1396 – 5th STREET, LLC
A California Limited Liability Company
1357 5th Street – Suite B
Oakland, Calif. 94607

December 24, 2006

Mr. Barney M. Chan
Hazardous Materials Specialist
Alameda County Health Care Services Agency
Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Subject: 1396- 5th Street, Oakland, Calif.
Environmental Closure
Submission to Alameda County

Dear Mr. Chan:

I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document are true and correct to the best of my knowledge.

Very truly yours,

1396-5th Street, LLC
A. C. Eisenberger
It's President

Attachment

Treadwell&Rollo

15 December 2006
Project 4068.01

Mr. Curtis Eisenberger
Red Star LLC
c/o Mariposa Property, Inc.
1357 Fifth Street
Oakland, California 94607

Subject: UST Soil and Groundwater Confirmation Sample Results
Former Red Star Yeast Facility
1396 Fifth Street
Oakland, California

Dear Mr. Eisenberger:

This letter describes and documents soil and groundwater confirmation sampling in the vicinity of the former 3,000-gallon diesel underground storage tank excavation along with summarizing previous subsurface investigations at the Former Red Star Yeast Facility at 1396 Fifth Street in Oakland, California (Site) (Figures 1).

BACKGROUND

The Site is north of Fifth Street between Cypress Street (Mandela Parkway) and Kirkham Street as shown on Figure 2. It is trapezoidal in shape and encompasses approximately 0.9 acres. The site is currently vacant, surrounded by a fence and is essentially level. It was once occupied by the Red Star Yeast Company, but all buildings and appurtenant structures have been removed.

Plans are to construct two buildings consisting of four-stories of residential units above a podium parking garage that will occupy the entire site. The residential levels and the podium will be reinforced concrete. The ground floor slab will be close to existing site grades.

The following presents a summary of the environmental activities performed at the Site.

Remediation Services Inc., June 2005 – Phase I and Phase II Environmental Site Assessment

Remediation Services Inc. performed a Phase I and II Environmental Site Assessment for the Site titled *Phase I and II Environmental Site Assessment, Alameda County Assessor's Parcel Number 004-69-004, Rev. 1* dated 17 June 2005. Based on the results of the *Phase I & II Environmental Site Assessment:*

- The Site was previously occupied by Consumer's Yeast and Vinegar Works on the western portion of the Site and the Washington Brewery on the eastern portion prior to 1902. The brewery had expanded by 1951 and was named Goebel Brewing Company.

In a 1965 Sanborn Map, the brewery was demolished and in 1966, the Red Star Yeast property was sold to Universal Food Corporation. The 1967 Sanborn Map shows the Yeast Plant expanding and occupying the entire Site. In 2003, Lasaffre Yeast Corporation purchased the Yeast operation and discontinued operations as of 1 April 2003 and demolished all the former structures in 2004.

- On 20 August 2004, Remediation Services Inc performed a subsurface investigation to collect soil and groundwater samples at the Site (Figure 2). A total of four exploratory borings (SB-1 through SB-4) were drilled to depths of approximately 20 feet and four soil and two groundwater samples were collected and analyzed for total petroleum hydrocarbons as diesel (TPHd), total petroleum hydrocarbons as gasoline (TPHg), volatile organic compounds (VOCs), pH, polynuclear aromatic hydrocarbons (PAHs), heavy metals (cadmium, chromium, lead, mercury, nickel, and zinc), and the groundwater samples were also analyzed for total dissolved solids (TDS).

- No TPHg, TPHg, or VOC's were detected in the soil and groundwater samples analyzed. The pH ranges from 6.61 to 8.16 Standard Units. Low levels of PAHs fluoranthene and pyrene were detected in one soil sample at concentration of 0.52 milligrams per kilograms (mg/kg) and 0.58 mg/kg, respectively. Elevated total lead and zinc were detected in one soil sample at concentrations of 2,700 mg/kg and 1,700 mg/kg, respectively. The groundwater had elevated TDS and Remediation Services Inc. concluded that it was naturally occurring and due to that the Site was formerly a bay wetland.

- Remediation Services Inc. recommended that future development at the Site include measures to remove soil with elevated metal concentrations from areas where soil will be exposed.

Treadwell & Rollo, Inc., April 2006 - Subsurface Investigation

As presented in our report *Limited Environmental Site Characterization, Former Red Star Yeast Site, 1396 Fifth Street, Oakland, California*, dated 17 May 2006, Treadwell & Rollo advanced six exploratory borings (E-1 through E-6) to depths of approximately 6.5 feet to 10 feet below the ground surface at locations shown on Figure 2.

The results of the borings and other available subsurface information indicate:

The Site is blanketed by heterogeneous fill extending to depths that generally range from 2.5 to 4 feet bgs. The fill is composed of medium dense sand with varying amounts of clay, brick, concrete and gravel. At the western portion of the Site, the fill is underlain by loose, clean sand

to a depth of 13 feet bgs. The sand is underlain by a marsh deposit at the central portion of the Site, between depths of 13 and 24 feet bgs. In the central portion of the Site, the marsh deposit extends from the bottom of the fill (depth of about 4.5 feet) to a depth of about 14 feet and is underlain by medium dense sand which grades to dense and very dense sand at 25 feet deep. The eastern limit of the Site is underlain by medium dense sand, grading to dense from 8 to 17 feet deep.

Groundwater was encountered in borings during drilling at depths ranging from 3.5 to 8 feet bgs. The groundwater flow direction is likely southwest towards the Oakland Estuary and San Francisco Bay.

A total of twelve soil samples indicated no TPHg, MTBE, BTEX, VOCs, or SVOCs were detected at or above method reporting limits in any of the soil samples analyzed. Low levels of TPHd were detected in six soil samples at concentrations ranging from 1.4 mg/kg to 7.8 mg/kg. TPHmo was detected in six samples at concentrations ranging from 6 mg/kg to 43 mg/kg.

In general, the metal concentrations appeared to be within normal[1] background ranges found in the western United States. However, total lead was detected at concentrations ranging from below the method reporting limits of 5 mg/kg to 180 mg/kg. Based on these concentrations, it was necessary to perform additional analyses for lead using the soluble threshold limit concentration (STLC) analysis on all samples that initially detected lead concentrations above 50 mg/kg. STLC lead was detected in 3 of the samples analyzed, at concentrations ranging from 3.4 to 11 milligrams per liter (mg/L), two of which exceed the California hazardous waste classification of 5.0 mg/L. The samples that exceeded the California hazardous waste classification were further analyzed for toxicity characteristic leaching procedure (TCLP) lead, the federal hazardous waste classification criteria. TCLP lead was not detected at or above the method reporting limit. Therefore, none of the soil at the Site is considered a federal hazardous waste.

Of six groundwater samples analyzed, no concentrations of TPHg, MTBE, BTEX, VOCs, or SVOCs were detected at or above method reporting limits in any of the groundwater samples analyzed. Low levels of TPHd were detected in four of the six groundwater samples at concentrations ranging from 54 micrograms per liter (µg/L) to 580 µg/L. TPHmo was detected in three of the six groundwater samples at concentrations ranging from 1,500 µg/L to 2,000 µg/L. The metal concentrations appeared to be within normal background ranges found in the western United States. The analytical results are summarized on Tables 1 through 4.

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

Treadwell & Rollo, Inc., October 2006 - 3,000-Gallon Diesel UST Removal

The tank was removed on 24 September 2006 and is detailed in a Treadwell & Rollo, Inc. report titled "*Underground Storage Tank Removal, 3,000-gallon Diesel Tank, Former Red Star Yeast Facility, 1396 Fifth Street, Oakland, California*" dated 20 October 2006.

A concrete slurry filled, 3,000-gallon diesel underground storage tank was removed under the direction of the City of Oakland Fire Department, Hazardous Materials Management Program. The tank was of single-wall steel construction and measured approximately 13 feet in length and 6.5 feet in diameter. The tank appeared to be in good condition with no visible evidence of any through-going pitting or containment failures.

Approximately 20 cubic yards of soil was excavated and placed on visqueen. Petroleum hydrocarbon sheen was observed on the groundwater surface within the excavation pit. Approximately 6,300 gallons of groundwater were pumped from the excavation pit and disposed of offsite.

Treadwell & Rollo collected a soil samples from the tank excavation, a sample of the concrete slurry, and groundwater from the excavation. The samples were analyzed for: TPHg, TPHd, BTEX, and MTBE. In addition, the soil and concrete slurry samples were analyzed for total lead

No TPHg, TPHd, BTEX, MTBE, or lead were detected at or above the method reporting limits in the soil sample (ST-1) collected from the tank excavation. In the tank fill material (concrete slurry) sample, TPH-gas was detected at 4.8 mg/kg, TPH-diesel was detected at 710 mg/kg, and xylenes were detected at 0.0098 mg/kg. No other BTEX, MTBE, or total lead was detected at or above method reporting limits.

A low level of TPH-diesel was detected in the groundwater sample at a concentration of 180 µg/L. No TPH-gas, BTEX, or MTBE were detected at or above method reporting limits.

On 30 November 2006, the City of Oakland Fire Department, Hazardous Materials Management Program issued a letter of No Further Action in regards to the former 3,000-gallon diesel underground storage tank.

UST SOIL AND GROUNDWATER CONFIRMATION SAMPLING

On 14 November 2006, Treadwell & Rollo collected four soil samples and one groundwater sample from the area surrounding the tank excavation (Figure 2). The following soil and groundwater samples were collected:

- Soil sample SW05 was collected five feet west of the excavation from a depth of approximately 5 feet below ground surface (bgs);
- Soil sample SE05 was collected five feet east of the former excavation from a depth of approximately 5 feet bgs;
- Soil sample SN05 was collected five feet north of the former excavation from a depth of approximately 5 feet bgs;
- Soil sample SN10 was collected ten feet north of the former excavation from a depth of approximately 5 feet bgs; and
- Groundwater sample WN10 was collected ten feet north of the former excavation from a depth of approximately 6 feet bgs.

To obtain the four soil samples, an excavator was used to remove the top five feet of soil and then a soil sample was collected by driving a two-inch-diameter stainless steel tube in the exposed soil. The ends of the sample tubes were covered with Teflon and plastic caps. The soil samples were placed in an ice-cooled chest until delivery to a certified laboratory under chain-of-custody procedures.

A groundwater sample was collected from the excavation 10 feet north of the former tank excavation area by removing 6 feet of surface soil and allowing groundwater to seep into the soil pit. The groundwater sample was collected in sample containers prepared and provided by a state-certified contracted analytical laboratory in accordance with standard laboratory procedures for the requested analyses. The samples were labeled and placed in an ice-cooled chest for delivery to the analytical laboratory using chain-of-custody procedures.

Analytical Testing

The soil and groundwater samples were delivered to McCampbell Analytical, Inc., a California Department of Health Services certified analytical laboratory in Pittsburg, California. The samples were analyzed for:

- TPHg and TPHd by EPA Testing Method 8015 Modified; and
- BTEX by EPA Testing Method 8020.

Analytical Results

The analytical results of the soil and groundwater samples are presented in Tables 5 and 6. The results from previous samples collected from the tank removal activities are also included in the Tables. A copy of the certified laboratory reports and chain-of-custody forms for the analyses described above are presented in Appendix A.

TPHd was detected in the soil samples collected approximately 5 feet east and north of the former excavation area at concentrations of 1.3 and 2.0 mg/kg, respectively. No other constituents were detected at or above method reporting limits from the area surrounding the excavation area or from the excavated soil.

TPHg was detected in groundwater at a concentration of 270 µg/L from sample WN10. No other constituents were detected at or above the method reporting limits.

DISCUSSION

Based on the analytical results from the chemical analyses of soil samples from the exploratory borings and tank removal activities, Site soil contains low levels of TPHd and TPHmo which will most likely be accepted for offsite disposal at a regulated Class II and/or Class III landfill. Localized areas of Site soil has been reported to contain elevated concentrations of total and soluble lead at levels which exceed the California hazardous waste criteria levels. These materials will require specific handling and offsite disposal at a licensed California hazardous waste Class I facility.

The areas of fill material containing lead exceeding the California hazardous waste levels (Class I waste material) are near borings SB-2, E-1 and E-2. Because hazardous materials were detected at the Site, a soil management plan (SMP) and a health and safety (H&S) plan (prepared by others) will be required prior to construction. The SMP will provide recommended measures to mitigate the long-term environmental or health and safety risks caused by the presence of hazardous materials in the soil. The SMP will also contain contingency plans to be implemented during soil excavation if unanticipated hazardous materials are encountered. The H&S plan will outline proper soil handling procedures and health and safety requirements to minimize worker and public exposure to hazardous materials during construction.

Groundwater is encountered at depths of approximately 3.5 and 8 feet bgs across the site. Low levels of TPHg, TPHd, and TPHmo were detected in the groundwater samples throughout the site. The proposed construction activities most likely will not encounter groundwater in quantities that will require its removal from the subsurface. If more groundwater than expected

is encountered during construction, the groundwater will be pumped into appropriate containers and additional samples will be obtained for chemical analyses for disposal options.

RECOMMENDATIONS FOR MITIGATIVE ACTIONS

The results of previous environmental investigations at the Site indicate the soil beneath the Site contains elevated concentrations of heavy metals and petroleum hydrocarbons. The presence of these compounds poses soil management and potential health and safety issues to be addressed as part of the Site development activities. The soil management objectives for the Site are to minimize exposure to construction workers at the Site, nearby residents and/or pedestrians, and future users of the Site to constituents in the soil.

Health and Safety Issues

On the basis of our experience on similar sites, there are potential health and safety risks associated with the heavy metals and petroleum hydrocarbons detected at the Site. We judge there may be the potential for this soil to affect construction workers at the Site, nearby residents and/or pedestrians, and future users of the Site. The routes of potential exposure to the petroleum hydrocarbons and metals could be through three pathways: 1) dermal (skin) contact with the soil, 2) inhalation of dusts, and 3) ingestion of the soil.

The most likely potential for human exposure to the petroleum hydrocarbons and metals in the soil will be during soil excavation operations. Because on-site materials contain concentrations of petroleum hydrocarbons and lead in excess of the Proposition 65 guidelines, we recommend that proper health and safety procedures, as well as warning requirements, be implemented during construction. The Site contractor should be responsible for establishing and maintaining proper health and safety procedures to minimize worker and public exposure to Site contaminants during construction. The potential health risk to on-site construction workers and the public will be minimized by developing and implementing a comprehensive health and safety plan (HASP), which should be prepared by a certified industrial hygienist that represents the Site contractors.

The HASP will describe the health and safety training requirements, i.e. trained in accordance with Section 1910.120 of 29 Code of Federal Regulations (HAZWOPER training), specific personal hygiene, and monitoring equipment that will be used during construction to protect and verify the health and safety of the construction workers and the general public from exposure to constituents in the soil. It may also be necessary to conduct air monitoring to evaluate the amount of airborne particles during excavation.

A Site health and safety officer (HASO) will be on Site at all times during excavation activities to ensure that all health and safety measures are maintained. The HASO will have authority to direct and stop (if necessary) all construction activities in order to ensure compliance with the HASP.

The purpose of the HASP is to provide field personnel with an understanding of the potential chemical and physical hazards, protection of any off-site receptors, procedures for entering the project Site, health and safety procedures, and emergency response to hazards should they occur. All project personnel shall read and adhere to the procedures established in this HASP. A copy of this plan will be kept on Site during field activities and will be reviewed and updated as necessary.

The general public will be protected through the following measures:

- The Site will be fenced;
- Exposed soil at the construction Site will be watered at least twice a day to prevent visible dust from migrating off-site;
- Soil stockpiles will be covered;
- Water will be misted or sprayed during the loading of soil onto trucks for off haul;
- Trucks transporting contaminated soil will be covered with a tarpaulin or other cover;
- The wheels of the trucks exiting the Site will be cleaned prior to entering public streets;
- Public streets will be swept daily if soil is visible; and
- Excavation and loading activities will be suspended if winds exceed 20 miles per hour.

Soil Management

The proposed construction activities will disturb soil during Site grading, the construction of new mat foundations, elevator pits, and utility lines. During construction activities, dust control measures will be implemented to reduce potential exposure. These measures may include moisture-conditioning the soil, using dust suppressants, covering the exposed soil and stockpiles with weighed down plastic sheeting to prevent exposure of the soil, or by capping the on-Site soil with buildings, asphalt, or at least two feet of clean imported fill.

The Site's HASP (prepared by others) will contain additional dust monitoring, action levels, dust control measures, and work stoppage provisions that will be followed during construction activities.

Soil Stockpiling

The excavated soil is to be disposed off-site; and if needed; chemical testing of the stockpile will be performed to profile the soil for disposal. Soil profiling criteria depends on the proposed landfill location. These procedures should be established by the excavation contractor and coordinated with the proposed landfills prior to initiating soil excavation. Typical soil profiling requirements are one four-point composite sample per 500 to 750 cubic yards to be disposed.

Soil Sampling

Soil samples will be collected by using a hand driven sampler with an inside diameter of two inches, lined with a clean stainless steel tube and driven into the soil. The ends of the sample tube will be covered with Teflon and sealed with plastic end caps, and placed into an ice-cooled chest until delivery to an analytical laboratory. The soil samples collected from the stockpile will be identified by using a progressive numbering sequence with the date of the sample collection and the location. All appropriate regulatory sampling methods, holding times, and detection limits will be followed.

Groundwater Management

Groundwater is encountered at a depth of approximately 4 feet bgs across the Site. The proposed construction activities most likely will not encounter groundwater in quantities that will require its removal from the subsurface. If more groundwater than expected is encountered during construction, the groundwater will be pumped into appropriate containers and samples will be obtained for chemical analyses. The groundwater will be tested for parameters established by East Bay Municipal Utility District (EBMUD) for discharge of groundwater into the sanitary sewer system. A permit will be obtained from EBMUD prior to any groundwater discharge. If analytes in the groundwater exceed the EBMUD discharge limits, the groundwater will be properly treated prior to disposal.

Site Encapsulation

The risk of direct contact with the underlying soil by future Site users will be mitigated by encapsulating the soil with concrete foundations, buildings, and/or asphaltic concrete. The concrete foundation system, buildings, and asphaltic concrete will be considered the cap above the soil. The encapsulation will sufficiently reduce the health risk by providing a physical

barrier, thereby eliminating the dermal contact, inhalation, and ingestion exposure pathway between the contaminants and Site users.

Contingency Procedures

The following tasks should be implemented during soil excavation if unanticipated hazardous materials are encountered. Such materials may include underground storage tanks (USTs) and associated product lines, sumps and/or vaults, former monitoring wells, and soil with significant petroleum hydrocarbon odors and/or stains:

- Stop work in the area the suspect material is encountered and cover with plastic sheets;
- Notify the Site superintendent and Treadwell & Rollo, Inc. for Site inspection and appropriate action in the suspect area;
- Review the existing health and safety plan for revisions, if necessary, and have appropriately trained personnel on Site to work with the affected materials, once directed by the contractor;

If a UST is found, arrange for a licensed tank removal contractor to properly remove and dispose of the UST. Proper permits and notifications should be in place prior to pulling the UST. If soil staining is observed, place the affected soil into a stockpile onto plastic sheets and cover with plastic sheets. Treadwell & Rollo will complete soil sampling and analysis tasks for UST closure in accordance with City of Oakland Fire Department, Hazardous Materials Management Program.

If a sump and/or vaults are located during excavation activities, contact Treadwell& Rollo for inspection and appropriate action. If no liquid, obvious staining or odors are noted, sump and/or vault will be destroyed and disposed of. If liquid is present within the sump and/or vault and/or obvious staining and odors are noted, Treadwell & Rollo will collect samples for analyses to determine proper disposal of the material, if needed.

If stained soil or odors are noted, plastic sheeting will be placed over the affected area and Treadwell& Rollo will be contacted for inspection and appropriate action. If the material is to be excavated, the material will be stockpiled onto plastic sheeting and cover with plastic sheeting. Soil samples will samples will be collected and analyzed to determine proper disposal of the material, if needed.

Closure Report

A Closure Report will be prepared by a third party separate from the contractors upon completion of site mitigation activities. This report will present a chronology of the construction events, a summary of analytical data, and a description of all mitigation activities at the Site. It will also include a certification statement that indicates the mitigation activities have been performed in accordance with this SMP.

We appreciate the opportunity of being of service to you on this project. If you have any questions or require additional information, please call.

Sincerely yours,
TREADWELL & ROLLO, INC.

Peter J. Cusack, REA
Project Scientist

Michael A. Chamberlain, PG
Senior Project Geologist

PROFESSIONAL GEOLOGIST
MICHAEL A. CHAMBERLAIN
NO. 7710
STATE OF CALIFORNIA

40680107.PJC

Attachments

TABLES

Table 1
Soil Analytical Results for Petroleum Hydrocarbons
Red Star Yeast
1396 Fifth Street
Oakland, California

Sample ID	Date Sample	TPHg	TPHd	TPHmo	MTBE	Benzene	Toluene	Ethlybenzene	Xylenes	VOCs	SVOCs
		mg/kg									
E-1-1.5	4/14/2006	< 1.0	3.7	19	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	--	--
E-1-2.5	4/14/2006	< 1.0	< 1.0	< 1.0	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	ND	ND
E-2-1.5	4/14/2006	< 1.0	< 1.0	< 1.0	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	--	--
E-2-2.5	4/14/2006	< 1.0	< 1.0	< 1.0	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	--	--
E-3-1.5	4/14/2006	< 1.0	2.6	12	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	--	--
E-3-2.5	4/14/2006	< 1.0	< 1.0	< 1.0	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	ND	--
E-4-1.5	4/14/2006	< 1.0	5.6	38	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	--	--
E-4-2.5	4/14/2006	< 1.0	< 1.0	< 1.0	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	--	--
E-5-1.5	4/14/2006	< 1.0	1.4	6.0	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	ND	--
E-5-2.5	4/14/2006	< 1.0	3.2	20	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	--	--
E-6-1.5	4/14/2006	< 1.0	7.8	43	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	--	--
E-6-2.5	4/14/2006	< 1.0	< 1.0	< 1.0	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	ND	--

Notes:
TPHg - Total Petroleum Hydrocarbons as Gasoline, EPA Method 8015M
TPHd - Total Petroleum Hydrocarbons as Diesel Range (C10-C23), EPA Method 8015M
TPHmo - Total Petroleum Hydrocarbons as Motor Oil (C10-C23), EPA Method 8015M
MTBE - Methyl Tert Butyl Ether
VOCs - Volatile Organic Compounds, EPA 8260B
SVOCs - Semi volatile organic compounds, EPA Method 8270
All results are reported in milligrams per kilogram (mg/kg)
< 0.005 - Analyte was not detected above the laboratory reporting limit (0.005 mg/kg)
-- Not Analyzed
ND - Not detected at or above the laboratory reporting limit

Table 2
Soil Analytical Results for Metals
Red Star Yeast
1396 Fifth Street
Oakland, California

Sample ID	Date Sampled	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	STLC Lead	TCLP Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/L)	(mg/L)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
E-1-1.5	4/14/2006	--	--	--	--	< 1.5	20	--	--	180	11	<0.2	--	--	25	--	--	--	--	280
E-1-2.5	4/14/2006	1.8	6.8	1,100	0.9	< 0.25	16	7.7	38	27	--	--	0.12	1.4	18	< 0.5	< 0.5	< 0.5	48	41
E-2-1.5	4/14/2006	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
E-2-2.5	4/14/2006	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
E-3-1.5	4/14/2006	< 0.5	5.1	--	--	--	< 0.5	--	--	< 0.5	--	--	--	--	7.3	--	--	--	--	< 5.0
E-3-2.5	4/14/2006	--	--	--	--	< 1.5	24	--	--	140	6.7	<0.2	--	--	22	--	--	--	--	370
E-4-1.5	4/14/2006	--	--	--	--	< 1.5	47	--	--	43	--	--	--	--	43	--	--	--	--	67
E-4-2.5	4/14/2006	< 0.5	1.7	130	< 0.5	< 0.25	23	3.5	13	15	--	--	< 0.05	< 0.5	18	< 0.5	< 0.5	< 0.5	22	34
E-5-1.5	4/14/2006	< 0.5	3.1	140	< 0.5	0.36	34	6.5	19	5.6	--	--	< 0.05	< 0.5	32	< 0.5	< 0.5	< 0.5	39	49
E-5-2.5	4/14/2006	--	--	--	--	< 1.5	29	--	--	34	--	--	--	--	22	--	--	--	--	200
E-6-1.5	4/14/2006	< 0.5	4.3	190	< 0.5	< 0.25	31	7.9	18	76	3.4	<0.2	0.16	0.5	40	< 0.5	< 0.5	< 0.5	45	92
E-6-2.5	4/14/2006	--	--	--	--	< 1.5	50	--	--	< 5.0	--	--	--	--	41	--	--	--	--	25

Notes:

mg/kg - milligrams per kilograms

< 5.0 - Analyte was not detected above the laboratory reporting limit (5.0 mg/kg).

-- Not analyzed

Table 3
Groundwater Analytical Results for Petroleum Hydrocarbons
Red Star Yeast
1396 Fifth Street
Oakland, California

Sample ID	Date Sample	TPHg	TPHd	TPHmo	MTBE	Benzene	Toluene	Ethlybenzene	Xylenes	VOCs	SVOCs
		µg/L									
E-1-W	4/14/2006	< 1.0	< 1.0	< 1.0	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	ND	ND
E-2-W	4/14/2006	< 1.0	320	1,500	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	--	--
E-3-W	4/14/2006	< 1.0	570	2,000	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	ND	ND
E-4-W	4/14/2006	< 1.0	580	1,900	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	--	--
E-5-W	4/14/2006	< 1.0	54	< 1.0	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	ND	ND
E-6-W	4/14/2006	< 1.0	< 1.0	< 1.0	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	ND	ND

Notes:
TPHg - Total Petroleum Hydrocarbons as Gasoline, EPA Method 8015M
TPHd - Total Petroleum Hydrocarbons as Diesel Range (C10-C23), EPA Method 8015M
TPHmo - Total Petroleum Hydrocarbons as Motor Oil (C10-C23), EPA Method 8015M
MTBE - Methyl Tert Butyl Ether
VOCs - Volatile Organic Compounds, EPA 8260B
SVOCs - Semi volatile organic compounds, EPA Method 8270
All results are reported in micrograms per liter (µg/L)
< 1.0 - Analyte was not detected above the laboratory reporting limit (0.005 mg/kg)
-- Not Analyzed
ND - Not detected at or above the laboratory reporting limit

Table 4
Groundwater Analytical Results for Total Metals
Red Star Yeast
1396 Fifth Street
Oakland, California

Sample ID	Date Sampled	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
E-1-W	4/14/2006	< 0.5	3.4	180	< 0.5	< 0.25	< 0.5	0.96	0.94	< 0.5	< 0.5	4.1	3.7	< 0.5	< 0.19	< 0.5	0.67	< 0.5
E-2-W	4/14/2006	--	--	--	--	< 0.25	< 0.5	--	--	--	--	--		--	--	--	--	--
E-3-W	4/14/2006	0.58	4.7	320	< 0.5	< 0.25	< 0.5	3.1	< 0.5	< 0.5	< 0.012	12	8.1	< 0.5	< 0.19	< 0.5	2.9	12
E-4-W	4/14/2006	--	--	--	--	< 0.25	< 0.5	--	--	< 0.5	--	--	5.8	--	--	--	--	< 5.0
E-5-W	4/14/2006	< 0.5	< 0.5	170	< 0.5	< 0.25	< 0.5	1.9	0.54	< 0.5	0.013	1.0	11	< 0.5	< 0.19	< 0.5	1.9	< 5.0
E-6-W	4/14/2006	< 0.5	< 0.5	150	< 0.5	< 0.25	< 0.5	3.0	1.5	< 0.5	< 0.012	1.3	7.7	< 0.5	< 0.19	< 0.5	1.7	< 5.0

Notes:
µg/L - microgram per liter
< 0.5 - Analyte was not detected above the laboratory reporting limit (0.5 µg/L).
-- Not analyzed

Table 5
Soil Analytical Results for Petroleum Hydrocarbons and Total Lead
Red Star Yeast
Oakland, California

Sample ID	Date Sample	TPHg	TPHd	MTBE	Benzene	Toluene	Ethlybenzene	Xylenes	Lead
		mg/kg							
ST-1	26-Sep-06	< 1.0	< 1.0	< 0.5	< 0.005	< 0.005	< 0.005	< 0.005	< 5.0
SE 05 (14Nov06)	14-Nov-06	< 1.0	1.3	NM	< 0.005	< 0.005	< 0.005	< 0.005	NM
SW 05 (14Nov06)	14-Nov-06	< 1.0	< 1.0	NM	< 0.005	< 0.005	< 0.005	< 0.005	NM
SN 05 (14Nov06)	14-Nov-06	< 1.0	2.0	NM	< 0.005	< 0.005	< 0.005	< 0.005	NM
SN 10 (14Nov06)	14-Nov-06	< 1.0	< 1.0	NM	< 0.005	< 0.005	< 0.005	< 0.005	NM

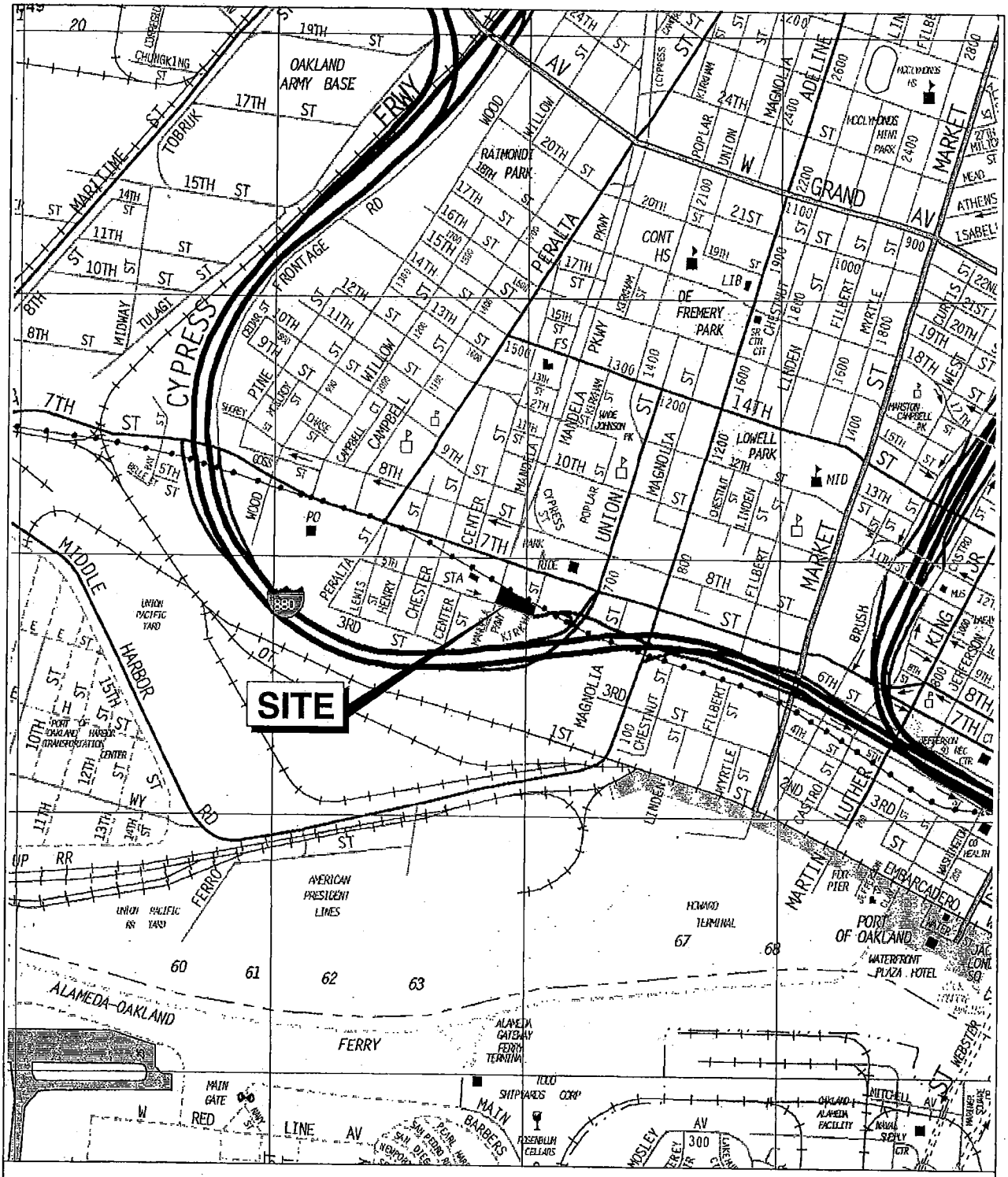
Notes:
All results are reported in milligrams per kilogram (mg/kg)
TPHg - Total Petroleum Hydrocarbons as Gasoline, EPA Method 8015M
TPHd - Total Petroleum Hydrocarbons as Diesel Range (C10-C23), EPA Method 8015M
MTBE - Methyl Tert Butyl Ether
<1.0 - Analyte was not detected above the laboratory reporting limit (1.0 mg/kg)
NM - Not Measured

Table 6
Groundwater Analytical Results for Petroleum Hydrocarbons
Red Start Yeast
Oakland, California

Sample ID	Date Sampled	TPHg	TPHd	MTBE	Benzene	Toluene	Ethlybenzene	Xylenes
		µg/L						
GRAB	3-Oct-06	< 50	180	< 5.0	< 0.5	< 0.5	< 0.5	< 0.5
WN10 (14Nov06)	14-Nov-06	270	< 50	NM	< 0.5	< 0.5	< 0.5	< 0.5

Notes:
All results are reported in micrograms per Liter (µg/L)
TPHg - Total Petroleum Hydrocarbons as Gasoline, EPA Method 8015M
TPHd - Total Petroleum Hydrocarbons as Diesel Range (C10-C23), EPA Method 8015M
MTBE - Methyl Tert Butyl Ether
< 50 - Analyte was not detected above the laboratory reporting limit (50 µg/L)
NM - Not measured

FIGURES



Base map: The Thomas Guide
Alameda County
1999

0 1/4 1/2 Mile

Approximate scale

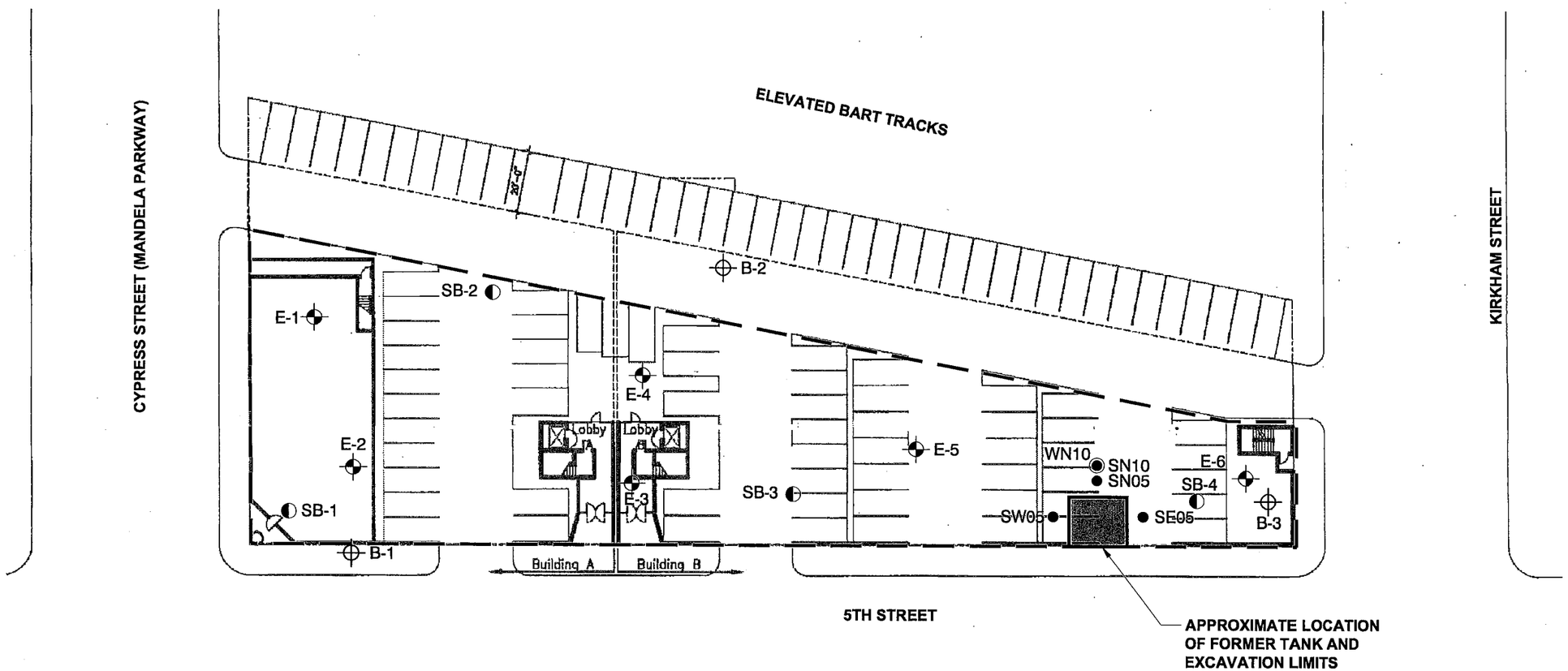
N

RED STAR YEAST SITE
Oakland, California

SITE LOCATION MAP

Treadwell&Rollo

Date 02/22/05	Project No. 4068.01	Figure 1



EXPLANATION

E-1 ⊕	Approximate location of boring by Treadwell & Rollo, Inc., April 2006
B-1 ⊕	Approximate location of boring by Treadwell & Rollo, Inc.
SB-1 ◐	Approximate location of boring by Remediation Services, Inc., August 2004
SN05 ●	Grab soil sample location
WN10 ⊙	Grab groundwater sample location

Note: Soil samples collected 5 feet below ground surface, groundwater sample collected 6 feet below ground surface.

N

0 20 40 Feet

Approximate scale

Reference: Ground Floor Plan - Option A by Philip Banta & Associates Architects, dated 11/03/04.

RED STAR YEAST SITE
Oakland, California

SITE PLAN

Date 12/13/06	Project No. 4068.01	Figure 2

Treadwell&Rollo

R:\Trgraphics\4000's\4068.01\4068.01 SITE PLAN-Dec 2006.dwg 12/13/06

APPENDIX A
Certified Laboratory Report and Chain-of-Custody Records

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

Treadwell & Rollo 555 Montgomery St., Suite 1300 San Francisco, CA 94111	Client Project ID: #4068.01; Former Red Star Yeast Facility	Date Sampled: 11/01/06
		Date Received: 11/14/06
	Client Contact: Peter Cusack	Date Reported: 11/16/06
	Client P.O.:	Date Completed: 11/16/06

WorkOrder: 0611293

November 16, 2006

Dear Peter:

Enclosed are:

1). the results of **5** analyzed samples from your **#4068.01; Former Red Star Yeast Facility project,**

2). a QC report for the above samples

3). a copy of the chain of custody, and

4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Best regards,

Angela Rydelius, Lab Manager

KUSH

Treadwell&Rollo

Environmental and Geotechnical Consultant

CHAIN OF CUSTODY RECORD

HEAD SPACE ABSENT ____ APPROPRIATE CONTAINERS ____
DECHLORINATED IN LAB ____ PRESERVED IN LAB ____
PRESERVATION: VOAS | O&G | METALS | OTHER

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

Site Name: Former Red Star Yeast Facility
Job Number: 4068.01
Project Manager\Contact: Peter Cusak
Samplers: M.D. CHENDORAIN
Recorder (Signature Required):

Turnaround Time: 48 Hour

Field Sample Identification No.	Date	Time	Lab Sample No.	Matrix: Soil	Water	Other	No. Containers & Preservative: HCL	H_2SO_4	HNO_3	Ice	Other	Analysis Requested: TPH-gas (8015M)	TPH-diesel (8015M)	BTEX (8020)	Silica gel clean-up	Hold	Remarks
SE05 (14NOV06)	14NOV06	1031		X						X		X	X	X			
SN05 (14NOV06)	"	1020		X						X		X	X	X			
SW05 (14NOV06)	"	1038		X						X		X	X	X			
SN10 (14NOV06)	"	1026		X						X		X	X	X			
+3 WN10 (14NOV06)	↓	1100			X					X		X	X	X			

Relinquished by: (Signature)	Date 14NOV06	Time 1:00 PM	Received by: (Signature)	Date 11/14/06	Time 100
Relinquished by: (Signature)	Date 11/14/06	Time 315	Received by: (Signature)	Date 11/14/06	Time 15:15
Relinquished by: (Signature)	Date	Time	Received by Lab: (Signature)	Date	Time

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

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

White Copy - Original Yellow Copy - Laboratory Pink Copy - Field

COC Number: 006415

McCampbell Analytical, Inc.
"When Quality Counts"

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Telephone: 877-252-9262 Fax: 925-252-9269

Treadwell & Rollo 555 Montgomery St., Suite 1300 San Francisco, CA 94111	Client Project ID: #4068.01; Former Red Star Yeast Facility	Date Sampled: 11/01/06-11/14/06
		Date Received: 11/14/06
	Client Contact: Peter Cusack	Date Extracted: 11/14/06-11/15/06
	Client P.O.:	Date Analyzed 11/14/06-11/15/06

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

Extraction method SW5030B Analytical methods SW8021B/8015Cm Work Order: 0611293

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	SE 05 (14NOV06)	S	ND	---	ND	ND	ND	ND	1	95
002A	SN 05 (14NOV06)	S	ND	---	ND	ND	ND	ND	1	87
003A	SW 05 (14NOV06)	S	ND	---	ND	ND	ND	ND	1	87
004A	SN 10 (14NOV06)	S	ND	---	ND	ND	ND	ND	1	77
005A	WN 10 (14NOV06)	W	270,f,i	---	ND	ND	ND	ND	1	84
Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5.0	0.5	0.5	0.5	0.5	1	µg/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	1	mg/Kg

* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern; n) TPH(g) value derived using a client specified carbon range; o) results are reported on a dry weight basis; p) see attached narrative.

DHS ELAP Certification N° 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0611293 **ClientID: TWRF**

☐ EDF ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty

Report to:
Peter Cusack
Treadwell & Rollo
555 Montgomery St., Suite 1300
San Francisco, CA 94111

Email: pjcusack@treadwellrollo.com
TEL: (415) 955-9040 FAX: (415) 955-9041
ProjectNo: #4068.01; Former Red Star Yeast Facilit
PO:

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

Requested TAT: **2 days**

Date Received: **11/14/2006**
Date Printed: **11/14/2006**

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
0611293-001	SE 05 (14NOV06)	Soil	11/1/1406	☐	A		A									
0611293-002	SN 05 (14NOV06)	Soil	11/14/06 10:20:00	☐	A		A									
0611293-003	SW 05 (14NOV06)	Soil	11/14/06 10:38:00	☐	A		A									
0611293-004	SN 10 (14NOV06)	Soil	11/14/06 10:26:00	☐	A		A									
0611293-005	WN 10 (14NOV06)	Water	11/14/06 11:00:00	☐		A		B								

Test Legend:

1	G-MBTEX_S	2	G-MBTEX_W	3	TPH(D)WSG_S	4	TPH(D)WSG_W	5	
6		7		8		9		10	
11		12							

Prepared by: Rosa Venegas

Comments:

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

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Telephone: 877-252-9262 Fax: 925-252-9269

Treadwell & Rollo	Client Project ID: #4068.01; Former Red Star Yeast Facility	Date Sampled: 11/01/06-11/14/06
555 Montgomery St., Suite 1300		Date Received: 11/14/06
San Francisco, CA 94111	Client Contact: Peter Cusack	Date Extracted: 11/14/06
	Client P.O.:	Date Analyzed 11/15/06

Diesel Range (C10-C23) Extractable Hydrocarbons with Silica Gel Clean-Up*

Extraction method: SW3510C/3630C/SW3550C/3630C Analytical methods: SW8015C Work Order: 0611293

Lab ID	Client ID	Matrix	TPH(d)	DF	% SS
0611293-001A	SE 05 (14NOV06)	S	1.3,b	1	104
0611293-002A	SN 05 (14NOV06)	S	2.0,a	1	105
0611293-003A	SW 05 (14NOV06)	S	ND	1	106
0611293-004A	SN 10 (14NOV06)	S	ND	1	105
0611293-005B	WN 10 (14NOV06)	W	ND,i	1	110

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	µg/L
	S	1.0	mg/Kg

* water samples are reported in µg/L, wipe samples in µg/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all DISTLC / STLC / SPLP / TCLP extracts are reported in µg/L.

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant); d) gasoline range compounds are significant; e) unknown medium boiling point pattern that does not appear to be derived from diesel; f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; k) kerosene/kerosene range; l) bunker oil; m) fuel oil; n) stoddard solvent/mineral spirit; r) results are reported on a dry weight basis

DHS ELAP Certification N° 1644

Angela Rydelius, Lab Manager

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QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Water QC Matrix: Water WorkOrder: 0611293

EPA Method SW8015C	Extraction SW3510C/3630C				BatchID: 24720			Spiked Sample ID: N/A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(d)	N/A	1000	N/A	N/A	N/A	102	98.9	3.16	N/A	N/A	70 - 130	30
%SS:	N/A	2500	N/A	N/A	N/A	107	104	3.16	N/A	N/A	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 24720 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0611293-005	1/14/06 11:00 AM	11/14/06	11/15/06 9:56 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

DHS ELAP Certification N° 1644

QA/QC Officer

McCampbell Analytical, Inc.
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QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Soil QC Matrix: Soil WorkOrder: 0611293

EPA Method SW8021B/8015Cm	Extraction SW5030B				BatchID: 24775			Spiked Sample ID: 0611286-011A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex)£	ND	0.60	112	110	2.37	117	109	6.69	70 - 130	30	70 - 130	30
MTBE	ND	0.10	94.3	100	6.04	99.7	97.9	1.77	70 - 130	30	70 - 130	30
Benzene	ND	0.10	93.7	97.6	4.12	92.8	98.6	6.11	70 - 130	30	70 - 130	30
Toluene	ND	0.10	85.7	89.7	4.63	86	92.3	7.07	70 - 130	30	70 - 130	30
Ethylbenzene	ND	0.10	96.9	101	3.86	101	96.6	3.99	70 - 130	30	70 - 130	30
Xylenes	ND	0.30	92	96.7	4.95	95	103	8.40	70 - 130	30	70 - 130	30
%SS:	112	0.10	97	89	8.60	92	96	4.26	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 24775 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0611293-001	1/01/06 10:31 AM	11/14/06	11/14/06 7:52 PM	0611293-002	/14/06 10:20 AM	11/14/06	1/14/06 10:22 PM
0611293-003	1/14/06 10:38 AM	11/14/06	1/14/06 10:51 PM	0611293-004	/14/06 10:26 AM	11/14/06	11/15/06 2:38 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

DHS ELAP Certification N° 1644

QA/QC Officer

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QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water QC Matrix: Water WorkOrder: 0611293

EPA Method SW8021B/8015Cm Extraction SW5030B BatchID: 24777 Spiked Sample ID: 0611306-014A

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex)£	ND	60	101	100	0.646	106	101	4.89	70 - 130	30	70 - 130	30
MTBE	ND	10	96.5	98.3	1.85	93.1	99.7	6.84	70 - 130	30	70 - 130	30
Benzene	ND	10	96.3	92	4.61	94.5	99.9	5.62	70 - 130	30	70 - 130	30
Toluene	ND	10	90.7	85	6.44	92.1	94.5	2.54	70 - 130	30	70 - 130	30
Ethylbenzene	ND	10	94.6	93.6	1.09	93.7	99.5	5.99	70 - 130	30	70 - 130	30
Xylenes	ND	30	86.3	86	0.387	90.3	90.7	0.368	70 - 130	30	70 - 130	30
%SS:	104	10	101	99	2.29	99	106	6.53	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 24777 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0611293-005	1/14/06 11:00 AM	11/15/06	11/15/06 5:28 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

DHS ELAP Certification N° 1644

QA/QC Officer

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QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Soil QC Matrix: Soil WorkOrder 0611293

EPA Method SW8015C	Extraction SW3550C/3630C				BatchID: 24755			Spiked Sample ID: 0611293-004A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(d)	ND	20	95.8	94.4	1.48	92.9	94.9	2.14	70 - 130	30	70 - 130	30
%SS:	105	50	105	106	1.62	104	107	2.76	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 24755 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0611293-001	1/01/06 10:31 AM	11/14/06	1/15/06 12:48 AM	0611293-002	/14/06 10:20 AM	11/14/06	11/15/06 1:57 AM
0611293-003	1/14/06 10:38 AM	11/14/06	11/15/06 5:22 AM	0611293-004	/14/06 10:26 AM	11/14/06	11/15/06 6:31 AM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.