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August 10, 2011

Mr. Paresh Khatri  
**Alameda County Environmental Health Services**  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-6577

**Subject:** 2<sup>nd</sup> Semi-Annual 2011 Groundwater Monitoring Report  
Former AutoPro  
5200 Telegraph Avenue  
Oakland, California

Case Number RO0000323  
GeoTracker Global ID T0600100131  
PSI Project No. 575-102-4


Dear Mr. Khatri:

Tri Star Partnership is pleased to submit the Semi-Annual Groundwater Monitoring Report for the subject site. Please refer to the attached report for details.

I declare, under penalty of perjury, that the information and/or recommendations contained in the attached Groundwater Monitoring Report are true and correct to the best of my knowledge, without independently investigating or verifying the information contained therein.

If you have any questions regarding this report or any aspect of the project, please call Mr. Frank Poss with PSI at 510-434-9200.

Sincerely,



George Tuma  
General Partner  
Tri Star Partnership

cc: Mr. Frank Poss, PSI

**2nd SEMI-ANNUAL 2011  
GROUNDWATER MONITORING REPORT**

**TEST ONLY SMOG STATION  
(FORMER AUTOPRO)  
5200 TELEGRAPH AVENUE  
OAKLAND, CALIFORNIA**

**2nd SEMI-ANNUAL 2011  
GROUNDWATER MONITORING REPORT**

**TEST ONLY SMOG STATION  
(FORMER AUTOPRO)  
5200 TELEGRAPH AVENUE  
OAKLAND, CALIFORNIA**

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August 9, 2011  
575-102-4



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## STATEMENT OF LIMITATIONS AND PROFESSIONAL CERTIFICATION

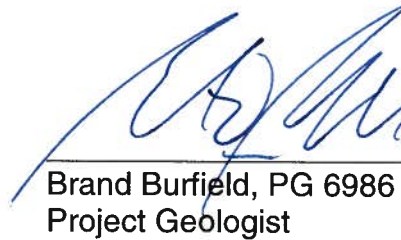
The information provided in this Groundwater Monitoring Report prepared by PSI, Project Number 575-102-4, is intended exclusively for Tri Star Partnership for the evaluation of groundwater contamination as it pertains to the subject site in Oakland, California at the time the activities were conducted. The professional services provided have been performed in accordance with practices generally accepted by other environmental professionals, geologists, hydrologists, hydrogeologists, engineers, and environmental scientists practicing in this field. No other warranty, either expressed or implied, is made. As with all subsurface soil and groundwater sampling, there is no guarantee that the work conducted has identified any and all sources or locations of petroleum hydrocarbons or hazardous substances or chemicals in the soil or groundwater.

This report is issued with the understanding that Tri Star Partnership is responsible for ensuring that the information contained in this report is brought to the attention of the appropriate regulatory agency. This report has been reviewed by a geologist who is registered in the State of California and whose signature and license number appear below.

### **Professional Service Industries, Inc.**



Frank R. Poss  
Principal Consultant



Brand Burfield, PG 6986  
Project Geologist



## **1.0 INTRODUCTION**

The Subject Property is an approximately 9,000 square foot, triangular-shaped parcel located at 5200 Telegraph Avenue, on the northeastern corner of Telegraph and Claremont Avenue in Oakland, Alameda County, California (see Figure 1 – Site Location Map). The site is asphalt-paved and is currently used as a smog testing facility (“Test Only Smog Station”) but was formerly an auto repair facility (“Autopro Inc.”) and a Shell gasoline service station. The subject site formerly included five Underground Storage Tanks (USTs) which were removed from three separate excavation areas. The three excavations include an approximately 140 square-foot former waste oil UST excavation on the northeastern portion of the property, a 750 square-foot excavation which contained three former gasoline or diesel USTs near the center of the property, and a 450 square-foot former gasoline UST (and associated piping) excavation on the southern portion of the property. Locations of the existing site improvements and the former UST excavations are depicted on Figure 2.

This report summarizes the 2nd Semi-Annual 2011 groundwater monitoring activities conducted on July 21, 2011, at the former UST site. The purpose of this project is to monitor petroleum hydrocarbon concentrations in groundwater to comply with the sampling requirements of the Alameda County Environmental Health Department (ACEH).

## **2.0 SITE BACKGROUND**

Previous reports and investigations have been completed at the former UST site at 5200 Telegraph Avenue, Oakland, California, while the site was operated as Autopro, an automotive repair facility. The site is currently under the regulatory oversight of the ACEH and is identified by County Fuel Leak Case Number RO0000323 and State Geotracker Global ID T0600100131.

### **2.1 HISTORICAL SITE USE**

The property is currently developed with an active automotive smog testing station. According to regulatory documents reviewed, the Subject Property has been developed as an automotive service station since at least 1973. Information obtained at the Alameda County Department of Environmental Health indicates that the Subject Property was developed as a Shell gasoline service station until 1978 and has operated as an automotive service or smog testing station until present.



The following table summarizes the historic use of the Subject Property.

<b>Summary</b>	
<b>Year(s)</b>	<b>Interpreted Property Use</b>
1973, 1978	According to Street Directories the subject property is listed as Jordan Shell Service Station.
1984, 1989, 1990, 1994	According to Street Directories the subject property is listed as Auto Pro Inc 2. In December 1990, five underground storage tanks (USTs) were removed from the site.
1999, 2003	According to Street Directories the subject property is listed as Auto Pro Inc.
2008	The subject property is Test Only SMOG Station.

## 2.2 PREVIOUS ENVIRONMENTAL SITE ACTIVITIES

This section summarizes the findings and conclusions of select previous environmental investigations and other pertinent documents (see references; Section 5) made available to PSI.

### 2.2.1 Underground Storage Tank Removal - 1990

Five USTs were removed from three different excavations at the subject site in December 1990 by Pacific Excavators (Pacific, 1991). Soil and groundwater samples collected from the UST fuel excavations contained levels of total petroleum hydrocarbons as gasoline (TPH-G), total petroleum hydrocarbons as diesel (TPH-D), benzene, toluene, ethylbenzene, total xylenes (BTEX), and total lead. In addition soil samples collected from the waste oil tank excavation contained concentrations of oil and grease (O&G). In addition, in 1991 soil was sampled and a small amount of contaminated soil was excavated and removed from the site (ESE, 1994).

### 2.2.2 Limited Soil and Groundwater Investigation - 1993

In April 1993, Environmental Science & Engineering Inc. (ESE) conducted a limited soil and groundwater investigation at the site. Two soil borings were drilled in the area of two former UST excavations through the backfill into native material, with soil and groundwater samples collected from the borings. Results of the investigation indicated concentrations of total semi-volatile petroleum hydrocarbons (TSVPH); these hydrocarbons were reported not to consist of diesel or gasoline (ESE, 1993).

### 2.2.3 Preliminary Site Assessment and Groundwater Monitoring - 1994

ESE conducted a preliminary site assessment (PSA) of the property in April 1994. The investigation consisted of drilling four soil borings, installation of four monitoring wells (MW-1 through MW-4), and collection of soil and groundwater samples. According to the investigation, soil beneath the site consisted of silty clay to between approximately 10 and 13 feet below ground surface (bgs) and groundwater was found to be approximately 11 to



13 feet bgs. Soil and groundwater samples collected during the investigation were found to contain petroleum hydrocarbons (ESE, 1994).

According to the Second Quarter 1994 Groundwater Monitoring Report, groundwater flow direction at the site is bimodal and flows both to the southwest and east, dependant upon the location at the site. According to ESE this may have been a result of the high permeability of the backfill material in the former UST excavations. The data presented in the Second Quarter 1994 monitoring report indicated that petroleum hydrocarbons are migrating off-site to the southwest and concluded that the existing monitoring well network is not sufficient to determine the extent off-site migration (ESE, 1994).

#### 2.2.4 Site Assessment and Groundwater Monitoring - 1996

ESE conducted an additional soil and water investigation (in addition to quarterly groundwater sampling) to determine the on and off-site extent of the soil and groundwater contamination. The 1996 study included seven geoprobe soil borings which were drilled and sampled; a total of 14 soil and seven groundwater samples were collected during the investigation. A concentration of 1.5 mg/kg TPH-G was detected in the sample collected from boring AP-2 at 10 feet. The remaining soil samples were non-detect for all constituents of concern. TPH-D was detected at concentrations ranging from 190 and 74,000 µg/l in groundwater samples from AP-1, AP-2, AP-3, and AP-6. TPH-G was detected at concentrations ranging between 1,400 and 14,000 µg/l in groundwater samples from AP-1, AP-2 and AP-3. TPH-MO was detected at a concentration of 1,900 µg/l in the groundwater sample from AP-6. In addition BTEX constituents were detected in groundwater samples from AP-1, AP-2, and AP-3. MTBE was detected at concentrations of 60 µg/l and 100 µg/l in groundwater samples from AP-2 and AP-3 (ESE, 1996).

Second Quarter 1996 groundwater monitoring activities at the site included sampling of monitoring wells MW-1 through MW-4. TPH-G and TPH-D were detected in MW-1, MW-3, and MW-4. BTEX constituents and MTBE were detected in MW-3 and MW-4 (ESE, 1996).

#### 2.2.5 Remediation and Site Closure Report - 1999

In 1998, with approval from the ACEH, it was determined that oxygen release compounds (ORCs) would be introduced into MW-3 and MW-4 to enhance the biodegradation of the contaminant plume at the site. ORCs were placed in MW-3 and MW-4 on March 23, 1998 by QST Environmental (QST). This resulted in a slight increase of BTEX and TPH immediately after the installation of the ORCs. According to QST, the increase in hydrocarbons may have been a result of the increase in the groundwater table elevation; the increased elevation may have caused a mobilization of additional petroleum hydrocarbon constituents from the capillary fringe thus increasing concentrations. Constituents have declined or stabilized since the removal of the ORCs, and as such, QST determined that constituent reduction and degradation was enhanced by the ORC (QST, 1999).





QST conducted a risk assessment as part of their site closure report. The evaluation focused on MW-1 through MW-4, the closest wells to the source. Concentrations of constituents in MW-5 (a nearby off-site Chevron well) indicate that the plume has stabilized in the downgradient (southwest) direction. The risk assessment was tied to the identification of the constituents of concern, potential pathways in environmental media, and potential receptors of exposure. According to the report the objectives of the site conceptual model have been realized through the identification of soil and groundwater as the environmental media for remedial action via soil vapor extraction and water entrainment. Receptors of potential exposure were based on residential land use and groundwater as a drinking water resource (QST, 1999).

Based on the 1996 ESE site investigation report, off-site soil between the Chevron Station and the subject property did not appear to be impacted by hydrocarbon contamination. Groundwater samples collected at the time of the 1996 investigation indicated concentrations of TPH-G, TPH-D, BTEX, and MTBE. Based on a 1996 soil vapor study, the Autopro plume and the Chevron plume are intermingled and the downgradient concentrations could not be accurately ascertained.

Based on exposure and toxicity assessments as part of the risk assessment, and since the site is surfaced with asphalt and concrete, repeat exposure to the constituents of concern is unlikely. The Environmental Protection Agency (EPA) Preliminary Remediation Goal (PRG) for industrial properties for benzene was exceeded in one soil sample collected in 1996. According to QST, the absence of benzene in groundwater at the site eliminates the possibility of vertical migration upward into soil vapor (QST, 1999).

#### 2.2.6 Quarterly Monitoring and Utility Backfill Sampling – 2004

According to Second Quarter 2004 sampling data TPH-G was detected at concentrations of 530, 33,000, and 1,700 µg/l in MW-1, MW-3, and MW-4 respectively. TPH-D was detected at concentrations between 56 and 1,200 µg/l in MW-1 through MW-4. Ethylbenzene was detected at concentrations of 0.67 µg/l in MW-4 and total xylenes were detected at concentrations of 5.6 and 1.22 µg/l in MW-3 and MW-4. Total petroleum hydrocarbons as motor oil (TPH-MO), benzene, toluene and fuel oxygenates were not detected during the sampling event. Monitoring well MW-5, was damaged at the time of sampling, thus was not sampled (MACTEC, 2004).

According to Third Quarter 2004 sampling data TPH-G was detected at concentrations of 260, 13,000, and 1,800 µg/l in MW-1, MW-3, and MW-4 respectively. TPH-D was detected at concentrations between 74 and 2,500 µg/l in MW-1 through MW-4. TPH-MO, BTEX, and fuel oxygenates were not detected during the Third Quarter sampling event (MACTEC, 2004).

In August 2004, two borings were advanced to approximately 16 feet bgs adjacent to the sanitary sewer line and storm drain line to investigate if the utility corridor was a conduit for contamination migration. This investigation was performed at the request of the ACEH in a letter dated December 24, 2002. The intent of the investigation was to



obtain grab groundwater samples from each of the utility trench backfills. However, the boring adjacent to the sanitary sewer line was dry. Therefore, samples were obtained only from the storm drain backfill. The samples collected from the storm drain backfill were tested for TPH-G, TPH-D, benzene, toluene, ethylbenzene and xylenes were detected at concentrations of 57,000, 29,000, 9.5, 36, 11, and 29 µg/l respectively. Concentrations of contaminants of concern in the areas explored suggest that the release from the site has migrated to the utility trenches, which have acted as a preferential pathway for the contaminants (MACTEC, 2004).

According to the Second and Third Quarter 2004 Monitoring Report (MACTEC, 2004) the slotted casing in each of the wells (MW-1 through MW-4) is below the groundwater level. Since the interval of slotted casing in a well should span the surface of the groundwater aquifer being monitored, the slotted casing in these wells is considered to have been improperly placed at construction. The report indicates that, while these improperly placed slotted intervals will likely have little impact in the monitoring of groundwater levels and contaminant trends, they may adversely affect the ability to determine the presence of free floating product in groundwater at the site.

According to Fourth Quarter 2004 sampling data TPH-G was detected at concentrations of 710, 5,100, and 2,300 µg/l in monitoring wells MW-1, MW-3, and MW-4 respectively. TPH-D was detected at concentrations between 53 and 3,300 µg/l in all wells except Chevron well MW-2. TPH-MO was detected at concentrations of 450 and 1,400 µg/l in MW-1 and MW-4. Benzene concentrations in MW-3 exceeded the California State Drinking Water Standard Maximum Contaminant Level (MCL) of 1.0 µg/l; the remaining BTEX concentrations did not exceed MCLs for this sampling event. Groundwater flow at the time of sampling was to the northeast which is inconsistent with historical flow to the south/southwest; the reason for the change was unknown and was thought to be a result of heavy rainfall (MACTEC, 2005).

#### 2.2.7 Site Recommendations From the ACEH - 2008

According to a letter from the Alameda County Environmental Health Services Department, dated March 28, 2008, analytical data from the Fourth Quarter 2004 Groundwater Monitoring Report was determined to be insufficient since all monitoring wells at the site have their slotted casing below groundwater. Depth to groundwater at the site ranges between 8 and 13 feet bgs; however MW-1 is screened from 15-30 feet and MW-2, MW-3, and MW-4 are screened between 15-25 feet. The ACEH expressed concerns that concentrations of contaminants detected in the groundwater samples may not be representative of actual site conditions. In addition, grab groundwater samples collected at a nearby cross-gradient site in 2007 indicated concentrations of TPH-G in all three samples. The ACEH stated that further evaluation of preferential pathways and additional off-site plume delineation is warranted at the site and that hydrocarbon concentrations in downgradient well MW-3 warranted further characterization of the onsite plume.

Since groundwater monitoring at the site had not been conducted since Fourth Quarter 2004, the ACEH recommended that quarterly monitoring be initiated and the wells be



re-developed at the site. In addition it was recommended that a new site conceptual model be developed for the subject property and that all analytical data from 2001 onward be submitted via the SWRCB Geotracker website, with all reports from July 1, 2005 onward be submitted to the website as well (ACEH, 2008).

### 2.2.8 Addressing ACEH Recommendations

On December 16, 2008, all four monitoring wells (MW-1 through MW-4) were redeveloped via the surge-block method to remove silt or clay from the surrounding formation that were caught in the filter pack, and to improve groundwater flow into the monitoring well. After the surge, the wells were purged to remove suspended sediment from the well and to encourage new water to flow into the well from the surrounding soil formation. This series of procedures was repeated three times to each of the monitoring wells with the exception of MW-1 in which the block became lodged at 14 feet. Fortunately, the well recharged easily during purging, suggesting that the filter pack and screen are in good working order.

ACEH was concerned that the “drowned wells” are affecting the detected contaminant concentrations in the wells. On December 22, 2008, the groundwater level was at approximately 8 feet below ground surface (bgs). The references reviewed indicate that the wells are screened from 15-25 feet bgs, with the exception of MW-1 which is screened from 15-30 feet bgs. Based on this data, the top of the screens remain below groundwater levels. While we are in agreement that “drowned wells” would affect the ability to detect product (i.e. fuel or oil) floating on top of the groundwater table, in the absence of floating product, this is not expected to significantly affect the monitoring of dissolved hydrocarbon contaminants in groundwater beneath the site either from a qualitative (ability to detect) or quantitative (detected concentrations) standpoint. We have seen no mention in the references reviewed and no indication from historical analytical data that there is, or has been, free floating product on groundwater at the site. As such, it is our opinion that the ability to accurately detect contaminant concentrations in the on-site wells is not a concern, despite their incorrect installation.

During groundwater sampling, the bottom of each well was sounded to determine the total depth. It was determined that the sounded depths below the top of casing are 26.07, 24.69, 14.54, and 15.69 feet for MW-1 through MW-4 respectively. With the exception of MW-2, these measured depths do not agree with the installation data for the wells; the depths of MW-1, MW-3, and MW-4 all measure to be about 5 to 10 feet less than their stated depth at installation.

There are several possible causes for the discrepancy between the installed and sounded depths of these wells;

1. Incorrect installation data.
2. Blockage (with a bailer for example).
3. Filling of the well casing (by siltation or man-made fill)



Sometime between the ESE 1996 report and the MACTEC 2004 monitoring report, wells MW-3 and MW-4 have seemingly “lost” 10 feet of depth. Since the sounded depths of MW-3 and MW-4 would put the current bottom of the well at or above the installed slotted casing, and since both of these wells had no problems producing groundwater, the most likely causes of the discrepancy are either incorrect installation data or a partial blockage of the wells.

### 2.2.9 Workplan for Site Investigation

On June 8, 2009, PSI submitted the “Workplan for Site Investigation” in response to the ACEH letter dated March 28, 2008, addressing the following concerns:

1. Monitoring Wells and Hydrologic Setting
2. Preferential Pathway Study
3. Groundwater Contaminant Plume Definition
4. Contaminant Source Area Characterization
5. Groundwater Contaminant Plume Monitoring
6. Site Conceptual Model
7. GeoTracker Compliance

In a letter dated June 26, 2009, the ACEH generally concurred with PSI’s findings and scope of work outlined in the Workplan and requested that the proposed work and associated reports be undertaken. Additionally, the letter stated that semi-annual monitoring frequency is appropriate for the site.

### **3.0 GROUNDWATER MONITORING ACTIVITIES**

#### **3.1 GROUNDWATER ELEVATION AND HYDRAULIC GRADIENT**

Prior to sampling on July 21, 2011, the depth to groundwater in each monitoring well was measured in accordance with the field procedures outlined in Section 3.2 using an electric water level indicator. Water levels are read from the top of the monitoring well casing (TOC) to an accuracy of 0.01 foot. This is performed in order to calculate the groundwater elevations and to determine the groundwater gradient. Before and after each use, the water level indicator was decontaminated to prevent cross-contamination of the wells.

Depths to groundwater, measured on July 21, 2011, and calculated groundwater elevations are presented in Table 1. Groundwater contours representing interpreted water levels beneath the site are shown on Figure 2. Historically, the groundwater flow direction at the subject property has been generally toward the southwest. Southwestern groundwater flow is consistent with data obtained from groundwater monitoring reports for three nearby monitoring sites within 1,000 feet of the subject property. Based on the data from the nearby sites, from historic subject property reports, and from review of the USGS topographic map, it is expected that the groundwater flow is to the southwest, towards the San Francisco Bay. Based on the water level measurements obtained from wells MW-1, MW-2 and MW-3, the groundwater flow direction at the subject site is generally toward the west/southwest with a hydraulic gradient of approximately 0.004. The groundwater level from MW-4 was excluded from the gradient and direction calculations because it is inconsistent with the expected gradient.

#### **3.2 GROUNDWATER SAMPLING**

On July 21, 2011, groundwater samples were collected from monitoring wells MW-1 through MW-4 at the project site. The following procedures for well monitoring, well purging and water sampling were implemented while sampling the wells:

1. All non-dedicated equipment was washed prior to entering the well with an Alconox solution, followed by a deionized water rinse.
2. Prior to purging the wells, depth to water was measured using a groundwater interface probe to an accuracy of 0.01 foot. The measurements were made to the top of the well casing on the north side.
3. The monitoring wells were purged of a minimum of three well volumes of water until pH, conductivity, and temperature stabilized. Each well was purged with a new, single-use dedicated bailer. If purged dry, the wells were allowed to recover to at least 80 percent of their original static groundwater levels or two hours were allowed to pass prior to sampling.



4. Water samples were collected with a single-use disposable bailer after the well had been purged. The water collected was immediately decanted into laboratory-supplied vials and bottles. The containers were filled, capped, labeled, and placed in a chilled cooler prior to delivery at the laboratory for analysis.
5. Chain of custody procedures, including chain of custody forms, were used to document water sample handling and transport from collection to delivery at the laboratory for analyses.
6. Purged water was contained in a DOT approved 55-gallon drum and left on site for proper disposal. The drum was labeled with the contents, date, well number, client name, and project number.

The purge logs are presented in Appendix A.

### 3.3 LABORATORY ANALYSIS, RESULTS, AND DISCUSSION

Four groundwater samples were submitted for analysis to SunStar Laboratories, Inc of Lake Forest, California, a State of California certified environmental analytical laboratory. The samples were analyzed for the following:

- Total Petroleum Hydrocarbons as Gasoline (TPH-G) using EPA Method 8015
- Total Petroleum Hydrocarbons as Diesel (TPH-D) using EPA Method 8015
- Total Petroleum Hydrocarbons as Motor Oil (TPH-MO) using EPA Method 8015
- Volatile Organic Compounds (VOCs) including fuel oxygenates using EPA Method 8260B

The following are the results of the groundwater analysis:

- TPH-G was detected above the laboratory reporting limit of 50 micrograms per liter ( $\mu\text{g/L}$ ) in the groundwater samples from MW-3 (1,600  $\mu\text{g/L}$ ) and MW-4 (810  $\mu\text{g/L}$ ).
- TPH-D was detected above the laboratory reporting limit of 50  $\mu\text{g/L}$  in the groundwater samples from MW-1 (430  $\mu\text{g/L}$ ), MW-3 (1,700  $\mu\text{g/L}$ ) and MW-4 (1,100  $\mu\text{g/L}$ ).
- TPH-MO was detected above the laboratory reporting limit of 100  $\mu\text{g/L}$  in the groundwater samples from MW-3 (1,100  $\mu\text{g/L}$ ) and MW-4 (1,200  $\mu\text{g/L}$ ).
- Various VOCs associated with hydrocarbon contamination were detected above their respective laboratory reporting limit in the groundwater samples collected from MW-1, MW-3 and MW-4. VOCs were not detected in MW-2.



- BTEX constituents were detected only in the groundwater sample from MW-3;
  - Ethylbenzene at 0.64 µg/L
  - Total Xylenes at 2.2 µg/L
- None of the tested constituents were detected in the groundwater sample from MW-2.

A summary of the laboratory results for groundwater samples is presented in Table 2. Copies of the laboratory report and chain of custody records are presented in Appendix B.

The groundwater analytical results were compared to their respective San Francisco Bay Regional Water Quality Control Board (RWQCB) Environmental Screening Levels (ESLs) for Residential Land Use where groundwater is a drinking water resource. The following constituents were detected at greater than their respective ESL;

- TPH-G (ESL of 100 µg/L) in MW-3 and MW-4
- TPH-D (ESL of 100 µg/L) in MW-1, MW-3 and MW-4
- TPH-MO (ESL of 100 µg/L) in MW-3 and MW-4

None of the other tested constituents were detected at greater than their respective ESL.

#### **4.0 CONCLUSIONS AND RECOMMENDATIONS**

PSI conducted groundwater monitoring activities on July 21, 2011. The results of the monitoring event are summarized below.

- Based on our field measurements, groundwater at the site flows generally toward the west/southwest under a hydraulic gradient of 0.004.
- TPH-G, TPH-D, TPH-MO were detected in the groundwater samples from monitoring wells MW-3 and MW-4 with TPH-D detected in the groundwater sample from monitoring well MW-1
- VOCs associated with hydrocarbon contamination were detected in the groundwater samples from MW-1, MW-3 and MW-4. BTEX constituents were detected only in MW-3.
- TPH constituents were detected at greater than their respective ESL in MW-1, MW-3 and MW-4.
- None of the tested constituents were detected in the groundwater sample from MW-2, which is consistent with the results of previous sampling events.

Based on the soil and groundwater analytical results, it appears that petroleum hydrocarbon and VOC-impacted groundwater is present in the area of the former UST excavations.

PSI recommends that semi-annual groundwater monitoring at the site continue until case closure has been granted. Additionally, the Workplan submitted by PSI on June 8, 2009 and approved by the ACEH, should be implemented as soon as is feasible.



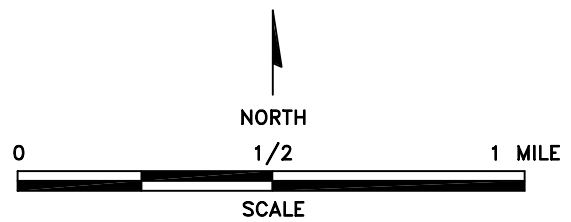
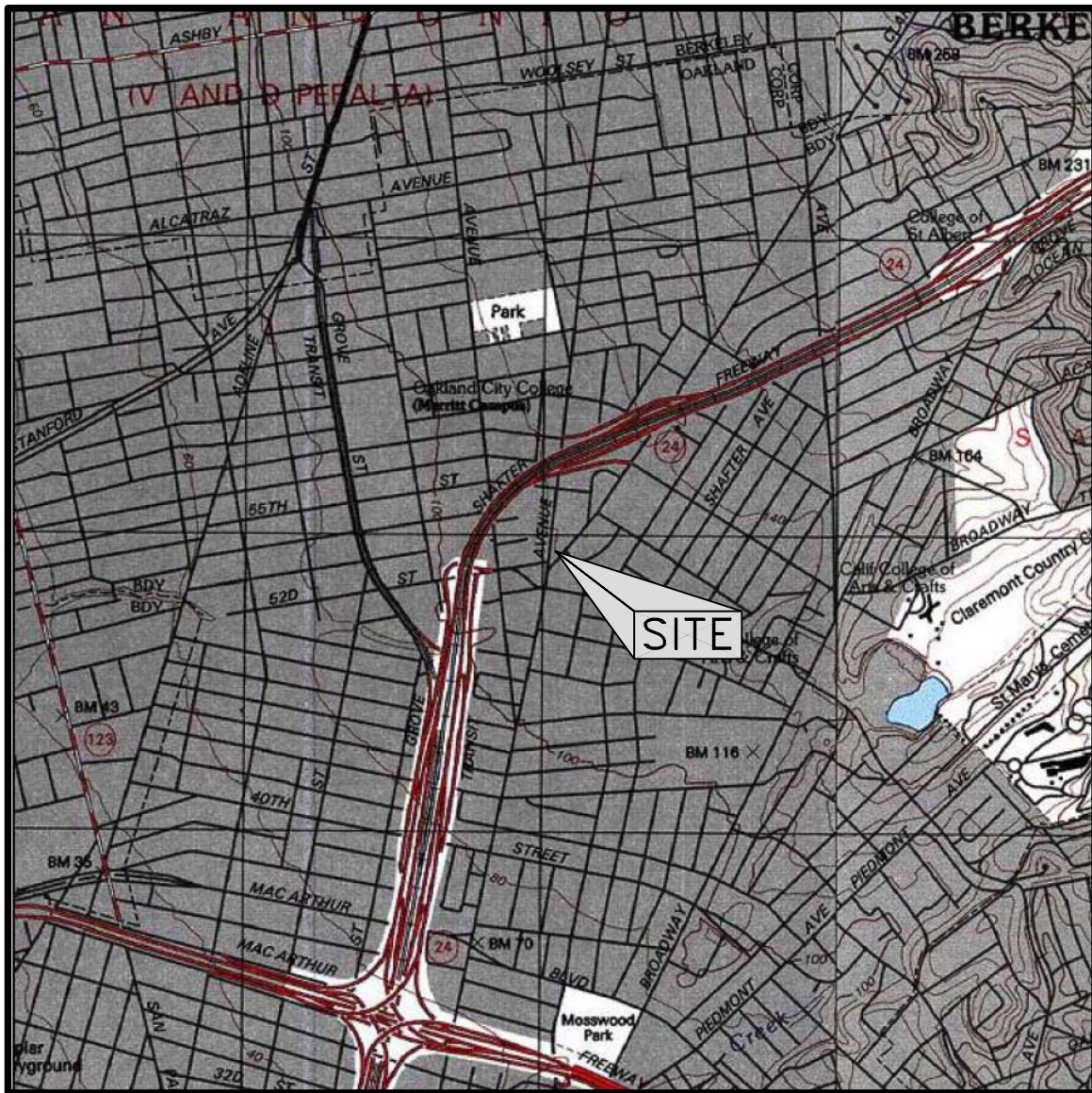


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## FIGURES



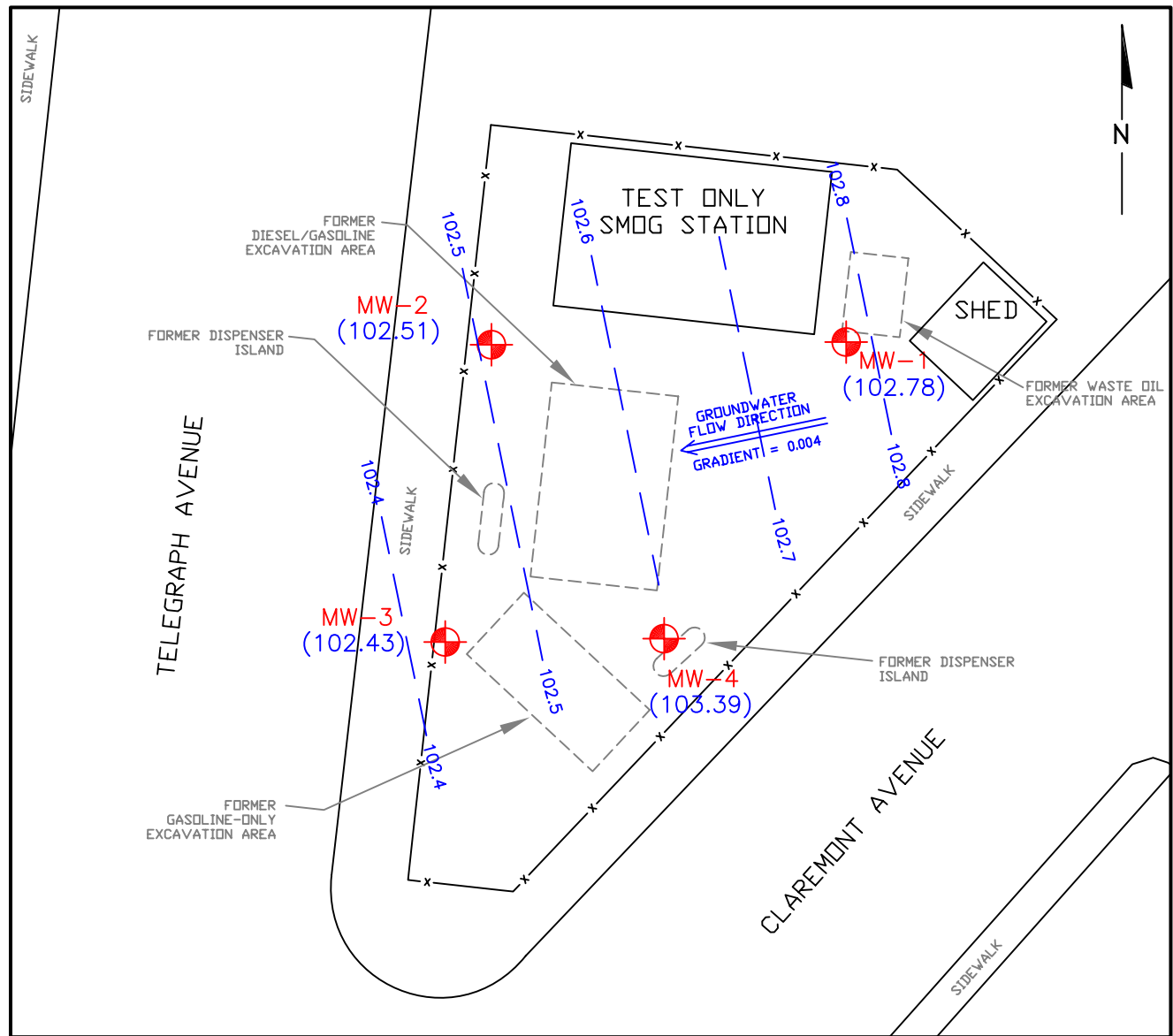
**REFERENCE:**

U.S.G.S. OAKLAND WEST AND OAKLAND EAST, CALIFORNIA, 7.5 MINUTE SERIES TOPOGRAPHIC MAPS, DATED 1993 AND 1997.




**psi** Information  
To Build On  
Engineering • Consulting • Testing

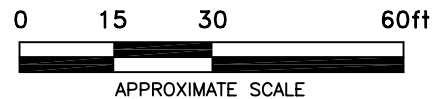
4703 Tidewater Avenue, Suite B  
Oakland, California 94601  
(510) 434-9200

<b>Project Name:</b> TEST ONLY SMOG STATION (FORMER AUTOPRO) 5200 TELEGRAPH AVENUE, OAKLAND, CALIFORNIA		<b>Drawn By:</b> B.B.	<b>Date:</b> 8/11	<b>File No.:</b> 102-4-1	<b>Figure No.:</b> 1
<b>Title:</b> SITE LOCATION MAP		<b>Approved By:</b> F.P.	<b>Project No.:</b> 575-102-4		



### LEGEND

-  MW-4 (103.39) - GROUNDWATER MONITORING WELL LOCATION (GROUNDWATER ELEVATION GIVEN IN FEET MSL)
-  102.8 - INTERPRETED LINE OF EQUAL GROUNDWATER ELEVATION (INDICATED IN FEET MSL)
-  - FENCE



### NOTES

1. MW-4 WAS NOT USED IN THE GRADIENT CALCULATION.
2. BASE MAP TAKEN FROM MACTEC, "GROUNDWATER CONTOUR MAP," PLATE 3, PROJECT NO: 4095041620 -03, DATED 12/14/04, GOOGLE AERIAL PHOTO AND ALAMEDA CO. ASSESSORS PARCEL MAP.

**psi** Information  
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Oakland, California 94601  
(510) 434-9200

**Project Name:**  
AUTOPRO  
5200 TELEGRAPH AVENUE, OAKLAND, CALIFORNIA

**Drawn By:** B.B. **Date:** 8/11 **File No.:** 102-4-2SA11 **Figure No.:** 2

**Title:** GROUNDWATER ELEVATION MAP  
JULY 21, 2011

**Approved By:** F.P. **Project No.:** 575-102-1

## TABLES

**TABLE 1**  
**SUMMARY OF GROUNDWATER ELEVATIONS**  
 Test Only SMOG Station (Former Autopro)  
 5200 Telegraph Avenue, Oakland, California

Well Number	TOC Elevation (ft msl)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft msl)
<b>MW-1</b>	115.44	12/22/08	11.67	103.77
		3/4/09	8.50	106.94
		5/1/09	12.58	102.86
		7/20/09	13.30	102.14
		3/2/10	10.17	105.27
		9/23/10	13.56	101.88
		3/2/11	10.55	104.89
		7/21/11	12.66	102.78
<b>MW-2</b>	114.62	12/22/08	10.96	103.66
		3/4/09	7.83	106.79
		5/1/09	11.91	102.71
		7/20/09	12.64	101.98
		3/2/10	9.49	105.13
		9/23/10	13.02	101.60
		3/2/11	9.98	104.64
		7/21/11	12.11	102.51
<b>MW-3</b>	113.77	12/22/08	10.30	103.47
		3/4/09	7.22	106.55
		5/1/09	11.30	102.47
		7/20/09	11.93	101.84
		3/2/10	8.94	104.83
		9/23/10	12.15	101.62
		3/2/11	9.23	104.54
		7/21/11	11.34	102.43
<b>MW-4</b>	114.25	12/22/08	10.36	103.89
		3/4/09	7.47	106.78
		5/1/09	10.97	103.28
		7/20/09	11.56	102.69
		3/2/10	8.89	105.36
		9/23/10	11.64	102.61
		3/2/11	8.92	105.33
		7/21/11	10.86	103.39

**Notes:**

ft msl = feet with respect to mean sea level

**TABLE 2**  
**SUMMARY OF GROUNDWATER ANALYTICAL RESULTS**  
 Test Only SMOG Station (Former Autopro)  
 5200 Telegraph Avenue, Oakland, California

Sample Number	Date	TPH-G	TPH-D	TPH-MO	Benzene	n-Butyl-benzene	sec-Butyl-benzene	tert-Butyl-benzene	Isopropyl-benzene	Ethyl-benzene	p-Isopropyl-toluene	Naphthalene	n-Propyl-benzene	Toluene	1,2,4-Trimethyl-benzene	1,3,5-Trimethyl-benzene	Total Xylenes
MW-1	12/22/08	390	150	<100	<0.5	5.5	3.9	<1.0	3.2	<0.5	<1.0	2.0	7.3	<0.5	<1.0	<1.0	<1.5
	3/4/09	360	64	<100	<0.5	1.8	1.8	<1.0	1.3	0.63	<1.0	1.3	2.8	<0.5	<1.0	<1.0	1.1
	5/1/09	120	130	<100	<0.5	1.5	2.0	<1.0	1.3	<0.5	<1.0	<1.0	2.8	<0.5	<1.0	<1.0	<1.5
	7/20/09	<50	110	330	<0.5	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	1.3	<0.5	<1.0	<1.0	<1.5
	3/2/10	<50	<50	<100	<0.5	1.1	1.7	<1.0	1.1	<0.5	<1.0	<1.0	2.1	<0.5	<1.0	<1.0	<1.5
	9/23/10	<50	<50	<100	<0.5	<1.0	1.2	<1.0	<1.0	<0.5	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	<1.5
	3/2/11	57	110	<100	<0.5	<1.0	3.2	<1.0	2.5	<0.5	<1.0	<1.0	4.5	<0.5	<1.0	<1.0	<1.5
7/21/11	<50	430	<100	<0.5	2.1	1.8	<1.0	1.7	<0.5	<1.0	<1.0	3.9	<0.5	<1.0	<1.0	<1.5	
MW-2	12/22/08	<50	<50	<100	<0.5	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	<1.5
	3/4/09	<50	<50	<100	<0.5	<1.0	<1.0	<1.0	<1.0	0.76	<1.0	1.4	<1.0	<0.5	1.1	<1.0	1.7
	5/1/09	<50	<50	<100	<0.5	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	<1.5
	7/20/09	<50	59	<100	<0.5	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	<1.5
	3/2/10	<50	<50	<100	<0.5	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	<1.5
	9/23/10	<50	<50	<100	<0.5	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	<1.5
	3/2/11	<50	<50	<100	<0.5	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	<1.5
7/21/11	<50	<50	<100	<0.5	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	<1.5	
MW-3	12/22/08	3,600	1,400	<100	<0.5	<1.0	<1.0	<1.0	39	<0.5	14	<1.0	60	<0.5	<1.0	23	9.8
	3/4/09	3,400	1,000	<100	2.2	17	7.4	<1.0	34	3.9	8.3	2.5	67	3.1	<1.0	1.8	8.68
	5/1/09	2,700	1,700	<100	<0.5	20	7.2	<1.0	21	2.2	7.5	<1.0	44	1.2	<1.0	<1.0	3.9
	7/20/09	2,100	1,400	<100	<0.5	19	9.8	<1.0	25	1.5	5.6	1.0	57	1.1	<1.0	<1.0	4.5
	3/2/10	4,500	1,000	<100	0.80	<1.0	8.8	<1.0	26	2.1	6.6	<1.0	58	2.0	<1.0	<1.0	4.1
	9/23/10	230	880	270	<0.5	13	8.4	<1.0	20	0.88	3.5	<1.0	40	0.63	<1.0	<1.0	3.2
	3/2/11	6,900	1,900	<100	<0.5	<1.0	13	<1.0	38	2.5	8.4	<1.0	81	1.1	<1.0	<1.0	7.2
7/21/11	1,600	1,700	1,100	<0.5	9.9	6.2	<1.0	15	0.64	3.0	1.1	29	<0.5	<1.0	<1.0	2.2	
MW-4	12/22/08	1,200	700	<100	<0.5	18	9.3	<1.0	10	<0.5	9.0	<1.0	21	<0.5	<1.0	<1.0	<1.5
	3/4/09	1,300	410	<100	<0.5	8.4	6.2	1.0	11	1.1	3.6	1.7	22	<0.5	<1.0	<1.0	1.2
	5/1/09	590	400	<100	2.6	6.4	4.8	<1.0	5.8	9.4	2.1	21	13	<0.5	<1.0	<1.0	<1.5
	7/20/09	440	260	<100	<0.5	4.4	3.5	<1.0	3.8	<0.5	1.6	<1.0	7.9	<0.5	<1.0	<1.0	<1.5
	3/2/10	860	370	<100	<0.5	<1.0	4.0	<1.0	4.3	0.57	2.0	<1.0	7.6	<0.5	<1.0	1.9	<1.5
	9/23/10	<50	82	<100	<0.5	1.6	2.0	<1.0	1.7	<0.5	<1.0	<1.0	2.2	<0.5	<1.0	<1.0	<1.5
	3/2/11	<50	8,400	18,000	<0.5	<1.0	2.8	<1.0	2.6	<0.5	1.3	<1.0	4.2	<0.5	<1.0	<1.0	<1.5
7/21/11	810	1,100	1,200	<0.5	1.1	1.5	<1.0	1.1	<0.5	<1.0	<1.0	1.6	<0.5	<1.0	<1.0	<1.5	

**Notes:**

TPH-G = Total Petroleum Hydrocarbons as Gasoline  
 TPH-MO = Total Petroleum Hydrocarbons as Motor Oil  
 All VOCs not listed were below their laboratory reporting limit.

TPH-D = Total Petroleum Hydrocarbons as Diesel  
 The units for all presented values are µg/L = Micrograms per liter  
 < = The "less than" symbol indicates not detected above the laboratory reporting limit shown.

**APPENDIX A**

GROUNDWATER PURGE LOGS AND WATER LEVEL DATA



# FLUID MEASUREMENT FIELD DATA

SHEET: 1 OF 1

DATE: 7/21/2011 PROJECT NAME: Tristar PROJECT NO: ~~575-8G012~~ 575-1024

WATER LEVEL MEASUREMENT INSTRUMENT: SOLINST SERIAL NO: 12080

PRODUCT DETECTION INSTRUMENT: SERIAL NO:

EQUIP. DECON:  ALCONOX WASH  DIST/DEION 1 RINSE  ISOPROPNOL  ANALYTE FREE FINAL RINSE  TAP WATER FINAL RINSE  
 TAP WATER WASH  LIQUINOX WASH  DIST/DEION 2 RINSE  OTHER SOLVENT  DIST/DEION FINAL RINSE  AIR DRY

WELL NUMBER	GROUND SURFACE ELEVATION	TOP OF CASING ELEVATION	DEPTH TO PRODUCT BELOW TOC	DEPTH TO WATER BELOW TOC	WELL DEPTH BELOW TOC	PRODUCT THICKNESS	WATER TABLE ELEVATION	ACTUAL TIME
MW-1		115.44		12.66	26.03			10:40
MW-2		114.62		12.11	24.69			10:36
MW-3		113.77		11.34	14.37			10:47
MW-4		114.25		10.86	15.69			10:44
WELLS OPENED FROM 10:10 — 10:25								
WELL IS 3/4 FULL, BRIM A NEW DRAW NEXT TIME								

REMEMBER TO CORRECT PRODUCT THICKNESS FOR DENSITY BEFORE CALCULATING WATER TABLE ELEVATION

PREPARED BY: STEPHEN RAMOS

# WELL PURGING AND SAMPLING DATA

		WELL NO: MW-1
DATE: 7/21/2011	PROJECT NAME: TRISTAR	PROJECT NO: <del>575-86042</del> 575-1024

WEATHER CONDITIONS:

WELL DIAMETER (IN.)     1     2     4     6     OTHER \_\_\_\_\_

SAMPLE TYPE:     GROUNDWATER     WASTEWATER     SURFACE WATER     OTHER

WELL DEPTH (TOC)    26.03    FT.    DEPTH TO WATER BEFORE PURGING (TOC) 12.66    FT.

LENGTH OF WATER    13.37    FT.    CALCULATED ONE WELL VOLUME<sup>1</sup>: 2.27    GAL.

PURGING DEVICE:    POLY BAILER     DEDICATED     DISPOSABLE     DECONTAMINATED

SAMPLING DEVICE:    POLY BAILER     DEDICATED     DISPOSABLE     DECONTAMINATED

EQUIP. DECON.     TAP WATER WASH     ISOPROPANOL     ANALYTE FREE FINAL RINSE  
 ALCONOX WASH     DIST/DEION 1 RINSE     OTHER SOLVENT     DIST/DEION FINAL RINSE  
 LIQUINOX WASH     DIST/DEION 2 RINSE     TAP WATER FINAL RINSE     AIR DRY

CONTAINER PRESERVATION:     LAB PRESERVED     FIELD PRESERVED

WATER ANALYZER MODEL & SERIAL NO:    YSI 556 MPS Serial # M61171 AN

ACTUAL TIME (MIN)	CUMUL. VOLUME PURGED (GAL)	TEMP <input type="checkbox"/> °F <input checked="" type="checkbox"/> °C	SPECIFIC CONDUCT.	pH	DEPTH TO GROUND WATER	WATER APPEAR CL=CLEAR CO=CLOUDY TU=TURBID	REMARKS (EVIDENT ODOR, COLOR, PID)
12:02	INITIAL	22.4	<u>MS</u> 430.2	7.42		CL	SLIGHT HC ODOR / <del>YELLOWISH BROWN</del> CLEAR
12:11	2.5	21.7	480.1	7.43		CL	SLIGHT HC ODOR / MORE CLEAR
12:20	5	21.3	483.8	7.48		CL	" / CLEAR, NO YELLOW
12:27	7.5	21.1	485.3	7.48		CL	" / "

DEPTH TO WATER AFTER PURGING (TOC)    FT.    SAMPLE FILTERED     YES     NO    SIZE \_\_\_\_\_

NOTES:    SAMPLE TIME: 12:35    ID# MW-1  
 DUPLICATE        TIME:    ID#:      
 EQUIP. BLANK:        TIME:    ID#:      
 PREPARED BY:    STEPHEN RAMOS

# WELL PURGING AND SAMPLING DATA

DATE: 7/21/2011		PROJECT NAME: TRISTAR	WELL NO: MW-2
			PROJECT NO: <del>575-86012</del> 575-102-4

WEATHER CONDITIONS:

WELL DIAMETER (IN.)     1     2     4     6     OTHER \_\_\_\_\_

SAMPLE TYPE:     GROUNDWATER     WASTEWATER     SURFACE WATER     OTHER

WELL DEPTH (TOC)    24.69    FT.    DEPTH TO WATER BEFORE PURGING (TOC)    12.11    FT.

LENGTH OF WATER    12.58    FT.    CALCULATED ONE WELL VOLUME<sup>1</sup>:    2.14    GAL.

PURGING DEVICE:    POLY BAILER     DEDICATED     DISPOSABLE     DECONTAMINATED

SAMPLING DEVICE:    POLY BAILER     DEDICATED     DISPOSABLE     DECONTAMINATED

EQUIP. DECON.     TAP WATER WASH     ISOPROPANOL     ANALYTE FREE FINAL RINSE  
 ALCONOX WASH     DIST/DEION 1 RINSE     OTHER SOLVENT     DIST/DEION FINAL RINSE  
 LIQUINOX WASH     DIST/DEION 2 RINSE     TAP WATER FINAL RINSE     AIR DRY

CONTAINER PRESERVATION:     LAB PRESERVED     FIELD PRESERVED

WATER ANALYZER MODEL & SERIAL NO:    YSI 556 MPS Serial # M61171 AN

ACTUAL TIME (MIN)	CUMUL. VOLUME PURGED (GAL)	TEMP <input type="checkbox"/> °F <input checked="" type="checkbox"/> °C	SPECIFIC CONDUCT.	pH	DEPTH TO GROUND WATER	WATER APPEAR CL=CLEAR CO=CLOUDY TU=TURBID	REMARKS (EVIDENT ODOR, COLOR, PID)
11:04	INITIAL	22.9	MS 294.3	7.43		CL	<del>NOT</del> CLEAR
11:12	2.5	21.8	342.0	7.45		"	" / "
11:20	5	21.4	343.4	7.46		"	" / "
11:27	7.5	21.3	349.6	7.46		"	" / "

DEPTH TO WATER AFTER PURGING (TOC)    \_\_\_\_\_    FT.    SAMPLE FILTERED     YES     NO    SIZE \_\_\_\_\_

NOTES:

SAMPLE TIME: 11:38	ID# MW-2
DUPLICATE <input type="checkbox"/> TIME: _____	ID#: _____
EQUIP. BLANK: <input type="checkbox"/> TIME: _____	ID#: _____
PREPARED BY:    STEPHEN RAMOS	

<sup>1</sup> A 1 FOOT LENGTH OF WATER = 0.05 GAL IN 1" DIA. PIPE    0.17 GAL IN 2" DIA PIPE    0.65 GAL IN 4" DIA PIPE    1.5 GAL IN 6" DIA PIPE

Well Purging And Sampling Data    Rev. 3/07

# WELL PURGING AND SAMPLING DATA

		WELL NO: MW-3
DATE: 7/21/2011	PROJECT NAME: TRISTAR	PROJECT NO: 575-8G042 575-102-4

WEATHER CONDITIONS:

WELL DIAMETER (IN.)     1     2     4     6     OTHER \_\_\_\_\_

SAMPLE TYPE:     GROUNDWATER     WASTEWATER     SURFACE WATER     OTHER

WELL DEPTH (TOC)    14.37    FT.    DEPTH TO WATER BEFORE PURGING (TOC)    11.34    FT.

LENGTH OF WATER    3.03    FT.    CALCULATED ONE WELL VOLUME<sup>1</sup>:    0.52    GAL.

PURGING DEVICE:    POLY BAILER     DEDICATED     DISPOSABLE     DECONTAMINATED

SAMPLING DEVICE:    POLY BAILER     DEDICATED     DISPOSABLE     DECONTAMINATED

EQUIP. DECON.     TAP WATER WASH     ISOPROPANOL     ANALYTE FREE FINAL RINSE

ALCONOX WASH     DIST/DEION 1 RINSE     OTHER SOLVENT     DIST/DEION FINAL RINSE

LIQUINOX WASH     DIST/DEION 2 RINSE     TAP WATER FINAL RINSE     AIR DRY

CONTAINER PRESERVATION:     LAB PRESERVED     FIELD PRESERVED

WATER ANALYZER MODEL & SERIAL NO:    YSI 556 MPS Serial # M61171 AN

ACTUAL TIME (MIN)	CUMUL. VOLUME PURGED (GAL)	TEMP <input type="checkbox"/> °F <input checked="" type="checkbox"/> °C	SPECIFIC CONDUCT.	pH	DEPTH TO GROUND WATER	WATER APPEAR CL=CLEAR CO=CLOUDY TU=TURBID	REMARKS (EVIDENT ODOR, COLOR, PID)
13:26	INITIAL	23.5	127.7	7.76		CL	Hc ODOR / CLEAR
13:31	1	22.2	129.3	7.72		CL	" / "
WELL PURGED DRY AT 1:25 pm 1/10/11							

DEPTH TO WATER AFTER PURGING (TOC)    \_\_\_\_\_    FT.    SAMPLE FILTERED     YES     NO    SIZE \_\_\_\_\_

NOTES: CHECKED WATER LEVEL AT 15:00 AND BAILER HAS 80% OF THE DEPTH TO WATER, SO WE TOOK MW-3 SAMPLES

SAMPLE TIME: 15:00    ID# MW-3

DUPLICATE        TIME:    ID#:

EQUIP. BLANK:        TIME:    ID#:

PREPARED BY:    STEPHEN RAMOS

# WELL PURGING AND SAMPLING DATA

		WELL NO: MW-4
DATE: 7/21/2011	PROJECT NAME: TRISTAR	PROJECT NO: 575-86012575-102-4

WEATHER CONDITIONS:

WELL DIAMETER (IN.)     1     2     4     6     OTHER \_\_\_\_\_

SAMPLE TYPE:     GROUNDWATER     WASTEWATER     SURFACE WATER     OTHER

WELL DEPTH (TOC)    15.69    FT.    DEPTH TO WATER BEFORE PURGING (TOC)    10.86    FT.

LENGTH OF WATER    4.83    FT.    CALCULATED ONE WELL VOLUME<sup>1</sup>:    0.82    GAL.

PURGING DEVICE:    POLY BAILER     DEDICATED     DISPOSABLE     DECONTAMINATED

SAMPLING DEVICE:    POLY BAILER     DEDICATED     DISPOSABLE     DECONTAMINATED

EQUIP. DECON.     TAP WATER WASH     ISOPROPANOL     ANALYTE FREE FINAL RINSE  
 ALCONOX WASH     DIST/DEION 1 RINSE     OTHER SOLVENT     DIST/DEION FINAL RINSE  
 LIQUINOX WASH     DIST/DEION 2 RINSE     TAP WATER FINAL RINSE     AIR DRY

CONTAINER PRESERVATION:     LAB PRESERVED     FIELD PRESERVED

WATER ANALYZER MODEL & SERIAL NO:    YSI 556 MPS Serial # M61171 AN

ACTUAL TIME (MIN)	CUMUL. VOLUME PURGED (GAL)	TEMP <input type="checkbox"/> °F <input checked="" type="checkbox"/> °C	SPECIFIC CONDUCT.	pH	DEPTH TO GROUND WATER	WATER APPEAR CL=CLEAR CO=CLOUDY TU=TURBID	REMARKS
							(EVIDENT ODOR, COLOR, PID)
12:52	INITIAL	22.2	MS 79.72	7.53		CL	SLIGHT HC ODOR / CLEAR
12:57	1	20.9	80.96	7.51		CL	" / "
12:59	2	20.4	82.13	7.52		CL	HC ODOR / "
13:02	3	20.7	83.56	7.52		CL	" / "

DEPTH TO WATER AFTER PURGING (TOC)    FT.    SAMPLE FILTERED     YES     NO    SIZE \_\_\_\_\_

NOTES:	SAMPLE TIME: 13:09	ID# MW-4
	DUPLICATE <input type="checkbox"/> TIME:	ID#:
	EQUIP. BLANK: <input type="checkbox"/> TIME:	ID#:
	PREPARED BY:    STEPHEN RAMOS	

**APPENDIX B**

LABORATORY REPORT AND CHAIN-OF-CUSTODY RECORD



25712 Commercentre Drive  
Lake Forest, California 92630  
949.297.5020 Phone  
949.297.5027 Fax

28 July 2011

Brand Burfield  
PSI -- Oakland  
4703 Tidewater Ave Ste B  
Oakland, CA 94601  
RE: Tristar

Enclosed are the results of analyses for samples received by the laboratory on 07/22/11 09:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Wendy Hsiao For John Shepler  
Laboratory Director



25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

PSI -- Oakland 4703 Tidewater Ave Ste B Oakland CA, 94601	Project: Tristar Project Number: 575-102-4 Project Manager: Brand Burfield	<b>Reported:</b> 07/28/11 16:40
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**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	T110988-01	Water	07/21/11 12:35	07/22/11 09:00
MW-2	T110988-02	Water	07/21/11 11:38	07/22/11 09:00
MW-3	T110988-03	Water	07/21/11 15:00	07/22/11 09:00
MW-4	T110988-04	Water	07/21/11 13:09	07/22/11 09:00

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Wendy Hsiao For John Shepler, Laboratory Director



PSI -- Oakland  
4703 Tidewater Ave Ste B  
Oakland CA, 94601

Project: Tristar  
Project Number: 575-102-4  
Project Manager: Brand Burfield

**Reported:**  
07/28/11 16:40

**MW-1  
T110988-01 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**SunStar Laboratories, Inc.**

**Extractable Petroleum Hydrocarbons by 8015C**

C6-C12 (GRO)	ND	0.050	mg/l	1	1072218	07/22/11	07/25/11	EPA 8015C	
<b>C13-C28 (DRO)</b>	<b>0.43</b>	0.050	"	"	"	"	"	"	
C29-C40 (MORO)	ND	0.10	"	"	"	"	"	"	
Surrogate: <i>p</i> -Terphenyl		95.1 %	65-135		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Bromobenzene	ND	1.0	ug/l	1	1072220	07/22/11	07/27/11	EPA 8260B	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
<b>n-Butylbenzene</b>	<b>2.1</b>	1.0	"	"	"	"	"	"	
<b>sec-Butylbenzene</b>	<b>1.8</b>	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.0	"	"	"	"	"	"	
Dibromomethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	

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PSI -- Oakland  
4703 Tidewater Ave Ste B  
Oakland CA, 94601

Project: Tristar  
Project Number: 575-102-4  
Project Manager: Brand Burfield

**Reported:**  
07/28/11 16:40

**MW-1  
T110988-01 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**SunStar Laboratories, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
cis-1,2-Dichloroethene	ND	1.0	ug/l	1	1072220	07/22/11	07/27/11	EPA 8260B	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
<b>Isopropylbenzene</b>	<b>1.7</b>	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
Methylene chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
<b>n-Propylbenzene</b>	<b>3.9</b>	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
Vinyl chloride	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	1.0	"	"	"	"	"	"	

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Wendy Hsiao For John Shepler, Laboratory Director



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**MW-1**  
**T110988-01 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**SunStar Laboratories, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

o-Xylene	ND	0.50	ug/l	1	1072220	07/22/11	07/27/11	EPA 8260B	
Tert-amyl methyl ether	ND	2.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	10	"	"	"	"	"	"	
Di-isopropyl ether	ND	2.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.6 %	77.1-110		"	"	"	"	
Surrogate: Dibromofluoromethane		160 %	66.3-111		"	"	"	"	S-04
Surrogate: Toluene-d8		111 %	84.7-109		"	"	"	"	S-04

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PSI -- Oakland 4703 Tidewater Ave Ste B Oakland CA, 94601	Project: Tristar Project Number: 575-102-4 Project Manager: Brand Burfield	Reported: 07/28/11 16:40
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**MW-2**  
**T110988-02 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**SunStar Laboratories, Inc.**

**Extractable Petroleum Hydrocarbons by 8015C**

C6-C12 (GRO)	ND	0.050	mg/l	1	1072218	07/22/11	07/25/11	EPA 8015C	
C13-C28 (DRO)	ND	0.050	"	"	"	"	"	"	
C29-C40 (MORO)	ND	0.10	"	"	"	"	"	"	
Surrogate: <i>p</i> -Terphenyl		98.0 %	65-135		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Bromobenzene	ND	1.0	ug/l	1	1072220	07/22/11	07/27/11	EPA 8260B	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.0	"	"	"	"	"	"	
Dibromomethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	

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Wendy Hsiao For John Shepler, Laboratory Director

PSI -- Oakland  
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Oakland CA, 94601

Project: Tristar  
Project Number: 575-102-4  
Project Manager: Brand Burfield

**Reported:**  
07/28/11 16:40

**MW-2  
T110988-02 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**SunStar Laboratories, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
cis-1,2-Dichloroethene	ND	1.0	ug/l	1	1072220	07/22/11	07/27/11	EPA 8260B	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
Methylene chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
Vinyl chloride	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	1.0	"	"	"	"	"	"	

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PSI -- Oakland  
4703 Tidewater Ave Ste B  
Oakland CA, 94601

Project: Tristar  
Project Number: 575-102-4  
Project Manager: Brand Burfield

**Reported:**  
07/28/11 16:40

**MW-2  
T110988-02 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**SunStar Laboratories, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

o-Xylene	ND	0.50	ug/l	1	1072220	07/22/11	07/27/11	EPA 8260B	
Tert-amyl methyl ether	ND	2.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	10	"	"	"	"	"	"	
Di-isopropyl ether	ND	2.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.0	"	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		93.2 %	77.1-110		"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		114 %	66.3-111		"	"	"	"	S-GC
<i>Surrogate: Toluene-d8</i>		108 %	84.7-109		"	"	"	"	

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PSI -- Oakland  
4703 Tidewater Ave Ste B  
Oakland CA, 94601

Project: Tristar  
Project Number: 575-102-4  
Project Manager: Brand Burfield

**Reported:**  
07/28/11 16:40

**MW-3  
T110988-03 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**SunStar Laboratories, Inc.**

**Extractable Petroleum Hydrocarbons by 8015C**

<b>C6-C12 (GRO)</b>	<b>1.6</b>	0.050	mg/l	1	1072218	07/22/11	07/25/11	EPA 8015C	
<b>C13-C28 (DRO)</b>	<b>1.7</b>	0.050	"	"	"	"	"	"	
<b>C29-C40 (MORO)</b>	<b>1.1</b>	0.10	"	"	"	"	"	"	
<i>Surrogate: p-Terphenyl</i>		96.7 %	65-135	"	"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Bromobenzene	ND	1.0	ug/l	1	1072220	07/22/11	07/27/11	EPA 8260B	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
<b>n-Butylbenzene</b>	<b>9.9</b>	1.0	"	"	"	"	"	"	
<b>sec-Butylbenzene</b>	<b>6.2</b>	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.0	"	"	"	"	"	"	
Dibromomethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	

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PSI -- Oakland  
4703 Tidewater Ave Ste B  
Oakland CA, 94601

Project: Tristar  
Project Number: 575-102-4  
Project Manager: Brand Burfield

**Reported:**  
07/28/11 16:40

**MW-3  
T110988-03 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**SunStar Laboratories, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
trans-1,2-Dichloroethene	ND	1.0	ug/l	1	1072220	07/22/11	07/27/11	EPA 8260B
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"
<b>Isopropylbenzene</b>	<b>15</b>	1.0	"	"	"	"	"	"
<b>p-Isopropyltoluene</b>	<b>3.0</b>	1.0	"	"	"	"	"	"
Methylene chloride	ND	1.0	"	"	"	"	"	"
<b>Naphthalene</b>	<b>1.1</b>	1.0	"	"	"	"	"	"
<b>n-Propylbenzene</b>	<b>29</b>	1.0	"	"	"	"	"	"
Styrene	ND	1.0	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"
Tetrachloroethene	ND	1.0	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"
Trichloroethene	ND	1.0	"	"	"	"	"	"
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"
Vinyl chloride	ND	1.0	"	"	"	"	"	"
Benzene	ND	0.50	"	"	"	"	"	"
Toluene	ND	0.50	"	"	"	"	"	"
<b>Ethylbenzene</b>	<b>0.64</b>	0.50	"	"	"	"	"	"
<b>m,p-Xylene</b>	<b>2.2</b>	1.0	"	"	"	"	"	"
o-Xylene	ND	0.50	"	"	"	"	"	"

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PSI -- Oakland 4703 Tidewater Ave Ste B Oakland CA, 94601	Project: Tristar Project Number: 575-102-4 Project Manager: Brand Burfield	Reported: 07/28/11 16:40
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**MW-3**  
**T110988-03 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**SunStar Laboratories, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

Tert-amyl methyl ether	ND	2.0	ug/l	1	1072220	07/22/11	07/27/11	EPA 8260B	
Tert-butyl alcohol	ND	10	"	"	"	"	"	"	
Di-isopropyl ether	ND	2.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.0	"	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		91.5 %	77.1-110		"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		142 %	66.3-111		"	"	"	"	S-04
<i>Surrogate: Toluene-d8</i>		110 %	84.7-109		"	"	"	"	S-04

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**MW-4**  
**T110988-04 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**SunStar Laboratories, Inc.**

**Extractable Petroleum Hydrocarbons by 8015C**

<b>C6-C12 (GRO)</b>	<b>0.81</b>	0.050	mg/l	1	1072218	07/22/11	07/25/11	EPA 8015C	
<b>C13-C28 (DRO)</b>	<b>1.1</b>	0.050	"	"	"	"	"	"	
<b>C29-C40 (MORO)</b>	<b>1.2</b>	0.10	"	"	"	"	"	"	
<i>Surrogate: p-Terphenyl</i>		103 %	65-135	"	"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Bromobenzene	ND	1.0	ug/l	1	1072220	07/22/11	07/27/11	EPA 8260B	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
<b>n-Butylbenzene</b>	<b>1.1</b>	1.0	"	"	"	"	"	"	
<b>sec-Butylbenzene</b>	<b>1.5</b>	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.0	"	"	"	"	"	"	
Dibromomethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	

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**MW-4**  
**T110988-04 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**SunStar Laboratories, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

trans-1,2-Dichloroethene	ND	1.0	ug/l	1	1072220	07/22/11	07/27/11	EPA 8260B	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
<b>Isopropylbenzene</b>	<b>1.1</b>	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
Methylene chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
<b>n-Propylbenzene</b>	<b>1.6</b>	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
Vinyl chloride	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	1.0	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	

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**MW-4  
T110988-04 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**SunStar Laboratories, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

Tert-amyl methyl ether	ND	2.0	ug/l	1	1072220	07/22/11	07/27/11	EPA 8260B	
Tert-butyl alcohol	ND	10	"	"	"	"	"	"	
Di-isopropyl ether	ND	2.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.0	"	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		86.6 %		77.1-110		"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		128 %		66.3-111		"	"	"	S-GC
<i>Surrogate: Toluene-d8</i>		103 %		84.7-109		"	"	"	

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**Extractable Petroleum Hydrocarbons by 8015C - Quality Control**  
**SunStar Laboratories, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 1072218 - EPA 3510C GC**

**Blank (1072218-BLK1)**

Prepared: 07/22/11 Analyzed: 07/25/11

C6-C12 (GRO)	ND	0.050	mg/l							
C13-C28 (DRO)	ND	0.050	"							
C29-C40 (MORO)	ND	0.10	"							
Surrogate: p-Terphenyl	3.38		"	4.00		84.5	65-135			

**LCS (1072218-BS1)**

Prepared: 07/22/11 Analyzed: 07/25/11

C13-C28 (DRO)	22.2	0.050	mg/l	20.0		111	75-125			
Surrogate: p-Terphenyl	3.74		"	4.00		93.6	65-135			

**Matrix Spike (1072218-MS1)**

Source: T110988-02

Prepared: 07/22/11 Analyzed: 07/25/11

C13-C28 (DRO)	22.6	0.050	mg/l	20.0	ND	113	75-125			
Surrogate: p-Terphenyl	4.04		"	4.00		101	65-135			

**Matrix Spike Dup (1072218-MSD1)**

Source: T110988-02

Prepared: 07/22/11 Analyzed: 07/25/11

C13-C28 (DRO)	23.3	0.050	mg/l	20.0	ND	117	75-125	3.15	20	
Surrogate: p-Terphenyl	3.82		"	4.00		95.5	65-135			

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 Oakland CA, 94601

Project: Tristar  
 Project Number: 575-102-4  
 Project Manager: Brand Burfield

Reported:  
 07/28/11 16:40

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**

**SunStar Laboratories, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 1072220 - EPA 5030 GCMS**

**Blank (1072220-BLK1)**

Prepared: 07/22/11 Analyzed: 07/27/11

Bromobenzene	ND	1.0	ug/l							
Bromochloromethane	ND	1.0	"							
Bromodichloromethane	ND	1.0	"							
Bromoform	ND	1.0	"							
Bromomethane	ND	1.0	"							
n-Butylbenzene	ND	1.0	"							
sec-Butylbenzene	ND	1.0	"							
tert-Butylbenzene	ND	1.0	"							
Carbon tetrachloride	ND	0.50	"							
Chlorobenzene	ND	1.0	"							
Chloroethane	ND	1.0	"							
Chloroform	ND	1.0	"							
Chloromethane	ND	1.0	"							
2-Chlorotoluene	ND	1.0	"							
4-Chlorotoluene	ND	1.0	"							
Dibromochloromethane	ND	1.0	"							
1,2-Dibromo-3-chloropropane	ND	1.0	"							
1,2-Dibromoethane (EDB)	ND	1.0	"							
Dibromomethane	ND	1.0	"							
1,2-Dichlorobenzene	ND	1.0	"							
1,3-Dichlorobenzene	ND	1.0	"							
1,4-Dichlorobenzene	ND	1.0	"							
Dichlorodifluoromethane	ND	0.50	"							
1,1-Dichloroethane	ND	1.0	"							
1,2-Dichloroethane	ND	0.50	"							
1,1-Dichloroethene	ND	1.0	"							
cis-1,2-Dichloroethene	ND	1.0	"							
trans-1,2-Dichloroethene	ND	1.0	"							
1,2-Dichloropropane	ND	1.0	"							
1,3-Dichloropropane	ND	1.0	"							
2,2-Dichloropropane	ND	1.0	"							
1,1-Dichloropropene	ND	1.0	"							
cis-1,3-Dichloropropene	ND	0.50	"							
trans-1,3-Dichloropropene	ND	0.50	"							
Hexachlorobutadiene	ND	1.0	"							
Isopropylbenzene	ND	1.0	"							

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PSI -- Oakland  
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 Oakland CA, 94601

Project: Tristar  
 Project Number: 575-102-4  
 Project Manager: Brand Burfield

Reported:  
 07/28/11 16:40

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**

**SunStar Laboratories, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 1072220 - EPA 5030 GCMS**

**Blank (1072220-BLK1)**

Prepared: 07/22/11 Analyzed: 07/27/11

p-Isopropyltoluene	ND	1.0	ug/l							
Methylene chloride	ND	1.0	"							
Naphthalene	ND	1.0	"							
n-Propylbenzene	ND	1.0	"							
Styrene	ND	1.0	"							
1,1,2,2-Tetrachloroethane	ND	1.0	"							
1,1,1,2-Tetrachloroethane	ND	1.0	"							
Tetrachloroethene	ND	1.0	"							
1,2,3-Trichlorobenzene	ND	1.0	"							
1,2,4-Trichlorobenzene	ND	1.0	"							
1,1,2-Trichloroethane	ND	1.0	"							
1,1,1-Trichloroethane	ND	1.0	"							
Trichloroethene	ND	1.0	"							
Trichlorofluoromethane	ND	1.0	"							
1,2,3-Trichloropropane	ND	1.0	"							
1,3,5-Trimethylbenzene	ND	1.0	"							
1,2,4-Trimethylbenzene	ND	1.0	"							
Vinyl chloride	ND	1.0	"							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
m,p-Xylene	ND	1.0	"							
o-Xylene	ND	0.50	"							
Tert-amyl methyl ether	ND	2.0	"							
Tert-butyl alcohol	ND	10	"							
Di-isopropyl ether	ND	2.0	"							
Ethyl tert-butyl ether	ND	2.0	"							
Methyl tert-butyl ether	ND	1.0	"							
Surrogate: 4-Bromofluorobenzene	7.93		"	8.00		99.1	77.1-110			
Surrogate: Dibromofluoromethane	9.29		"	8.00		116	66.3-111			S-GC
Surrogate: Toluene-d8	8.17		"	8.00		102	84.7-109			

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Oakland CA, 94601

Project: Tristar  
Project Number: 575-102-4  
Project Manager: Brand Burfield

Reported:  
07/28/11 16:40

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**

**SunStar Laboratories, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 1072220 - EPA 5030 GCMS**

**LCS (1072220-BS1)**

Prepared: 07/22/11 Analyzed: 07/27/11

Chlorobenzene	16.3	1.0	ug/l	20.0		81.4	75-125			
1,1-Dichloroethene	19.6	1.0	"	20.0		97.9	75-125			
Trichloroethene	16.2	1.0	"	20.0		81.2	75-125			
Benzene	17.2	0.50	"	20.0		86.2	75-125			
Toluene	17.7	0.50	"	20.0		88.5	75-125			
Surrogate: 4-Bromofluorobenzene	8.06		"	8.00		101	77.1-110			
Surrogate: Dibromofluoromethane	10.9		"	8.00		136	66.3-111			S-GC
Surrogate: Toluene-d8	8.84		"	8.00		110	84.7-109			S-GC

**Matrix Spike (1072220-MS1)**

Source: T110988-01

Prepared: 07/22/11 Analyzed: 07/27/11

Chlorobenzene	15.0	1.0	ug/l	20.0	ND	75.2	75-125			
1,1-Dichloroethene	22.8	1.0	"	20.0	ND	114	75-125			
Trichloroethene	16.6	1.0	"	20.0	ND	82.8	75-125			
Benzene	17.2	0.50	"	20.0	ND	86.0	75-125			
Toluene	17.8	0.50	"	20.0	ND	88.8	75-125			
Surrogate: 4-Bromofluorobenzene	7.18		"	8.00		89.8	77.1-110			
Surrogate: Dibromofluoromethane	12.4		"	8.00		155	66.3-111			S-04
Surrogate: Toluene-d8	8.84		"	8.00		110	84.7-109			S-04

**Matrix Spike Dup (1072220-MSD1)**

Source: T110988-01

Prepared: 07/22/11 Analyzed: 07/27/11

Chlorobenzene	15.1	1.0	ug/l	20.0	ND	75.6	75-125	0.531	20	
1,1-Dichloroethene	19.2	1.0	"	20.0	ND	96.0	75-125	17.4	20	
Trichloroethene	15.4	1.0	"	20.0	ND	77.2	75-125	6.94	20	
Benzene	16.0	0.50	"	20.0	ND	79.9	75-125	7.30	20	
Toluene	16.8	0.50	"	20.0	ND	83.8	75-125	5.91	20	
Surrogate: 4-Bromofluorobenzene	7.17		"	8.00		89.6	77.1-110			
Surrogate: Dibromofluoromethane	10.8		"	8.00		135	66.3-111			S-04
Surrogate: Toluene-d8	8.81		"	8.00		110	84.7-109			S-04

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Oakland CA, 94601

Project: Tristar  
Project Number: 575-102-4  
Project Manager: Brand Burfield

**Reported:**  
07/28/11 16:40

### Notes and Definitions

S-GC Surrogate recovery outside of established control limits. The data was accepted based on valid recovery of the remaining surrogate(s).

S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

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 Lake Forest, CA 92630  
 949-297-5020

### Chain of Custody Record

Client: PSI  
 Address: 4703 TIDEWATER AVE, STE B, OAKLAND, CA 94601  
 Phone: 510 434 9200 Fax: 510 434 7676  
 Project Manager: BRAND BURFIELD

Date: 7/21/11 Page: 1 Of 1  
 Project Name: TRISTAR  
 Collector: STEPHEN RAMOS Client Project #: 575-102-4  
 Batch #: T110988 EDF #: T0600100131

Sample ID	Date Sampled	Time	Sample Type	Container Type	8260	8260 + OXY	8260 BTEX, OXY only	8270	8021 BTEX	8015M (gasoline)	8015M (diesel)	8015M Ext./Carbon Chain	6010/7000 Title 22 Metals	Laboratory ID #	Comments/Preservative	Total # of containers
MW-1	7-21-11	12:35	WATER	VOA		X						X		01		4
MW-2	7-21-11	11:38				X						X		02		4
MW-3	7-21-11	15:00	↓	↓		X						X		03		4
MW-4	7-21-11	13:09	↓	↓		X						X		04		4

Relinquished by: (signature) <i>[Signature]</i>	Date / Time 7-21-11 15:55	Received by: (signature) GSO Tracking # 106746932	Date / Time 7/22/11 9:00	Total # of containers <u>16</u> Chain of Custody seals Y/N/NA <u>Y</u> Seals intact? Y/N/NA <u>Y</u> Received good condition/cold <u>8.6</u> Turn around time: <u>STD</u>	Notes • CREATE EDF • RL=0.05 mg/L FOR TPH-G AND TPH-D • RL=0.10 mg/L FOR TPH-MO
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time		
Relinquished by: (signature) GSO 7/22/11 9:00	Date / Time 7/22/11 9:00	Received by: (signature) <i>[Signature]</i>	Date / Time 7/22/11 9:00		

Sample disposal instructions: Disposal @ \$2.00 each \_\_\_\_\_ Return to client \_\_\_\_\_ Pickup \_\_\_\_\_