/2007	12.0-12.5	<0.1	<2.0*	<4.0*	NA
UST-2	10/5/2007	12.0-12.5	<0.1	<2.0*	<4.0*	NA
UST-25A	10/5/2007	8.0-8.5	<0.1	<2.0*	<4.0*	NA
UST-12B	10/5/2007	8.0-8.5	424x	5.8x*	<4.0*	NA
UST-10C	10/5/2007	8.0-8.5	4.74x	2.2x*	<4.0*	NA
UST-6D	10/5/2007	8.0-8.5	<0.1	<2.0*	6.34*	NA
UST-27B	10/11/2007	8.0-8.5	1.29x	<2.0*	NA	NA
TR-1	10/16/2007	9.5-10.0	NA	<2.0*	<4.0*	<4.0*
TR-2	10/16/2007	9.5-10.0	NA	<2.0*	<4.0*	<4.0*
TR-3	10/16/2007	9.5-10.0	<0.1	<2.0*	<4.0*	NA
ESL (Table K-1)			400	400	400	400
ESL (Table K-3)			6,000	6,000	6,000	6,000

Notes

Detected concentrations are highlighted in **bold** 

mg/kg = Milligrams per kilogram

TPH-g = Total Petroleum Hydrocarbons quantified as gasoline

TPH-d = Total Petroleum Hydrcarbons quantified as diesel fuel

TPH-mo = Total Petroleum Hydrocarbons quantified as motor oil

TPH-bo = Total Petroleum Hydrocarbons quantified as bunker oil

\* = Sample analyzed with Silica Gel Cleanup

x = Laboratory flag indicating that although TPH-g is present, pattern does not match typical

gasoline. TPH-g result is elevated due to the presence of heavy hydrocarbons within the gasoline

< 1 = Not detected at the indicated laboratory detection limit

NA = Not analyzed

ESL = Environmental Screening Levels (SF-RWQCB, 2005)

ESL (Table K-1): Direct Exposure, Residential

ESL (Table K-3): Direct Exposure, Construction/Trench Worker Exposure Scenario

#### TABLE 2 Volatile Organic Compounds in Soil 311 Second Street Oakland, California

	Sampla	Sample	Ponzono	Toluono	Ethylbonzono	Total	EDR	EDC	MTDE	стрс	DIDE	ТАМЕ	Othor VOCs
Sample ID	Date	feet	ma/ka	ma/ka	ma/ka	ma/ka	ma/ka		ma/ka	ma/ka	ma/ka		ma/ka
SB-1	9/15/1993	5.5-6.0	< 0.0050	< 0.0050	< 0.0050	0.0090	NA	NA	NA	NA	NA	NA	NA
SB-2	9/15/1993	7.0-7.5	< 0.0050	< 0.0050	0.65	0.82	NA	NA	NA	NA	NA	NA	NA
B3	3/20/1996	4.5-5.0	< 0.005	< 0.005	< 0.005	< 0.005	NA	NA	< 0.05	NA	NA	NA	NA
B4	3/20/1996	4.5-5.0	<0.005	< 0.005	< 0.005	< 0.005	NA	NA	< 0.05	NA	NA	NA	NA
B5	3/20/1996	4.5-5.0	<0.005	< 0.005	< 0.005	< 0.005	NA	NA	< 0.05	NA	NA	NA	NA
B6	3/20/1996	4.5-5.0	<0.005	< 0.005	< 0.005	< 0.005	NA	NA	<0.05	NA	NA	NA	NA
B-1	5/3/2005	5.0-5.5	<0.001	<0.001	<0.001	0.001	NA	NA	<0.005	NA	NA	NA	1,2,4-Trimethylbenzene = <b>0.002</b> 1,3,5-Trimethylbenzene = <b>0.001</b> Other VOCs = ND
B-1	5/3/2005	10-10.5	<0.001	<0.001	<0.001	< 0.001	NA	NA	< 0.005	NA	NA	NA	ND
B-2	5/3/2005	6.0-6.5	<0.001	<0.001	<0.001	< 0.001	NA	NA	< 0.005	NA	NA	NA	ND
B-3	5/3/2005	2.0-2.5	<0.001	<0.001	<0.001	<0.001	NA	NA	<0.005	NA	NA	NA	ND
B-3	5/3/2005	5.0-5.5	<0.001	<0.001	0.07	0.005	NA	NA	<0.005	NA	NA	NA	n-Butylbenzene = 0.014 isopropylbenzene = 0.004 p-isopropyltoluene = 0.003 Napthalene = 0.052 n-propylbenzene = 0.020 1,2,4-Trimethylbenzene = 0.055 Other VOCs = ND
B-3	5/3/2005	7.0-7.5	<0.001	<0.001	<0.001	<0.001	NA	NA	<0.005	NA	NA	NA	n-Butylbenzene = 1.6 Isopropylbenzene = 0.82 Napthalene = 4.5 n-propylbenzene = 3.4 Other VOCs = ND
B-3	5/3/2005	12.0-12.5	<0.001	<0.001	<0.001	<0.001	NA	NA	<0.005	NA	NA	NA	Isopropylbenzene = 0.005 n-Propylbenzene = 0.009 Other VOCs = ND
B-4	5/3/2005	5.0-5.5	<0.001	<0.001	<0.001	<0.001	NA	NA	< 0.005	NA	NA	NA	ND
B-6	5/3/2005	2.0-2.5	<0.001	<0.001	<0.001	<0.001	NA	NA	<0.005	NA	NA	NA	ND
B-6	5/3/2005	5.0-5.5	< 0.001	< 0.001	< 0.001	< 0.001	NA	NA	< 0.005	NA	NA	NA	ND
В-6	5/3/2005	8.0-8.5	<0.001	<0.001	< 0.001	<0.001	NA	NA	<0.005	NA	NA	NA	ND
B-6	5/3/2005	12.0-12.5	<0.001	<0.001	<0.001	<0.001	NA	NA	<0.005	NA	NA	NA	Tetrachlorethene = <b>0.004</b> Other VOCs = ND
ESL (Table K-1)			0.18	100	400	330	0.087	0.34	30	NE	NE	NE	Napthalene = 1.5 Tetrachloroethene = 0.43 All Others = ESLs NE
ESL (Table K-3)			16	650	400	420	4.6	31	2,500	NE	NE	NE	Napthalene = 97 Tetrachloroethene = 25 All Others = ESLs NE
ESL (Table E-1b)			0.18	130	390	310	8.9	0.025	2.0	NE	NE	NE	Napthalene = 0.46 Tetrachloroethene = 0.26 All Others = ESLs NE

# TABLE 2 Volatile Organic Compounds in Soil 311 Second Street Ochland, Ochlandia

						Uakianu	. Calloffia						
Sample ID	Sample Date	Sample Depth feet	Benzene ma/ka	Toluene ma/ka	Ethylbenzene ma/ka	Total Xylenes mg/kg	EDB ma/ka	EDC mg/kg	MTBE ma/ka	ETBE ma/ka	DIPE ma/ka	TAME ma/ka	Other VOCs
B-10	5/3/2005	2 0-2 5	< 0.001	< 0.001	< 0.001	< 0.001	NA	NA	< 0.005	NA	NA	NA	ND
B-10	5/3/2005	5.0-5.5	< 0.001	< 0.001	<0.001	< 0.001	NA	NA	< 0.005	NA	NA	NA	ND
UST-1	10/5/2007	12.0-12.5	< 0.005	< 0.005	< 0.005	< 0.015	< 0.005	< 0.005	< 0.010	< 0.005	< 0.005	< 0.005	NA
UST-2	10/5/2007	12.0-12.5	< 0.005	< 0.005	< 0.005	<0.015	< 0.005	<0.005	<0.010	< 0.005	< 0.005	< 0.005	NA
UST-25a	10/5/2007	8.0-8.5	< 0.005	<0.005	< 0.005	<0.015	< 0.005	< 0.005	<0.010	< 0.005	< 0.005	< 0.005	NA
UST-12b	10/5/2007	8.0-8.5	0.1	0.042	0.18	0.46	<0.025	<0.025	< 0.050	< 0.025	< 0.025	<0.025	NA
UST-10c	10/5/2007	8.0-8.5	<0.005	< 0.005	<0.005	<0.015	<0.005	<0.005	<0.010	< 0.005	<0.005	<0.005	NA
UST-6d	10/5/2007	8.0-8.5	<0.005	< 0.005	<0.005	< 0.015	<0.005	<0.005	<0.010	< 0.005	<0.005	<0.005	NA
ESL (Table K-1)			0.18	100	400	330	0.087	0.34	30	NE	NE	NE	Napthalene = 1.5 Tetrachloroethene = 0.43 All Others = ESLs NE
ESL (Table K-3)			16	650	400	420	4.6	31	2,500	NE	NE	NE	Napthalene = 97 Tetrachloroethene = 25 All Others = ESLs NE
ESL (Table E-1b)			0.18	130	390	310	8.9	0.025	2.0	NE	NE	NE	Napthalene = 0.46 Tetrachloroethene = 0.26 All Others = ESLs NE

Notes:

mg/kg = Milligrams per kilogram

Detected concentrations are highlighted in **bold** 

ND = Not detected above laboratory detection limit which varies, see laboratory report

NA = Not analyzed

< 1 = Not detected above the indicated laboratory detection limit

BTEX = Benzene, Toluene, Ethylbenzene, Total Xylenes

Lead Scavengers = Ethylene Dibromide (EDB), Ethylene Dichloride (EDC)

Fuel Oxygenates = Methyl tert Butyl Ether (MTBE), Ethyl tert Butyl Ether (ETBE), Diisoopropyl Ether (DIPE), Tert amyl Methyl Ether (TAME)

Other VOCs = Other Volatile Organic Compounds, see laboratory report

ESL = Environmental Screening Levels (SF-RWQCB, 2005).

 $\mathsf{NE}=\mathsf{ESL's}$  not established for the indicated chemical

ESL (Table K-1): Direct Exposure, Residential

ESL (Table K-3): Direct Exposure, Construction/Trench Worker Exposure Scenario

ESL (Table E-1b): Soil Screening Levels for Evaluation of Potential Vapor Intrusion Concerns, Residential

#### TABLE 3 Metals in Soil 311 Second Street Oakland, California

	Sample	Sample				<u>.</u>		<u> </u>	•	DI.				-	Soluble Pb	Soluble Pb
Sample Number	Date	Depth	As	Ва	Ве	Cd	Cr	Co	Cu	РЬ	NI	Нд	v	Zn	(WET)	(TCLP)
		-	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/L)	(mg/L)
SB-1	9/15/1993	5.5-6.0	NA	NA	NA	NA	NA	NA	NA	71	NA	NA	NA	NA	NA	NA
SB-2	9/15/1993	7.0-7.5	NA	NA	NA	NA	NA	NA	NA	84	NA	NA	NA	NA	NA	NA
B3	3/20/1996	4.5-5.0	NA	NA	NA	NA	NA	NA	NA	58	NA	NA	NA	NA	NA	NA
B4	3/20/1996	4.5-5.0	NA	NA	NA	NA	NA	NA	NA	310	NA	NA	NA	NA	NA	NA
B5	3/20/1996	4.5-5.0	NA	NA	NA	NA	NA	NA	NA	9.3	NA	NA	NA	NA	NA	NA
B6	3/20/1996	4.5-5.0	NA	NA	NA	NA	NA	NA	NA	23	NA	NA	NA	NA	NA	NA
B-1	5/3/2005	5.0-5.5	NA	NA	NA	NA	NA	NA	NA	100	NA	NA	NA	NA	6.1	NA
B-1	5/3/2005	10-10.5	NA	NA	NA	NA	NA	NA	NA	1.9	NA	NA	NA	NA	NA	NA
B-2	5/3/2005	6.0-6.5	NA	NA	NA	NA	NA	NA	NA	47	NA	NA	NA	NA	NA	NA
B-3	5/3/2005	2.0-2.5	4.3	110	<0.5	0.52	27	4.8	57	160	16	2.0	22	130	7.8	NA
B-3	5/3/2005	5.0-5.5	2.1	54	<0.5	<0.5	30	3.5	7.3	8.3	12	0.04	19	18	NA	NA
B-3	5/3/2005	7.0-7.5	NA	NA	NA	NA	NA	NA	NA	3.0	NA	NA	NA	NA	NA	NA
B-3	5/3/2005	12.0-12.5	NA	NA	NA	NA	NA	NA	NA	3.0	NA	NA	NA	NA	NA	NA
B-4	5/3/2005	5.0-5.5	NA	NA	NA	NA	NA	NA	NA	1,200	NA	NA	NA	NA	25	1.2
B-6	5/3/2005	2.0-2.5	3.2	59	<0.5	<0.5	30	3.0	7.8	27	11	0.05	19	19	NA	NA
B-6	5/3/2005	5.0-5.5	1.8	30	<0.5	<0.5	32	2.2	5.1	3.9	10	< 0.02	19	10	NA	NA
B-6	5/3/2005	8.0-8.5	NA	NA	NA	NA	NA	NA	NA	21	NA	NA	NA	NA	NA	NA
B-6	5/3/2005	10-10.5	NA	NA	NA	NA	NA	NA	NA	2.8	NA	NA	NA	NA	NA	NA
B-10	5/3/2005	2.0-2.5	6	130	<0.5	0.85	19	5.4	870	320	16	0.81	21	410	19	NA
B-10	5/3/2005	5.0-5.5	2.3	50	<0.5	<0.5	24	2.5	16	180	11	0.08	17	36	4.8	NA
UST-1A	10/5/2007	12.0-12.5	NA	NA	NA	NA	NA	NA	NA	1.8	NA	NA	NA	NA	NA	NA
UST-2	10/5/2007	12.0-12.5	NA	NA	NA	NA	NA	NA	NA	2.0	NA	NA	NA	NA	NA	NA
UST-25a	10/5/2007	8.0-8.5	NA	NA	NA	NA	NA	NA	NA	45	NA	NA	NA	NA	NA	NA
UST-12b	10/5/2007	8.0-8.5	NA	NA	NA	NA	NA	NA	NA	2.1	NA	NA	NA	NA	NA	NA
UST-10c	10/5/2007	8.0-8.5	NA	NA	NA	NA	NA	NA	NA	5.2	NA	NA	NA	NA	NA	NA
UST-6d	10/5/2007	8.0-8.5	NA	NA	NA	NA	NA	NA	NA	210	NA	NA	NA	NA	NA	NA
TR-1	10/16/2007	9.5-10.0	NA	NA	NA	NA	NA	NA	NA	3.4	NA	NA	NA	NA	NA	NA
TR-2	10/16/2007	9.5-10.0	NA	NA	NA	NA	NA	NA	NA	2.0	NA	NA	NA	NA	NA	NA
TR-3	10/16/2007	9.5-10.0	NA	NA	NA	NA	NA	NA	NA	1.7	NA	NA	NA	NA	NA	NA
TR-4	10/16/2007	9.5-10.0	NA	NA	NA	NA	NA	NA	NA	2.6	NA	NA	NA	NA	NA	NA
TR-5	10/16/2007	9.5-10.0	NA	NA	NA	NA	NA	NA	NA	2.3	NA	NA	NA	NA	NA	NA
																•
Background			5.5	130	0.42	5.6	58	14	32	7.0	68	0.5	46	64	NA	NA
TTLC - (mg/kg)			500	10,000	75	100	2,500	8,000	2,500	1,000	2,000	20	2,400	5,000	NA	NA
STLC (mg/L)			5.0	100	0.75	1.0	5	80	25	5.0	20	0.2	24	250	5.0	NA
RL (mg/L)			5.0	100	NA	1.0	5	NA	NA	5.0	NA	0.2	NA	NA	NA	5.0
ESL (Table K-1)			5.5*	100	29	1.7	58*	10	610	255**	310	4	110	4,600	NA	NA
ESL (Table K-3)			5.5*	2,500	36	38	58*	10	28,000	750	1,000	98	5,000	210,000	NA	NA

TABLE 3 Metals in Soil 311 Second Street Oakland, California

#### Notes:

mg/kg = Milligrams per kilogram
mg/L = Milligrams per liter
Total metals include arsenic (As), barium (Ba), beryllium (Be), cadmium (Cd), chromium (Cr),
cobalt (Co), copper (Cu), lead (Pb), nickel (Ni), mercury (Hg), vanadium (V), and zinc (Zn)
WET = Waste Extraction Test
TCLP = Toxicity Characteristic Leaching Procedure
< 1 = Not detected above the indicated laboratory detection limit</li>
ND = Not detected above laboratory detection limit which varies, see laboratory report
NA = Not Analyzed or Not Applicable
Detected concentrations are highlighted in **bold**.
ESL = Environmental Screening Levels (SF-RWQCB, 2005)
ESL (Table K-1): ESL for Direct Exposure, Residential
ESL (Table K-2): Direct Exposure, Construction/Trench Worker Exposure Scenario
TTLC = Total Threshold Limit Concentration

RL = Regulatory Level, Criteria for a Federal Hazardous Waste

BKG = Maximum detected concentration is less than background and not evaluated further

#### Notes:

 $5.5^*$  = Table B ESL in soil for residential land-use where groundwater is not current or potential source of drinking water. Considers background concentrations and human health risk exposure.

 $255^{**} = 2003$  lead in soil ESL for residential land-use that assumes no consumption of home grown produce cultivated in lead-affected soil.

Background = Average Concentrations from LBNL, 2002. If no average concentration available, then value was selected from the following 95th percentile, 99th percentile, or median of detected concentrations ( in order, depending upon available values).

LBNL, 2002 = Lawrence Berkeley National Laboratory, 2002, Analysis of Background Distributions of Metals in Soil at Lawrence Berkeley National Laboratory. Envrionmental Restoration Program, June 2002.



#### TABLE 4 Groundwater Analytical Results 311 Second Street Oakland, California

Sample	Sample	TPH-g	TPH-d	TPH-mo	TPH-bo	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	TDS	Other VOCs	Lead	Organic Lead
ID	Date	µg/L	µg∕L	µg∕L	µg/L	µg∕L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	mg/L	mg/L
SB-2	9/15/1993	85	5,500	NA	NA	2.7	0.66	< 0.50	0.51	NA	NA	NA	<0.0050	NA
B3	3/20/1996	<50	<50	NA	NA	< 0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	0.049*	NA
B4	3/20/1996	<50	<50	NA	NA	< 0.5	<0.5	< 0.5	<0.5	<5.0	NA	NA	1.7*	NA
B5	3/20/1996	<50	<50	NA	NA	< 0.5	<0.5	< 0.5	<0.5	<5.0	NA	NA	0.68*	NA
B6	3/20/1996	<50	<50	NA	NA	< 0.5	<0.5	< 0.5	<0.5	<5.0	NA	NA	0.49*	NA
B-1	5/3/2005	<0.50	11,000	NA	NA	<0.5	<0.5	<0.5	<0.5	<1.0	NA	ND	NA	NA
B-2	5/3/2005	<0.50	NA	NA	NA	<0.5	<0.5	<0.5	<0.5	<1.0	NA	ND	NA	NA
В-3	5/3/2005	5,300	200	NA	NA	15	6.0	51	30.5	<1.0	NA	n-Butylbenzene = <b>60</b> sec-Butylbenzene = <b>20</b> p-isopropylbenzene = <b>57</b> p-isopropyltoluene = <b>3.3</b> Napthalene = <b>160</b> n-propylbenzene = <b>160</b> 1,2,4-Trimethylbenzene = <b>90</b> 1.3.5-Trimethylbenzene = <b>24</b>	NA	NA
B-4	5/3/2005	<0.50	<50	NA	NA	< 0.5	<0.5	< 0.5	<0.5	<1.0	NA	ND	NA	NA
В-6	5/3/2005	<0.50	8,100	NA	NA	<0.5	<0.5	<0.5	<0.5	<1.0	NA	Tetrachloroethene = <b>8.2</b> Trichloroethene = <b>1.5</b> 1,2-Dichloroethane = <b>1.0</b> cis-1,2-Dichloroethene = <b>0.7</b>	NA	NA
SW-1	5/10/2006	<500	<400	<400	NA	NA	NA	NA	NA	<1.0	NA	Tetrachloroethene = 24 Trichloroethene = 1.3 1,2-Dichloroethane = 1.9	NA	NA
SW-2	5/10/2006	<500	<400	<400	NA	NA	NA	NA	NA	<1.0	NA	Tetrachloroethene = <b>11</b> Trichloroethene = <b>22</b> 1,2-Dichloroethane = <b>7.7</b> cis-1,2-Dichloroethene = <b>3.8</b> Diisopropyl Ether = <b>5.4</b>	NA	NA
ESL (Table B)		500	640	640	640	46	130	290	100	1,800	NE	Napthalene = 24Tetrachloroethene = 120Trichloroethene = 3601,2-Dichloroethane = 200cis-1,2-Dichloroethene = 590trans-1,2-Dichloroethene = 590All Others = NE	2.5	NA
ESL (Table E-1a)		NE	NE	NE	NE	540	380,000	170,000	160,000	24,000	NE	Napthalene = 3,200 Tetrachloroethene = 120 Trichloroethene = 530 1,2-Dichloroethane = 200 cis-1,2-Dichloroethene = 6,200 trans-1,2-Dichloroethene = 6,700 All Others = ESLs not available	NE	NA



# TABLE 4Groundwater Analytical Results311 Second StreetOakland, California

Sample	Sample	TPH-g	TPH-d	TPH-mo	TPH-bo	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	TDS	Other VOCs	Lead	Organic Lead
ID	Date	µg/L	µg∕L	µg∕L	µg∕L	µg∕L	µg∕L	µg∕L	µg/L	µg∕L	mg/L	μg/L	mg/L	mg/L
SW-3	5/10/2006	<500	<400	<400	NA	NA	NA	NA	NA	1.1	NA	Tetrachloroethene = <b>18</b> Trichloroethene = <b>130</b> 1,2-Dichloroethane = <b>11</b> cis-1,2-Dichloroethene = <b>7.9</b> trans-1,2-Dichloroethene = <b>0.9</b> Dijsopropyl Ether = <b>5.1</b>	NA	NA
SW-4	5/10/2006	<500	<400	<400	NA	NA	NA	NA	NA	<1.0	NA	Tetrachloroethene = <b>2.4</b> Trichloroethene = <b>16</b> 1,2-Dichloroethane = <b>5.0</b> cis-1,2-Dichloroethene = <b>5.3</b>	NA	NA
SW-5	5/10/2006	<500	<400	<400	NA	NA	NA	NA	NA	<1.0	NA	ND	NA	NA
UST-GW	10/5/2007	293x	<100**	<200**	NA	< 0.5	1.14	4.68	16	<0.5	920	NA	<0.015	< 0.005
TR-1	10/16/2007	NA	<128**	<256**	<256**	NA	NA	NA	NA	NA	460	NA	NA	NA
TR-2	10/16/2007	NA	<139**	<278**		NA	NA	NA	NA	NA	440	NA	NA	NA
TR-3	10/16/2007	<61	<112**	<224**	NA	NA	NA	NA	NA	NA	700	NA	NA	NA
ESL (Table B)		500	640	640	640	46	130	290	100	1,800	NE	Napthalene = 24 Tetrachloroethene = 120 Trichloroethene = 360 1,2-Dichloroethane = 200 cis-1,2-Dichloroethene = 590 trans-1,2-Dichloroethene = 590 All Others = NE	2.5	
ESL (Table E-1a)		NE	NE	NE	NE	540	380,000	170,000	160,000	24,000	NE	Napthalene = 3,200Tetrachloroethene = 120Trichloroethene = 5301,2-Dichloroethane = 200cis-1,2-Dichloroethene = 6,200trans-1,2-Dichloroethene = 6,700All Others = ESLs not available	NE	

Notes:

 $\mu g/L = Micrograms per liter$ 

mg/L = Milligrams per liter

Detected concentrations are highlighted in **bold**.

TPH-g = Total Petroleum Hydrocarbons quantified as gasoline

TPH-d = Total Petroleum Hydrcarbons quantified as diesel fuel

TPH-mo = Total Petroleum Hydrocarbons quantified as motor oil

MTBE = Methyl tert Butyl Ether

VOCs = Volatile Organic Compounds (see laboratory data sheets for complete list of VOCs analyzed)x = Laboratory flag indicating that although TPH-g is present, pattern does not match typical gasoline. TPH-g result is elevated due to the presence of heavy hydrocarbons within the gasoline range. Notes:

< 1 = indicates not detected at the indicated laboratory detection limit

ND = Not detected at or greater than the laboratory detection limit which varies, see laboratory report

NA = Not analyzed

NE = Not Established

ESL = Environmental Screening Levels (SF-RWQCB, 2005)

ESL (Table B): Shallow soils (<m bgs) where groundwater is not a current or potential source of drinkning water

ESL (Table E-1a): Groundwater Screening Levels for Evaluation of Potential Indoor-Air Impacts, high permeability

\* = Groundwater sample was preserved before being filtered and are therefore erroneous.

\*\* = Groundwater sample analyzed with Silica Gel Cleanup



otential source of drinkning water loor-Air Impacts, high permeability e erroneous.

APPENDIX A Tank Removal Report by Environmental Resources Group

### Environmental Resource Group

1038 Redwood Hwy. Suite 1 Mill Valley, CA 94925 Phone (415) 381-6574 Fax (415) 381-6320

November 20<sup>th</sup>, 2007

Mr. Ken Defiebre The 311 Company, LLC c/o KSD Group, Inc. Concord Ave., Concord, California

#### RE: UNDERGROUND STORAGE TANK REMOVAL REPORT 311 2<sup>nd</sup> Street, Oakland, CA

Dear Mr. Defiebre:

Enclosed is the "Underground Storage Tanks Removal Report" documenting activities associated with removal of the three underground storage tank (UST) at the site located at 311 2<sup>nd</sup> Street, Oakland, California.

UST removal activities were performed in accordance with the City of Oakland Fire Prevention Bureau regulations.

Please feel free to contact me if you have any questions or comments concerning this report.

Sincerely,

Benjamin Wells Principal Geologist

cc: Dave Bell, San Jose Construction Glenn Leong, Treadwell and Rollo

#### UNDERGROUND STORAGE TANK REMOVAL REPORT 311 2<sup>nd</sup> Street Oakland, California

Prepared for: 311 Company LLC c/o KSD Group, 1200 Concord Ave., Suite 170, California 94520

Prepared by:

Environmental Resource Group 1038 Redwood Hwy., Suite 1 Mill Valley, California 94941 (415) 381-6574

> Benjamin Wells Principal Geologist

November 20<sup>th</sup>, 2007
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# TABLES (provided by Treadwell and Rollo)

Table 1	Summary of Total Petroleum Hydorcarbons in Soil
Table 2	Summary of Volatile Organic Compounds in Soil
Table 3	Summary of Metals in Soil
Table 4	Summary of Ground Water Sample Analytical Results

# FIGURES (provided by Treadwell and Rollo)

Plate 1	Site Vicinity Map
Plate 2	UST Excavation Area and Sample Locations

# APPENDICES

- Appendix A City of Oakland Fire Prevention Bureau of Public Works Certified Unified Program Agency Application to Remove Underground Storage Tank.
- Appendix B Uniform Hazardous Waste Manifests
- Appendix C Photographs of UST Removal
- Appendix D Laboratory Analytical Reports
- Appendix E Hazardous Waste Manifests

# **1.0 INTRODUCTION**

This Underground Storage Tank Removal Report (UST Removal Report) was prepared by Environmental Resource Group. Inc. (ERG) on behalf of the The 311 Company, LLC, for the property located at 311 2<sup>nd</sup> Street, Oakland, California ("the Site"; Plate 1). This report presents the results of UST removal actions performed at the Site during September and October 2007. The UST removal was performed in accordance with the scope of work presented in ERG's Application to Remove Underground Storage Tank submitted to City of Oakland Fire Prevention Bureau (OFPB), the Underground Storage Tank Removal Workplan submitted to OFPB and San Jose Construction, a Site Health and Safety Plan for 311 2<sup>nd</sup> Street, Oakland, California, and the Treadwell and Rollo Site Management Plan (SMP) submitted to Alameda County Health Care Services Agency (ACHCSA). ERG is a California licensed contractor (CSL 740879 A, B, Haz).

# 2.0 BACKGROUND

# 2.1 Site Description

The Site is a now vacant parcel located at 311 2<sup>nd</sup> Street, Oakland, California. The site is bound to the northwest by the showroom and offices of Jack London Square Bath Gallery (130 Webster St.), a second office building (110 Webster St.), and an asphalt parking lot with Webster Street further to the; to the northeast by Second Street with parking and offices to the east; to the southwest by Amtrak railway with Embarcadero Street and a parking lot further to the west. Figure 2. presents the site vicinity map.

# **2.2 Site History**

A small commercial building occupied the site and was operated as a steel fabricating and welding shop from 150 to 1957. According to George Meyer, a previous owner, a buried UST was onsite when he purchased the property in 1978. The UST was a 1,000 gallon tank closed in place prior to 1976. (Blymer, 1993).

In 1993 Blymer Engineers conducted a closure assessment. In addition, in 1996 AllPro Environmental Corporation conducted a Soil and Groundwater Investigation to pursue Tank Closure. Alameda County Health Care Services Agency (ACHCSA) issued a "No Further Action" based on the results of this investigation. Secor International, Inc. (Secor) prepared a Phase I Environmental Site Assessment dated April 200 and a Phase II Environmental Site Assessment dated May 2005

ERG submitted an Application to Remove Underground Storage Tanks, the Underground Storage Tank Removal Workplan and a Site Health and Safety Plan for 311 2<sup>nd</sup> Street, Oakland, CA, to the City of Oakland Fire Prevention Bureau.

# **3.0 UST REMOVAL ACTIVITIES**

# 3.1 Pre UST Removal

Prior to excavation, on September 27<sup>th</sup>, 2007 ERG conducted a site walk to inspect the tank prior to its removal. ERG contacted Subsurface Locating Services (SLS) to identify the tank and size of the tank. Upon inspection the tank was found to contain oily water and was not filled with concrete as previously thought. ERG contacted the Oakland Fire Prevention Bureau to confirm our permit was valid. ERG contacted Clearwater Environmental to remove oily water from the UST. The UST was then triple rinsed using a high-pressure water sprayer and Simple Green cleaner. The rinsate was added to the oily water removed from the UST. A total of 1050 gallons of oily water was transported by Clearwater for disposal. Appendix B presents the Uniform Hazardous Waste Manifest for the disposal.

# 3.2 UST Removal

The UST removal activities were performed on October 3<sup>rd</sup>, in accordance with Oakland Fire Prevention Bureau regulations and were observed by Fire Marshal Keith Matthews of the Oakland Fire Prevention Bureau and Louis M. Arighi of Treadwell and Rollo.

Prior to the UST removal all relevant permits were obtained from the City of Oakland, Fire Prevention Bureau Certified Unified Program Agency (Appendix A). Notification was also made to the Bay Area Air Quality Management District that a UST were being removed. Underground Service Alert (USA) was notified that excavation was planned at the site, USA notified those utility companies with underground utilities in the area to locate and mark their utilities.

On October 3<sup>rd</sup>, 2007, the UST was exposed at a depth of approximately 3.5 feet bgs. Plate 2 presents the UST Excavation Area and Sample Locations. The client obtained a one-time use EPA ID Waste generator number for the disposal. Prior to removal ERG filled the tank with approximately 200lbs of dry ice. ERG removed the tank and it was placed on a truck for transportation and disposed of by Ecology Control Industries (ECI) at their facility in Richmond, California. The Uniform Hazardous Waste Manifest is located in Appendix B. Appendix F contains photos of the UST's removal.

# **3.3 Soil Excavation**

ERG excavated approximately 500 yards of contaminated soil in the area of the UST. Upon completion Mr. Arighi of Treadwell and Rollo collected sidewall samples at the outer edge of the excavation. The sample UST-12B-8.0, furthest east of the excavation was above the limits required by ACHCSA and set out in the Site Management Plan (SMP). On October 22<sup>nd</sup>, 2007 ERG conducted additional over excavation of approximately 500 yards of soil. The excavated soil was stockpiled on and covered with plastic sheeting. Upon completion Mr. Arighi collected a sidewall sample, UST-27B-8.0 at the east edge of the excavation. This samples concentrations were below the levels set out by ACHCSA in the SMP and the results of this sample is located in Table.

# **3.4 Soil Sampling Following Excavation**

Mr. Arighi of Treadwell and Rollo collected soil samples from the excavation sidewalls at approximately 8.0 feet bgs and from the bottom of the excavation at approximately 12 feet bgs after removal of the UST to assess the presence and concentration of residual petroleum hydrocarbons. All of the soil samples were collected on October 3<sup>rd</sup>, 2007. The four sidewall samples were labeled UST–25a-8.0, UST-12b-8.0, UST-6d-8.0 and UST-10c-8.0 (Plate 2). The samples from the bottom of the excavation were labeled UST-2-12.0 (Plate 2.).

Each soil sample was collected in a stainless steel tube. The sample tube was covered with Teflon and plastic caps at each end. Following collection, the soil samples were properly labeled and placed in a chilled cooler and delivered to Torrent Laboratory, of Milpitas, California. Chain-of-custody protocol was followed during sampling procedures and transport to the analytical laboratory.

# **3.5 Soil Sample Results**

The soil samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg) by EPA Method 8015m, diesel (TPHd) by 8015m, MTBE, fuel oxygenates and lead scavengers by GC/MS by EPA Method 8260B and for Total Lead by EPA Method 6010b. The laboratory analytical results are presented in Treadwell and Rollo's Table 1, Table 2 and Table 3; copies of the chain-of-custody forms and laboratory certificates are presented in Appendix D.

# 3.6 Rainwater Removal and Disposal

On October 23<sup>rd</sup>, 2007, prior to backfilling approximately 10,000 gallons of impacted groundwater was removed from the excavation by Clearwater Environmental Management, Inc. The non hazardous waste manifest is located in Appendix B.

# 3.7 Sampling of Groundwater Within the Excavation

Mr. Arighi of Treadwell and Rollo collected one sample of groundwater from the excavation, labeled UST-GW-12.0. The sample was properly labeled and placed in a chilled cooler and delivered to Torrent Laboratory, of Milpitas, California. Chain-of-custody protocol was followed during sampling procedures and transport to the analytical laboratory. The results of this sample are presented in Table 4.

# 4.0 SOIL REMOVAL AND DISPOSAL

ERG profiled the contaminated soil with Altamont Landfill as Class II material. ERG removed and disposed of approximately 1,054 tons of soil on October 19<sup>th</sup> and October 22<sup>nd</sup>, 2007. Intrinsic Transportation hauled the contaminated soil to Altamont Landfill. Hazardous Waste Manifests are located in Appendix E.

# **5.0 SUMMARY AND CONCLUSIONS**

One 1,000 gallon underground storage tank was removed from the site by ERG. ERG excavated contaminated soil and removed and disposed of the soil at Altamont Landfill. The bottom of the excavation at approximately 12 feet bgs was then backfilled with a Geo liner, two feet of drain rock, another Geo liner and clean imported soil and was compacted to 95%.

# 6.0 LIMITATION

ERG assumes no responsibility or liability for the reliance hereon or hereof of the information contained in this report by anyone other than the party to whom it is addressed.

# 7.0 SIGNATURE PAGE

Benjamin Wells President Date

# **TABLES**

Environmental Resource Group



# TABLE 1 Total Petroleum Hydrocarbons in Soil 311 Second Street Oakland, California

		Sample				
Sample ID	Sample Date	Depth	TPH-g	TPH-d	TPH-mo	TPH-bo
~~~ <b>r</b>	<b>F</b>	feet	mg/kg	mg/kg	mg/kg	mg/kg
SB-1 5.5-6.0'	9/15/93	5.5-6.0	<1.0	4.2	NA	NA
SB-2 7.0-7.5'	9/15/93	7.0-7.5	34	15,000	NA	NA
B3-4.5	3/20/96	4.5-5.0	<1.0	<1.0	NA	NA
B4-4.5	3/20/96	4.5-5.0	<1.0	<1.0	NA	NA
B5-4.5	3/20/96	4.5-5.0	<1.0	<1.0	NA	NA
B6-4.5	3/20/96	4.5-5.0	<1.0	16	NA	NA
B-1	5/3/05	5.0-5.5	< 0.5	44	NA	NA
B-1	5/3/05	10-10.5	< 0.5	6	NA	NA
B-2	5/3/05	6.0-6.5	< 0.5	39	NA	NA
B-3	5/3/05	2.0-2.5	< 0.5	NA	NA	NA
B-3	5/3/05	5.0-5.5	1.1	NA	NA	NA
B-3	5/3/05	7.0-7.5	160	390	NA	NA
B-3	5/3/05	12.0-12.5	< 0.5	< 0.1	NA	NA
B-4	5/3/05	5.0-5.5	< 0.5	< 0.1	NA	NA
B-6	5/3/05	2.0-2.5	<0.5	NA	NA	NA
B-6	5/3/05	5.0-5.5	<0.5	NA	NA	NA
B-6	5/3/05	8.0-8.5	< 0.5	< 0.1	NA	NA
B-6	5/3/05	12.0-12.5	<0.5	< 0.1	NA	NA
B-10	5/3/05	2.0-2.5	<0.5	NA	NA	NA
B-10	5/3/05	5.0-5.5	<0.5	NA	NA	NA
UST-1	10/5/07	12.0-12.5	< 0.1	<2.0*	<4.0*	NA
UST-25a	10/5/07	8.0-8.5	< 0.1	<2.0*	<4.0*	NA
UST-12b	10/5/07	8.0-8.5	424x	5.8x*	<4.0*	NA
UST-10c	10/5/07	8.0-8.5	4.74x	2.2x*	<4.0*	NA
UST-6d	10/5/07	8.0-8.5	< 0.1	<2.0*	6.34*	NA
UST-27b	10/11/07	8.0-8.5	<b>1.29</b> x	<2.0*	NA	NA
TR-1	10/16/07	9.5-10.0	NA	<2.0*	<4.0*	<4.0*
TR-2	10/16/07	9.5-10.0	NA	<2.0*	<4.0*	<4.0*
TR-3	10/16/07	9.5-10.0	< 0.1	<2.0*	<4.0*	NA
ESL (Table K-1)			400	400	400	400
ESL (Table K-3)			6,000	6,000	6,000	6,000

Notes

Detected concentrations are highlighted in **bold** 

mg/kg = Milligrams per kilogram

TPH-g = Total Petroleum Hydrocarbons quantified as gasoline

TPH-d = Total Petroleum Hydrcarbons quantified as diesel fuel

TPH-mo = Total Petroleum Hydrocarbons quantified as motor oil

TPH-bo = Total Petroleum Hydrocarbons quantified as bunker oil

\* = Sample analyzed with Silica Gel Cleanup

x = Laboratory flag indicating that although TPH-g is present, pattern does not match typical gasoline. TPH-g result is

raised due to the presence of heavy hydrocarbons within the gasoline range.

ND = Not detected at or greater than laboratory detection limit which varies, see

laboratory report

< 1 = Not detected at the indicated laboratory detection limit

NA = Not analyzed

ESL = Environmental Screening Levels (SF-RWQCB, 2005)

ESL (Table K-1): Direct Exposure, Residential

ESL (Table K-3): Direct Exposure, Construction/Trench Worker Exposure Scenario



#### TABLE 2 Volatile Organic Compounds in Soil 311 Second Street Oakland, California

					BTEX		Lead Sc	avengers		F	uel Oxygena	ites					Other	VOCs			
Sample ID	Sample Date	Sample Depth	Benzene	Toluene	Ethylbenzene	Total Xylenes	EDB	EDC	MTBE	ETBE	DIPE	TAME	t-But	1,2,4- TMB	1,3,5- TMB	n-But	isopropylbenz ene	p-isopropyl toluene	n-propyl benzene	PCE	Other VOCs
		feet	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg								mg/kg
SB-1 5.5-6.0'	9/15/93	5.5-6.0	< 0.0050	< 0.0050	< 0.0050	0.0090	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-2 7.0-7.5'	9/15/93	7.0-7.5	< 0.0050	< 0.0050	0.65	0.82	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B3-4.5	3/20/96	4.5-5.0	< 0.005	< 0.005	< 0.005	< 0.005	NA	NA	< 0.05	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B4-4.5	3/20/96	4.5-5.0	< 0.005	< 0.005	< 0.005	< 0.005	NA	NA	< 0.05	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B5-4.5	3/20/96	4.5-5.0	< 0.005	< 0.005	< 0.005	< 0.005	NA	NA	< 0.05	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B6-4.5	3/20/96	4.5-5.0	< 0.005	< 0.005	< 0.005	< 0.005	NA	NA	< 0.05	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B-1	5/3/05	5.0-5.5	< 0.001	< 0.001	<0.001	0.001	NA	NA	< 0.005	NA	NA	NA	NA	0.002	0.001	ND	ND	ND	ND	ND	1,2,4-Trimethylbenzene = 0.002 1,3,5-Trimethylbenzene = 0.001 Other VOCs = ND
B-1	5/3/05	10-10.5	< 0.001	< 0.001	< 0.001	< 0.001	NA	NA	< 0.005	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
B-2	5/3/05	6.0-6.5	< 0.001	< 0.001	< 0.001	< 0.001	NA	NA	< 0.005	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
B-3	5/3/05	2.0-2.5	< 0.001	< 0.001	< 0.001	< 0.001	NA	NA	< 0.005	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
В-3	5/3/05	5.0-5.5	<0.001	<0.001	0.07	0.005	NA	NA	<0.005	NA	NA	NA	NA								n-Butylbenzene = 0.014 isopropylbenzene = 0.004 p-isopropyltoluene = 0.003 Napthalene = 0.052 n-propylbenzene = 0.020 1,2,4-Trimethylbenzene = 0.055 Other VOCs = ND
B-3	5/3/05	7.0-7.5	<0.001	<0.001	<0.001	<0.001	NA	NA	<0.005	NA	NA	NA	NA								n-Butylbenzene = 1.6 Isopropylbenzene = 0.82 Napthalene = 4.5 n-propylbenzene = 3.4 Other VOCs = ND
B-3	5/3/05	12.0-12.5	< 0.001	< 0.001	<0.001	< 0.001	NA	NA	< 0.005	NA	NA	NA	NA								Isopropylbenzene = 0.005 n-Propylbenzene = 0.009 Other VOCs = ND
B-4	5/3/05	5.0-5.5	< 0.001	< 0.001	< 0.001	< 0.001	NA	NA	< 0.005	NA	NA	NA	NA								ND
B-6	5/3/05	2.0-2.5	< 0.001	< 0.001	< 0.001	< 0.001	NA	NA	< 0.005	NA	NA	NA	NA								ND
B-6	5/3/05	5.0-5.5	< 0.001	< 0.001	<0.001	< 0.001	NA	NA	< 0.005	NA	NA	NA	NA								ND
B-6	5/3/05	8.0-8.5	<0.001	< 0.001	<0.001	< 0.001	NA	NA	<0.005	NA	NA	NA	NA								ND
n /		12.0-12.5	< 0.001	< 0.001	< 0.001	< 0.001	NA	NA	< 0.005	NA	NA	NA	NA								Tetrachlorethene = 0.004
B-0	5/3/05	20.25	<0.001	<0.001	<0.001	<0.001	NA	NA	<0.005	NA	NA	NIA	NA								Other VOCs = ND
B-10 B-10	5/3/05	5.0.5.5	<0.001	<0.001	<0.001	<0.001	NA	NA	<0.005	NA	NA	NA	NA								ND
UST-1	10/5/07	12.0-12.5	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.050								NA
UST-2	10/5/07	12.0-12.5	< 0.005	< 0.005	<0.005	< 0.015	< 0.005	< 0.005	< 0.010	< 0.005	<0.005	<0.005	<0.050								NA
UST-25a	10/5/07	8.0-8.5	< 0.005	< 0.005	< 0.005	< 0.015	< 0.005	< 0.005	< 0.010	< 0.005	< 0.005	< 0.005	< 0.050								NA
UST-12b	10/5/07	8.0-8.5	0.1	0.042	0.18	0.46	< 0.025	< 0.025	< 0.050	< 0.025	< 0.025	< 0.025	< 0.250								NA
UST-10c	10/5/07	8.0-8.5	< 0.005	< 0.005	< 0.005	< 0.015	< 0.005	< 0.005	< 0.010	< 0.005	< 0.005	< 0.005	< 0.050								NA
UST-6d	10/5/07	8.0-8.5	< 0.005	< 0.005	< 0.005	< 0.015	< 0.005	< 0.005	< 0.010	< 0.005	< 0.005	< 0.005	< 0.050								NA
ESL (Table K-1)			0.18	100	400	330	0.087	0.34	30	NE	NE	NE	NE								Napthalene = 1.5 Tetrachloroethene = 0.43 All Others = ESLs NE Napthalene = 97
ESL (Table K-3)			16	650	400	420	4.6	31	2,500	NE	NE	NE	NE								Tetrachloroethene = 25 All Others = ESLs NE Napthalene = 0.46
ESL (Table E-1b)			0.18	130	390	310	8.9	0.025	2.0	NE	NE	NE	NE								Tetrachloroethene = 0.26 All Others = ESLs NE

Notes: mg/kg = Milligrams per kilogram MTBE = Methyl tert Butyl Ether Other VOCs = Other Volatile Organic Compounds, see laboratory report Detected concentrations are highlighted in **bold** ND = Not detected above the indicated laboratory detection limit which varies, see laboratory report < 1 = Not detected above the indicated laboratory detection limit Na Networkshord

NA = Not analyzed

NA = Not analyzed ESL = Environmental Screening Levels (SF-RWQCB, 2005) ESL (Table K-1): Direct Exposure, Residential ESL (Table K-3): Direct Exposure, Construction/Trench Worker Exposure Scenario ESL (Table E-1b): Soil Screening Levels for Evaluation of Potential Vapor Intrusion Concerns, Residential



# TABLE 3Metals in Soil311 Second StreetOakland, California

															Soluble	Soluble
Sample Number	Sample Date	Sample Depth	Ar	Ba	Be	Cd	Cr	Со	Cu	Pb	Ni	Hg	V	Zn	Pb	Pb
															(WET)	(TCLP)
			(mg/kg)	(mg/L)	(mg/L)											
SB-1 5.5-6.0'	9/15/93	5.5-6.0	NA	71	NA	NA	NA	NA	NA	NA						
SB-2 7.0-7.5'	9/15/93	7.0-7.5	NA	84	NA	NA	NA	NA	NA	NA						
B3-4.5	3/20/96	4.5-5.0	NA	58	NA	NA	NA	NA	NA	NA						
B4-4.5	3/20/96	4.5-5.0	NA	310	NA	NA	NA	NA	NA	NA						
B5-4.5	3/20/96	4.5-5.0	NA	9.3	NA	NA	NA	NA	NA	NA						
B6-4.5	3/20/96	4.5-5.0	NA	23	NA	NA	NA	NA	NA	NA						
B-1	5/3/05	5.0-5.5	NA	100	NA	NA	NA	NA	6.1	NA						
B-1	5/3/05	10-10.5	NA	1.9	NA	NA	NA	NA	NA	NA						
B-2	5/3/05	6.0-6.5	NA	47	NA	NA	NA	NA	NA	NA						
B-3	5/3/05	2.0-2.5	4.3	110	< 0.5	0.52	27	4.8	57	160	16	2.0	22	130	7.8	NA
B-3	5/3/05	5.0-5.5	2.1	54	< 0.5	< 0.5	30	3.5	7.3	8.3	12	0.04	19	18	NA	NA
B-3	5/3/05	7.0-7.5	NA	3.0	NA	NA	NA	NA	NA	NA						
B-3	5/3/05	12.0-12.5	NA	3.0	NA	NA	NA	NA	NA	NA						
B-4	5/3/05	5.0-5.5	NA	1,200	NA	NA	NA	NA	25	1.2						
B-6	5/3/05	2.0-2.5	3.2	59	< 0.5	< 0.5	30	3.0	7.8	27	11	0.05	19	19	NA	NA
B-6	5/3/05	5.0-5.5	1.8	30	< 0.5	< 0.5	32	2.2	5.1	3.9	10	< 0.02	19	10	NA	NA
B-6	5/3/05	8.0-8.5	NA	21	NA	NA	NA	NA	NA	NA						
B-6	5/3/05	10-10.5	NA	2.8	NA	NA	NA	NA	NA	NA						
B-10	5/3/05	2.0-2.5	6	130	< 0.5	0.85	19	5.4	870	320	16	0.81	21	410	19	NA
B-10	5/3/05	5.0-5.5	2.3	50	< 0.5	< 0.5	24	2.5	16	180	11	0.08	17	36	4.8	NA
UST-1	10/5/07	12.0-12.5	NA	1.8	NA	NA	NA	NA	NA	NA						
UST-2	10/5/07	12.0-12.4	NA	2.0	NA	NA	NA	NA	NA	NA						
UST-25a	10/5/07	8.0-8.5	NA	45	NA	NA	NA	NA	NA	NA						
UST-12b	10/5/07	8.0-8.5	NA	2.1	NA	NA	NA	NA	NA	NA						
UST-10c	10/5/07	8.0-8.5	NA	5.2	NA	NA	NA	NA	NA	NA						
UST-6d	10/5/07	8.0-8.5	NA	210	NA	NA	NA	NA	NA	NA						
Maximum			6	130	ND	0.85	32	5.4	870	1,200	16	2	22	410	25	1.2
Background			5.5	130	0.42	5.6	58	14	32	7.0	68	0.5	46	64	NA	NA
TTLC - (mg/kg)			500	10,000	75	100	2,500	8,000	2,500	1,000	2,000	20	2,400	5,000	NA	NA
STLC (mg/L)			5.0	100	0.75	1.0	5	80	25	5.0	20	0.2	24	250	5.0	NA
RL (mg/L)			5.0	100	NA	1.0	5	NA	NA	5.0	NA	0.2	NA	NA	NA	5.0
ESL (Table K-1)			5.5*	100	29	1.7	58*	10	610	255**	310	4	110	4,600	NA	NA
ESL (Table K-3)			5.5*	2,500	36	38	58*	10	28,000	750	1,000	98	5,000	210,000	NA	NA

# TABLE 3Metals in Soil311 Second StreetOakland, California



															Soluble	Soluble
Sample Number	Sample Date	Sample Depth	Ar	Ba	Be	Cd	Cr	Со	Cu	Pb	Ni	Hg	V	Zn	Pb	Pb
															(WET)	(TCLP)
			(mg/kg)	(mg/L)	(mg/L)											
Notes:	·	-						Notes:								

mg/kg = Milligrams per kilogram

mg/L = Milligrams per liter

Total metals include arsenic (Ar), barium (Ba), beryllium (Be), cadmium (Cd), chromium (Cr), cobalt (Co), copper (Cu), lead (Pb), nickel (Ni), mercury (Hg), vanadium (V), and

WET = Waste Extraction Test

TCLP = Toxicity Characteristic Leaching Procedure

< 1 = Not detected above the indicated laboratory detection limit

ND = Not detected above laboratory detection limit which varies, see laboratory report

NA = Not Analyzed or Not Applicable

Detected concentrations are highlighted in **bold**.

ESL = Environmental Screening Levels (SF-RWQCB, 2005)

ESL (Table K-1): ESL for Direct Exposure, Residential

ESL (Table K-2): Direct Exposure, Construction/Trench Worker Exposure Scenario

TTLC = Total Threshold Limit Concentration

STLC = Soluble Threshold Limit Concentration

RL = Regulatory Level, Criteria for a Federal Hazardous Waste

BKG = Maximum detected concentration is less than background and not evaluated further

 $5.5^*$  = Table B ESL in soil for residential land-use where groundwater is not current or potential source of drinking water. Considers background concentrations and human

255\*\* = 2003 lead in soil ESL for residential land-use that assumes no consumption of home grown produce cultivated in lead-affected soil.

Background = Average Concentrations from LBNL, 2002. If no average concentration available, then value was selected from the following 95th percentile, 99th percentile, or median of detected concentrations ( in order, depending upon available values).

LBNL, 2002 = Lawrence Berkeley National Laboratory, 2002, Analysis of Background Distributions of Metals in Soil at Lawrence Berkeley National Laboratory. Envrionmental Restoration Program, June 2002.



#### TABLE 4 Groundwater Analytical Results 311 Second Street Oakland, California

Sample	Sample	TPH-g	TPH-d	TPH-mo	TPH-bo	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	TDS	Other VOCs	Lead
ID	Date	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	μg/L	mg/L
SB-2	9/15/93	85	5,500	NA	NA	2.7	0.66	< 0.50	0.51	NA	NA	NA	< 0.0050
B3	3/20/96	<50	<50	NA	NA	< 0.5	< 0.5	< 0.5	< 0.5	<5.0	NA	NA	0.049*
B4	3/20/96	<50	<50	NA	NA	< 0.5	< 0.5	< 0.5	< 0.5	<5.0	NA	NA	1.7*
B5	3/20/96	<50	<50	NA	NA	< 0.5	< 0.5	< 0.5	< 0.5	<5.0	NA	NA	0.68*
B6	3/20/96	<50	<50	NA	NA	< 0.5	< 0.5	< 0.5	< 0.5	<5.0	NA	NA	0.49*
B-1	5/3/05	< 0.50	11,000	NA	NA	< 0.5	< 0.5	< 0.5	< 0.5	<1.0	NA	ND	NA
B-2	5/3/05	< 0.50	NA	NA	NA	< 0.5	< 0.5	< 0.5	< 0.5	<1.0	NA	ND	NA
В-3	5/3/05	5,300	200	NA	NA	15	6.0	51	30.5	<1.0	NA	n-Butylbenzene = <b>60</b> sec-Butylbenzene = <b>20</b> p-isopropylbenzene = <b>57</b> p-isopropyltoluene = <b>3.3</b> Napthalene = <b>160</b> n-propylbenzene = <b>160</b> 1,2,4-Trimethylbenzene = <b>90</b>	NA
												1,3,5-Trimethylbenzene = 24	
B-4	5/3/05	< 0.50	<50	NA	NA	< 0.5	< 0.5	< 0.5	< 0.5	<1.0	NA	ND	
В-б	5/3/05	<0.50	8,100	NA	NA	<0.5	<0.5	<0.5	<0.5	<1.0	NA	Tetrachloroethene = <b>8.2</b> Trichloroethene = <b>1.5</b> 1,2-Dichloroethane = <b>1.0</b> cis-1,2-Dichloroethene = <b>0.7</b>	NA
SW-1	5/10/06	<500	<400	<400	NA	NA	NA	NA	NA	<1.0	NA	Tetrachloroethene = 24 Trichloroethene = 1.3 1,2-Dichloroethane = 1.9	NA
SW-2	5/10/06	<500	<400	<400	NA	NA	NA	NA	NA	<1.0	NA	Tetrachloroethene = 11 Trichloroethene = 22 1,2-Dichloroethane = 7.7 cis-1,2-Dichloroethene = 3.8 Diisopropyl Ether = 5.4	NA
SW-3	5/10/06	<500	<400	<400	NA	NA	NA	NA	NA	1.1	NA	Tetrachloroethene = 18 Trichloroethene = 130 1,2-Dichloroethane = 11 cis-1,2-Dichloroethene = 7.9 trans-1,2-Dichloroethene = 0.9 Diisopropyl Ether = 5.1	NA
SW-4	5/10/06	<500	<400	<400	NA	NA	NA	NA	NA	<1.0	NA	Tetrachloroethene = <b>2.4</b> Trichloroethene = <b>16</b> 1,2-Dichloroethane = <b>5.0</b> cis-1,2-Dichloroethene = <b>5.3</b>	NA
SW-5	5/10/06	<500	<400	<400	NA	NA	NA	NA	NA	<1.0	NA	ND	NA
UST-GW-12.0	10/5/07	293x	<100**	<200**	NA	< 0.5	1.14	4.68	16	< 0.5	920.00	NA	< 0.015
TR-1	10/16/07	NA	<128**	<256**	<256**	NA	NA	NA	NA	NA	460	NA	NA
TR-2	10/16/07	NA	<139**	<278**	<278**	NA	NA	NA	NA	NA	440	NA	NA
TR-3	10/16/07	<61	<112**	<224**	NA	NA	NA	NA	NA	NA	700	NA	NA
Maximum		5300	11,000	ND	ND	15	6	51	30.5	1.1	ND	ND	1.7*

# Treadwell&Rollo

#### TABLE 4 Groundwater Analytical Results 311 Second Street Oakland, California

Sample	Sample	TPH-g	TPH-d	TPH-mo	TPH-bo	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	TDS	Other VOCs	Lead
ID	Date	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	mg/L
ESL (Table B)		500	640	640	640	46	130	290	100	1,800	NE	Napthalene = 24 Tetrachloroethene = 120 Trichloroethene = 360 1,2-Dichloroethane = 200 cis-1,2-Dichloroethene = 590 trans-1,2-Dichloroethene = 590 All Others = NE	2.5
ESL (Table E-1a)		NE	NE	NE	NE	540	380,000	170,000	160,000	24,000	NE	Napthalene = 3,200 Tetrachloroethene = 120 Trichloroethene = 530 1,2-Dichloroethane = 200 cis-1,2-Dichloroethene = 6,200 trans-1,2-Dichloroethene = 6,700 All Others = ESLs not available	NE

Notes:

 $\mu g/L = Micrograms per liter$ 

mg/L = Milligrams per liter

Detected concentrations are highlighted in **bold**.

TPH-g = Total Petroleum Hydrocarbons quantified as gasoline

TPH-d = Total Petroleum Hydrcarbons quantified as diesel fuel

TPH-mo = Total Petroleum Hydrocarbons quantified as motor oil

MTBE = Methyl tert Butyl Ether

Notes:

< 1 = indicates not detected at the indicated laboratory detection limit

ND = Not detected at or greater than the laboratory detection limit which varies, see laboratory report

NA = Not analyzed

NE = Not Established

ESL = Environmental Screening Levels (SF-RWQCB, 2005)

ESL (Table B): Shallow soils (<m bgs) where groundwater is not a current or potential source of drinkning water ESL (Table E-1a): Groundwater Screening Levels for Evaluation of Potential Indoor-Air Impacts, high permeability

VOCs = Volatile Organic Compounds (see laboratory data sheets for complete list of VOCs analyzed) \* = Groundwater sample was preserved before being filtered and are therefore erroneous.

x = Laboratory flag indicating that although TPH-g is present, pattern does not match

typical gasoline. TPH-g result is raised due to the presence of heavy hydrocarbons within

\*\* = Groundwater sample analyzed with Silica Gel Cleanup

# PLATES

Environmental Resource Group





EXPLANATION

TR-1 -	Approximate location of boring by Treadwell & Rollo, Inc., 2007
UST-25A-8' ●	Approximate location of sample collected during soil excavation by Treadwell & Rolo, Inc., 2007
SB-1 ●	Approximate location of boring by Blymyer Engineers, Inc., in 1993
B6 -	Approximate location of boring by AllPro Environmental Corporation, in 1996
B-6 +	Approximate location of boring by Secor International, Inc., in 2005
SW-1	Approximate location of boring by Secor International, Inc., in 2006
	Site boundary
x x	Fence line



0 30 Feet

Approximate scale



# **APPENDIX** A

City of Oakland Fire Prevention Bureau UST Removal Permit

<b>City Of Oal</b> FIRE PREVENTIO 250 Frank Ogawa Pla Oakland California 510-238-385	kland N BUREAU za, Ste. 3341 94612-2032 51	Permit To Excavate And Install, Repair, Or Remove Inflammable Liquid Tanks Oakland, California October 3, 2007 Tank Permit Number: T07-0048									
Permission Is Hercby Granted To	0:										
UST Removal	UST	Tank And Excavate Commencing:	Feet Inside:	Line.							
On The:											
Site Address: 311 2nd St		Present Storage:									
Owner: 311 Company LLC		Address: 1200 Concord Ave Conc	ord, CA 94520	Phone: 925-827-0841							
Applicant: Enviornmental Resou	urce Group INC	Address: 1038 Redwood Highway	v Suite 1 Mill Valley, CA	<b>Phone:</b> 415-381-6274							
Dimensions Of Street (sidewalk) St	urface To Be Disturbed :	X No. Of Tanks	l Capacity 1000 Ga	allons Gallons, Each							

-

Remarks

р. 2

07 03:47p

Oct 31

This Permit Is Granted In Accordance With Existing City Ordinances. Owner Hereby Agrees To Remove Tanks On Discontinuance Of Use Or When Notified By The City Authorities When Installing, Removing Or Repairing Tanks, No Open Flame To Be On Or Near Premises.

CERTIFICATE	OF TANK AND EQUIPMENT INSPECT	<b>FION</b>
1	Type Of Inspection: ().57	Remark
	Inspected And Passed Or	"3 Oct cter 07
Al	UST/AST Installations/modifications:	Kent Marchens
Approved:	Pressure Test: Inspected By:	Date:
	Primary Piping Test: Inspected By:	Date:
	Secondary Containment & Sume Testing	
Received By:	Inspected By:	Date:
	Final: Inspected By:	Date:
Before Covering Tanks, Above Certification	on Must Be Signed When Ready For Inspection Notify Fire Prevention	Bureau 238-3851
THIS PERMIT MUST BE LE	FT ON THE WORK SITE AS AUTHORITY THEREI	ORE
Dist	ribution: White - Fire Prevention Bureau, Yellow - Contractor	

# **APPENDIX B**

**Uniform Hazardous Waste Manifests** 

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DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Year

# APPENDIX C

Photographs of UST Removal and Overexcavation of Soil













# Treadwell&Rollo

APPENDIX B Laboratory Analytical Reports



# TORRENT LABORATORY, INC.

483 Sinclair Frontage Rd. • Milpitas, CA 95035 • Ph: (408) 263-5258 • Fax: (408) 263-8293

### www.torrentlab.com

October 15, 2007

Eric Morita Treadwell & Rollo(Oakland) 501 14th Street 3rd Floor Oakland, CA 94612

TEL: (510) 874-4500 FAX (510) 874-4507

RE: 4568.02

Dear Eric Morita:

Order No.: 0710033

Torrent Laboratory, Inc. received 7 samples on 10/5/2007 for the analyses presented in the following report.

All data for associated QC met EPA or laboratory specification(s) except where noted in the case narrative.

Torrent Laboratory, Inc, is certified by the State of California, ELAP #1991. If you have any questions regarding these tests results, please feel free to contact the Project Management Team at (408)263-5258;ext: 204.

Sincerely,

Daboratory Director

Patti Sandrock QA Officer

10/15/07

# **Torrent Laboratory, Inc.**

Date: 15-Oct-07

CLIENT:	Treadwell & Rollo(Oakland)
Project:	4568.02
Lab Order:	0710033

# **CASE NARRATIVE**

Analytical Comments for METHOD TPH\_GAS\_S\_GCMS, SAMPLE 0710033-006A: Note: E - Estimated value. The amount exceeds the calibration range of the instrument due to significant amount of heavier hydrocarbons responded within gasoline quantitative range that also effected surrogate recocovery. Re-run is pending.

Analytical Comments for METHOD TPHDOSG\_W, SAMPLE WDSG071010A-LCS: Note: Surrogate recovery falls outside the control limit (bias high). All associated samples are non-detect (ND) for TPH as diesel/oil range compounds. Outlier will be considered in the next quarterly control Chart update (January 2008). NO further corrective action is required.



# TORRENT LABORATORY, INC.

483 Sinclair Frontage Road • Milpitas, CA • Phone: (408) 263-5258 • Fax: (408) 263-8293

Visit us at www.torrentlab.com email: analysis@torrentlab.com

Report prepared for: Eric Morita Treadwell & Rollo(Oakland)

**Date Received:** 10/5/2007 **Date Reported:** 10/15/2007

Client Sample ID:	UST-1a-12.0
Sample Location:	The Colony
Sample Matrix:	SOIL
Date/Time Sampled	10/5/2007 11:17:00 AM

Lab Sample ID: 0710033-001 Date Prepared: 10/5/2007-10/6/2007

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
Lead	SW6010B	10/7/2007	1	1	1.0	1.8	mg/Kg	3836
TPH (Diesel)	SW8015B	10/6/2007	2	1	2.00	ND	mg/Kg	R14123
TPH (Motor Oil)	SW8015B	10/6/2007	4	1	4.00	ND	ma/Ka	R14123
Surr: Pentacosane	SW8015B	10/6/2007	0	1	28-125	90.7	%REC	R14123
1,2-Dibromoethane (EDB)	SW8260B	10/6/2007	5	1	5.0	ND	µg/Kg	R14126
1,2-Dichloroethane (EDC)	SW8260B	10/6/2007	5	1	5.0	ND	µg/Kg	R14126
Benzene	SW8260B	10/6/2007	5	1	5.0	ND	µg/Kg	R14126
Ethyl tert-butyl ether (ETBE)	SW8260B	10/6/2007	5	1	5.0	ND	µg/Kg	R14126
Ethylbenzene	SW8260B	10/6/2007	5	1	5.0	ND	µg/Kg	R14126
Isopropyl ether (DIPE)	SW8260B	10/6/2007	5	1	5.0	ND	µg/Kg	R14126
Methyl tert-butyl ether (MTBE)	SW8260B	10/6/2007	10	1	10	ND	µg/Kg	R14126
t-Butyl alcohol (t-Butanol)	SW8260B	10/6/2007	50	1	50	ND	µg/Kg	R14126
tert-Amyl methyl ether (TAME)	SW8260B	10/6/2007	5	1	5.0	ND	µg/Kg	R14126
Toluene	SW8260B	10/6/2007	5	1	5.0	ND	µg/Kg	R14126
Xylenes, Total	SW8260B	10/6/2007	15	1	15	ND	µg/Kg	R14126
Surr: 4-Bromofluorobenzene	SW8260B	10/6/2007	0	1	55.8-141	107	%REC	R14126
Surr: Dibromofluoromethane	SW8260B	10/6/2007	0	1	59.8-148	102	%REC	R14126
Surr: Toluene-d8	SW8260B	10/6/2007	0	1	55.2-133	86.0	%REC	R14126
TPH (Gasoline)	SW8260B(TPH)	10/6/2007	100	1	100	ND	µg/Kg	G14126
Surr: 4-Bromofllurobenzene	SW8260B(TPH)	10/6/2007	0	1	56.9-133	78.0	%REC	G14126

**Client Sample ID:** 

Sample Location:

**Date/Time Sampled** 

Sample Matrix:

UST-2-12.0

The Colony

SOIL

Treadwell & Rollo(Oakland)

10/5/2007 11:25:00 AM

# **Date Received:** 10/5/2007 **Date Reported:** 10/15/2007

Lab Sample ID: 0710033-002 Date Prepared: 10/5/2007-10/6/2007

			i .	I	n n			
Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
Lead	SW6010B	10/7/2007	1	1	1.0	2.0	mg/Kg	3836
TPH (Diesel)	SW8015B	10/6/2007	2	1	2.00	ND	mg/Kg	R14123
TPH (Motor Oil) Surr: Pentacosane	SW8015B SW8015B	10/6/2007 10/6/2007	4 0	1 1	4.00 28-125	ND 99.4	mg/Kg %REC	R14123 R14123
1.2-Dibromoethane (EDB)	SW8260B	10/6/2007	5	1	5.0	ND	µa/Ka	R14126
1.2-Dichloroethane (EDC)	SW8260B	10/6/2007	5	1	5.0	ND	µg/Kg	R14126
Benzene	SW8260B	10/6/2007	5	1	5.0	ND	µg/Kg	R14126
Ethyl tert-butyl ether (ETBE)	SW8260B	10/6/2007	5	1	5.0	ND	µg/Kg	R14126
Ethylbenzene	SW8260B	10/6/2007	5	1	5.0	ND	µg/Kg	R14126
Isopropyl ether (DIPE)	SW8260B	10/6/2007	5	1	5.0	ND	µg/Kg	R14126
Methyl tert-butyl ether (MTBE)	SW8260B	10/6/2007	10	1	10	ND	µg/Kg	R14126
t-Butyl alcohol (t-Butanol)	SW8260B	10/6/2007	50	1	50	ND	μg/Kg	R14126
tert-Amyl methyl ether (TAME)	SW8260B	10/6/2007	5	1	5.0	ND	µg/Kg	R14126
Toluene	SW8260B	10/6/2007	5	1	5.0	ND	µg/Kg	R14126
Xylenes, Total	SW8260B	10/6/2007	15	1	15	ND	µg/Kg	R14126
Surr: 4-Bromofluorobenzene	SW8260B	10/6/2007	0	1	55.8-141	96.7	%REC	R14126
Surr: Dibromofluoromethane	SW8260B	10/6/2007	0	1	59.8-148	112	%REC	R14126
Surr: Toluene-d8	SW8260B	10/6/2007	0	1	55.2-133	85.6	%REC	R14126
TPH (Gasoline)	SW8260B(TPH)	10/6/2007	100	1	100	ND	µg/Kg	G14126
Surr: 4-Bromofllurobenzene	SW8260B(TPH)	10/6/2007	0	1	56.9-133	84.0	%REC	G14126

UST-25a-8.0

The Colony

**Client Sample ID:** 

Sample Location:

Surr: Dibromofluoromethane

Surr: Toluene-d8

Treadwell & Rollo(Oakland)

**Date Received:** 10/5/2007 **Date Reported:** 10/15/2007

Lab Sample ID: 0710033-003 Date Prepared: 10/5/2007-10/8/2007

Analytical

Batch

3836

R14123

R14123

R14123

R14126

G14129

G14129

Units

mg/Kg

mg/Kg

mg/Kg

%REC

µg/Kg

%REC

%REC

%REC

Sample Matrix: SOIL						
Date/Time Sampled 10/5/2007	1:15:00 PM					
Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result
Lead	SW6010B	10/7/2007	1	1	1.0	45
TPH (Diesel)	SW8015B	10/6/2007	2	1	2.00	ND
TPH (Motor Oil)	SW8015B	10/6/2007	4	1	4.00	ND
Surr: Pentacosane	SW8015B	10/6/2007	0	1	28-125	99.4
1,2-Dibromoethane (EDB)	SW8260B	10/6/2007	5	1	5.0	ND
1,2-Dichloroethane (EDC)	SW8260B	10/6/2007	5	1	5.0	ND
Benzene	SW8260B	10/6/2007	5	1	5.0	ND
Ethyl tert-butyl ether (ETBE)	SW8260B	10/6/2007	5	1	5.0	ND
Ethylbenzene	SW8260B	10/6/2007	5	1	5.0	ND
Isopropyl ether (DIPE)	SW8260B	10/6/2007	5	1	5.0	ND
Methyl tert-butyl ether (MTBE)	SW8260B	10/6/2007	10	1	10	ND
t-Butyl alcohol (t-Butanol)	SW8260B	10/6/2007	50	1	50	ND
tert-Amyl methyl ether (TAME)	SW8260B	10/6/2007	5	1	5.0	ND
Toluene	SW8260B	10/6/2007	5	1	5.0	ND
Xylenes, Total	SW8260B	10/6/2007	15	1	15	ND
Surr: 4-Bromofluorobenzene	SW8260B	10/6/2007	0	1	55.8-141	132

TPH (Gasoline)	SW8260B(TPH)	10/8/2007	100	1	100	ND	µg/Kg
Surr: 4-Bromofllurobenzene	SW8260B(TPH)	10/8/2007	0	1	56.9-133	78.0	%REC

10/6/2007

10/6/2007

0

0

1

1

59.8-148

55.2-133

106

98.3

SW8260B

SW8260B

These analyses were performed according to State of California Environmental Laboratory Accreditation program, Certificate # 1991

Treadwell & Rollo(Oakland)

### **Date Received:** 10/5/2007 **Date Reported:** 10/15/2007

Lab Sample ID: 0710033-004 Date Prepared: 10/5/2007-10/8/2007

# Client Sample ID:UST-12b-8.0Sample Location:The ColonySample Matrix:SOILDate/Time Sampled10/5/2007 1:35:00 PM

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
Lead	SW6010B	10/7/2007	1	1	1.0	2.1	mg/Kg	3836
TPH (Diesel)	SW8015B	10/6/2007	2	1	2.00	5.8x	mg/Kg	R14123
TPH (Motor Oil)	SW8015B	10/6/2007	4	1	4.00	ND	mg/Kg	R14123
Surr: Pentacosane	SW8015B	10/6/2007	0	1	28-125	97.0	%REC	R14123
Note: x- Sample chromatogram does not re	esemble typical die	sel pattern. Lighte	r end hydro	carbons withi	n the diesel	range quantitat	ed as diesel.	
1,2-Dibromoethane (EDB)	SW8260B	10/6/2007	5	5	25	ND	µg/Kg	R14126
1,2-Dichloroethane (EDC)	SW8260B	10/6/2007	5	5	25	ND	µg/Kg	R14126
Benzene	SW8260B	10/6/2007	5	5	25	100	µg/Kg	R14126
Ethyl tert-butyl ether (ETBE)	SW8260B	10/6/2007	5	5	25	ND	µg/Kg	R14126
Ethylbenzene	SW8260B	10/6/2007	5	5	25	180	µg/Kg	R14126
Isopropyl ether (DIPE)	SW8260B	10/6/2007	5	5	25	ND	µg/Kg	R14126
Methyl tert-butyl ether (MTBE)	SW8260B	10/6/2007	10	5	50	ND	µg/Kg	R14126
t-Butyl alcohol (t-Butanol)	SW8260B	10/6/2007	50	5	250	ND	µg/Kg	R14126
tert-Amyl methyl ether (TAME)	SW8260B	10/6/2007	5	5	25	ND	µg/Kg	R14126
Toluene	SW8260B	10/6/2007	5	5	25	42	µg/Kg	R14126
Xylenes, Total	SW8260B	10/6/2007	15	5	75	460	µg/Kg	R14126
Surr: 4-Bromofluorobenzene	SW8260B	10/6/2007	0	5	55.8-141	128	%REC	R14126
Surr: Dibromofluoromethane	SW8260B	10/6/2007	0	5	59.8-148	130	%REC	R14126
Surr: Toluene-d8	SW8260B	10/6/2007	0	5	55.2-133	91.0	%REC	R14126
Note: Reporting limits were raised due to s	ample matrix (see	comment for TPH-	-g result).					
TPH (Gasoline)	SW8260B(TPH)	10/8/2007	100	200	20000	424000 x	µg/Kg	G14129
Surr: 4-Bromofllurobenzene	SW8260B(TPH)	10/8/2007	0	200	56.9-133	92.0	%REC	G14129

Note:x-Pattern does not match typical gasoline. TPHg result due to significant amount of heavy hydrocarbons within gasoline range.

Treadwell & Rollo(Oakland)

**Date Received:** 10/5/2007 **Date Reported:** 10/15/2007

Lab Sample ID: 0710033-005 Date Prepared: 10/5/2007-10/6/2007

Client Sample ID:	UST-6d-8.0
Sample Location:	The Colony
Sample Matrix:	SOIL
Date/Time Sampled	10/5/2007 1:37:00 PM

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
ead	SW6010B	10/7/2007	1	1	1.0	210	mg/Kg	3836
PH (Diesel)	SW8015B	10/6/2007	2	1	2.00	ND	mg/Kg	R14123
PH (Motor Oil)	SW8015B	10/6/2007	4	1	4.00	6.34	mg/Kg	R14123
Surr: Pentacosane	SW8015B	10/6/2007	0	1	28-125	90.4	%REC	R14123
,2-Dibromoethane (EDB)	SW8260B	10/6/2007	5	1	5.0	ND	µg/Kg	R14126
,2-Dichloroethane (EDC)	SW8260B	10/6/2007	5	1	5.0	ND	µg/Kg	R14126
Benzene	SW8260B	10/6/2007	5	1	5.0	ND	µg/Kg	R14126
thyl tert-butyl ether (ETBE)	SW8260B	10/6/2007	5	1	5.0	ND	µg/Kg	R14126
thylbenzene	SW8260B	10/6/2007	5	1	5.0	ND	µg/Kg	R14126
sopropyl ether (DIPE)	SW8260B	10/6/2007	5	1	5.0	ND	µg/Kg	R14126
lethyl tert-butyl ether (MTBE)	SW8260B	10/6/2007	10	1	10	ND	µg/Kg	R14126
Butyl alcohol (t-Butanol)	SW8260B	10/6/2007	50	1	50	ND	µg/Kg	R14126
ert-Amyl methyl ether (TAME)	SW8260B	10/6/2007	5	1	5.0	ND	µg/Kg	R14126
oluene	SW8260B	10/6/2007	5	1	5.0	ND	µg/Kg	R14126
Vienes, Total	SW8260B	10/6/2007	15	1	15	ND	µg/Kg	R14126
Surr: 4-Bromofluorobenzene	SW8260B	10/6/2007	0	1	55.8-141	111	%REC	R14126
Surr: Dibromofluoromethane	SW8260B	10/6/2007	0	1	59.8-148	108	%REC	R14126
Surr: Toluene-d8	SW8260B	10/6/2007	0	1	55.2-133	88.6	%REC	R14126
PH (Gasoline)	SW8260B(TPH)	10/6/2007	100	1	100	ND	ua/Ka	G14126
Surr: 4-Bromofllurobenzene	SW8260B(TPH)	10/6/2007	0	1	56.9-133	88.0	%REC	G14126

These analyses were performed according to State of California Environmental Laboratory Accreditation program, Certificate # 1991

Treadwell & Rollo(Oakland)

### **Date Received:** 10/5/2007 **Date Reported:** 10/15/2007

Lab Sample ID: 0710033-006 Date Prepared: 10/5/2007-10/6/2007

# Client Sample ID:UST-10c-8.0Sample Location:The ColonySample Matrix:SOILDate/Time Sampled10/5/2007 2:10:00 PM

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
Lead	SW6010B	10/7/2007	1	1	1.0	5.2	mg/Kg	3836
TPH (Diesel)	SW8015B	10/6/2007	2	1	2.00	2.2x	mg/Kg	R14123
TPH (Motor Oil) Surr: Pentacosane	SW8015B SW8015B	10/6/2007 10/6/2007	4 0	1 1	4.00 28-125	ND 89.4	mg/Kg %REC	R14123 R14123

Note: x- Sample chromatogram does not resemble typical diesel pattern. Hydrocarbons within the diesel range quantitated as diesel.

1,2-Dibromoethane (EDB)	SW8260B	10/6/2007	5	1	5.0	ND	µg/Kg	R14126
1,2-Dichloroethane (EDC)	SW8260B	10/6/2007	5	1	5.0	ND	µg/Kg	R14126
Benzene	SW8260B	10/6/2007	5	1	5.0	ND	µg/Kg	R14126
Ethyl tert-butyl ether (ETBE)	SW8260B	10/6/2007	5	1	5.0	ND	µg/Kg	R14126
Ethylbenzene	SW8260B	10/6/2007	5	1	5.0	ND	µg/Kg	R14126
Isopropyl ether (DIPE)	SW8260B	10/6/2007	5	1	5.0	ND	µg/Kg	R14126
Methyl tert-butyl ether (MTBE)	SW8260B	10/6/2007	10	1	10	ND	µg/Kg	R14126
t-Butyl alcohol (t-Butanol)	SW8260B	10/6/2007	50	1	50	ND	µg/Kg	R14126
tert-Amyl methyl ether (TAME)	SW8260B	10/6/2007	5	1	5.0	ND	µg/Kg	R14126
Toluene	SW8260B	10/6/2007	5	1	5.0	ND	µg/Kg	R14126
Xylenes, Total	SW8260B	10/6/2007	15	1	15	ND	µg/Kg	R14126
Surr: 4-Bromofluorobenzene	SW8260B	10/6/2007	0	1	55.8-141	146 S	%REC	R14126
Surr: Dibromofluoromethane	SW8260B	10/6/2007	0	1	59.8-148	114	%REC	R14126
Surr: Toluene-d8	SW8260B	10/6/2007	0	1	55.2-133	90.4	%REC	R14126

Note:S-Surrogate recovery out of control due to matrix interference: non-target compounds co-eluted with surrogate peak that effected on surrogate recovery.

TPH (Gasoline)	SW8260B(TPH)	10/6/2007	100	1	100	4740 x	µg/Kg	G14126
Surr: 4-Bromofllurobenzene	SW8260B(TPH)	10/6/2007	0	1	56.9-133	0 S	%REC	G14126

Note: E - Estimated value. The amount exceeds the calibration range of the instrument due to significant amount of heavier hydrocarbons responded within gasoline quantitative range that also effected surrogate recocovery. Re-run is pending.

Treadwell & Rollo(Oakland)

# **Date Received:** 10/5/2007 **Date Reported:** 10/15/2007

Lab Sample ID: 0710033-007 Date Prepared: 10/10/2007

Client Sample ID:	UST-GW-120
Sample Location:	The Colony
Sample Matrix:	WATER
Date/Time Sampled	10/5/2007 2:15:00 PM

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
Total Dissolved Solids (Residue, Filterable)	E160.1	10/8/2007	10	1	10	920	mg/L	R14137
Lead	SW6010B-D	10/9/2007	0.015	1	0.015	ND	mg/L	3841
TPH (Diesel)	SW8015B	10/11/2007	0.1	1	0.100	ND	mg/L	R14179
TPH (Motor Oil)	SW8015B	10/11/2007	0.2	1	0.200	ND	mg/L	R14179
Surr: Pentacosane	SW8015B	10/11/2007	0	1	40-120	96.0	%REC	R14179
1,2-Dibromoethane (EDB)	SW8260B	10/10/2007	0.5	1	0.500	ND	µg/L	R14163
1,2-Dichloroethane (EDC)	SW8260B	10/10/2007	0.5	1	0.500	ND	µg/L	R14163
Benzene	SW8260B	10/10/2007	0.5	1	0.500	ND	μg/L	R14163
Ethyl tert-butyl ether (ETBE)	SW8260B	10/10/2007	0.5	1	0.500	ND	µg/L	R14163
Ethylbenzene	SW8260B	10/10/2007	0.5	1	0.500	4.68	µg/L	R14163
Isopropyl ether (DIPE)	SW8260B	10/10/2007	0.5	1	0.500	ND	µg/L	R14163
Methyl tert-butyl ether (MTBE)	SW8260B	10/10/2007	0.5	1	0.500	ND	µg/L	R14163
t-Butyl alcohol (t-Butanol)	SW8260B	10/10/2007	10	1	10.0	ND	µg/L	R14163
tert-Amyl methyl ether (TAME)	SW8260B	10/10/2007	0.5	1	0.500	ND	µg/L	R14163
Toluene	SW8260B	10/10/2007	0.5	1	0.500	1.14	µg/L	R14163
Xylenes, Total	SW8260B	10/10/2007	1.5	1	1.50	16.0	µg/L	R14163
Surr: Dibromofluoromethane	SW8260B	10/10/2007	0	1	61.2-131	104	%REC	R14163
Surr: 4-Bromofluorobenzene	SW8260B	10/10/2007	0	1	64.1-120	102	%REC	R14163
Surr: Toluene-d8	SW8260B	10/10/2007	0	1	75.1-127	95.6	%REC	R14163
TPH (Gasoline)	SW8260B(TPH)	10/10/2007	50	1	50	293x	µg/L	G14163
Surr: 4-Bromofllurobenzene	SW8260B(TPH)	10/10/2007	0	1	58.4-133	75.9	%REC	G14163

Note:x-Although TPHG as gasoline is present, pattern does not match typical gasoline. TPHg result is raised due to the presence of heavy hydrocarbons within gasoline range.

These analyses were performed according to State of California Environmental Laboratory Accreditation program, Certificate # 1991
### **Definitions, legends and Notes**

Note	Description
ug/kg	Microgram per kilogram (ppb, part per billion).
ug/L	Microgram per liter (ppb, part per billion).
mg/kg	Milligram per kilogram (ppm, part per million).
mg/L	Milligram per liter (ppm, part per million).
LCS/LCSD	Laboratory control sample/laboratory control sample duplicate.
MDL	Method detection limit.
MRL	Modified reporting limit. When sample is subject to dilution, reporting limit times dilution factor yields MRL.
MS/MSD	Matrix spike/matrix spike duplicate.
N/A	Not applicable.
ND	Not detected at or above detection limit.
NR	Not reported.
QC	Quality Control.
RL	Reporting limit.
% RPD	Percent relative difference.
а	pH was measured immediately upon the receipt of the sample, but it was still done outside the holding time.
sub	Analyzed by subcontracting laboratory, Lab Certificate #

# Torrent Laboratory, Inc.

**CLIENT:** Treadwell & Rollo(Oakland) Work Order: 0710033 4568.02 **Project:** 

# ANALYTICAL QC SUMMARY REPORT

BatchID: 3836

Sample ID	MB-3836	SampType: M	IBLK	TestCode	e: 6010B_S	Units: mg/Kg		Prep Date	e: 10/7/20	007	RunNo: 14	122	
Client ID:	ZZZZZ	Batch ID: 38	836	TestNo	o: <b>SW6010B</b>	(SW3050B)		Analysis Date	e: 10/7/20	07	SeqNo: 204	4529	
Analyte		R	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead			ND	1.0									
Sample ID	LCS-3836	SampType: L	.CS	TestCode	e: 6010B_S	Units: mg/Kg		Prep Date	: <b>10/7/20</b>	07	RunNo: 14	122	
Client ID:	<u>ZZZZZ</u>	Batch ID: 38	836	TestNo	o: <b>SW6010B</b>	(SW3050B)		Analysis Date	e: 10/7/20	007	SeqNo: 204	4527	
Analyte		R	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead		2	47.50	1.0	50	0	95.0	67.9	118				
Sample ID	LCSD-3836	SampType: L	CSD	TestCode	e: 6010B_S	Units: mg/Kg		Prep Date	e: 10/7/20	07	RunNo: 14	122	
Client ID:	ZZZZZ	Batch ID: 38	836	TestNo	D: SW6010B	(SW3050B)		Analysis Date	e: 10/7/20	007	SeqNo: 204	4528	
Analyte		R	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead		2	48.40	1.0	50	0	96.8	67.9	118	47.5	1.88	30	
Sample ID	0710033-01AMS	SampType: <b>M</b>	IS	TestCode	e: 6010B_S	Units: mg/Kg		Prep Date	: <b>10/7/20</b>	07	RunNo: 14	122	
Client ID:	ZZZZZ	Batch ID: 38	836	TestNo	o: SW6010B	(SW3050B)		Analysis Date	e: 10/7/20	007	SeqNo: 204	4525	
Analyte		R	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead		2	48.50	1.0	50	5.15	86.7	60.5	113				
Sample ID	0710033-01AMSD	SampType: M	ISD	TestCode	e: 6010B_S	Units: mg/Kg		Prep Date	: 10/7/20	07	RunNo: 14	122	
Client ID:	<u>ZZZZZ</u>	Batch ID: 38	836	TestNo	o: SW6010B	(SW3050B)		Analysis Date	e: 10/7/20	007	SeqNo: 204	4526	
Analyte		R	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead		2	49.00	1.0	50	5.15	87.7	60.5	113	48.5	1.03	30	

**Qualifiers:** 

Е Value above quantitation range

Holding times for preparation or analysis exceeded Н

R

ND Not Detected at the Reporting Limit

RPD outside accepted recovery limits S

J

Spike Recovery outside accepted recovery limits Page 1 of 13

Analyte detected below quantitation limits

### **CLIENT:** Treadwell & Rollo(Oakland) Work Order: 0710033 4568.02 **Project:**

## ANALYTICAL QC SUMMARY REPORT

BatchID: 3841

Sample ID	MB-3841	SampType:	MBLK	TestCod	e: 6010B_DIS	S Units: mg/L		Prep Date	e: 10/9/20	007	RunNo: 14	143	
Client ID:	22222	Batch ID:	3841	TestN	o: <b>SW6010B-D</b>	(E200.7D/SW		Analysis Date	e: <b>10/9/20</b>	07	SeqNo: 204	4861	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead			ND	0.015									
Sample ID	LCS-3841	SampType:	LCS	TestCod	e: 6010B_DIS	G Units: mg/L		Prep Date	e: 10/9/20	007	RunNo: 14	143	
Client ID:	22222	Batch ID:	3841	TestN	o: SW6010B-D	(E200.7D/SW		Analysis Date	e: <b>10/9/20</b>	007	SeqNo: 20	4859	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead			0.9052	0.015	1	0	90.5	80	120				
Sample ID	LCSD-3841	SampType:	LCSD	TestCod	e: 6010B_DIS	G Units: mg/L		Prep Date	e: 10/9/20	007	RunNo: 14	143	
Client ID:	ZZZZZ	Batch ID:	3841	TestN	o: SW6010B-D	(E200.7D/SW		Analysis Date	e: <b>10/9/20</b>	07	SeqNo: 204	4860	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead			0.9362	0.015	1	0	93.6	80	120	0.9052	3.37	20	
Sample ID	0710033-007AMS	SampType:	MS	TestCode	e: 6010B_DISS	G Units: mg/L		Prep Date	e: <b>10/9/20</b>	07	RunNo: 14	143	
Client ID:	UST-GW-120	Batch ID:	3841	TestN	o: <b>SW6010B-D</b>	(E200.7D/SW		Analysis Date	e: <b>10/9/20</b>	007	SeqNo: 204	4857	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead			0.8721	0.015	1	0	87.2	80	120				
Sample ID	0710033-007AMSD	SampType:	MSD	TestCode	e: 6010B_DISS	3 Units: mg/L		Prep Date	e: <b>10/9/20</b>	007	RunNo: 14	143	
Client ID:	UST-GW-120	Batch ID:	3841	TestN	o: SW6010B-D	(E200.7D/SW		Analysis Date	e: <b>10/9/20</b>	007	SeqNo: 20	4858	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead			0.8560	0.015	1	0	85.6	80	120	0.8721	1.86	20	

**Qualifiers:** Е

Value above quantitation range

Holding times for preparation or analysis exceeded Н R

Analyte detected below quantitation limits J

S

ND Not Detected at the Reporting Limit

RPD outside accepted recovery limits

Spike Recovery outside accepted recovery limits Page 2 of 13

4568.02 **Project:** 

# ANALYTICAL QC SUMMARY REPORT

BatchID: G14126

Sample ID MB-G	SampType: MBLK	TestCode: TPH_GAS_S Units: µg/Kg	Prep Date: 10/6/2007	RunNo: 14126
Client ID: ZZZZZ	Batch ID: G14126	TestNo: SW8260B(TP	Analysis Date: 10/6/2007	SeqNo: 204558
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
TPH (Gasoline)	ND	100		
Surr: 4-Bromofllurobenzene	47.00	0 50 0	94.0 56.9 133	
Sample ID LCS-G	SampType: LCS	TestCode: TPH_GAS_S Units: µg/Kg	Prep Date: 10/5/2007	RunNo: 14126
Client ID: ZZZZZ	Batch ID: G14126	TestNo: SW8260B(TP	Analysis Date: 10/5/2007	SeqNo: 204559
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
TPH (Gasoline)	1181	100 1000 0	118 48.2 132	
Surr: 4-Bromofllurobenzene	50.00	0 50 0	100 56.9 133	
Sample ID LCSD-G	SampType: LCSD	TestCode: TPH_GAS_S Units: µg/Kg	Prep Date: 10/6/2007	RunNo: 14126
Client ID: ZZZZZ	Batch ID: G14126	TestNo: SW8260B(TP	Analysis Date: 10/6/2007	SeqNo: 204560
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
TPH (Gasoline)	1136	100 1000 0	114 48.2 132 1181	3.88 30
Surr: 4-Bromofllurobenzene	48.00	0 50 0	96.0 56.9 133 0	0 0

Spike Recovery outside accepted recovery limits Page 3 of 13 S

Analyte detected below quantitation limits J

4568.02 **Project:** 

# ANALYTICAL QC SUMMARY REPORT

BatchID: G14129

Sample ID MB-G	SampType: MBLK	TestCode: TPH_GAS_S Units: µg/Kg	Prep Date: 10/8/2007	RunNo: 14129
Client ID: ZZZZZ	Batch ID: G14129	TestNo: SW8260B(TP	Analysis Date: 10/8/2007	SeqNo: 204601
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
TPH (Gasoline)	ND	100		
Surr: 4-Bromofllurobenzene	48.00	0 50 0	96.0 56.9 133	
Sample ID LCS-G	SampType: LCS	TestCode: TPH_GAS_S Units: µg/Kg	Prep Date: 10/8/2007	RunNo: 14129
Client ID: ZZZZZ	Batch ID: G14129	TestNo: SW8260B(TP	Analysis Date: 10/8/2007	SeqNo: 204602
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
TPH (Gasoline)	806.0	100 1000 0	80.6 48.2 132	
Surr: 4-Bromofllurobenzene	44.00	0 50 0	88.0 56.9 133	
Sample ID LCSD-G	SampType: LCSD	TestCode: TPH_GAS_S Units: µg/Kg	Prep Date: 10/8/2007	RunNo: 14129
Client ID: ZZZZZ	Batch ID: G14129	TestNo: SW8260B(TP	Analysis Date: 10/8/2007	SeqNo: 204603
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
TPH (Gasoline)	832.0	100 1000 0	83.2 48.2 132 806	3.17 30
Surr: 4-Bromofllurobenzene	46.00	0 50 0	92.0 56.9 133 0	0 0

Analyte detected below quantitation limits J

4568.02 **Project:** 

# ANALYTICAL QC SUMMARY REPORT

BatchID: G14163

Sample ID MB-G	SampType: MBLK	TestCode: TPH_GAS_W Units: µg/L	Prep Date: 10/10/2007	RunNo: 14163
Client ID: ZZZZZ	Batch ID: G14163	TestNo: SW8260B(TP	Analysis Date: 10/10/2007	SeqNo: 205142
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
TPH (Gasoline)	ND	50		
Surr: 4-Bromofllurobenzene	8.000	0 11.36 0	70.4 58.4 133	
Sample ID LCS-G	SampType: LCS	TestCode: TPH_GAS_W Units: µg/L	Prep Date: 10/10/2007	RunNo: 14163
Client ID: ZZZZZ	Batch ID: G14163	TestNo: SW8260B(TP	Analysis Date: 10/10/2007	SeqNo: 205143
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
TPH (Gasoline)	204.0	50 227 0	89.9 52.4 127	
Surr: 4-Bromofllurobenzene	8.220	0 11.36 0	72.4 58.4 133	
Sample ID LCSD-G	SampType: LCSD	TestCode: TPH_GAS_W Units: µg/L	Prep Date: 10/10/2007	RunNo: <b>14163</b>
Client ID: ZZZZZ	Batch ID: G14163	TestNo: SW8260B(TP	Analysis Date: 10/10/2007	SeqNo: 205144
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
TPH (Gasoline)	181.0	50 227 0	79.7 52.4 127 204	11.9 20
Surr: 4-Bromofllurobenzene	8.400	0 11.36 0	73.9 58.4 133 0	0 0

Spike Recovery outside accepted recovery limits Page 5 of 13 S

Analyte detected below quantitation limits J

4568.02 **Project:** 

# ANALYTICAL QC SUMMARY REPORT

BatchID: R14123

Sample ID SDSG071005A-MB	SampType:	MBLK	TestCod	le: TPHDOS	G_S Units: mg/Kg		Prep Date	e: 10/5/20	007	RunNo: 14	123	
Client ID: ZZZZZ	Batch ID:	R14123	TestN	lo: SW8015B	i		Analysis Date	e: <b>10/6/20</b>	007	SeqNo: 20	4532	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Diesel)		ND	2.00									
TPH (Motor Oil)		ND	4.00									
Surr: Pentacosane		3.375	0	3.3	0	102	28	125				
Sample ID SDSG071005A-LCS	SampType:	LCS	TestCod	le: TPHDOS	G_S Units: mg/Kg		Prep Date	e: 10/5/20	007	RunNo: 14	123	
Client ID: ZZZZZ	Batch ID:	R14123	TestN	lo: SW8015B			Analysis Date	e: <b>10/6/20</b>	07	SeqNo: 204	4533	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Diesel)		26.45	2.00	33.33	0	79.4	26.6	128				
Surr: Pentacosane		3.371	0	3.3	0	102	28	125				
Sample ID SDSG071005A-LCS	SampType:	LCSD	TestCod	le: TPHDOS	G_S Units: mg/Kg		Prep Date	e: <b>10/5/20</b>	07	RunNo: 14	123	
Client ID: ZZZZZ	Batch ID:	R14123	TestN	lo: SW8015B			Analysis Date	e: <b>10/6/20</b>	007	SeqNo: 20	4534	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Diesel)		28.42	2.00	33.33	0	85.3	26.6	128	26.45	7.18	30	
Surr: Pentacosane		3.282	0	3.3	0	99.5	28	125	0	0	0	
Sample ID 0710033-003A MS	SampType:	MS	TestCod	le: TPHDOS	G_S Units: mg/Kg		Prep Date	e: 10/5/20	007	RunNo: 14	123	
Client ID: UST-25a-8.0	Batch ID:	R14123	TestN	lo: SW8015B	i		Analysis Date	e: <b>10/6/20</b>	007	SeqNo: 20	4541	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Diesel)		25.54	2.00	33.33	0	76.6	26.6	128				
Surr: Pentacosane		3.072	0	3.3	0	93.1	28	125				
Sample ID 0710033-003A MSD	SampType:	MSD	TestCod	le: TPHDOS	G_S Units: mg/Kg		Prep Date	e: 10/5/20	007	RunNo: 14	123	
Client ID: UST-25a-8.0	Batch ID:	R14123	TestN	lo: SW8015B	ł		Analysis Date	e: <b>10/6/20</b>	07	SeqNo: 204	4542	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Diesel)		28.16	2.00	33.33	0	84.5	26.6	128	25.54	9.77	30	
Qualifiers: E Value above of	uantitation rang	ge		H Holdi	ng times for preparation	n or analys	is exceeded	J	Analyte detected l	below quantitation	on limits	

ND Not Detected at the Reporting Limit

times for preparation or analysis exceeded Holding н

Analyte detected below qu antitation iimit S Spike Recovery outside accepted recovery limits Page 6 of 13

R RPD outside accepted recovery limits

### **CLIENT:** Treadwell & Rollo(Oakland) Work Order: 0710033 4568.02 **Project:**

## ANALYTICAL QC SUMMARY REPORT

BatchID: R14123

Sample ID 0710033-003A MSD	SampType: MSD	TestCod	e: TPHDOSC	G_S Units: mg/Kg		Prep Dat	te: 10/5/20	07	RunNo: 14	123	
Client ID: UST-25a-8.0	Batch ID: R14123	TestN	o: SW8015B			Analysis Dat	te: 10/6/20	07	SeqNo: 204	4542	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Pentacosane	3.256	0	3.3	0	98.7	28	125	0	0	0	

Value above quantitation range **Qualifiers:** Е ND Not Detected at the Reporting Limit

Holding times for preparation or analysis exceeded Н

Analyte detected below quantitation limits J

S

RPD outside accepted recovery limits R

Spike Recovery outside accepted recovery limits Page 7 of 13

4568.02 **Project:** 

# ANALYTICAL QC SUMMARY REPORT

BatchID: R14126

Sample ID MB	SampType: <b>MBLK</b>	TestCoo	le: 8260B_S	Units: µg/Kg		Prep Dat	te: 10/6/20	007	RunNo: 14	126	
Client ID: ZZZZZ	Batch ID: R14126	TestN	lo: SW8260B			Analysis Dat	te: 10/6/20	007	SeqNo: 20	4548	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromoethane (EDB)	ND	10									
1,2-Dichloroethane (EDC)	ND	10									
Benzene	ND	10									
Ethyl tert-butyl ether (ETBE)	ND	10									
Ethylbenzene	ND	10									
Isopropyl ether (DIPE)	ND	10									
Methyl tert-butyl ether (MTBE)	ND	10									
t-Butyl alcohol (t-Butanol)	ND	50									
tert-Amyl methyl ether (TAME)	ND	10									
Toluene	ND	10									
Xylenes, Total	ND	20									
Surr: 4-Bromofluorobenzene	52.40	0	50	0	105	55.8	141				
Surr: Dibromofluoromethane	54.44	0	50	0	109	59.8	148				
Surr: Toluene-d8	43.36	0	50	0	86.7	55.2	133				
Sample ID LCS	SampType: LCS	TestCoo	le: 8260B_S	Units: µg/Kg		Prep Dat	te: <b>10/5/2</b> 0	007	RunNo: 14	126	
Sample ID LCS Client ID: ZZZZZ	SampType: LCS Batch ID: R14126	TestCoc TestN	le: 8260B_S lo: SW8260B	Units: µg/Kg		Prep Dat Analysis Dat	te: 10/5/20 te: 10/5/20	007 007	RunNo: 14 SeqNo: 20	126 4549	
Sample ID LCS Client ID: ZZZZZ Analyte	SampType: LCS Batch ID: R14126 Result	TestCoo TestN PQL	le: 8260B_S lo: SW8260B SPK value	Units: µg/Kg SPK Ref Val	%REC	Prep Dat Analysis Dat LowLimit	te: <b>10/5/20</b> te: <b>10/5/20</b> HighLimit	007 007 RPD Ref Val	RunNo: 14 SeqNo: 20 %RPD	<b>126</b> <b>4549</b> RPDLimit	Qual
Sample ID LCS Client ID: ZZZZZ Analyte Benzene	SampType: LCS Batch ID: R14126 Result 45.28	TestCoc TestN PQL 10	le: 8260B_S lo: SW8260B SPK value 50	Units: µg/Kg SPK Ref Val 0	%REC 90.6	Prep Dat Analysis Dat LowLimit 66.5	te: <b>10/5/20</b> te: <b>10/5/20</b> HighLimit 135	007 007 RPD Ref Val	RunNo: 14 SeqNo: 20 %RPD	<b>126</b> <b>4549</b> RPDLimit	Qual
Sample ID LCS Client ID: ZZZZZ Analyte Benzene Toluene	SampType: LCS Batch ID: R14126 Result 45.28 50.51	TestCoc TestN PQL 10 10	le: 8260B_S lo: SW8260B SPK value 50 50	Units: µg/Kg SPK Ref Val 0 0	%REC 90.6 101	Prep Dat Analysis Dat LowLimit 66.5 56.8	te: <b>10/5/20</b> te: <b>10/5/20</b> HighLimit 135 134	007 007 RPD Ref Val	RunNo: <b>14</b> SeqNo: <b>20</b> %RPD	<b>126</b> <b>4549</b> RPDLimit	Qual
Sample ID LCS Client ID: ZZZZZ Analyte Benzene Toluene Surr: 4-Bromofluorobenzene	SampType: LCS Batch ID: R14126 Result 45.28 50.51 47.49	TestCoc TestN PQL 10 10 0	le: 8260B_S lo: SW8260B SPK value 50 50 50	Units: <b>µg/Kg</b> SPK Ref Val 0 0 0	%REC 90.6 101 95.0	Prep Dat Analysis Dat LowLimit 66.5 56.8 55.8	te: 10/5/20 te: 10/5/20 HighLimit 135 134 141	007 007 RPD Ref Val	RunNo: <b>14</b> SeqNo: <b>20</b> %RPD	126 4549 RPDLimit	Qual
Sample ID LCS Client ID: ZZZZZ Analyte Benzene Toluene Surr: 4-Bromofluorobenzene Surr: Dibromofluoromethane	SampType: LCS Batch ID: R14126 Result 45.28 50.51 47.49 47.70	TestCoc TestN PQL 10 10 0 0	le: 8260B_S lo: SW8260B SPK value 50 50 50 50	Units: <b>µg/Kg</b> SPK Ref Val 0 0 0 0	%REC 90.6 101 95.0 95.4	Prep Dat Analysis Dat LowLimit 66.5 56.8 55.8 59.8	te: 10/5/20 te: 10/5/20 HighLimit 135 134 141 148	007 007 RPD Ref Val	RunNo: 14 SeqNo: 20 %RPD	<b>126</b> <b>4549</b> RPDLimit	Qual
Sample ID LCS Client ID: ZZZZZ Analyte Benzene Toluene Surr: 4-Bromofluorobenzene Surr: Dibromofluoromethane Surr: Toluene-d8	SampType: LCS Batch ID: R14126 Result 45.28 50.51 47.49 47.70 50.58	TestCoc TestN PQL 10 10 0 0	le: <b>8260B_S</b> lo: <b>SW8260B</b> SPK value 50 50 50 50 50	Units: <b>µg/Kg</b> SPK Ref Val 0 0 0 0 0 0	%REC 90.6 101 95.0 95.4 101	Prep Dat Analysis Dat LowLimit 66.5 56.8 55.8 59.8 59.8 55.2	te: 10/5/20 te: 10/5/20 HighLimit 135 134 141 148 133	007 007 RPD Ref Val	RunNo: <b>14</b> SeqNo: <b>20</b> %RPD	126 4549 RPDLimit	Qual
Sample ID LCS Client ID: ZZZZZ Analyte Benzene Toluene Surr: 4-Bromofluorobenzene Surr: Dibromofluoromethane Surr: Toluene-d8 Sample ID LCSD	SampType: LCS Batch ID: R14126 Result 45.28 50.51 47.49 47.70 50.58 SampType: LCSD	TestCoc TestN PQL 10 10 0 0 0 0 TestCoc	le: 8260B_S SPK value 50 50 50 50 50 50	Units: <b>µg/Kg</b> SPK Ref Val 0 0 0 0 0 0 0 0 0	%REC 90.6 101 95.0 95.4 101	Prep Dat Analysis Dat LowLimit 66.5 56.8 55.8 59.8 55.2 Prep Dat	te: 10/5/20 te: 10/5/20 HighLimit 135 134 141 148 133 te: 10/5/20	007 007 RPD Ref Val	RunNo: 14 SeqNo: 20 %RPD RunNo: 14	126 4549 RPDLimit 126	Qual
Sample ID LCS Client ID: ZZZZZ Analyte Benzene Toluene Surr: 4-Bromofluorobenzene Surr: Dibromofluoromethane Surr: Toluene-d8 Sample ID LCSD Client ID: ZZZZZ	SampType: LCS Batch ID: R14126 Result 45.28 50.51 47.49 47.70 50.58 SampType: LCSD Batch ID: R14126	TestCoc TestN PQL 10 10 0 0 0 TestCoc TestN	le: 8260B_S SPK value 50 50 50 50 50 50 50 50 50 50 50 50	Units: µg/Kg SPK Ref Val 0 0 0 0 0 0 Units: µg/Kg	%REC 90.6 101 95.0 95.4 101	Prep Dat Analysis Dat LowLimit 66.5 56.8 55.8 59.8 55.2 Prep Dat Analysis Dat	te: 10/5/20 HighLimit 135 134 141 148 133 te: 10/5/20	007 007 RPD Ref Val 007	RunNo: 14 SeqNo: 20 %RPD RunNo: 14 SeqNo: 20	126 4549 RPDLimit 126 4550	Qual
Sample ID LCS Client ID: ZZZZZ Analyte Benzene Toluene Surr: 4-Bromofluorobenzene Surr: Dibromofluoromethane Surr: Toluene-d8 Sample ID LCSD Client ID: ZZZZZ Analyte	SampType: LCS Batch ID: R14126 Result 45.28 50.51 47.49 47.70 50.58 SampType: LCSD Batch ID: R14126 Result	TestCoc TestN PQL 10 10 0 0 0 TestCoc TestN PQL	le: 8260B_S SPK value 50 50 50 50 50 50 50 50 50 50 50 50 50	Units: µg/Kg SPK Ref Val 0 0 0 0 0 0 Units: µg/Kg SPK Ref Val	%REC 90.6 101 95.0 95.4 101 %REC	Prep Dat Analysis Dat LowLimit 66.5 56.8 55.8 59.8 55.2 Prep Dat Analysis Dat LowLimit	te: 10/5/20 HighLimit 135 134 141 148 133 te: 10/5/20 HighLimit	007 007 RPD Ref Val 007 007 RPD Ref Val	RunNo: 14 SeqNo: 20 %RPD RunNo: 14 SeqNo: 20 %RPD	126 4549 RPDLimit 126 4550 RPDLimit	Qual
Sample ID LCS Client ID: ZZZZZ Analyte Benzene Toluene Surr: 4-Bromofluorobenzene Surr: Dibromofluoromethane Surr: Toluene-d8 Sample ID LCSD Client ID: ZZZZZ Analyte Benzene	SampType: LCS Batch ID: R14126 Result 45.28 50.51 47.49 47.70 50.58 SampType: LCSD Batch ID: R14126 Result 50.93	TestCoc TestN PQL 10 10 0 0 0 TestCoc TestN PQL 10	le: 8260B_S SPK value 50 50 50 50 50 ke: 8260B_S lo: SW8260B SPK value 50	Units: <b>µg/Kg</b> SPK Ref Val 0 0 0 0 0 Units: <b>µg/Kg</b> SPK Ref Val 0 0	%REC 90.6 101 95.0 95.4 101 %REC 102	Prep Dat Analysis Dat LowLimit 66.5 56.8 55.8 59.8 55.2 Prep Dat Analysis Dat LowLimit 66.5	te: 10/5/20 HighLimit 135 134 141 148 133 te: 10/5/20 HighLimit 135	007 007 RPD Ref Val 007 007 RPD Ref Val 45.28	RunNo: 14 SeqNo: 20 %RPD RunNo: 14 SeqNo: 20 %RPD 11.7	126 4549 RPDLimit 126 4550 RPDLimit 30	Qual
Sample ID LCS Client ID: ZZZZZ Analyte Benzene Toluene Surr: 4-Bromofluorobenzene Surr: Dibromofluoromethane Surr: Toluene-d8 Sample ID LCSD Client ID: ZZZZZ Analyte Benzene Toluene	SampType: LCS Batch ID: R14126 Result 45.28 50.51 47.49 47.70 50.58 SampType: LCSD Batch ID: R14126 Result 50.93 43.07	TestCoc TestN PQL 10 10 0 0 0 TestCoc TestN PQL 10 10	le: 8260B_S SPK value 50 50 50 50 50 50 50 50 50 50 50 50 SPK value 50 50 50	Units: <b>µg/Kg</b> SPK Ref Val 0 0 0 0 0 Units: <b>µg/Kg</b> SPK Ref Val 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	%REC 90.6 101 95.0 95.4 101 %REC 102 86.1	Prep Dat Analysis Dat LowLimit 66.5 56.8 55.8 59.8 55.2 Prep Dat Analysis Dat LowLimit 66.5 56.8	te: 10/5/20 HighLimit 135 134 141 148 133 te: 10/5/20 HighLimit 135 134	007 007 RPD Ref Val 007 007 RPD Ref Val 45.28 50.51	RunNo: 14 SeqNo: 20 %RPD RunNo: 14 SeqNo: 20 %RPD 11.7 15.9	126 4549 RPDLimit 126 4550 RPDLimit 30 30	Qual

ND Not Detected at the Reporting Limit

Holding times for preparation or analysis exceeded н

Analyte detected octor: The second se Analyte detected below quantitation limits

R RPD outside accepted recovery limits S

### **CLIENT:** Treadwell & Rollo(Oakland) Work Order: 0710033 4568.02 **Project:**

# ANALYTICAL QC SUMMARY REPORT

BatchID: R14126

Sample ID LCSD	SampType: LCSD	TestCoc	le: 8260B_S	Units: µg/Kg		Prep Dat	te: 10/5/20	07	RunNo: 14	126	
Client ID: ZZZZZ	Batch ID: R14126	TestN	lo: SW8260B			Analysis Dat	te: 10/5/20	07	SeqNo: 204	4550	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	51.86	0	50	0	104	55.8	141	0	0	0	
Surr: Dibromofluoromethane	56.47	0	50	0	113	59.8	148	0	0	0	
Surr: Toluene-d8	48.66	0	50	0	97.3	55.2	133	0	0	0	

Analyte detected below quantitation limits J Spike Recovery outside accepted recovery limits Page 9 of 13

#### CL ANALYTICAL QC SUMMARY REPORT W Pro SampType: MBLK Units: mg/L Prep Date: Sample ID MBLK TestCode: TDS\_W RunNo: 14137 Client ID: ZZZZZ Batch ID: R14137 TestNo: E160.1 Analysis Date: 10/8/2007 SeqNo: 204764

SPK value SPK Ref Val

%REC

PQL

10

Total Dissolved Solids (Residue, Filtera ND

Analyte

RPD outside accepted recovery limits

R

BatchID: R14137

LowLimit HighLimit RPD Ref Val

%RPD RPDLimit

Qual

LIENT:	Treadwell & Rollo(Oakland)
ork Order:	0710033
oject:	4568.02

Result

Analyte detected below quantitation limits J

Spike Recovery outside accepted recovery limits Page 10 of 13 S

4568.02 **Project:** 

# ANALYTICAL QC SUMMARY REPORT

BatchID: R14163

Sample ID MB	SampType: MBLK	TestCo	de: 8260B_W	Units: µg/L		Prep Date	e: 10/10/2	2007	RunNo: 14	163	
Client ID: ZZZZZ	Batch ID: R14163	Test	No: SW8260B			Analysis Dat	e: 10/10/2	2007	SeqNo: 20	5090	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromoethane (EDB)	ND	0.500									
1,2-Dichloroethane (EDC)	ND	0.500									
Benzene	ND	0.500									
Ethyl tert-butyl ether (ETBE)	ND	0.500									
Ethylbenzene	ND	0.500									
Isopropyl ether (DIPE)	ND	0.500									
Methyl tert-butyl ether (MTBE)	ND	0.500									
t-Butyl alcohol (t-Butanol)	ND	5.00									
tert-Amyl methyl ether (TAME)	ND	0.500									
Toluene	ND	0.500									
Xylenes, Total	ND	1.50									
Surr: Dibromofluoromethane	11.12	0	11.36	0	97.9	61.2	131				
Surr: 4-Bromofluorobenzene	11.73	0	11.36	0	103	64.1	120				
Surr: Toluene-d8	10.78	0	11.36	0	94.9	75.1	127				
Sample ID LCS	SampType: LCS	TestCo	de: 8260B_W	Units: µg/L		Prep Dat	e: 10/10/2	2007	RunNo: 14	163	
Sample ID LCS Client ID: ZZZZZ	SampType: LCS Batch ID: R14163	TestCoo TestN	de: 8260B_W No: SW8260B	Units: µg/L		Prep Dat Analysis Dat	e: 10/10/2 e: 10/10/2	2007 2007	RunNo: 14 SeqNo: 20	163 5097	
Sample ID LCS Client ID: ZZZZZ Analyte	SampType: LCS Batch ID: R14163 Result	TestCoo TestN PQL	de: 8260B_W No: SW8260B SPK value	Units: µg/L SPK Ref Val	%REC	Prep Dat Analysis Dat LowLimit	e: <b>10/10/2</b> e: <b>10/10/2</b> HighLimit	2007 2007 RPD Ref Val	RunNo: 14 SeqNo: 20 %RPD	163 5097 RPDLimit	Qual
Sample ID LCS Client ID: ZZZZZ Analyte Benzene	SampType: LCS Batch ID: R14163 Result 15.19	TestCoo TestN PQL 0.500	de: <b>8260B_W</b> No: <b>SW8260B</b> SPK value 17.04	Units: µg/L SPK Ref Val 0	%REC 89.1	Prep Dat Analysis Dat LowLimit 66.9	e: <b>10/10/2</b> e: <b>10/10/2</b> HighLimit 140	2007 2007 RPD Ref Val	RunNo: <b>14</b> SeqNo: <b>20</b> %RPD	<b>163</b> 5097 RPDLimit	Qual
Sample ID LCS Client ID: ZZZZZ Analyte Benzene Toluene	SampType: LCS Batch ID: R14163 Result 15.19 18.16	TestCod TestN PQL 0.500 0.500	de: 8260B_W No: SW8260B SPK value 17.04 17.04	Units: µg/L SPK Ref Val 0 0	%REC 89.1 107	Prep Dat Analysis Dat LowLimit 66.9 76.6	e: <b>10/10/2</b> e: <b>10/10/2</b> HighLimit 140 123	2007 2007 RPD Ref Val	RunNo: 14 SeqNo: 20 %RPD	<b>163</b> 5097 RPDLimit	Qual
Sample ID LCS Client ID: ZZZZZ Analyte Benzene Toluene Surr: Dibromofluoromethane	SampType: LCS Batch ID: R14163 Result 15.19 18.16 10.81	TestCoo TestM PQL 0.500 0.500 0	de: 8260B_W No: SW8260B SPK value 17.04 17.04 11.36	Units: µg/L SPK Ref Val 0 0 0	%REC 89.1 107 95.2	Prep Date Analysis Date LowLimit 66.9 76.6 61.2	e: 10/10/2 e: 10/10/2 HighLimit 140 123 131	2007 2007 RPD Ref Val	RunNo: 14 SeqNo: 20 %RPD	163 5097 RPDLimit	Qual
Sample ID LCS Client ID: ZZZZZ Analyte Benzene Toluene Surr: Dibromofluoromethane Surr: 4-Bromofluorobenzene	SampType: LCS Batch ID: R14163 Result 15.19 18.16 10.81 10.40	TestCoo TestM PQL 0.500 0.500 0 0	de: 8260B_W No: SW8260B SPK value 17.04 17.04 11.36 11.36	Units: µg/L SPK Ref Val 0 0 0 0	%REC 89.1 107 95.2 91.5	Prep Date Analysis Date LowLimit 66.9 76.6 61.2 64.1	e: 10/10/2 e: 10/10/2 HighLimit 140 123 131 120	2007 2007 RPD Ref Val	RunNo: <b>14</b> SeqNo: <b>20</b> %RPD	163 5097 RPDLimit	Qual
Sample ID LCS Client ID: ZZZZZ Analyte Benzene Toluene Surr: Dibromofluoromethane Surr: 4-Bromofluorobenzene Surr: Toluene-d8	SampType: LCS Batch ID: R14163 Result 15.19 18.16 10.81 10.40 11.34	TestCoo TestM PQL 0.500 0.500 0 0 0	de: 8260B_W No: SW8260B SPK value 17.04 17.04 11.36 11.36 11.36	Units: <b>µg/L</b> SPK Ref Val 0 0 0 0 0 0	%REC 89.1 107 95.2 91.5 99.8	Prep Dat Analysis Dat LowLimit 66.9 76.6 61.2 64.1 75.1	e: 10/10/2 e: 10/10/2 HighLimit 140 123 131 120 127	2007 2007 RPD Ref Val	RunNo: 14 SeqNo: 20 %RPD	163 5097 RPDLimit	Qual
Sample ID LCS Client ID: ZZZZZ Analyte Benzene Toluene Surr: Dibromofluoromethane Surr: 4-Bromofluorobenzene Surr: Toluene-d8 Sample ID LCSD	SampType: LCS Batch ID: R14163 Result 15.19 18.16 10.81 10.40 11.34 SampType: LCSD	TestCoo TestM PQL 0.500 0.500 0 0 0 0 0 0 0	de: 8260B_W No: SW8260B SPK value 17.04 17.04 11.36 11.36 11.36 11.36	Units: <b>μg/L</b> SPK Ref Val 0 0 0 0 0 0 0 0	%REC 89.1 107 95.2 91.5 99.8	Prep Date Analysis Date LowLimit 66.9 76.6 61.2 64.1 75.1 Prep Date	e: 10/10/2 e: 10/10/2 HighLimit 140 123 131 120 127 e: 10/10/2	2007 2007 RPD Ref Val	RunNo: 14 SeqNo: 20 %RPD RunNo: 14	163 5097 RPDLimit	Qual
Sample ID LCS Client ID: ZZZZZ Analyte Benzene Toluene Surr: Dibromofluoromethane Surr: 4-Bromofluorobenzene Surr: Toluene-d8 Sample ID LCSD Client ID: ZZZZZ	SampType: LCS Batch ID: R14163 Result 15.19 18.16 10.81 10.40 11.34 SampType: LCSD Batch ID: R14163	TestCoo TestM PQL 0.500 0.500 0 0 0 0 TestCoo TestM	de: 8260B_W No: SW8260B SPK value 17.04 17.04 11.36 11.36 11.36 de: 8260B_W No: SW8260B	Units: <b>µg/L</b> SPK Ref Val 0 0 0 0 0 Units: <b>µg/L</b>	%REC 89.1 107 95.2 91.5 99.8	Prep Dat Analysis Dat LowLimit 66.9 76.6 61.2 64.1 75.1 Prep Dat Analysis Dat	e: 10/10/2 e: 10/10/2 HighLimit 140 123 131 120 127 e: 10/10/2 e: 10/10/2	2007 RPD Ref Val	RunNo: 14 SeqNo: 20 %RPD RunNo: 14 SeqNo: 20	163 5097 RPDLimit 163 5098	Qual
Sample ID LCS Client ID: ZZZZZ Analyte Benzene Toluene Surr: Dibromofluoromethane Surr: 4-Bromofluorobenzene Surr: Toluene-d8 Sample ID LCSD Client ID: ZZZZZ Analyte	SampType: LCS Batch ID: R14163 Result 15.19 18.16 10.81 10.40 11.34 SampType: LCSD Batch ID: R14163 Result	TestCoo TestM PQL 0.500 0.500 0 0 0 TestCoo TestM PQL	de: 8260B_W No: SW8260B SPK value 17.04 17.04 11.36 11.36 11.36 de: 8260B_W No: SW8260B SPK value	Units: <b>µg/L</b> SPK Ref Val 0 0 0 0 0 Units: <b>µg/L</b> SPK Ref Val	%REC 89.1 107 95.2 91.5 99.8 %REC	Prep Dat Analysis Dat LowLimit 66.9 76.6 61.2 64.1 75.1 Prep Dat Analysis Dat LowLimit	e: 10/10/2 e: 10/10/2 HighLimit 140 123 131 120 127 e: 10/10/2 e: 10/10/2 HighLimit	2007 RPD Ref Val 2007 2007 2007 RPD Ref Val	RunNo: 14 SeqNo: 20 %RPD RunNo: 14 SeqNo: 20 %RPD	163 5097 RPDLimit 163 5098 RPDLimit	Qual
Sample ID LCS Client ID: ZZZZZ Analyte Benzene Toluene Surr: Dibromofluoromethane Surr: 4-Bromofluorobenzene Surr: Toluene-d8 Sample ID LCSD Client ID: ZZZZZ Analyte Benzene	SampType: LCS Batch ID: R14163 Result 15.19 18.16 10.81 10.40 11.34 SampType: LCSD Batch ID: R14163 Result 17.76	TestCoo TestM PQL 0.500 0.500 0 0 0 TestCoo TestM PQL 0.500	de: 8260B_W No: SW8260B SPK value 17.04 17.04 11.36 11.36 11.36 de: 8260B_W No: SW8260B SPK value 17.04	Units: <b>µg/L</b> SPK Ref Val 0 0 0 0 0 Units: <b>µg/L</b> SPK Ref Val 0	%REC 89.1 107 95.2 91.5 99.8 %REC 104	Prep Dat Analysis Dat LowLimit 66.9 76.6 61.2 64.1 75.1 Prep Dat Analysis Dat LowLimit 66.9	e: 10/10/2 e: 10/10/2 HighLimit 140 123 131 120 127 e: 10/10/2 e: 10/10/2 HighLimit 140	2007 RPD Ref Val 2007 2007 RPD Ref Val 15.19	RunNo: 14 SeqNo: 20 %RPD RunNo: 14 SeqNo: 20 %RPD 15.6	163 5097 RPDLimit 163 5098 RPDLimit 20	Qual
Sample ID LCS Client ID: ZZZZZ Analyte Benzene Toluene Surr: Dibromofluoromethane Surr: 4-Bromofluorobenzene Surr: Toluene-d8 Sample ID LCSD Client ID: ZZZZZ Analyte Benzene Toluene	SampType: LCS Batch ID: R14163 Result 15.19 18.16 10.81 10.40 11.34 SampType: LCSD Batch ID: R14163 Result 17.76 16.36	TestCoo TestM PQL 0.500 0 0 0 0 TestCoo TestM PQL 0.500 0.500	de: 8260B_W No: SW8260B SPK value 17.04 17.04 11.36 11.36 11.36 de: 8260B_W No: SW8260B SPK value 17.04 17.04	Units: <b>µg/L</b> SPK Ref Val 0 0 0 0 0 Units: <b>µg/L</b> SPK Ref Val 0 0 0	%REC 89.1 107 95.2 91.5 99.8 %REC 104 96.0	Prep Dat Analysis Dat LowLimit 66.9 76.6 61.2 64.1 75.1 Prep Dat Analysis Dat LowLimit 66.9 76.6	e: 10/10/2 e: 10/10/2 HighLimit 140 123 131 120 127 e: 10/10/2 e: 10/10/2 HighLimit 140 123	2007 RPD Ref Val 2007 2007 2007 RPD Ref Val 15.19 18.16	RunNo: 14 SeqNo: 20 %RPD RunNo: 14 SeqNo: 20 %RPD 15.6 10.4	163 5097 RPDLimit 163 5098 RPDLimit 20 20	Qual

ND Not Detected at the Reporting Limit

Holding times for preparation or analysis exceeded н

R RPD outside accepted recovery limits

Analyte detected below quantitation limits S

Spike Recovery outside accepted recovery limits Page 11 of 13

# CLIENT:Treadwell & Rollo(Oakland)Work Order:0710033Project:4568.02

# ANALYTICAL QC SUMMARY REPORT

BatchID: R14163

Sample ID LCSD	SampType: LCSD	TestCoc	le: 8260B_W	Units: µg/L		Prep Dat	te: 10/10/2	007	RunNo: 141	163	
Client ID: ZZZZZ	Batch ID: R14163	TestN	lo: SW8260B			Analysis Dat	te: 10/10/2	SeqNo: 205098			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Dibromofluoromethane	10.65	0	11.36	0	93.8	61.2	131	0	0	0	
Surr: 4-Bromofluorobenzene	12.48	0	11.36	0	110	64.1	120	0	0	0	
Surr: Toluene-d8	10.68	0	11.36	0	94.0	75.1	127	0	0	0	

H Holding times for preparation or analysis exceeded

R

- J Analyte detected below quantitation limits
- RPD outside accepted recovery limits S

Spike Recovery outside accepted recovery limits Page 12 of 13

4568.02 **Project:** 

# ANALYTICAL QC SUMMARY REPORT

BatchID: R14179

Sample ID WDSG071010A-MB	SampType: MBLK	TestCode: TPHDOSG	_ Units: mg/L		Prep Date	: 10/10/2007	RunNo: 14179	
Client ID: ZZZZZ	Batch ID: R14179	TestNo: SW8015B			Analysis Date	: <b>10/11/2007</b>	SeqNo: 205303	
Analyte	Result	PQL SPK value	SPK Ref Val	%REC	LowLimit I	HighLimit RPD Ref	Val %RPD RPDLimit C	Qual
TPH (Diesel)	ND	0.100						
TPH (Motor Oil)	ND	0.200						
Surr: Pentacosane	0.1010	0 0.1	0	101	40	120		
Sample ID WDSG071010A-LCS	SampType: LCS	TestCode: TPHDOSG	_ Units: <b>mg/L</b>		Prep Date	: 10/10/2007	RunNo: 14179	
Client ID: ZZZZZ	Batch ID: R14179	TestNo: SW8015B			Analysis Date	: 10/11/2007	SeqNo: 205304	
Analyte	Result	PQL SPK value	SPK Ref Val	%REC	LowLimit I	HighLimit RPD Ref	Val %RPD RPDLimit C	Qual
TPH (Diesel)	0.4680	0.100 1	0	46.8	30	68.5		
Surr: Pentacosane	0.1050	0 0.1	0	105	46.8	104		S
Sample ID WDSG071010A-LCS	SampType: LCSD	TestCode: TPHDOSG	Units: <b>mg/L</b>		Prep Date	: <b>10/10/2007</b>	RunNo: 14179	
Client ID: ZZZZZ	Batch ID: R14179	TestNo: SW8015B			Analysis Date	: <b>10/11/2007</b>	SeqNo: 205305	
Analyte	Result	PQL SPK value	SPK Ref Val	%REC	LowLimit I	HighLimit RPD Ref	Val %RPD RPDLimit C	Qual
	0.3800	0.100 1	0	38.0	30	68.5 0.	468 20.8 30	

R

S

Analyte detected below quantitation limits J

# **Torrent Laboratory, Inc.**

## WORK ORDER Summary

### Client ID: TREADWELL & ROLLO(OAKLAND)

**Project:** 4568.02 - The Colony

QC Level:

Comments: 1 day Rush for soils!! Organic lead subbed to McCampbell lab. Full list Oxys/Scavengers and BTEX, TPHD/O with Silica Gel. TTLC-Pb Only!!

Sample ID	<b>Client Sample ID</b>	<b>Collection Date</b>	Date Received	Date Due	Matrix	Test Code	Hld	MS	SEL	Sub	Storage
0710033-001A	UST-1a-12.0	10/5/2007 11:17:00 AM	10/5/2007	10/8/2007	Soil	3050B_S					SR
				10/8/2007		6010B_S			✓		SR
				10/8/2007		8260B_S_PETRO			$\checkmark$		SR
				10/8/2007		TPH_GAS_S_GC					SR
				10/8/2007		TPHDOSG_S					SR
0710033-002A	UST-2-12.0	10/5/2007 11:25:00 AM		10/8/2007		3050B_S					SR
				10/8/2007		6010B_S			$\checkmark$		SR
				10/8/2007		8260B_S_PETRO			✓		SR
				10/8/2007		TPH_GAS_S_GC					SR
				10/8/2007		TPHDOSG_S					SR
0710033-003A	UST-25a-8.0	10/5/2007 1:15:00 PM		10/8/2007		3050B_S					SR
				10/8/2007		6010B_S			✓		SR
				10/8/2007		8260B_S_PETRO			✓		SR
				10/8/2007		TPH_GAS_S_GC					SR
				10/8/2007		TPHDOSG_S					SR
0710033-004A	UST-12b-8.0	10/5/2007 1:35:00 PM		10/8/2007		3050B_S					SR
				10/8/2007		6010B_S			$\checkmark$		SR
				10/8/2007		8260B_S_PETRO			✓		SR
				10/8/2007		TPH_GAS_S_GC					SR
				10/8/2007		TPHDOSG_S					SR
0710033-005A	UST-6d-8.0	10/5/2007 1:37:00 PM		10/8/2007		3050B_S					SR
				10/8/2007		6010B_S			✓		SR
				10/8/2007		8260B_S_PETRO			✓		SR
				10/8/2007		TPH_GAS_S_GC					SR
				10/8/2007		TPHDOSG_S					SR
0710033-006A	UST-10c-8.0	10/5/2007 2:10:00 PM		10/8/2007		3050B_S					SR
				10/8/2007		6010B_S			$\checkmark$		SR

Page 1 of 2

*08-Oct-07* **Work Order** 0710033

# WORK ORDER Summary

## 08-Oct-07

## **Work Order** 0710033

Client ID: TREADWELL & ROLLO(OAKLA

**Project:** 4568.02

QC Level:

Comments: 1 day Rush for soils!! Organic lead subbed to McCampbell lab. Full ist Oxys/Scavengers and BTEX, TOHD/O with Silica Gel. TTLC-Pb Only!!

Sample ID	Client Sample ID	<b>Collection Date</b>	Date Received	Date Due	Matrix	Test Code	Hld	MS S	SEL	Sub	Storage
0710033-006A	UST-10c-8.0	10/5/2007 2:10:00 PM	10/5/2007	10/8/2007	Soil	8260B_S_PETRO			$\checkmark$		SR
				10/8/2007		TPH_GAS_S_GC					SR
				10/8/2007		TPHDOSG_S					SR
0710033-007A	UST-GW-120	10/5/2007 2:15:00 PM		10/8/2007	Water	200.7PR/3010A-DI					SR
				10/8/2007		6010B_DISSOLV			✓		SR
				10/8/2007		8260B_W_PETRO			✓		SR
				10/8/2007		ORG_LEAD CA22				✓	SR
				10/8/2007		TDS_W					SR
				10/8/2007		TPH_GAS_W_GC					SR
				10/8/2007		TPHDOSG_W					SR

			TUCIT	006842
Troochuoll& Bollo	SOL CHAIN	SAMPLE		
Environmental and Geolechnical Consultant	501 1	ontgomery Street, Sui 4th Street, Third Floor	Te 1300, San Francisco, CA 94111 Pn: 4 Oakland CA 94612 Ph: 510 874 4500/Fa	15.955.9040/Fax: 415.955.9041 x: 510.874.4507
	777 C	ampus Commons Roa	d, Suite 200, Sacramento, CA 95825 Ph:	: 916.565.7412/Fax: 916.565.7413
	50 Aii	port Parkway, Suite 17	75. San Jose, CA 95110 Ph: 408.437.770	8/Fax: 408.437.7709
Site Name: <u>Me Colomy</u>			e e	
Job Number: 45.00.02			Analysis Requested	Turnaround
Project Manager\Contact:	Morita			Time
Recorder (Signature Required):	1	No Containete		P 29 PROEKUST
Recorder (Signature Required).	pan	No. Containers		
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Field Sample	Air Air Arter Contraction			
Identification No: Date	Lab Sample No: S			o ž Remarks
VS1-1a-12.0 10/5/01 14-101	AT ATOO	┝╌┼╌┽╶┼╹┼╌┼╴		24 HOUK BLET
1050 100		┝╶┼╌┼╴┽╶┽╴┽		+++
UPT-2-12.0 / 11:25	002M N			
USI-652 8.0 3:15	0020			+++
1105-101-120 12:30	00414 N			
1125-100-20 V 14:10				1 2 Asher Richal
				FUDN .
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		┝╶╁╾╀╌╂╌╂╼╂╌╂		
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# TORRENT LABORATORY, INC.

483 Sinclair Frontage Rd. • Milpitas, CA 95035 • Ph: (408) 263-5258 • Fax: (408) 263-8293

### www.torrentlab.com

October 18, 2007

Eric Morita Treadwell & Rollo(Oakland) 501 14th Street 3rd Floor Oakland, CA 94612

TEL: (510) 874-4500 FAX (510) 874-4507

RE: 4568.02

Dear Eric Morita:

Order No.: 0710115

Torrent Laboratory, Inc. received 6 samples on 10/16/2007 for the analyses presented in the following report.

All data for associated QC met EPA or laboratory specification(s) except where noted in the case narrative.

Torrent Laboratory, Inc, is certified by the State of California, ELAP #1991. If you have any questions regarding these tests results, please feel free to contact the Project Management Team at (408)263-5258;ext: 204.

Sincerely,

Laboratory Director

Patti Sandrock QA Officer

10/18/07

**Torrent Laboratory, Inc.** 

**Date:** 18-Oct-07

CLIENT:	Treadwell & Rollo(Oakland)
Project:	4568.02
Lab Order:	0710115

# **CASE NARRATIVE**

Analytical Comments for METHOD TPH Extractable analyses: Note: Per client request, silca gel clean up procedures emplyed on all samples

Analytical Comment for TEPHSG\_W, Note: The % recovery for the Petacosane surrogate in the LCSD is outside of laboratory control limits (high bias). All samples were Non Detect for those compounds associated with the surrogate. No corrective action is required.



# **TORRENT LABORATORY, INC.**

483 Sinclair Frontage Road • Milpitas, CA • Phone: (408) 263-5258 • Fax: (408) 263-8293

Visit us at www.torrentlab.com email: analysis@torrentlab.com

Report prepared for:	Eric Morita
	Treadwell & Rollo(Oakland)

**Date Received:** 10/16/2007 **Date Reported:** 10/18/2007

Client Sample ID:	TR-1-9.5
Sample Location:	The Colony at Jack London Squa
Sample Matrix:	SOIL
Date/Time Sampled	10/16/2007 10:15:00 AM

Lab Sample ID: 0710115-001 Date Prepared: 10/17/2007

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
TPH (Bunker Oil)	SW8015B	10/18/2007	4	1	4.00	ND	mg/Kg	R14253
TPH (Diesel)	SW8015B	10/18/2007	2	1	2.00	ND	mg/Kg	R14253
TPH (Motor Oil)	SW8015B	10/18/2007	4	1	4.00	ND	mg/Kg	R14253
Surr: Pentacosane	SW8015B	10/18/2007	0	1	53.5-127	87.4	%REC	R14253

## **Date Received:** 10/16/2007 **Date Reported:** 10/18/2007

Lab Sample ID: 0710115-002 Date Prepared:

Client Sample ID:	TR-1-GW
Sample Location:	The Colony at Jack London Squa
Sample Matrix:	GROUNDWATER
Date/Time Sampled	10/16/2007 10:30:00 AM

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
Total Dissolved Solids (Residue, Filterable)	E160.1	10/17/2007	10	1	10	460	mg/L	R14254
TPH (Bunker Oil)	SW8015B	10/18/2007	0.2	1	0.256	ND	mg/L	R14251
TPH (Diesel)	SW8015B	10/18/2007	0.1	1	0.128	ND	mg/L	R14251
TPH (Motor Oil)	SW8015B	10/18/2007	0.2	1	0.256	ND	mg/L	R14251
Surr: Pentacosane	SW8015B	10/18/2007	0	1	46.8-104	101	%REC	R14251

Note: Reporting limits increased due to limited sample available (sediment present).

Client Sample ID:	TR-2-9.5
Sample Location:	The Colony at Jack London Squa
Sample Matrix:	SOIL
Date/Time Sampled	10/16/2007 11:05:00 AM

Lab Sample ID: 0710115-003 **Date Prepared:** 10/17/2007

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
TPH (Bunker Oil)	SW8015B	10/18/2007	4	1	4.00	ND	mg/Kg	R14253
TPH (Diesel)	SW8015B	10/18/2007	2	1	2.00	ND	mg/Kg	R14253
TPH (Motor Oil)	SW8015B	10/18/2007	4	1	4.00	ND	mg/Kg	R14253
Surr: Pentacosane	SW8015B	10/18/2007	0	1	53.5-127	93.3	%REC	R14253

## **Date Received:** 10/16/2007 **Date Reported:** 10/18/2007

## Lab Sample ID: 0710115-004 Date Prepared:

Client Sample ID:	TR-2-GW
Sample Location:	The Colony at Jack London Squa
Sample Matrix:	GROUNDWATER
Date/Time Sampled	10/16/2007 11:45:00 AM

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
Total Dissolved Solids (Residue, Filterable)	E160.1	10/17/2007	10	1	10	440	mg/L	R14254
TPH (Bunker Oil)	SW8015B	10/18/2007	0.2	1	0.278	ND	mg/L	R14251
TPH (Diesel)	SW8015B	10/18/2007	0.1	1	0.139	ND	mg/L	R14251
TPH (Motor Oil)	SW8015B	10/18/2007	0.2	1	0.278	ND	mg/L	R14251
Surr: Pentacosane	SW8015B	10/18/2007	0	1	46.8-104	96.0	%REC	R14251

Note: Reporting limits increased due to limited sample available (sediment present).

Client Sample ID:	TR-3-9.5
Sample Location:	The Colony at Jack London Squa
Sample Matrix:	SOIL
Date/Time Sampled	10/16/2007 12:00:00 PM

# Date Received: 10/16/2007 Date Reported: 10/18/2007

Lab Sample ID: 0710115-005 Date Prepared: 10/17/2007

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
TPH (Diesel)	SW8015B	10/18/2007	2	1	2.00	ND	mg/Kg	R14253
TPH (Motor Oil)	SW8015B	10/18/2007	4	1	4.00	ND	mg/Kg	R14253
Surr: Pentacosane	SW8015B	10/18/2007	0	1	28-125	93.8	%REC	R14253
TPH (Gasoline)	SW8260B(TPH)	10/17/2007	100	1	100	ND	µg/Kg	G14233
Surr: 4-Bromofllurobenzene	SW8260B(TPH)	10/17/2007	0	1	56.9-133	80.0	%REC	G14233

## Treadwell & Rollo(Oakland)

## Date Received: 10/16/2007 Date Reported: 10/18/2007

Lab Sample ID: 0710115-006 Date Prepared: 10/17/2007

Client Sample ID:	TR-3-GW
Sample Location:	The Colony at Jack London Squa
Sample Matrix:	GROUNDWATER
Date/Time Sampled	10/16/2007 12:20:00 PM

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
Total Dissolved Solids (Residue, Filterable)	E160.1	10/17/2007	10	1	10	700	mg/L	R14254
TPH (Diesel)	SW8015B	10/18/2007	0.1	1	0.112	ND	mg/L	R14251
TPH (Motor Oil)	SW8015B	10/18/2007	0.2	1	0.224	ND	mg/L	R14251
Surr: Pentacosane	SW8015B	10/18/2007	0	1	40-120	92.0	%REC	R14251
Note: Reporting limits increased due to lir	nited sample availab	le (sediment pres	ent).					
TPH (Gasoline)	SW8260B(TPH)	10/17/2007	50	1.22	61	ND	µg/L	G14239
Surr: 4-Bromofllurobenzene	SW8260B(TPH)	10/17/2007	0	1.22	58.4-133	75.0	%REC	G14239

Note: Sample diluted prior to the analysis due to high level of sediment in all VOAs.

### **Definitions, legends and Notes**

Note	Description
ug/kg	Microgram per kilogram (ppb, part per billion).
ug/L	Microgram per liter (ppb, part per billion).
mg/kg	Milligram per kilogram (ppm, part per million).
mg/L	Milligram per liter (ppm, part per million).
LCS/LCSD	Laboratory control sample/laboratory control sample duplicate.
MDL	Method detection limit.
MRL	Modified reporting limit. When sample is subject to dilution, reporting limit times dilution factor yields MRL.
MS/MSD	Matrix spike/matrix spike duplicate.
N/A	Not applicable.
ND	Not detected at or above detection limit.
NR	Not reported.
QC	Quality Control.
RL	Reporting limit.
% RPD	Percent relative difference.
а	pH was measured immediately upon the receipt of the sample, but it was still done outside the holding time.
sub	Analyzed by subcontracting laboratory, Lab Certificate #

# Torrent Laboratory, Inc.

**CLIENT:** Treadwell & Rollo(Oakland) Work Order: 0710115 4568.02 **Project:** 

# ANALYTICAL QC SUMMARY REPORT

BatchID: G14233

Sample ID <b>MB-G</b>	SampType: MBLK	TestCode: TPH_GAS_S Units: µg/Kg	Prep Date: <b>10/16/2007</b>	RunNo: <b>14233</b>
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
TPH (Gasoline) Surr: 4-Bromofllurobenzene	ND 49.00	100 0 50 0	98.0 56.9 133	
Sample ID LCS-G	SampType: LCS	TestCode: TPH_GAS_S Units: µg/Kg	Prep Date: 10/16/2007	RunNo: 14233
Client ID: ZZZZZ	Batch ID: G14233	TestNo: SW8260B(TP	Analysis Date: 10/16/2007	SeqNo: 205935
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
TPH (Gasoline)	1102	100 1000 24	108 48.2 132	
Surr: 4-Bromofllurobenzene	48.00	0 50 0	96.0 56.9 133	
Sample ID LCSD-G	SampType: LCSD	TestCode: TPH_GAS_S Units: µg/Kg	Prep Date: 10/17/2007	RunNo: 14233
Client ID: ZZZZZ	Batch ID: G14233	TestNo: SW8260B(TP	Analysis Date: 10/17/2007	SeqNo: 205936
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
TPH (Gasoline)	1109	100 1000 24	108 48.2 132 1102	0.633 30
Surr: 4-Bromofllurobenzene	47.00	0 50 0	94.0 56.9 133 0	0 0

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4568.02 **Project:** 

# ANALYTICAL QC SUMMARY REPORT

BatchID: G14239

Sample ID MB-G	SampType: MBLK	TestCode: TPH_GAS_W Units: µg/L	Prep Date: 10/16/2007	RunNo: 14239
Client ID: ZZZZZ	Batch ID: G14239	TestNo: SW8260B(TP	Analysis Date: 10/16/2007	SeqNo: 205993
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
TPH (Gasoline)	ND	50		
Surr: 4-Bromofllurobenzene	8.200	0 11.36 0	72.2 58.4 133	
Sample ID LCS-G	SampType: LCS	TestCode: TPH_GAS_W Units: µg/L	Prep Date: 10/16/2007	RunNo: 14239
Client ID: ZZZZZ	Batch ID: G14239	TestNo: SW8260B(TP	Analysis Date: 10/16/2007	SeqNo: 205994
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
TPH (Gasoline)	195.0	50 227 0	85.9 52.4 127	
Surr: 4-Bromofllurobenzene	8.700	0 11.36 0	76.6 58.4 133	
Sample ID LCSD-G	SampType: LCSD	TestCode: TPH_GAS_W Units: µg/L	Prep Date: 10/17/2007	RunNo: 14239
Client ID: ZZZZZ	Batch ID: G14239	TestNo: SW8260B(TP	Analysis Date: 10/17/2007	SeqNo: 205995
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
TPH (Gasoline)	220.0	50 227 0	96.9 52.4 127 195	12.0 20
Surr: 4-Bromofllurobenzene	8.900	0 11.36 0	78.3 58.4 133 0	0 0

Analyte detected below quantitation limits J

4568.02

**Project:** 

## ANALYTICAL QC SUMMARY REPORT

BatchID: R14251

Sample ID WDSG071017A-MB	SampType: MBLK	TestCode: TEPHSG_W Units: mg/L	Prep Date: 10/17/2007	RunNo: 14251
Client ID: ZZZZZ	Batch ID: R14251	TestNo: SW8015B	Analysis Date: 10/18/2007	SeqNo: 206166
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
TPH (Bunker Oil)	ND	0.200		
TPH (Diesel)	ND	0.100		
TPH (Motor Oil)	ND	0.200		
Surr: Pentacosane	0.1030	0 0.1 0	103 46.8 104	
Sample ID WDSG071017A-LCS	SampType: LCS	TestCode: TEPHSG_W Units: mg/L	Prep Date: 10/17/2007	RunNo: 14251
Client ID: ZZZZZ	Batch ID: R14251	TestNo: SW8015B	Analysis Date: 10/18/2007	SeqNo: 206167
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
TPH (Diesel)	0.3670	0.100 1 0	36.7 30 68.5	
Surr: Pentacosane	0.09900	0 0.1 0	99.0 46.8 104	
Sample ID WDSG071017A-LCS	SampType: LCSD	TestCode: TEPHSG_W Units: mg/L	Prep Date: 10/17/2007	RunNo: 14251
Client ID: ZZZZZ	Batch ID: R14251	TestNo: SW8015B	Analysis Date: 10/18/2007	SeqNo: 206168
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
TPH (Diesel)	0.3430	0.100 1 0	34.3 30 68.5 0.367	6.76 30
Surr: Pentacosane	0.1070	0 0.1 0	107 46.8 104 0	0 0 S

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RPD outside accepted recovery limits R

### 4568.02 **Project:**

# ANALYTICAL QC SUMMARY REPORT

BatchID: R14253

Sample ID SDSG071017A-MB	SampType: MBLK	TestCode: TEPHSG_SOI Un	its: mg/Kg	Prep Date: 10/17/2007	RunNo: 14253
Client ID: ZZZZZ	Batch ID: R14253	TestNo: SW8015B		Analysis Date: 10/18/2007	SeqNo: 206184
Analyte	Result	PQL SPK value SPK Re	of Val %REC	LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
TPH (Bunker Oil)	ND	4.00			
TPH (Diesel)	ND	2.00			
TPH (Motor Oil)	ND	4.00			
Surr: Pentacosane	3.400	0 3.33	0 102	53.5 127	
Sample ID SDSG071017A-LCS	SampType: LCS	TestCode: TEPHSG_SOI Un	its: mg/Kg	Prep Date: 10/17/2007	RunNo: 14253
Client ID: ZZZZZ	Batch ID: R14253	TestNo: SW8015B		Analysis Date: 10/18/2007	SeqNo: 206185
Analyte	Result	PQL SPK value SPK Re	of Val %REC	LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
TPH (Diesel)	28.10	2.00 33.3	0 84.4	46.2 109	
Surr: Pentacosane	3.570	0 3.33	0 107	53.5 127	
Sample ID SDSG071017A-LCS	SampType: LCSD	TestCode: TEPHSG_SOI Un	its: mg/Kg	Prep Date: 10/17/2007	RunNo: 14253
Client ID: ZZZZZ	Batch ID: R14253	TestNo: SW8015B		Analysis Date: 10/18/2007	SeqNo: 206186
Analyte	Result	PQL SPK value SPK Re	əf Val %REC	LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
TPH (Diesel)	28.68	2.00 33.3	0 86.1	46.2 109 28.1	2.04 30
Surr: Pentacosane	3.826	0 3.33	0 115	53.5 127 0	0 0

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Analyte detected below quantitation limits J

### **CLIENT:** Treadwell & Rollo(Oakland) Work Order: 0710115 4568.02 **Project:**

## ANALYTICAL QC SUMMARY REPORT

BatchID: R14254

Sample ID MBLK	SampType: MBLK	TestCode: TDS_W		Units: <b>mg/L</b>		Prep Date:		RunNo: 14254			
Client ID: ZZZZZ	Batch ID: R14254	TestNo: <b>E160.1</b>			Analysis Date: 10/17/20	007	SeqNo: 206195				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Total Dissolved Solids (Residue, Fi	ltera ND	10									

**Qualifiers:** Е Value above quantitation range ND Not Detected at the Reporting Limit

Holding times for preparation or analysis exceeded Н R

RPD outside accepted recovery limits

Analyte detected below quantitation limits J

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Spike Recovery outside accepted recovery limits Page 5 of 5

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November 07, 2007

Eric Morita Treadwell & Rollo(Oakland) 501 14th Street 3rd Floor Oakland, CA 94612

TEL: (510) 874-4500 FAX (510) 874-4507

RE:

Dear Eric Morita:

Order No.: 0711013

Torrent Laboratory, Inc. received 5 samples on 11/2/2007 for the analyses presented in the following report.

All data for associated QC met EPA or laboratory specification(s) except where noted in the case narrative.

Torrent Laboratory, Inc, is certified by the State of California, ELAP #1991. If you have any questions regarding these tests results, please feel free to contact the Project Management Team at (408)263-5258;ext: 204.

Sincerely,

Valoratory Director

11/2/07 Date

Patti Sandrock QA Officer



# TORRENT LABORATORY, INC.

## 483 Sinclair Frontage Road • Milpitas, CA • Phone: (408) 263-5258 • Fax: (408) 263-8293

Visit us at www.torrentlab.com email: analysis@torrentlab.com

Report prepared for:	Eric Morita Treadwell & I	Rollo(Oakland)			Dat Date	e Received: e Reported:	11/2/2007 11/7/2007					
Client Sample ID: Sample Location: Sample Matrix: Date/Time Sampled	TR-1-9.5 The Colony at SOIL 10/16/2007 10	t Jack London S 0:15:00 AM	qua		Lab Sample ID: 0711013-001 Date Prepared: 11/5/2007							
Parameters		Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch			
Lead		SW6010B	11/6/2007	1	1	1.0	3.4	mg/Kg	3918			
Client Sample ID: Sample Location: Sample Matrix: Date/Time Sampled	TR-2-9.5 The Colony at SOIL 10/16/2007 11	t Jack London S 1:09:00 AM	qua		Lab Date	Sample ID: e Prepared:	0711013- 11/5/2007	002				
Parameters		Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch			
Lead		SW6010B	11/6/2007	1	1	1.0	2.0	mg/Kg	3918			
Client Sample ID: Sample Location: Sample Matrix: Date/Time Sampled	TR-3-9.5 The Colony at SOIL 10/16/2007 12	t Jack London S 2:00:00 PM	qua	Lab Sample ID: 0711013-003 Date Prepared: 11/5/2007								
Parameters		Analysis	Date	RL	Dilution	MRL	Result	Units	Analytical			
		Method	Analyzed		Factor				Batch			

<b>Report prepared for:</b>	Eric Morita			<b>Date Received:</b> 11/2/2007										
	Treadwell & I	Rollo(Oakland)		<b>Date Reported:</b> 11/7/2007										
Client Sample ID:	TR-4-9.5			Lab Sample ID: 0711013-004										
Sample Location:	The Colony at	t Jack London S	qua		Date	e Preparec	<b>1:</b> 11/5/2007	7						
Sample Matrix:	SOIL													
Date/Time Sampled	10/16/2007 12:35:00 PM													
Parameters		Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch					
Lead		SW6010B	11/6/2007	1	1	1.0	2.6	mg/Kg	3918					
Client Sample ID:	TR-5-9.5				Lab	Sample II	<b>):</b> 0711013-	005						
Sample Location:	The Colony a	t Jack London So	aua		<b>Date Prepared:</b> 11/5/2007									
Sample Matrix:	SOIL		1			· · <b>r</b> · - · ·								
Date/Time Sampled	10/16/2007 1:30:00 PM													
Parameters		Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch					
Lead		SW6010B	11/6/2007	1	1	1.0	2.3	mg/Kg	3918					
### **Definitions, legends and Notes**

Note	Description
ug/kg	Microgram per kilogram (ppb, part per billion).
ug/L	Microgram per liter (ppb, part per billion).
mg/kg	Milligram per kilogram (ppm, part per million).
mg/L	Milligram per liter (ppm, part per million).
LCS/LCSD	Laboratory control sample/laboratory control sample duplicate.
MDL	Method detection limit.
MRL	Modified reporting limit. When sample is subject to dilution, reporting limit times dilution factor yields MRL.
MS/MSD	Matrix spike/matrix spike duplicate.
N/A	Not applicable.
ND	Not detected at or above detection limit.
NR	Not reported.
QC	Quality Control.
RL	Reporting limit.
% RPD	Percent relative difference.
а	pH was measured immediately upon the receipt of the sample, but it was still done outside the holding time.
sub	Analyzed by subcontracting laboratory, Lab Certificate #

## Torrent Laboratory, Inc.

Date: 07-Nov-07

**CLIENT:** Treadwell & Rollo(Oakland) Work Order: 0711013

### **Project:**

## ANALYTICAL QC SUMMARY REPORT

BatchID: 3918

Sample ID	MB-3918	SampType: N	MBLK	TestCod	e: 6010B_S	Units: mg/Kg		Prep Date:	: 11/5/20	07	RunNo: 144	482	
Client ID:	ZZZZZ	Batch ID: 3	3918	TestN	o: SW6010B	(SW3050B)		Analysis Date:	: 11/6/20	07	SeqNo: 208	8954	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit H	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead			ND	1.0									
Sample ID	LCS-3918	SampType: I	LCS	TestCod	e: 6010B_S	Units: <b>mg/Kg</b>		Prep Date:	: 11/5/20	07	RunNo: 144	482	
Client ID:	22222	Batch ID: 3	3918	TestN	o: SW6010B	(SW3050B)		Analysis Date:	: 11/6/20	07	SeqNo: 208	8952	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit H	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead			50.10	1.0	50	0	100	67.9	118				
Sample ID	LCSD-3918	SampType: I	LCSD	TestCod	e: 6010B_S	Units: mg/Kg		Prep Date:	: 11/5/20	07	RunNo: 144	482	
Client ID:	<u>ZZZZZ</u>	Batch ID: 3	3918	TestN	o: SW6010B	(SW3050B)		Analysis Date:	: 11/6/20	07	SeqNo: 208	8953	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit H	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead			50.70	1.0	50	0	101	67.9	118	50.1	1.19	30	
Sample ID	0711013-001AMS	SampType:	MS	TestCod	e: 6010B_S	Units: mg/Kg		Prep Date:	: 11/5/20	07	RunNo: 144	482	
Client ID:	TR-1-9.5	Batch ID: 3	3918	TestN	o: SW6010B	(SW3050B)		Analysis Date:	: 11/6/20	07	SeqNo: 208	8943	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit H	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead			50.35	1.0	50	3.4	93.9	60.5	113				
Sample ID	0711013-001AMSD	SampType:	MSD	TestCod	e: 6010B_S	Units: mg/Kg		Prep Date:	: 11/5/20	07	RunNo: 144	482	
Client ID:	TR-1-9.5	Batch ID: 3	3918	TestN	o: SW6010B	(SW3050B)		Analysis Date:	: <b>11/6/20</b>	07	SeqNo: 208	8944	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead			52.20	1.0	50	3.4	97.6	60.5	113	50.35	3.61	30	

**Qualifiers:** 

Е Value above quantitation range ND Not Detected at the Reporting Limit

Holding times for preparation or analysis exceeded Н

RPD outside accepted recovery limits R

J

S

Analyte detected below quantitation limits Spike Recovery outside accepted recovery limits Page 1 of 1

I	Torrent	483 Sinclair Milpitas, CA Phone: 408 FAX: 408.2 www.torren	r Frontage A 95035 3.263.525 63.8293 tlab.com	e Road 8 RESE	T • NC	C DTE: SHA	CHA	REAS	OF ARE F			TLAB	<b>USE</b> (	ONLY .	0	AB WORK ORDER NO
Company	Name: Treaduce	a & I	Rell	0		Locati	on of Sa	mpling	:	The	Co	lor	ry	at	Jaul	e London Sque
Address:	501 14th st	, 36 2	floos			Purpo	se:						1			Ŷ
ity:	Dalland s	tate: Cf	A .	Zip Code:		Speci	al Instru	ctions /	Comm	ents:	Ad	gn	Re	Que	& Ja	ios Pt
elephor	ie: FA)	<b>K</b> :				or	iain	a	(1)	of	t c	FC	101	15		
EPORT	TO: Esic Mosita	SAMPLER:			a colline of	P.O. 1	#: [	+5	68.	02	E	MAIL:		-		
URNAR	DUND TIME:	SAMPI	LE TYPE:	1.1	REPORT	FORMAT:			10							1
10 Wor 7 Work	k Days 3 Work Days Noon - N Days 2 Work Days 2 - 8 Hou Days 1 Work Day Other	Ixt Day Jrs Units Stor	orm Water ste Water bund Water I	Air Other	QC Le EDF Excel /	vel IV EDD	tal Pb		w having	7						ANALYSIS REQUESTED
AB ID	CLIENT'S SAMPLE I.D.	DATE / T SAMPL	ED.	MATRIX	# OF CONT	CONT TYPE	10		ð							REMARKS
001A	TR-1-9.5	10/16 10	115	S	1	Bray sleer	X			07	1011	5-	001	A		
002A	TR-2-9-5	10/16 11	209	1	1	1	X			07	1011	5-	00	3A		
03A	TR-3-9-5	10/16 12	00:2				X			07	(0)1	5-	00	5 A		
OYA	TR-4-9.5	10/16 17	2:35				X			07	1011	6-	001	A		
05A	TR-5-9-5	10/16 13	3:30	¥	1	k	×			07	1011	6 -	00	3A		
Reling	uished By:	Ear	Date:	102	Time:		Receiv	ed By:	bi		Print:			Date:		Time:
2 Reling	uished By: Print:		Date:	104	Time:		Receiv	ed By:	-		Print:			Date:	2105	Time:
Were San NOTE: Sa Log In By	nples Received in Good Condition? Imples are discarded by the lab	Yes N oratory 30 days Date:	NO Sai s from date	mples on lo	ce? DYe unless othe .og In Revi	s D NO er arrange ewed By: _	Method	of Ship are ma	ment		Da	te:	s	ample se	eals intact?	Yes NO N/A

## Treadwell&Rollo

APPENDIX C Boring Logs

			UNIFIED SOIL CLASSIFICATION SYSTEM							
м	Major Divisions Symbols Typical Names									
200	- ·	GW	Well-graded gravels or gravel-sand mixtures, little or no fines							
no.	Gravels (More than half of	GP	Poorly-graded gravels or gravel-sand mixtures, little or no fines							
<b>d S</b>	coarse fraction >	GM	Silty gravels, gravel-sand-silt mixtures							
of so	no. 4 sieve size)	GC	Clayey gravels, gravel-sand-clay mixtures							
<b>P-Gr</b> half sieve	Sande	SW	Well-graded sands or gravelly sands, little or no fines							
<b>arse</b> han	(More than half of	SP	Poorly-graded sands or gravelly sands, little or no fines							
ore t	coarse fraction <	SM	Silty sands, sand-silt mixtures							
Ű.	10. 4 01000 0120)	SC	Clayey sands, sand-clay mixtures							
e) iil	0.11	ML	Inorganic silts and clayey silts of low plasticity, sandy silts, gravelly silts							
Soi Soi Soi Soi Soi Size	Silts and Clays $LL = < 50$	CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, lean clays							
half balf sieve		OL	Organic silts and organic silt-clays of low plasticity							
<b>Grai</b> than 200 s		МН	Inorganic silts of high plasticity							
ore 1	Silts and Clays $  \downarrow \rangle = > 50$	СН	Inorganic clays of high plasticity, fat clays							
ΈĖν	> 00	ОН	Organic silts and clays of high plasticity							
Highl	y Organic Soils	PT	Peat and other highly organic soils							

	GRAIN SIZE CHART												
	Range of Grain Sizes												
Classification	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 3" to 3/4" 3/4" to No. 4	76.2 to 4.76 76.2 to 19.1 19.1 to 4.76											
Sand coarse medium fine	No. 4 to No. 200 No. 4 to No. 10 No. 10 to No. 40 No. 40 to No. 200	4.76 to 0.074 4.76 to 2.00 2.00 to 0.420 0.420 to 0.074											
Silt and Clay	Below No. 200	Below 0.074											

#### SAMPLE DESIGNATIONS/SYMBOLS

	(	<b>GRAIN SIZE CHA</b>	RI		Sample t	akan with Sprague & Henwood split-barrel sampler with a				
		Range of Gra	ain Sizes		3.0-inch outside diameter and a 2.43-inch inside diameter. Darke					
Classifi	cation	U.S. Standard Sieve Size	Grain Size in Millimeters		area indicates soil recovered Classification sample taken with Standard Penetration Test sample					
Boulde	ers	Above 12"	Above 305		Classifier					
Cobble	s	12" to 3"	305 to 76.2		Undistur	ped sample taken with thin-walled tube				
Gravel coarse fine	e	3" to No. 4 3" to 3/4" 3/4" to No. 4	76.2 to 4.76 76.2 to 19.1 19.1 to 4.76		Disturbed sample					
Sand coarse mediu fine	e ım	No. 4 to No. 200 No. 4 to No. 10 No. 10 to No. 40 No. 40 to No. 200	4.76 to 0.074 4.76 to 2.00 2.00 to 0.420 0.420 to 0.074		Sampling attempted with no recovery					
Silt and	d Clay	Below No. 200	Below 0.074		Core san	npie				
					Analytical laboratory sample					
<u> </u>	Jnstabiliz	zed groundwater lev	el		Sample t	aken with Direct Push sampler				
<u>▼</u> s	Stabilized	d groundwater level			Sonic					
				SAMPL	LER TYPE					
C C	Core bar	rel			PT	Pitcher tube sampler using 3.0-inch outside diameter, thin-walled Shelby tube				
CA C	California diameter	a split-barrel sample and a 1.93-inch insi	r with 2.5-inch outs de diameter	ide	S&H	Sprague & Henwood split-barrel sampler with a 3.0-inch outside diameter and a 2.43-inch inside diameter				
D&M E	Dames & diameter,	Moore piston samp thin-walled tube	ler using 2.5-inch o	outside	SPT	Standard Penetration Test (SPT) split-barrel sampler with				
O C tl	Osterberg hin-walle	g piston sampler usi ed Shelby tube	ng 3.0-inch outside	e diameter,	ST	Shelby Tube (3.0-inch outside diameter, thin-walled tube) advanced with hydraulic pressure				
	THE	COLONY DEV 311 2ND ST	<b>ELOPMENT</b>			CLASSIFICATION CHART				

# **Treadwell**& Rollo

THE COLONY DEVELOPMENT 311 2ND STREET Oakland, California

Date 11/07/07 Project No. 4568.02

PRC	JECT:		TI	HE C	<b>OLC</b> 311 Oakla	NY DEVELOPMENT 2ND STREET and, California	Log of	Boring TR	- <b>1</b> AGE 1 OF 1
Borin	g locatior	n: See	e Site	Plan	, Figu	re 2		Logged by: E. Mo	orita
Date	started:	10/16/0	7			Date finished: 10/16/07		Drilled By: RSI D	Drilling
Drillir	ng methoo	d: Dual	Tube						
Ham	mer weigl	nt/drop:				Hammer type:			
Sam	pler: Dir	ect Pusł	٦						
:PTH eet)	Sample	MPLES	f) (ery	(mqq) h	огосу	MATERI	AL DESCRIP	TION	
DE (f	Number	Sam	Reco	NO NO	ET I				
1—				ppm	SIVI	<ul> <li>SILTY SAND with GRAVEL (SI brown, medium dense, moist, s percent gravel, 55 percent fine</li> </ul>	۷) ubangular, sligl to medium san	htly plastic, well grad d, 35 percent fines	ed, no odor, 10
2— 3—					SM	SILTY SAND (SM) brown, moist, subrounded, sligh	surface, some c	rly graded, no odor,	eces / — 75 percent fine —
4—				0		sand, 25 percent fines			
5— 6—	-			ppm		No recovery from 5 to 8 feet used piston-tip to remove possi	ble obstruction	in front of direct pus	n sampler _
7—		•				_			_
8— 9—	-			0		SAND with SILT (SP) light brown, loose, wet to satura	ated, non plastic	c, no odor, 85 percer	it fine to
10-	TR-1-9.5	•		ppm	SP	medium sand, 15 percent fines wet at 8 feet saturated at 10 feet			_
11— 12—	_								
13-									_
14-									_
16-									_
17—									_
18— 19—									_
20-									_
21-									_
22— 23—									_
24—									_
25-									_
26— 27—									_
28—									_
29-									_
30 Borir Surfa Borir	ng terminate	d at a dept	h of 12	feet be	elow gr	ound		Treadwe	<b>ell&amp;Rollo</b>
Grou	indwater end	countered a	at a dep	oth of 8	feet.			Project No.: 4568.02	Figure: C-2

PRO	DJECT:			TI	HE C	<b>OLC</b> 311 Oakl	NY DEVELOPMENT 2ND STREET and, California	Log of	Boring TR-2 PAGE 1 OF 1	
Borin	ng locatior	า:	See	Site	Plan,	, Figu	ire 2		Logged by: E. Morita	
Date	started:	10/1	6/07				Date finished: 10/16/07		Drilled By: RSI Drilling	
Drilli	ng methoo	d: D	Dual T	Tube						
Ham	mer weigl	ht/dr	op:				Hammer type:			
Sam	pler: Dir	ect F	Push		1					
Ξ.	SA	AMPL	.ES	>	(mqc	OGY	MATERIA	AL DESCRIP	NOIT	
(fee	Sample Number	ample	Blow	cover (feet)	WV(g)	THOL				
1		S S S S S S S S S S S S S S S S S S S		Re	0 ppm	SM	SILTY SAND with GRAVEL (SM brown, medium dense, moist, s gravel, 60 percent fine to mediu concrete and brick fragments at SILTY SAND (SM) light to medium brown, loose, w graded, no odor, 80 percent fine	/I) lightly plastic, v im sand, 35 per standard standard eto saturated to medium sa	vell graded, no odor, 5 percent rcent fines , subrounded, slightly plastic, poorly nd, 20 percent fines	/
7- 8-					0 ppm	~				_
۰ ۵_					0	SM	wet at 8 feet			_
3	TR-2-9.5	•	-		ppm		$\nabla$			
10-							<u>-</u>			
11-										
12-										_
13—					0 ppm					_
14-										_
15—										_
16-	_		-		0					
17-					ppm					
18-										_
10_										
20										_
										_
21-										_
22-										
23-										_
24-										_
25-										_
26-										
27-										_
28-										
29-										_
20-										
Bori Bori Bori	ng terminate ace. ng backfilled	d at a	depth	of 16 ite.	feet be	elow gr	ound			)
	andwater ent	Journe	nou al	a uep					4568.02	C-3

PROJECT: THE	COLONY DEVELOPMENT 311 2ND STREET Oakland, California	Log of Boring TR-3 PAGE 1 OF 1										
Boring location: See Site Plan	n, Figure 2	Logged by: E. Morita										
Date started: 10/16/07	Date finished: 10/16/07	Drilled By: RSI Drilling										
Drilling method: Dual Tube												
Hammer weight/drop:	Hammer type:											
Sampler: Direct Push												
τ SAMPLES <sub>ε</sub>												
A (pp	;   º   MATERIA	AL DESCRIPTION										
	Ś											
1- 2-	1) ngular, slightly plastic, well graded, no odor, 10 o medium sand, 35 percent fines											
3-       medium brown, loose to medium dense, moist to wet, surangular, sligh well graded, no odor, 65 percent fine to medium sand, 35 percent fines         4-       SM												
		_										
	m	_										
8	SAND with SILT (SP)											
9- 10- TR-3-9.5	sand, 15 percent fines $\nabla$											
		-										
12-	SP	_										
13-		—										
	m											
16-		_										
17-		-										
18-		-										
		_										
21-		_										
22-		_										
23-		_										
		_										
		-										
		-										
		_										
29		_										
30												
Boring terminated at a depth of 15 feet t surface. Boring backfilled with bentonite.	below ground	Treadwell&Rollo										
Groundwater encountered at a depth of	10 feet.	Project No.: 4568.02 Figure: C-4										

PRC	JECT:			TI	HE C	<b>OLC</b> 311 Oakl	DNY DEVELOPMENT 2ND STREET and, California	Log of	Boring TR	-4 AGE 1 OF 1	
Borin	g locatior	n:	See	Site	Plan	, Figu	ire 2	1	Logged by: E. Mo	orita	
Date	started:	10/1	6/07				Date finished: 10/16/07		Drilled By: RSI D	Drilling	
Drillir	ng methoo	1: D	Jual T	ube							
Ham	mer weigł	nt/dro	op: ·				Hammer type:				
Sam	pler: Dir	ect F	Push								
Εæ	SA	MPL	ES		(md	OGY	MATERI				
DEP <sup>-</sup> (fee	Sample Number	Sample	Blow Count	Recovery (feet)	d) MVO	ПТНОГ					
$ \begin{array}{c} 1 - \\ 2 - \\ 3 - \\ 4 - \\ 5 - \\ 6 - \\ 7 - \\ 8 - \\ 9 - \\ 10 - \\ 11 - \\ 12 \end{array} $	TR-4-9.5	•			0 ppm 0 ppm	SM	SILTY SAND with GRAVEL (SM medium brown, medium dense, graded, no odor, 10 percent gra concrete fragments SILTY SAND (SM) brown to light brown, loose to m plastic, moderately graded, no o fines	4) , moist, subang avel, 50 percen nedium dense, odor, 65 percer on plastic to slig of fines	ular, slightly plastic to t sand, 40 percent fin moist to wet, subang nt fine to medium san	o plastic, well les ular, slightly id, 35 percent 85 percent	
12 - 13 - 14 - 15 - 16 - 17 - 18 - 19 - 20 - 21 - 22 - 23 - 24 - 25 - 25 - 25 - 26 - 27 - 28 - 28 - 28 - 28 - 28 - 28 - 28						SP					
29— 30—											
Borin Surfa	ng terminateo ice.	ata	depth	ot 15	reet be	elow gr	ound		Treadwe	<b>ell&amp;Rolld</b>	)
Grou	indwater end	ounte	ered at	a dep	oth of 1	0 feet.			Project No.:	Figure:	0 -
í									4568.02		U-5

PRC	JECT:		TI	HE C	<b>OLC</b> 311 Oakl	<b>NY DEVELOPMENT</b> <b>2ND STREET</b> and, California	Log of	Boring TR	<b>-5</b> AGE 1 OF 1				
Borin	g locatior	n: See	e Site	Plan	, Figu	ıre 2		Logged by: E. Mo	orita				
Date	started:	10/16/0	7			Date finished: 10/16/07		Drilled By: RSI D	vrilling				
Drillir	ng methoo	d: Dual	Tube										
Ham	mer weigl	nt/drop:				Hammer type:							
Sam	oler: Dir	ect Pusł	n										
EPTH (feet)	SA Sample	MPLES	overy bet)	(mqq) M	НОГОСУ	MATERI	AL DESCRIP	TION					
<u>م</u> 1-	Number		Reo (f	0 0	5 SM	SILTY SAND with GRAVEL (SM brown, medium dense, moist, s	И) ubangular, sligi	htly plastic, well grad	ed, no odor, 10 /				
2— 3—				ppm	orly graded, no	odor, 85 percent fine	/ sand, 15						
3-     4-													
6— 7—					CL	dark brown to black-brown, stiff fine sand, 55 percent fines	, wet, plastic, p	oorly graded, no odo	r, 45 percent				
8— 9—						SAND with SILT (SM) olive brown, loose, wet to satura poorly graded, no odor, 80 perc	ated, subangula ent fine to coar	ar, non plastic to slig rse sand, 20 percent	 ntly plastic, fines				
10— 11—	TR-5-9.5				SM	¥			_				
12— 13— 14—					SM	SILTY SAND (SM) light brown, loose, saturated, su graded, no odor, 75 percent fine	ubangular, non e to medium sa	plastic to slightly plas nd, 25 percent fines	stic, poorly				
15— 16—	-												
17— 18—									-				
19— 20—									_				
21-									_				
22-									_				
24- 25-									_				
26-									_				
27— 28—									-				
29-													
Borir Surfa Borir	ng terminate ice. ng backfilled	d at a dept	h of 15 nite.	feet be	elow gr	ound		Treadwe	<b>ell&amp;Rollo</b>				
Grou	indwater end	countered a	at a dep	oth of 1	0 feet.			Project No.: 4568.02	Figure: C-6				