geologica

*Innovative Strategies for Managing Environmental Liability*

April 25, 2012

Mr. Keith Matthews
City of Oakland Fire Department
250 Frank H. Ogawa Plaza, Suite 3341
Oakland, CA 94612

**Subject:** **Request for UST Case Closure**
**Vacant Lot (former gasoline station)**
**7701 Bancroft Avenue**
**Oakland, California 94621**

Dear Mr. Matthews:

As we discussed in our recent telephone conversations, GEOLOGICA, INC. (GEOLOGICA) is pleased to present the attached Letter Report entitled, *Limited Phase II Soil and Groundwater Investigation* for the vacant lot located at 7701 Bancroft Avenue in Oakland, CA, on behalf of the property owner, Union Bank.

The primary objective of this limited soil and groundwater investigation was to evaluate the possible presence of historic USTs related to a former on-site gasoline service station and whether or not residual petroleum hydrocarbons were present in soil and / or groundwater on the property. There were no records in the building department, fire department, and county environmental health department files for the installation or removal of USTs at the property. The property has been a vacant lot since 1997.

Based on the findings of this study, we do not believe additional investigation or remediation is warranted at this site. We are requesting UST / site closure under an unrestricted land use scenario, based on the following:

- A geophysical survey performed in November 2011 confirmed that no USTs are currently present at the site. The depth of fill in the former UST area suggests that the USTs were over-excavated and some volume of soil was removed with the USTs approximately 15 – 25 years ago. Thus, there is no threat of a future release or continuing source.
- Low permeability soil conditions have resulted in the presence of only intermittent shallow groundwater. Groundwater in the area is not used for water supply; no water supply wells were identified in a well database search within ½-mile of the property.

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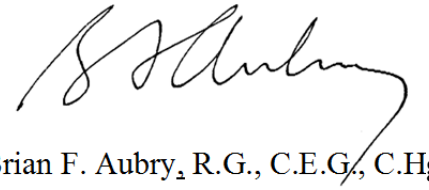
- Detected low-level hydrocarbon concentrations reflect an older release that has significantly degraded over time; it is expected that residual concentrations will continue to degrade over time. The ESL exceedances noted in this study were sporadic and limited in extent; elevated concentrations of constituents down-gradient is not anticipated. In addition, no significant volatile constituents were detected in soil or groundwater. Thus, the testing results indicate a low potential for impacts to human health and the environment under an unrestricted land use.

We have enjoyed working with you on this project and appreciate the opportunity to be of service. Should you have any questions, please do not hesitate to contact us at (415) 597-7883, or Mr. Uwe Ligmond, Vice President of Environmental Risk Management for Union Bank at (714) 565-5634.

Very truly yours,

GEOLOGICA, INC.

Greg Romero
Project Geologist



Brian F. Aubry, R.G., C.E.G., C.Hg
Principal

Attachments:

*Limited Phase II Soil and Groundwater Investigation Report*

April 16, 2012

Union Bank
Environmental Risk Management
500 South Main Street, Suite 320
Orange, CA 92868

Attention: Mr. Uwe Ligmond

**LETTER REPORT**
**LIMITED PHASE II SOIL AND**
**GROUNDWATER INVESTIGATION**
**7701 BANCROFT AVENUE**
**OAKLAND, CA 94621**

Dear Mr. Ligmond:

## 1.0 INTRODUCTION

GEOLOGICA Inc. (GEOLOGICA) is pleased to submit this Letter Report presenting the results of our Limited Phase II Soil and Groundwater Investigation for the vacant lot located at 7701 Bancroft Avenue in Oakland, CA (the "property"). The site location is shown on **Figure 1**. The primary objective of this limited soil and groundwater investigation was to evaluate the possible presence of historic underground storage tanks (USTs) related to a former on-site gasoline service station and whether or not residual petroleum hydrocarbons were present in soil and / or groundwater on the property. This work was conducted in general accordance with our proposal dated December 14, 2011.

## 2.0 SITE DESCRIPTION

The Subject property is located at 7701 Bancroft Avenue in Oakland, CA. The 11,250 sq-ft vacant subject property lot is located on the southwest corner of Bancroft Avenue and 77$^{th}$ Avenue in a residential area of Oakland. The subject property consists of an undeveloped vacant lot with half of the lot being asphalt paved and the other half covered by a grass lawn. The property is surrounded by a locked chain-link fence and is identified by Assessor Block Number 040-3388-004-04.

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## 3.0 SITE BACKGROUND

Based on available information, including historic Sanborn maps and aerial photographs, the subject property was occupied by residential dwellings from at least 1925 till the early 1960's. Building department records indicated a building permit for the Wilshire Oil Company (Gulf) service station in 1962. The service station operated until approximately 1969, when the service station was demolished. The property was then vacant until approximately 1974, when a Stop N Go convenience store was constructed. In approximately 1976, the Stop N Go Market installed pump islands and started operating as a convenience store with gasoline service at the site until approximately the mid 1980's. A database search of regulatory agency lists identified three historic gasoline USTs for the site in the 1970s – 1980s, though information regarding the USTs is very limited. City Directory listings indicated that a K & B Market was present in 1991 and 1992, though it doesn't appear that this was also a gas station. Building department records indicated that the subject site commercial building was vacant at the time it was demolished around 1997. The site has been a vacant lot since 1997. No information regarding the USTs was available at the City of Oakland Fire Department or Alameda County Department of Environmental Health.

## 4.0 PHYSICAL SETTING

This section summarizes site and general area physical setting information.

### 4.1 Site and Area Topography and Occurrence of Surface Water

The property is located at an approximate site elevation of 53 feet above mean sea level (msl) and the general topographic gradient is southwest toward San Francisco Bay. The nearest mapped surface water is Arroyo Viejo Creek, located to the southwest of the property.

### 4.2 Soil Conditions

Based on information from nearby sites, soils in the vicinity were expected to consist of fine grained silty clay and clayey sands located to depths of approximately 20-25 ft bgs. These soils were expected to have generally low permeability.

### 4.3 Groundwater

There was no site specific groundwater information for the subject property; however, nearby sites with groundwater data 1/4-mile away indicated that groundwater in the area was estimated to be approximately 8 to 15 feet bgs and the groundwater flow direction consistent with the direction of surface topography, which is southwest.

## 5.0 GEOPHYSICAL SURVEY

GEOLOGICA contracted with NORCAL Geophysical Consultants to conduct a geophysical investigation at the subject property on October 27, 2011 to assess the possible presence of historic USTs at the site using the vertical magnetic gradient (VMG), metal detection (MD), and ground penetrating radar (GPR) methods. The VMG method was used to identify the location of the buried ferrous metal that may indicate the presence of a UST or other metallic buried debris. The MD method was used to detect shallow subsurface metal objects such as USTs and utilities. The GPR method was used to provide images that represent variations in the electrical properties of the shallow subsurface. These images may indicate possible locations and dimensions of USTs, buried objects, and fill boundaries. Descriptions of the VMG, MD, and GPR methods are provided in NORCAL's report, which is attached as **Attachment A.**

The survey did not indicate that USTs or product piping were still present at the site. However the survey did indicate an anomaly that represented a buried reinforced concrete pad, likely the area of the pump island and fueling area. Adjacent to the buried reinforced concrete pad was an anomalous fill zone probably representing the former excavation area of the USTs. Other minor, isolated buried metal anomalies and utility lines were detected throughout the property. Features identified in the geophysical survey are shown in the report in **Attachment A** and in **Figure 2**. Based on this, GEOLOGICA recommended a Limited Phase II soil and groundwater investigation to assess whether the subsurface has been impacted by hydrocarbons associated with the gasoline service station.

## 6.0 LIMITED PHASE II SCOPE OF WORK COMPLETED

The Scope of Work completed included the following tasks:

**TASK 1: PRELIMINARY FIELD ACTIVITIES.** Prior to conducting field activities, GEOLOGICA performed the following:

- Assess Presence of Subsurface Utilities - GEOLOGICA coordinated with site personnel to arrange site access and mark borehole and sampling locations, reviewed available as-built blueprints and contacted Underground Services Alert (USA) to help establish the approximate location of subsurface utilities within the area to be investigated and engaged a private utility locator to clear each boring location.
- Permitting & Mobilization Activities – The property is located within the jurisdiction of the Alameda County Public Works Agency (ACPW), which supervises environmental investigations in Oakland. GEOLOGICA obtained a

drilling permit from ACPW. A copy of the drilling permit is provided in **Attachment A**.

**TASK 2: SOIL AND GROUNDWATER SAMPLING.** The purpose of this task was to investigate soil and groundwater quality beneath the property to assess whether it has been impacted by historical USTs at the property. Seven (7) soil borings were advanced around the property at the locations shown on **Figure 2**. The borings were advanced to depths of 16 to 30 ft below ground surface (bgs). The total boring depths varied depending on whether groundwater was available for sampling. Only three boring locations (GP-1, GP-2, and GP-6) produced groundwater samples at depths of 13 to 18 ft bgs; the remaining borings (GP-3, GP-4, GP-5, and GP-7), were advanced up to 30 ft bgs, but did not produce groundwater. Soil samples were collected in all seven boring locations at approximate depth intervals 4 ft, 8 ft and 12 ft, based on adequate sample recovery and field observations.

**TASK 3: CHEMICAL ANALYSES.** All soil and "grab" groundwater samples were analyzed for Total Petroleum Hydrocarbons (TPH) as gasoline, diesel, and motor oil; benzene, toluene, ethylbenzene, and total xylens (BTEX); and fuel oxygenates by EPA Method 8260 and 8015 with silica gel cleanup to remove natural organic carbon. The samples were submitted to Test America San Francisco, a State of California certified analytical laboratory.

**TASK 4: DATA INTERPRETATION AND LETTER REPORT.** The results of the Limited Phase II Investigation are presented in this letter report.

## 7.0 FIELD PROCEDURES

The Limited Phase II field procedures are decribed in the following sections.

### 7.1 Drilling and Soil Sampling

Borings were advanced on January 10, 2012 using a truck-mounted direct push/vibratory hammer Geoprobe Model 5410 (GeoProbe) drilling rig. Continuous soil samples were collected during drilling for lithologic logging purposes and for analytical testing. Soil samples were retrieved in continuous four-foot intervals during direct push probe advancement by withdrawing the probe rod and removing the 1.5-inch-diameter acetate liner attached to the tip. For each boring, the entire sample collected from each four-foot long, acetate tube was inspected in the field for visual and olfactory signs of contamination. Soil samples were collected at approximately 4 ft, 8 ft and 12 ft depth intervals based on adequate sample recovery, field observations, and conditions. After sample collection, the samples were labeled with boring identification, sample depth interval, and date/time of collection, and placed in an ice-chest cooled with bagged ice. A GEOLOGICA Project Geologist logged the probe core samples under direction of a California Registered Geologist and in accordance with the Unified Soil Classification

System (USCS). Additional characteristics noted included descriptions of non-native materials such as wood, concrete or other debris types, gradation, moisture content, stiffness or density, degree of consolidation or cementation, grain size, distribution, roundness, accessory or secondary mineralogy, organic content and any discernable depositional characteristics. A copy of the field boring log prepared for each exploration is provided in **Attachment B**.

### 7.2 Groundwater "Grab" Sample Collection

Groundwater "grab" samples were collected from the direct push soil borings using temporary ¾-inch diameter PVC casing to facilitate sampling. Samples were collected by lowering dedicated polyethylene tubing into the temporary casing and using a check-valve to lift water to fill sample containers. Clean PVC casing and screen was dedicated to each boring. Groundwater sample collection was attempted at first groundwater which was encountered at depths of 13 to as much as 18 ft bgs. The static water level is likely around between 12 and 14 ft bgs; the variability observed during drilling probably reflects slow groundwater entry into the borings from the relatively low permeability clayey soils encountered at the site. Grab groundwater samples were collected into appropriate pre-cleaned containers provided by the analytical laboratory. After sample collection, the sample containers were closed, labeled with boring identification, sample depth interval, and date/time of collection, and placed in an ice-chest cooled with bagged ice.

After completion of sampling, all soil and groundwater samples were shipped by a same-day courier service to the TestAmerica analytical laboratory in Pleasanton, CA. After sampling, the direct push borings were closed by backfilling with neat cement grout. Non-disposable sampling equipment, mainly the drill rod, was decontaminated between locations by triple rinse.

### 7.3 Boring Closure

All probe holes were backfilled with grout on the day of completion of sampling in accordance with our permit. Grout mixtures were cement-bentonite-water slurries consisting of:

- Approximately 2-4% high yield bentonite by weight
- Approximately 5 gallons of water per 94 pound sack of cement

To close the borings, the tremie tubing was placed approximately 2 feet from the bottom of the borehole and slowly withdrawn as the pumped grout mixture began to approach the ground surface. Pavement damaged during sampling was repaired in kind. Borehole grouting was completed under the oversight of an ACPW grout inspector on January 10, 2012.

# 8.0 FINDINGS

## 8.1 Soil Conditions

Soils consist of fine to medium grained clayey sands with gravels to depths of 16 feet below ground surface (ft bgs). Underlying the clayey sands are sandy clays to depths of approximately 20-30 ft bgs. At locations within the former UST area, fill material consisting of fine to medium grained sands with gravel was encountered to depths of approximately 12 to 13 feet bgs, consistent with the contention that all historic USTs have been removed from site.

## 8.2 Groundwater Occurrence

Groundwater was encountered at depths of between 13 to 18 feet bgs at the time of drilling. A site specific groundwater flow direction could not be determined. However, southwesterly groundwater flow has been reported at nearby sites.

## 8.3 Soil Sampling Results

A summary of the soil sampling data is summarized in **Table 1**. A copy of the laboratory testing report is provided in **Attachment C.** Because it is our understanding that groundwater in this area is not a source of drinking water due to its intermittent presence, low recharge, and poor quality, sampling data were compared to the RWQCB Table B (< 3 m) and Table D (>3 m) Environmental Screening Levels (ESLs) dated November 2007(revised May 2008) for Groundwater (that) IS NOT a Current or Potential Source of Drinking Water. Soil samples were collected at all seven boring locations at approximate depth intervals of 4 ft, 8 ft and 12 ft. All soil samples were analyzed for Total Petroleum Hydrocarbons (TPH) as gasoline, diesel, and motor oil, BTEX, and fuel oxygenates by EPA Method 8260 and 8015 with silica gel cleanup to remove natural organic carbon.

TPH as diesel was detected in samples GP-1-12', GP-2-13', GP-5-4', GP-5-8', GP-5-14', and GP-6-4' at detections of 8 mg/kg, 140 mg/kg, 300 mg/kg, 1.1 mg/kg, 1,500 mg/kg, and 3.3 mg/kg, respectively. TPH as motor oil was detected in samples GP-2-13', GP-5-4' and GP-5-14', at detections of 300 mg/kg, 980 mg/kg, and 4,500 mg/kg, respectively. Sample GP-5-14' also had detections of TPH as gasoline and ethylbenzene at 110 mg/kg and 0.019 mg/kg, respectively. Samples GP-5-4' and GP-5-14' exceeded the residential and commercial/industrial ESLs for TPH-diesel (100 mg/kg and 180 mg/kg, respectively), and sample GP-5-4' only exceeded the residential ESLs for TPH-mo (370 mg/kg). No other samples exceeded the residential or commercial/industrial ESL values.

### 8.4 Groundwater Sampling Results

A summary of the Groundwater "grab" sampling data is summarized in **Table 2**. A copy of the laboratory testing report is provided in **Attachment C.** To provide a context with which to evaluate the results, sampling data were compared to the RWQCB Table B ESLs for Groundwater (that) is NOT a Current or Potential Source of Drinking Water. Groundwater "grab" samples were only produced and collected at three boring locations (GP-1, GP-2, and GP-6). All three groundwater samples were analyzed for TPH as gasoline, diesel, and motor oil and BTEX using EPA Method 8260 and 8015 with silica gel cleanup to remove natural organic carbon.

Sample GP-1 had detections of TPH-diesel at 91 ug/L and TPH-mo at 240 ug/L. Sample GP-2 had detections of TPH-diesel at 150 ug/L and TPH-mo at 370 ug/L. Both samples had TPH-mo detections exceeding the Table B ESLs for groundwater (210 ug/L); though TPH-diesel did not exceed the ESLs (210 ug/L). No other analytes were found in groundwater in these samples. Sample GP-6 was non-detect for all analytes.

## 9.0 DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

### 9.1 UST History

The geophysical survey performed recently confirmed that no USTs are currently present at the site. The depth of fill in the former UST area (12 - 13 ft bgs) suggests that the USTs were over-excavated and some volume of soil was removed at the time of UST excavation. There were no records in the building department, fire department, and county environmental health department files for the installation or removal of the gasoline USTs. Based on the historic information available, it is likely that the USTs were removed in the mid-1980s. After this time, record-keeping regarding UST removals were generally maintained. However, it is possible that removal could have occurred at the time of building demolition in the mid-1990s. In any case, it is likely that the USTs have been gone for at least 15 years and probably as much as 25 years.

### 9.2 Soil, Groundwater, and Constituent Conditions

Soil - The analytical results of the limited soil and groundwater investigation at the property indicated generally low level, sporadic residual concentrations of TPH as diesel and motor oil in soil beneath the site. Slightly elevated concentrations of TPH as diesel and motor oil were noted in one area: an area near the southwest corner of the property. However, these detections appear to be localized and deeper than would be a direct contact concern.

Groundwater - With regard to groundwater, a continuous, static water table was not observed; four of the seven holes were dry. Low permeability soil conditions appear to have resulted in the presence of only intermittent shallow groundwater. Where present, groundwater was observed within discontinuous sand stringers. Concentrations of TPH as diesel and motor oil in groundwater were localized to the area of the former UST excavation only.

Degradation of Hydrocarbons - No significant evidence of volatile constituents was observed. Available records suggest that the USTs on site contained gasoline; in our experience, given the age of the gasoline dispensing operation, the observed TPH as diesel and motor oil concentrations may represent what was initially mostly in the gasoline range, but that has weathered to TPH concentrations mostly in the diesel/motor oil range.

## 9.3 Conclusions & Recommendations

Based on the findings of this study, we do not believe additional investigation or remediation is warranted at this site. We recommend that this report be provided to the Oakland Fire Department and that formal UST / site closure be requested under an unrestricted land use scenario, based on the following:

- The geophysical survey performed in November 2011 confirmed that no USTs are currently present at the site. These USTs were apparently removed 15 – 25 years ago. Thus, there is no threat of a future release or continuing source.

- Low permeability soil conditions have resulted in the presence of only intermittent shallow groundwater. Groundwater in the area is not used for water supply; no water supply wells were identified in a well database search within ½-mile of the property.

- Detected hydrocarbon concentrations reflect an older release that has significantly degraded over time; it is expected that residual concentrations will continue to degrade over time. The ESL exceedances noted in this study were sporadic and limited in extent; elevated concentrations of constituents down-gradient is not anticipated. In addition, no significant volatile constituents were detected in soil or groundwater. Thus, the testing results indicate a low potential for impacts to human health and the environment under an unrestricted land use.

We would be happy to discuss this report at your convenience. Should you have any questions, please don't hesitate to call at (415) 597-7883.

Sincerely,

GEOLOGICA INC.


Brian F. Aubry, R.G., C.E.G., C.Hg.
Principal

Attachments:

Table 1 – Summary of Soil Sampling Data
Table 2 – Summary of Grab Groundwater Sampling Data

Figure 1 – Site Location Map
Figure 2 – Sample Detection Map

Attachment A- NORCAL Geophysical Survey Report
Attachment B – Exploration Boring Logs
Attachment C – Laboratory Analytical Testing Reports
Attachment D - Credentials

# Tables

# Table 1
## Limited Phase II Soil and Groundwater Investigation
## 7701 Bancroft Avenue, Oakland,CA

### Summary of Soil Sampling Data

| Method | Analyte | Units | Method Reporting Limit | GP-1 | GP-2 | GP-3 | GP-4 | | GP-5 | | | GP-6 | | GP-7 | | SFB RWQCB Table B Residential ESLs (< 3m)[1] | SFB RWQCB Table B Commercial/ Industrial ESLs (<3 m) [1] | SFB RWQCB Table D Residential ESLs (>3 m)[2] | SFB RWQCB Table D Commercial/ Industrial ESLs (>3 m)[2] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Sample Depth, ft below ground surface* | | | | 12' | 13' | 8' | 4' | 13' | 4' | 8' | 14' | 4' | 12' | 4' | 12' | | | | |
| *Date Sampled* | | | | 1/10/2012 | 1/10/2012 | 1/10/2012 | 1/10/2012 | 1/10/2012 | 1/10/2012 | 1/10/2012 | 1/10/2012 | 1/10/2012 | 1/10/2012 | 1/10/2012 | 1/10/2012 | | | | |
| | ***Petroleum Hydrocarbons*** | | | | | | | | | | | | | | | | | | |
| 8260B | Gasoline Range (C5-C12) | mg/kg | 0.23-24 | ND | ND | ND | ND | ND | ND | ND | **110** | ND | ND | ND | ND | **100** | 180 | 180 | 180 |
| 8015B | Diesel Range (C10-C28) | mg/kg | .98-50 | **8** | **140** | ND | ND | ND | **300** | **1.1** | **1,500** | **3.3** | ND | ND | ND | **100** | **180** | **180** | **180** |
| 8015B | Motor Oil Range (C24-C36) | mg/kg | 49-2500 | ND | **300** | ND | ND | ND | **980** | ND | **4,500** | ND | ND | ND | ND | **370** | **2,500** | 5,000 | 5,000 |
| | ***Volatile Organic Compounds*** | | | | | | | | | | | | | | | | | | |
| 8260B | Benzene | mg/kg | 0.0045-0.005 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.12 | 0.27 | 2.0 | 2.0 |
| | Ethylbenzene | mg/kg | 0.0045-0.005 | ND | ND | ND | ND | ND | ND | ND | **0.019** | ND | ND | ND | ND | 2.3 | 4.7 | 4.7 | 4.7 |
| | Toluene | mg/kg | 0.0045-0.005 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 9.3 | 9.3 | 9.3 | 9.3 |
| | Xylene, Total[6] | mg/kg | 0.0089-0.01 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 11 | 11 | 11 | 11 |
| | Methyl tert-butyl ether | mg/kg | 0.0045-0.01 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | - | - | - | - |
| | TBA | mg/kg | 0.0089-0.01 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | - | - | - | - |
| | DIPE | mg/kg | 0.0045-0.005 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | - | - | - | - |
| | TAME | mg/kg | 0.0045-0.005 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | - | - | - | - |
| | Ethyl t-butyl ether | mg/kg | 0.0045-0.005 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | - | - | - | - |

Notes:

1) Environmental Screening Levels (ESLs) for shallow Soils (<3m bgs) / Groundwater IS NOT Current or Potential Source of Drinking Water

2) Environmental Screening Levels (ESLs) for Deep Soils (>3m bgs) / Groundwater IS NOT Current or Potential Source of Drinking Water

3) ND = Not detected above method reporting limit.

4) - = Not analyzed or not established.

5) Compounds detected in at least one environmental sample, complete list of analytes in Appendix A, Laboratory Testing Reports.

6) Value for total xylenes.

7) **83** Sample result exceeding Table B or D screening criteria.

# Table 2
## Limited Phase II Soil and Groundwater Investigation
## 7701 Bancroft Avenue, Oakland,CA

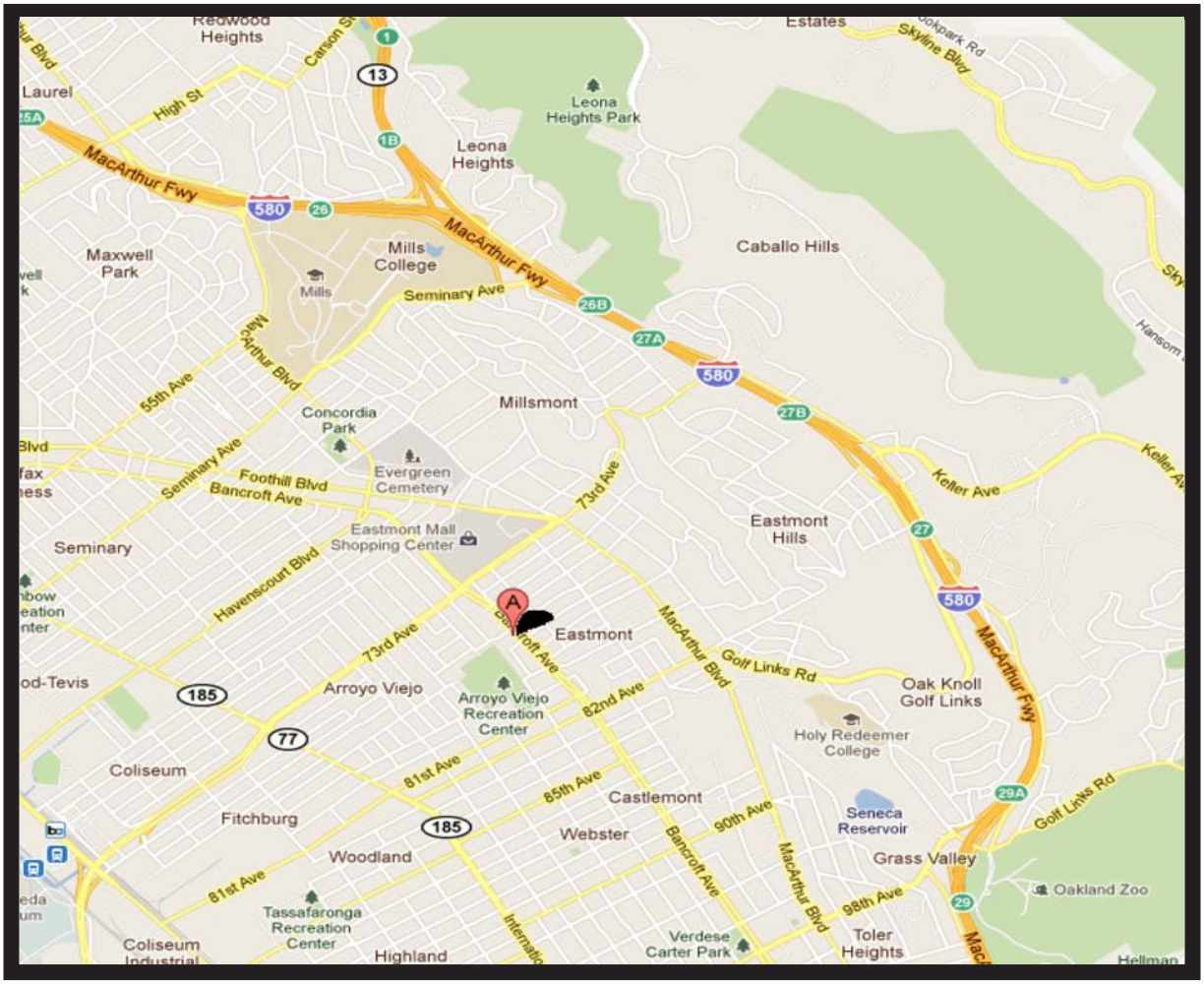
### Summary of Grab Groundwater Sampling Data

| Method | Analyte | Units | Method Reporting Limit | GP-1 | GP-2 | GP-6 | SFB RWQCB Table B ESLs[1] |
|---|---|---|---|---|---|---|---|
| *Date Sampled* | | | | 1/10/2012 | 1/10/2012 | 1/10/2012 | |
| | ***Petroleum Hydrocarbons*** | | | | | | |
| 8260B | Gasoline Range (C5-C12) | ug/L | 50 | ND | ND | ND | 210 |
| 8015B | Diesel Range (C10-C28) | ug/L | 58-62 | **91** | **150** | ND | **210** |
| 8015B | Motor Oil Range (C24-C36) | ug/L | 120 | **240** | **370** | ND | **210** |
| | ***Volatile Organic Compounds*** | | | | | | |
| 8260B | Benzene | ug/L | 0.5 | ND | ND | ND | 46 |
| | Ethylbenzene | ug/L | 0.5 | ND | ND | ND | 43 |
| | Toluene | ug/L | 0.5 | ND | ND | ND | 130 |
| | Xylene, Total[5] | ug/L | 1 | ND | ND | ND | 100.0 |
| | Methyl tert-butyl ether | ug/L | 0.5 | ND | ND | ND | 1,800 |
| | TBA | ug/L | 4 | ND | ND | ND | - |
| | DIPE | ug/L | 0.5 | ND | ND | ND | - |
| | TAME | ug/L | 0.5 | ND | ND | ND | - |
| | Ethyl t-butyl ether | ug/L | 0.5 | ND | ND | ND | - |

Notes:

1) Environmental Screening Levels (ESLs) for shallow Soils (<3m bgs) / Groundwater IS NOT Current or Potential Source of Drinking Water
2) ND = Not detected above method reporting limit.
3) - = Not analyzed or not established.
4) Compounds detected in at least one environmental sample, complete list of analytes in Appendix C, Laboratory Testing Reports.
5) Value for total xylenes.
6) **83** Sample result exceeding Table B screening criteria.

# Figures

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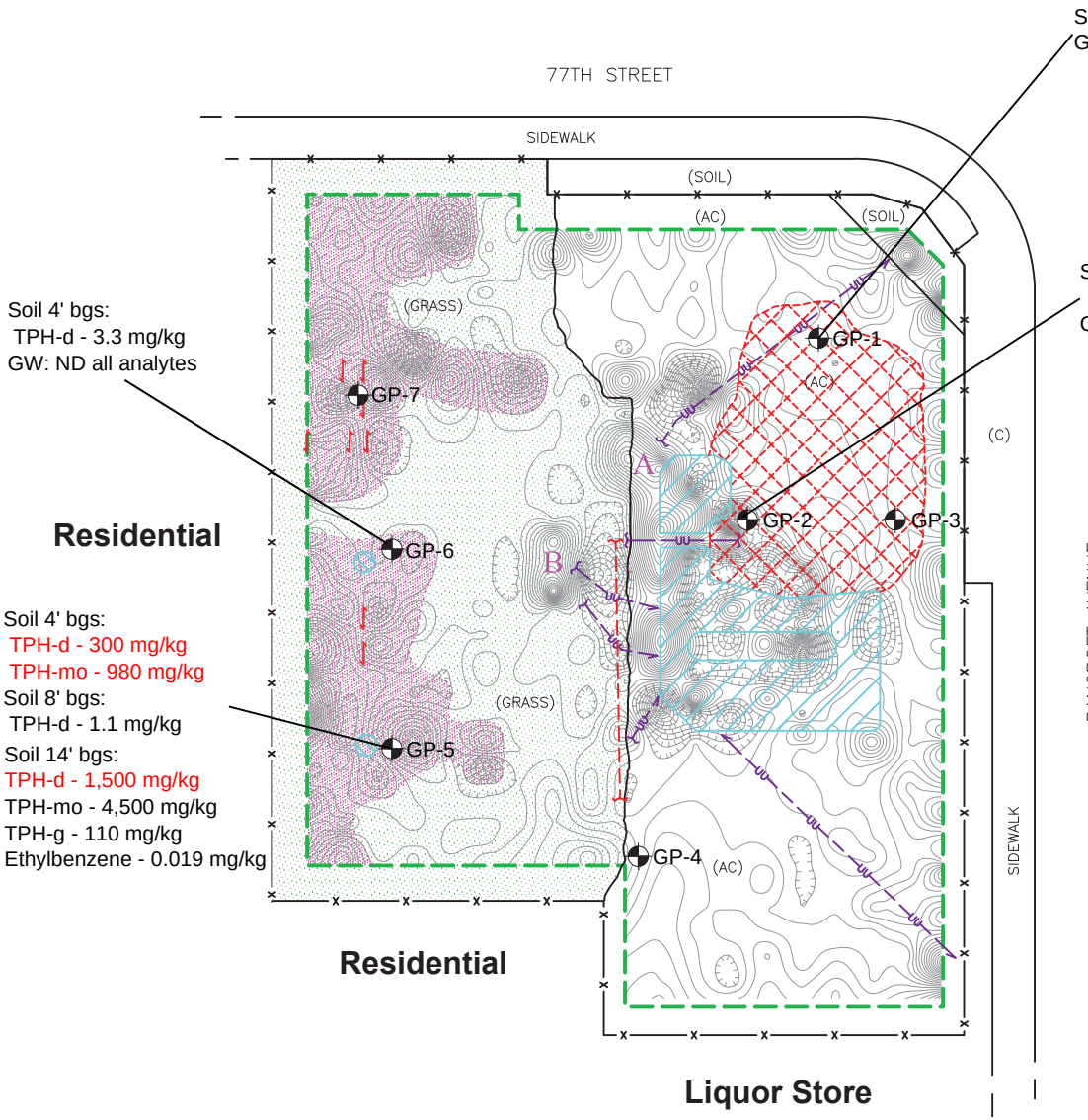
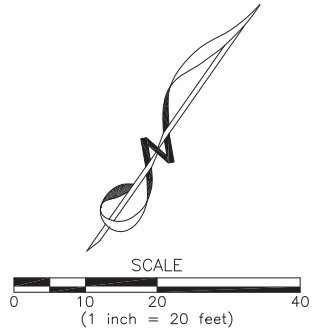
# Site Location Map

7701 Bancroft Avenue
Oakland, CA 94621

geologica
San Francisco, CA

**Figure 1**




## LEGEND

| | |
|---|---|
| | LIMITS OF GEOPHYSICAL SURVEY |
| | VERTICAL MAGNETIC GRADIENT CONTOUR (CONTOUR INTERVAL = 200 nT/m) |
| | VERTICAL MAGNETIC GRADIENT ANOMALY |
| A | VERTICAL MAGNETIC GRADIENT ANOMALY |
| | METAL DETECTOR ANOMALY REPRESENTING ISOLATED BURIED METAL |
| | METAL DETECTOR ANOMALY REPRESENTING BURIED REINFORCED CONCRETE PAD |
| | GPR ANOMALY |
| | GPR ANOMALOUS ZONE REPRESENTING POSSIBLE FORMER EXCAVATION |
| | GPR ANOMALY REPRESENTING POSSIBLE UTILITY ALIGNMENT |
| | UNDIFFERENTIATED UTILITY LINE |
| | CHAIN–LINK FENCE |
| (AC) | ASPHALT |
| (C) | CONCRETE |
| | Boring Location |

* Red highlight indicates sample result exceeding RWQCB Table B and/or D ESLs

# Sample Detection Map

***7701 Bancroft Avenue***
***Oakland, California 94621***

geologica
San Francisco, CA

**Figure 2**

# Attachment A

## NORCAL Geophysical Survey Report

NORCAL GEOPHYSICAL CONSULTANTS, INC.

November 7, 2011

Mr. Greg Romero
Geologica, Inc.
5 Third St., Suite 224
San Francisco, CA 94103

Subject: Geophysical Investigation
Former Gas Station, 7701 Bancroft Avenue, Oakland, CA
NORCAL Job # 11-652.10

Dear Mr. Romero:

This letter presents the findings of a geophysical investigation performed by NORCAL Geophysical Consultants, Inc. on the subject property in Oakland, CA. The field survey was conducted on October 27, 2011 by NORCAL Professional Geophysicist Donald J. Kirker and geophysical technician Anna G. Brody. Logistical support was provided by Greg Romero of Geologica.

## 1.0 PURPOSE AND SITE DESCRIPTION

Geologica indicates that the subject property was formerly occupied by a gas station. All of the above ground facilities have been demolished and removed. However, it is unknown if the underground storage tanks (USTs) were removed. Therefore, the purpose of the geophysical investigation was to obtain subsurface information that will aid in determining if USTs exist within the designated limits of the survey area.

The survey area, as specified by Geologica, measures approximately 100- by 120-ft and is enclosed by a chain link fence. It is bound by Bancroft Avenue and a sidewalk to the east, 77th Street and a sidewalk to the north, and buildings to the west and south. Ground conditions consist of grass over the west half, and asphalt paving over the east half. Surface cracks, indicating the possible outline of a former pump island, are evident in the center of the paved area. The survey area is free of above ground obstructions.

## 2.0 FIELD INVESTIGATION

### 2.1 APPROACH

NORCAL conducted the geophysical investigation using the vertical magnetic gradient (VMG), metal detection (MD), and ground penetrating radar (GPR) methods. The VMG method was used to identify the location of buried ferrous metal that may indicate the presence of a UST or other metallic buried debris. The MD method was used to detect shallow subsurface metal

objects such as USTs and utilities. The GPR method was used to provide images that represent variations in the electrical properties of the shallow subsurface. These images may indicate possible locations and dimensions of USTs, buried objects, and fill boundaries. Descriptions of the VMG, MD, and GPR methods are provided in Appendix A.

### 2.2 GEOPHYSICAL SURVEYS

Prior to proceeding with the geophysical work, we established a survey grid to provide horizontal control. The grid was based on a rectangular coordinate system with the origin (0E,0N) located in the southwest corner. We established the grid in the field using a fiberglass measuring tape and marking paint. The marking paint was used to mark the grid nodes every 10-ft on the ground. These grids were then used to guide the VMG, MD, and GPR surveys.

For the geophysical investigation, we first performed a reconnaissance using the MD equipment. Initially, the MD was scanned along south-north and west-east trending traverses spaced 5-ft apart throughout the entire survey area. When a buried object was detected, the MD was then scanned along additional closely spaced traverses. During this reconnaissance, we detected several subsurface targets. The locations of these targets were marked on the ground surface with pink spray paint and subsequently mapped. We used GPR to verify the approximate depths and lateral limits of the MD anomalies.

We then conducted a VMG survey over the established grid. VMG data were acquired at five foot intervals (stations) along south-north trending traverses spaced five feet apart. This small spacing provided increased resolution for relatively small targets. Following data acquisition, we transferred the VMG data to a personal computer and converted it into a format for contouring. The contouring program (***SURFER Version 9.0 by Golden Software***) calculates an evenly spaced array of values (grid) based on the observed field data. Finally, these gridded values are contoured to produce a VMG contour map. This map provided a general characterization of the magnetic variations and can be used to assess the existence of USTs and other subsurface objects. The contour configurations are the net effect of one or more magnetic sources that may be within the instrument zone of detection for each measurement location.

## 3.0 RESULTS

The results of the geophysical investigation are presented on the Geophysical Survey Map, Plate 1. This map shows the limits of the survey, site features, and the locations of detected subsurface features and detected utility alignments. Also shown on this map are the VMG contours. The contours illustrate the variation in the vertical magnetic gradient throughout the site.

### 3.1 MD RECONNAISSANCE SURVEY

Initially, we scanned the survey area with the MD (metal detection) equipment. This reconnaissance scan identified two small isolated buried metal objects, a buried reinforced concrete pad, and undifferentiated utility alignments. They are considered undifferentiated because the specific type (i.e. water, gas, etc.) could not be determined.

The isolated buried metal objects are located along the west boundary of the survey area, as shown on Plate 1. Both measure less than 2- by 2-ft and exhibit dimensions that are consistent with small near surface metal debris.

The buried reinforced concrete (RC) slab is located in the center of the asphalt covered area and is represented by a blue-dashed zone on Plate 1. The shape of this zone is highly irregular and suggestive of a 30- by 40-ft rectangular slab that had portions removed. There is also an outline within the south portion of this slab that suggests the location of a former pump island.

The undifferentiated utility alignments are generally located in the east half of the survey area, as shown on Plate 1. All are truncated and measure from 13- to over 46-ft long. The shortest segments extend west from the buried RC pad to the grass covered area where they end abruptly. The longest segments generally trend from the northeast and southeast comers of the parcel to the west side of the buried RC pad. The varying response from the MD over these utilities suggests that they are variable in composition and depth.

### 3.2 VMG SURVEY

The results of the VMG survey are illustrated by the VMG contours shown on Plate 1. The contours indicate highly variable vertical magnetic gradients throughout the site. Areas with significant concentrations of ferrous metal, either above or below ground, have steep magnetic gradients, as indicated by contours that are closely spaced and/or form closures. Areas where there are no above or below ground ferrous metal are characterized by a lack of contours or widely distributed contours.

The VMG contours on Plate 1 indicate numerous small VMG variations (contour closures) scattered throughout the survey area. Some of these closures can be associated with the MD defined small isolated buried metal objects, buried reinforced concrete pad, and undifferentiated utility alignments. Others represent affects from the perimeter fencing. The remaining closures, however, cannot be attributed to known above or below ground features, and are therefore considered anomalous. Most are very small and result from a single measurement point. These are accumulated along the west boundary and are represented by a red stipple area on Plate 1. The character of these anomalies is indicative of an accumulation of very small, isolated, shallow, metallic debris that may be associated with the demolition of past structures. Others are slightly larger, resulting from more than a single measurement point. They are labeled as A and

B on Plate 1, and are located in the center. The magnitude and aerial extent of these anomalies are indicative of a slightly larger object, such as a small UST, utility vault, and/or other buried metal debris.

Except for a few small isolated near surface objects along the west boundary, the MD and GPR surveys did not detect anything significant at these locations. Therefore, their sources are either very small and/or buried deeper than the detection capabilities of the MD and GPR equipment.

### 3.3 AREA WIDE GPR SURVEY

Because of the MD detected features and the numerous scattered VMG anomalies, we obtained GPR data throughout the survey area. Our analysis of this data did not define hyperbolic reflection patterns large enough to represent a UST within the designated survey limits. However, they did resolve distinct reflection patterns that comprise a large zone in the northeast corner of the site. It measures approximately 30- by 40-ft and is referred to as a GPR Anomalous Zone on Plate 1. The character of the reflection patterns within this zone is suggestive of a possible change in fill associated with a former excavation. The size of this zone is consistent with the removal of one or two large USTs.

Additionally, the GPR defined multiple small hyperbolic reflection patterns indicative of underground utility alignments and rebar in the buried concrete slab. Most of the utilities were previously defined by the MD. However, there is an additional utility defined by the GPR that measures approximately 36-ft long and trends south-north along the west side of the buried RC pad. Since the MD did not detect this object, we believe that it is nonmetallic in nature.

## 4.0 LIMITATIONS

In general, there are limitations unique to the geophysical methods used for this investigation. For example, subsurface objects may be buried deeper than the detection capabilities of the geophysical method. There may be a lack of contrast in physical properties between native soils and buried objects. Above or below ground cultural features, such as utilities, fences, vehicles, and debris, may cause interference that limits or masks the detection of nearby buried objects.

Since the accuracy of our findings is subject to these limitations, it should be noted that not all USTs and buried objects or features can be detected or characterized by the geophysical techniques used for this investigation. Specifically, USTs buried deeper than about four to five-feet cannot be detected by the MD, and the GPR cannot detect objects buried deeper than about 5 feet below ground surface. A more detailed discussion of the limitations with regard to each of the geophysical methods used for this investigation is presented in Appendix A.

## 5.0 STANDARD CARE AND WARRANTY

The scope of NORCAL's services for this project consisted of using geophysical methods to characterize the shallow subsurface. The accuracy of our findings is subject to specific site conditions and limitations inherent to the techniques used. We performed our services in a manner consistent with the standard of care ordinarily exercised by members of the profession currently employing similar methods. No warranty, with respect to the performance of services or products delivered under this agreement, expressed or implied, is made by NORCAL.

We appreciate having the opportunity to provide our services to Geologica for this investigation.

Respectfully,

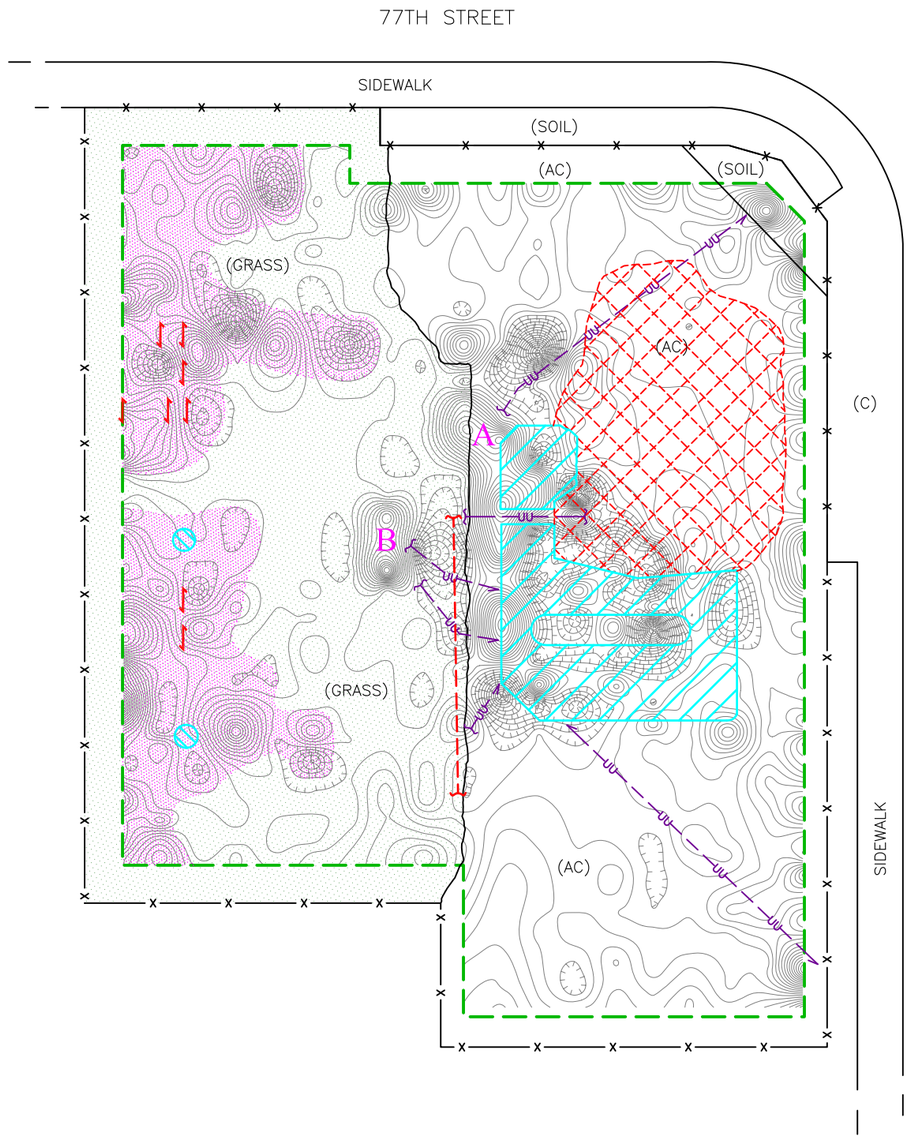
NORCAL Geophysical Consultants, Inc.

Donald J. Kirker

Donald J. Kirker
Professional Geophysicist, PGp-997

DJK/tt

Enclosure: Plate 1
Appendix A GEOPHYSICAL METHODS





## LEGEND

| | |
|---|---|
| LIMITS OF GEOPHYSICAL SURVEY | |
| 0 | VERTICAL MAGNETIC GRADIENT CONTOUR (CONTOUR INTERVAL = 200 nT/m) |
| | VERTICAL MAGNETIC GRADIENT ANOMALY |
| A | VERTICAL MAGNETIC GRADIENT ANOMALY |
| | METAL DETECTOR ANOMALY REPRESENTING ISOLATED BURIED METAL |
| | METAL DETECTOR ANOMALY REPRESENTING BURIED REINFORCED CONCRETE PAD |
| | GPR ANOMALY |
| | GPR ANOMALOUS ZONE REPRESENTING POSSIBLE FORMER EXCAVATION |
| | GPR ANOMALY REPRESENTING POSSIBLE UTILITY ALIGNMENT |
| UU | UNDIFFERENTIATED UTILITY LINE |
| x | CHAIN–LINK FENCE |
| (AC) | ASPHALT |
| (C) | CONCRETE |

NORCAL

# GEOPHYSICAL SURVEY MAP
# VACANT LOT
# 7701 BANCROFT AVENUE

LOCATION: OAKLAND, CALIFORNIA

CLIENT: GEOLOGICA

JOB #: 11–652.10

NORCAL GEOPHYSICAL CONSULTANTS INC.

DATE: NOV. 2011

DRAWN BY: G.RANDALL

APPROVED BY: DJK

PLATE 1

# APPENDIX A

# GEOPHYSICAL METHODOLOGY

# APPENDIX A

# VERTICAL MAGNETIC GRADIENT

## METHODOLOGY

Vertical magnetic gradient surveys are used to determine the presence of buried ferrous objects. A magnetic gradiometer measures the vertical gradient of the earth's magnetic field. It consists of two total field magnetic sensors separated vertically by one-half meter. The magnetic field strength is measured simultaneously at both of these sensors. The difference in magnetic intensity between these measurements is proportional to the vertical gradient of the earth's magnetic field. Because the vertical gradient is constant with respect to time, the effect of diurnal variations is eliminated. Therefore, a gradiometer provides higher sensitivity and better resolution of near surface sources than total field magnetometers. Areas with significant amounts of buried metal typically produce anomalously steep magnetic gradients. Since it is sensitive to ferrous metal sources both above and below ground, site and vicinity surface conditions can affect survey results.

We typically use a Geometrics G-858 cesium vapor magnetometer to obtain vertical magnetic gradient data. This instrument features a built-in memory that stores the vertical magnetic gradient and survey grid information. The information can be down loaded to a computer for further processing.

## DATA ANALYSIS

### Computer Processing

The VMG data are down loaded to a lap-top computer and converted it into a format for contouring. The contouring program (SURFER Version 9.0 by Golden Software) calculates an evenly spaced array of values (grid) based on the observed field data. Finally, these gridded values are contoured to produce a VMG contour map.

### Contour Map Interpretation

The VMG contour map illustrates the variations in the vertical magnetic gradient across the site. Areas without below or above ground ferrous metal are characterized by very low magnetic gradients. In these areas, there are very few contours. In areas with above or below ground ferrous metal, the magnetic gradient is relatively steep. These areas are characterized by numerous closely spaced contours and are considered anomalous. If the source of the anomaly is linear (e.g. underground utilities or fence lines), then the contours tend to be parallel and evenly distributed. If the source of the anomaly is localized (e.g. sign post, buried drum, etc.), then the contours tend to form circular or elliptical closures proportional to the size of the object.

The larger the object and the closer it is to the magnetometer, the denser the concentrations of contours. Magnetic anomalies that cannot be attributed to above ground objects (fences, vehicles, buildings, etc.) are probably caused by buried objects.

USTs are often characterized by circular to elliptical contour closures. These closures have magnitudes ranging from several hundred to several thousand nano-Tesla per meter (nT/m) depending on the size and depth of the tank. If the UST is cylindrical and lying horizontally, it will often produce a bi-polar VMG anomaly. This consists of two adjacent contour closures. One has VMG values that increase towards the center of the closure and is referred to as a positive lobe. The second has VMG values that decrease towards the center of the closure and is referred to as a negative lobe. Typically, the positive lobe is situated directly above the UST and the negative lobe is to the north of the UST. Utilities and scattered metal debris, on the other hand, are generally characterized by single circular or irregular shaped negative lobes, or a group of alternating positive and negative lobes (closures). These closures typically have magnitudes ranging from less than fifty to several hundred nano-Tesla per meter (nT/m) depending on the size, depth, and amount of utilities and debris in a given area.

### LIMITATIONS

Below ground metal ferrous objects produce localized variations in the earth's magnetic field. The magnetic intensity associated with buried metal depends on the mass of the metal and the distance the metal object is from the magnetometer sensor. As the distance between the object and the magnetometer sensor increases, the intensity of the associated field decreases, thereby making detection more difficult. In addition, the ability to detect a buried metal object is based on the intensity of these variations versus the intensity of the background variations. Background variations can be caused by other nearby above or below ground metallic sources. Cultural features such as chain link fences, buildings, debris, railroad spurs, utilities, above ground electric lines, etc. typically produce numerous magnetic variations with high intensities. These variations may mask effects from buried metal objects, or make it very difficult to determine whether the magnetic variations are associated with below ground metal or above/below ground cultural features.

## ELECTROMAGNETIC LINE LOCATION/METAL DETECTION (EMLL/MD)

### METHODOLOGY

Electromagnetic line location techniques are used to locate the magnetic field resulting from an electric current flowing on a line. These magnetic fields can arise from currents already on the line (passive) or currents applied to a line with a transmitter (active). The most common passive signals are generated by live electric lines and re-radiated radio signals. Active signals can be introduced by connecting the transmitter to the line at accessible locations or by induction.

The detection of underground utilities is affected by the composition and construction of the line in question. Utilities detectable with standard line location techniques include any continuously connected metal pipes, cables/wires or utilities with tracer wires. Unless the utilities carry a passive current, they must be exposed at the surface or in accessible utility vaults. These generally include water, electric, natural gas, telephone, and other conduits related to facility operations. Utilities that are not detectable using standard electromagnetic line location techniques include those made of non-electrically conductive materials such as PVC, fiberglass, vitrified clay, and pipes with insulated connections.

Buried objects can also be detected, without direct contact, by using the induction mode. This is used to detect buried near surface metal objects such as rebar, manhole covers, USTs, and various metallic debris. The induction mode is used by holding the transmitter-receiver unit above the ground and continuously scanning the surface. The unit utilizes two orthogonal coils that are separated by a specified distance. One of the coils transmits an electromagnetic signal (primary magnetic field) which in turn produces a secondary magnetic field about the subsurface metal object. Since the receiver coil is orthogonal to the transmitter coil, it is unaffected by the primary field. Therefore, the secondary magnetic fields produced by buried metal object will generate an audible response from the unit. The peak of this response indicates when the unit is directly over the metal object.

The instrumentation typically used for the EMLL survey consists of a Radio Detection RD-400 and a Fisher TW-6 inductive pipe and cable locator.

### DATA ANALYSIS

The EMLL instrumentation indicates the presence of buried metal by emitting an audible tone; there are no recorded data to analyze. Therefore, the locations of buried objects detected with the EMLL method are marked on the ground surface during the survey.

### LIMITATIONS

The detection of underground utilities is dependent upon the composition and construction of the line of interest, as well as depth. Utilities detectable with standard line location techniques include any continuously connected metal pipes, cables/wires or utilities with tracer wires. Unless carrying a passive current these utilities must be exposed at the surface or accessible in a utility vault. These generally include water, electric, natural gas, telephone, and other conduits related to facility operations. Utilities that may not be detectable using standard electromagnetic line location techniques include certain abandoned utilities, utilities not exposed at the ground surface, or those made of non-electrically conductive materials such as PVC, fiberglass, vitrified clay, and metal pipes with insulating joints. Pipes generally deeper than about five to seven feet may not be detected.

## GROUND PENETRATING RADAR (GPR)

### METHODOLOGY

Ground penetrating radar is a method that provides a continuous, high resolution cross-section depicting variations in the electrical properties of the shallow subsurface. The method is particularly sensitive to variations in electrical conductivity and electrical permittivity (the ability of a material to hold a charge when an electrical field is applied).

The GPR system operates by radiating electromagnetic pulses into the ground from a transducer (antenna) as it is moved along a traverse. Since most earth materials are transparent to electromagnetic energy, the signal spreads downward into the subsurface.

However, when the signal encounters a variation in electrical permittivity, a portion of the electromagnetic energy is reflected back to the surface. When the signal encounters a metal object, all of the incident energy is reflected. The reflected signals are received by the same transducer and are printed in cross-section form on a graphical recorder. Changes in subsurface reflection character on the GPR records can provide information regarding the location of USTs, sumps, buried debris, underground utilities, and variations in the shallow stratigraphy.

The GPR system typically used is a Geophysical Survey Systems, Inc. SIR-3000 Subsurface Interface Radar Systems equipped with a 400 megahertz (MHz) transducer. This transducer is near the center of the available frequency range and is used to provide high resolution at shallow depths.

## DATA ANALYSIS

GPR records are examined to identify reflection patterns characteristic of USTs, utilities, and other buried debris. Typically, USTs are manifested by broad localized hyperbolic (upside-down "U" shape) reflection patterns that vary in intensity. The intensity of a reflection pattern is usually dependent upon the condition of the respective UST, its burial depth, and the type of fill over the UST. Utilities and other buried debris are typically manifested by narrow localized hyperbolic reflections that also vary in intensity.

## LIMITATIONS

The ability to detect subsurface targets is dependent on site specific conditions. These conditions include depth of burial, the size or diameter of the target, the condition of the specific target in question, the type of backfill material associated with the target, and the surface conditions over the target. Under ideal conditions, the GPR can generally detect objects buried to approximately six feet. However, as the clay content in the subsurface increases, the GPR depth of detection decreases. Therefore, it is possible that on-site soil conditions and target features may limit the depth of detection to the upper one to two feet below ground surface.

# Attachment B

## Exploration Boring Logs

**GEOLOGICA INC.**

**Boring Log**

5 Third St, Suite 224
San Francisco, CA 94103

**Boring Number: GP-1**



| | |
|---|---|
| Project Number: Union Bank:Bancroft Ave | Date Started: 1/10/12 |
| Project Name: Oakland Bancroft | Date Completed: 1/10/12 |
| Site Location: 7701 Bancroft Ave, Oakland, CA | Casing Type/Diameter: |
| Boring Location: | Screen Type/Slot: hydro punch 12-16 ft bgs |
| Drilling Method: GeoProbe | Gravel/Sand Pack Type: |
| Sampling Method: MacroCore | Grout Type/Quantity: Neat cement grout from 0-16 ft |
| Boring Diameter: 2" | Depth to Water: ~12.5 -13 ft bgs |
| Logged by: GR | Elevation of Top of PVC Casing: |
| Drilling Contractor: ECA | Casing Stickup: |

Remarks: Weather:

| PID/OVA (ppm) | Blow Counts | Recovery (inches) | Sample ID. | Depth (ft BGS) | USCS | Lithologic Description | Boring Completion Diagram |
|---|---|---|---|---|---|---|---|
| | | 0.5 | | 0 | SP | Gravelly Sand, tan, 30% med-coarse gravel, 70% fine-med sand, loose, dry | |
| | | 0.5 | | 1 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 2 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 3 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 4 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 5 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 6 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 7 | | | |
| | | 0.5 | | | SW | Sand, brown, 100% fine sand, dry | |
| | | 0.5 | | 8 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 9 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 10 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 11 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 12 | SP | Gravelly Sand, tan, 25 % med-course gravel, 75% fine-med sand, dry | |
| | | 0.5 | | | SP | Gravelly Sand, brown, 10% med-course gravel, 90% fine-med sand, moist | |
| | | 0.5 | | 13 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 14 | ML | Silty Clay, brown, 25% silt, 75% clay, wet | |
| | | 0.5 | | | | | |
| | | 0.5 | | 15 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 16 | | | |

Bottom of boring at 16ft on 1/10/12

**GEOLOGICA INC.**

**Boring Log**

5 Third St, Suite 224
San Francisco, CA 94103

**Boring Number: GP-2**



| | |
|---|---|
| Project Number: Union Bank:Bancroft Ave | Date Started: 1/10/12 |
| Project Name: Oakland Bancroft | Date Completed: 1/10/12 |
| Site Location: 7701 Bancroft Ave, Oakland, CA | Casing Type/Diameter: |
| Boring Location: | Screen Type/Slot: hydro punch from 12-16 ft bgs |
| Drilling Method: GeoProbe | Gravel/Sand Pack Type: |
| Sampling Method: MacroCore | Grout Type/Quantity: Neat cement grout from 0-16 ft |
| Boring Diameter: 2" | Depth to Water: ~13-13.5 ft bgs |
| Logged by: GR | Elevation of Top of PVC Casing: |
| Drilling Contractor: ECA | Casing Stickup: |

Remarks: Weather:

| PID/OVA (ppm) | Blow Counts | Recovery (inches) | Sample ID. | Depth (ft BGS) | USCS | Lithologic Description |
|---|---|---|---|---|---|---|
| | | | | 1 | | No Recovery |
| | | 0.5 | | 2 | SP | Gravelly Sand, tan, 30% fine-med gravel, 70% fine-med sand |
| | | 0.5 | | | | |
| | | 0.5 | | 3 | | |
| | | 0.5 | | | | |
| | | 0.5 | | 4 | | |
| | | 0.5 | | | | No Recovery |
| | | 0.5 | | 5 | | |
| | | 0.5 | | | | |
| | | 0.5 | | 6 | | |
| | | 0.5 | | | | |
| | | 0.5 | | 7 | | |
| | | 0.5 | | | SP | Gravelly Sand, tan, 30% fine-med gravel, 70% fine-med sand |
| | | 0.5 | | 8 | | |
| | | | | 9 | | No Recovery |
| | | | | 10 | | |
| | | | | 11 | | |
| | | | | 12 | | |
| | | 0.5 | | | SC | Gravelly Clay Sand, green, 5% fine-med gravel, 90% fine-med sand, 5% clay, dry |
| | | 0.5 | | 13 | | |
| | | 0.5 | | | ML | Silty Clay, brown, 30% silt, 70% clay |
| | | 0.5 | | 14 | | |
| | | 0.5 | | | | |
| | | 0.5 | | 15 | | |
| | | 0.5 | | | | |
| | | 0.5 | | 16 | | |

Boring Completion Diagram

Bottom of boring at 16ft on 1/10/12

**GEOLOGICA INC.**

**Boring Log**

5 Third St, Suite 224
San Francisco, CA 94103

**Boring Number: GP-3**



| | |
|---|---|
| Project Number: Union Bank:Bancroft Ave | Date Started: 1/10/12 |
| Project Name: Oakland Bancroft | Date Completed: 1/10/12 |
| Site Location: 7701 Bancroft Ave, Oakland, CA | Casing Type/Diameter: |
| Boring Location: | Screen Type/Slot: hydro punch from 12-20 ft bgs - no H2O |
| Drilling Method: GeoProbe | Gravel/Sand Pack Type: |
| Sampling Method: MacroCore | Grout Type/Quantity: Neat cement grout from 0-20 ft |
| Boring Diameter: 2" | Depth to Water: |
| Logged by: GR | Elevation of Top of PVC Casing: |
| Drilling Contractor: ECA | Casing Stickup: |

Remarks: Weather:

| PID/OVA (ppm) | Blow Counts | Recovery (inches) | Sample ID. | Depth (ft BGS) | USCS | Lithologic Description | Boring Completion Diagram |
|---|---|---|---|---|---|---|---|
| | | | | 1 | | No Recovery | |
| | | 0.5 | | 2 | SP | Gravelly Sand, tan, 25% fine-med gravel, 75% med-course sand | |
| | | 0.5 | | | | | |
| | | 0.5 | | 3 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 4 | | | |
| | | 0.5 | | 5 | SC | Gravelly Silty Clay Sand, brown, 10% med-course gravel, 70% med-course sand, 10% silt, 10% clay | |
| | | 0.5 | | | | | |
| | | 0.5 | | 6 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 7 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 8 | | | |
| | | | | 9 | | No Recovery | |
| | | | | 10 | | | |
| | | | | 11 | | | |
| | | | | 12 | | | |
| | | | | 13 | | | |
| | | | | 14 | | | |
| | | | | 15 | | | |
| | | | | 16 | | | |
| | | | | 17 | | | |
| | | | | 18 | | | |
| | | | | 19 | | | |
| | | | | 20 | | | |

Bottom of boring at 20ft on 1/10/12

**GEOLOGICA INC.**
**Boring Log**
5 Third St, Suite 224
San Francisco, CA 94103

**Boring Number: GP-4**



| | |
|---|---|
| Project Number: Union Bank:Bancroft Ave | Date Started: 1/10/12 |
| Project Name: Oakland Bancroft | Date Completed: 1/10/12 |
| Site Location: 7701 Bancroft Ave, Oakland, CA | Casing Type/Diameter: |
| Boring Location: | Screen Type/Slot: 0.01 slotted PVC from 10-30 ft bgs - no H2O |
| Drilling Method: GeoProbe | Gravel/Sand Pack Type: |
| Sampling Method: MacroCore | Grout Type/Quantity: Neat cement grout from 0-30 ft |
| Boring Diameter: 2" | Depth to Water: |
| Logged by: GR | Elevation of Top of PVC Casing: |
| Drilling Contractor: ECA | Casing Stickup: |

Remarks: Weather:

| PID/OVA (ppm) | Blow Counts | Recovery (inches) | Sample ID. | Depth (ft BGS) | USCS | Lithologic Description | Boring Completion Diagram |
|---|---|---|---|---|---|---|---|
| | | | | 1 | | No Recovery | |
| | | 0.5 | | 2 | SW | Sand, dark brown, 100% fine sand | |
| | | 0.5 | | | | | |
| | | 0.5 | | 3 | SC | Clay Sand, brown, 80% fine sand, 20% clay | |
| | | 0.5 | | | | | |
| | | 0.5 | | 4 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 5 | SM | Gravelly Silty Clay Sand, brown, 2% med-course gravel, 50% sand, 25% silt, 23% clay | |
| | | 0.5 | | | | | |
| | | 0.5 | | 6 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 7 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 8 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 9 | SC | Gravelly Clay Sand, brown, 30% fine-med gravel, 60% fine-med sand, 10% clay | |
| | | 0.5 | | | | | |
| | | 0.5 | | 10 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 11 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 12 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 13 | | | |
| | | | | 14 | | No Recovery | |
| | | 0.5 | | | ML | Sandy Silty Clay, brown, 10% fine-med sand, 20% silt, 70% clay | |
| | | 0.5 | | 15 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 16 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 17 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 18 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 19 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 20 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 21 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 22 | ML | Sandy Silty Clay, brown, 10% fine-med sand, 20% silt, 70% clay, dry | |
| | | 0.5 | | | | | |
| | | 0.5 | | 23 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 24 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 25 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 26 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 27 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 28 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 29 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 30 | | | |

Bottom of boring at 30ft on 1/10/12

**GEOLOGICA INC.**
**Boring Log**
5 Third St, Suite 224
San Francisco, CA 94103

**Boring Number: GP-5**



| | |
|---|---|
| Project Number: Union Bank:Bancroft Ave | Date Started: 1/10/12 |
| Project Name: Oakland Bancroft | Date Completed: 1/10/12 |
| Site Location: 7701 Bancroft Ave, Oakland, CA | Casing Type/Diameter: |
| Boring Location: | Screen Type/Slot: 0.01 slotted PVC from 10-30 ft bgs - no H2O |
| Drilling Method: GeoProbe | Gravel/Sand Pack Type: |
| Sampling Method: MacroCore | Grout Type/Quantity: Neat cement grout from 0-30 ft |
| Boring Diameter: 2" | Depth to Water: |
| Logged by: GR | Elevation of Top of PVC Casing: |
| Drilling Contractor: ECA | Casing Stickup: |

Remarks: Weather:

| PID/OVA (ppm) | Blow Counts | Recovery (inches) | Sample ID. | Depth (ft BGS) | USCS | Lithologic Description | Boring Completion Diagram |
|---|---|---|---|---|---|---|---|
| | | 0.5 | | 0 | SP | Gavelly Sand, brown, 10% med-course gravel, 90% fine-med sand | |
| | | 0.5 | | 1 | | | |
| | | 0.5 | | 2 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 3 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 4 | | | |
| | | 0.5 | | 5 | SC | Gravelly Silty Clay Sand, brown, 5% fine-med gravel, 65% fine-med sand, 10% silt, 20% clay | |
| | | 0.5 | | | | | |
| | | 0.5 | | 6 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 7 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 8 | | | |
| | | 0.5 | | 9 | SC | Gravelly Clay Sand, brown, 10% fine-med gravel, 85% fine-med sand, 5% clay | |
| | | 0.5 | | | | | |
| | | 0.5 | | 10 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 11 | SC | Gravelly Clay Sand, brown, 15% fine-med gravel,75% fine-med sand, 10% clay | |
| | | 0.5 | | | | | |
| | | 0.5 | | 12 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 13 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 14 | | | |
| | | 0.5 | | 15 | SC | Gravelly Clay Sand,green, 25% med-course gravel,50% med-course sand, 25% clay | |
| | | 0.5 | | | | | |
| | | 0.5 | | 16 | | | |
| | | 0.5 | | 17 | ML | Gravelly Sandy Silty Clay, brown, 1% med-course gravel, 5% fine sand, 4% silt, 90% clay | |
| | | 0.5 | | | | | |
| | | 0.5 | | 18 | | | |
| | | 0.5 | | 19 | ML | Silty Clay, brown, 30% silt, 70% clay | |
| | | 0.5 | | | | | |
| | | 0.5 | | 20 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 21 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 22 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 23 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 24 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 25 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 26 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 27 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 28 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 29 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 30 | | | |

Bottom of boring at 30ft on 1/10/12

**GEOLOGICA INC.**
**Boring Log**

5 Third St, Suite 224
San Francisco, CA 94103

**Boring Number: GP-6**



| | |
|---|---|
| Project Number: Union Bank:Bancroft Ave | Date Started: 1/10/12 |
| Project Name: Oakland Bancroft | Date Completed: 1/10/12 |
| Site Location: 7701 Bancroft Ave, Oakland, CA | Casing Type/Diameter: |
| Boring Location: | Screen Type/Slot: 0.01 slotted PVC from 10-20 ft bgs |
| Drilling Method: GeoProbe | Gravel/Sand Pack Type: |
| Sampling Method: MacroCore | Grout Type/Quantity: Neat cement grout from 0-20 ft |
| Boring Diameter: 2" | Depth to Water: ~17.5-18 ft bgs |
| Logged by: GR | Elevation of Top of PVC Casing: |
| Drilling Contractor: ECA | Casing Stickup: |

Remarks: Weather:

| PID/OVA (ppm) | Blow Counts | Recovery (inches) | Sample ID. | Depth (ft BGS) | USCS | Lithologic Description | Boring Completion Diagram |
|---|---|---|---|---|---|---|---|
| | | 0.5 | | 0 | SP | Gravelly Sand, brown, 5% fine-med gravel, 95% fine-med sand, dry | |
| | | 0.5 | | 1 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 2 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 3 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 4 | | | |
| | | 0.5 | | | SC | Gravelly Clay Sand, brown, 5% fine-med gravel,85% fine-med sand, 10% clay, dry | |
| | | 0.5 | | 5 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 6 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 7 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 8 | | | |
| | | 0.5 | | | SP | Gravelly Sand, brown, 10% fine-med gravel, 90% fine-med sand, dry | |
| | | 0.5 | | 9 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 10 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 11 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 12 | | | |
| | | 0.5 | | | SC | Gravelly Clay Sand, brown, 5% med-course gravel, 85% fine-med sand, 10% clay, moist | |
| | | 0.5 | | 13 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 14 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 15 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 16 | | | |
| | | 0.5 | | | SC | Gravelly Clay Sand, brown, 3% fine-med gravel, 60% fine sand, 37% clay, | |
| | | 0.5 | | 17 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 18 | | | |
| | | 0.5 | | | ML | Sandy Silty Clay, brown, 15% fine sand, 5% silt, 80% Clay | |
| | | 0.5 | | 19 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 20 | | | |

Bottom of boring at 20ft on 1/10/12

**GEOLOGICA INC.**
**Boring Log**

5 Third St, Suite 224
San Francisco, CA 94103

**Boring Number: GP-7**

Page 1 of 1

| | |
|---|---|
| Project Number: Union Bank:Bancroft Ave | Date Started: 1/10/12 |
| Project Name: Oakland Bancroft | Date Completed: 1/10/12 |
| Site Location: 7701 Bancroft Ave, Oakland, CA | Casing Type/Diameter: |
| Boring Location: | Screen Type/Slot: 0.01 slotted PVC from 14-24 ft bgs - no H20 |
| Drilling Method: GeoProbe | Gravel/Sand Pack Type: |
| Sampling Method: MacroCore | Grout Type/Quantity: Neat cement grout from 0-24 ft |
| Boring Diameter: 2" | Depth to Water: |
| Logged by: GR | Elevation of Top of PVC Casing: |
| Drilling Contractor: ECA | Casing Stickup: |

Remarks: Weather:

| PID/OVA (ppm) | Blow Counts | Recovery (inches) | Sample ID. | Depth (ft BGS) | USCS | Lithologic Description | Boring Completion Diagram |
|---|---|---|---|---|---|---|---|
| | | 0.5 | | 0 | SP | Gravelly Sand, brown, 5% fine-med gravel, 95% fine-med sand, dry | |
| | | 0.5 | | 1 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 2 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 3 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 4 | | | |
| | | 0.5 | | | SP | Gravelly Sand, brown, 10% fine-med gravel, 90% fine-med sand, dry | |
| | | 0.5 | | 5 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 6 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 7 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 8 | | | |
| | | 0.5 | | | SC | Gravelly Clay Sand, brown, 3% fine-med gravel, 77% fine-med sand, 20% clay, dry | |
| | | 0.5 | | 9 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 10 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 11 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 12 | | | |
| | | 0.5 | | | SC | Gravelly Clay Sand, brown, 5% med-course gravel, 75% fine-med sand, 20% clay, moist | |
| | | 0.5 | | 13 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 14 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 15 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 16 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 17 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 18 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 19 | | | |
| | | 0.5 | | | ML | Sandy Silty Clay, brown, 20% fine sand, 5% silt, 75% clay, moist | |
| | | 0.5 | | 20 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 21 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 22 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 23 | | | |
| | | 0.5 | | | | | |
| | | 0.5 | | 24 | | | |

Bottom of boring at 24ft on 1/10/12

# Alameda County Public Works Agency - Water Resources Well Permit

399 Elmhurst Street
Hayward, CA 94544-1395
Telephone: (510)670-6633 Fax:(510)782-1939

**Application Approved on: 12/16/2011 By jamesy**

**Permit Numbers: W2011-0766**
**Permits Valid from 01/10/2012 to 01/10/2012**

**Application Id:** 1324069224278 **City of Project Site:** Oakland
**Site Location:** 7701 Bancroft Ave
Oakland, CA 94621
Vacant Lot
**Project Start Date:** 01/10/2012 **Completion Date:** 01/10/2012
**Assigned Inspector:** Contact Steve Miller at (510) 670-5517 or stevem@acpwa.org

**Applicant:** Geologica Inc - Greg Romero **Phone:** 415-597-7884
5 Third Street, Suite 224, San Francisco, CA 94103
**Property Owner:** Uwe Ligmond **Phone:** --
Union Bank ERM - 500 South Main St, Suite 320, Orange, CA 92868
**Client:** Greg Romero **Phone:** 415-597-7884
Geologica - 5 Third St, suite 224, San Francisco, CA 94103

**Total Due:** $265.00
**Receipt Number: WR2011-0375** **Total Amount Paid:** $265.00
**Payer Name : Geologica Inc. (Dave Klimberg)** Paid By: VISA **PAID IN FULL**

**Works Requesting Permits:**

Borehole(s) for Geo Probes-Sampling 24 to 72 hours only - 7 Boreholes
Driller: Environmental Control Associates - Lic #: 695970 - Method: DP **Work Total: $265.00**

**Specifications**

| Permit Number | Issued Dt | Expire Dt | # Boreholes | Hole Diam | Max Depth |
|---|---|---|---|---|---|
| W2011-0766 | 12/16/2011 | 04/09/2012 | 7 | 2.00 in. | 20.00 ft |

**Specific Work Permit Conditions**

1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site. The containers shall be clearly labeled to the ownership of the container and labeled hazardous or non-hazardous.

2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.

3. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.

4. Applicant shall contact Steve Miller for an inspection time at (510) 670-5517 or email to stevem@acpwa.org at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

5. Permittee, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters

generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.

6. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of $500.00.

7. Prior to any drilling activities onto any public right-of-ways, it shall be the applicants responsibilities to contact and coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits required for that City or to the County and follow all City or County Ordinances. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County a Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

8. Permit is valid only for the purpose specified herein. No changes in construction procedures, as described on this permit application. Boreholes shall not be converted to monitoring wells, without a permit application process.

# Attachment C

## Laboratory Analytical Testing Reports

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica San Francisco
1220 Quarry Lane
Pleasanton, CA 94566
Tel: (925)484-1919

TestAmerica Job ID: 720-39692-1
Client Project/Site: 7701 Bancroft, Oakland

For:
Geologica Inc
2625 Alcatraz Ave
Suite 504
Berkeley, California 94705

Attn: Mr. Dan Matthews

*Authorized for release by:*
*1/18/2012 4:51:13 PM*

Dimple Sharma
Project Manager I
dimple.sharma@testamericainc.com

# Table of Contents

# Definitions/Glossary

Client: Geologica Inc
Project/Site: 7701 Bancroft, Oakland

TestAmerica Job ID: 720-39692-1

## Qualifiers

### GC/MS VOA

| Qualifier | Qualifier Description |
|---|---|
| X | Surrogate is outside control limits |
| F | MS or MSD exceeds the control limits |
| F | RPD of the MS and MSD exceeds the control limits |

### GC Semi VOA

| Qualifier | Qualifier Description |
|---|---|
| D | Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D. |
| X | Surrogate is outside control limits |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ☼ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CNF | Contains no Free Liquid |
| DL, RA, RE, IN | Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| EDL | Estimated Detection Limit |
| EPA | United States Environmental Protection Agency |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| ND | Not detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RL | Reporting Limit |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

## Job ID: 720-39692-1

### Laboratory: TestAmerica San Francisco

**Narrative**

**Job Narrative**
**720-39692-1**

**Comments**
No additional comments.

**Receipt**
The following sample was submitted for analysis; however, it was not listed on the Chain-of-Custody (COC): Trip Blank logged per revised coc from client.

All other samples were received in good condition within temperature requirements.

**GC/MS VOA**
Method 8260B: The matrix spike / matrix spike duplicate (MS/MSD) percent recoveries and %RPD for batch #105849 were outside control limits. This is attributed to: non-homogeneity of the sample matrix; abundance of target analytes at concentrations significantly higher than the spike concentration; matrix interferences; etc.>>

Method 8260B: Surrogate recovery for the following sample was outside control limits: GP-5-14' (720-39692-10). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

No other analytical or quality issues were noted.

**GC VOA**
No analytical or quality issues were noted.

**GC Semi VOA**
Method 8015B: Surrogate capric acid recovery for the following sample was outside control limits: GP-2-13' (720-39692-3). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015B: Due to the level of dilution required for the following sample, surrogate recoveries are not reported: GP-5-14' (720-39692-10).

No other analytical or quality issues were noted.

**Metals**
No analytical or quality issues were noted.

**Organic Prep**
No analytical or quality issues were noted.

# Detection Summary

Client: Geologica Inc
Project/Site: 7701 Bancroft, Oakland

TestAmerica Job ID: 720-39692-1

## Client Sample ID: GP-1-12' — Lab Sample ID: 720-39692-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics [C10-C28] | 8.0 | | 1.0 | | mg/Kg | 1 | | 8015B | Silica Gel Clear |

## Client Sample ID: GP-2-13' — Lab Sample ID: 720-39692-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics [C10-C28] | 140 | | 3.0 | | mg/Kg | 3 | | 8015B | Silica Gel Clear |
| Motor Oil Range Organics [C24-C36] | 300 | | 150 | | mg/Kg | 3 | | 8015B | Silica Gel Clear |

## Client Sample ID: GP-3-8' — Lab Sample ID: 720-39692-4

No Detections

## Client Sample ID: GP-4-4' — Lab Sample ID: 720-39692-5

No Detections

## Client Sample ID: GP-4-13' — Lab Sample ID: 720-39692-7

No Detections

## Client Sample ID: GP-5-14' — Lab Sample ID: 720-39692-10

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | 19 | | 4.5 | | ug/Kg | 1 | | 8260B/CA_LUFTM | Total/NA |
| Gasoline Range Organics (GRO) -C5-C12 | 110000 | | 24000 | | ug/Kg | 100 | | 8260B/CA_LUFTM | Total/NA |
| Diesel Range Organics [C10-C28] | 1500 | | 50 | | mg/Kg | 50 | | 8015B | Silica Gel Clear |
| Motor Oil Range Organics [C24-C36] | 4500 | | 2500 | | mg/Kg | 50 | | 8015B | Silica Gel Clear |

## Client Sample ID: GP-6-4' — Lab Sample ID: 720-39692-11

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics [C10-C28] | 3.3 | | 1.0 | | mg/Kg | 1 | | 8015B | Silica Gel Clear |

## Client Sample ID: GP-6-12' — Lab Sample ID: 720-39692-13

No Detections

## Client Sample ID: GP-7-4' — Lab Sample ID: 720-39692-14

No Detections

## Client Sample ID: GP-7-12' — Lab Sample ID: 720-39692-16

No Detections

## Client Sample ID: IDW-SOIL — Lab Sample ID: 720-39692-17

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 6.1 | | 3.9 | | mg/Kg | 4 | | 6010B | Total/NA |
| Barium | 170 | | 2.0 | | mg/Kg | 4 | | 6010B | Total/NA |
| Chromium | 51 | | 2.0 | | mg/Kg | 4 | | 6010B | Total/NA |
| Cobalt | 11 | | 0.78 | | mg/Kg | 4 | | 6010B | Total/NA |
| Copper | 34 | | 5.9 | | mg/Kg | 4 | | 6010B | Total/NA |
| Lead | 47 | | 2.0 | | mg/Kg | 4 | | 6010B | Total/NA |

## Client Sample ID: IDW-SOIL (Continued) — Lab Sample ID: 720-39692-17

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Nickel | 52 | | 2.0 | | mg/Kg | 4 | | 6010B | Total/NA |
| Vanadium | 52 | | 2.0 | | mg/Kg | 4 | | 6010B | Total/NA |
| Zinc | 70 | | 5.9 | | mg/Kg | 4 | | 6010B | Total/NA |
| Mercury | 0.35 | | 0.0094 | | mg/Kg | 1 | | 7471A | Total/NA |

## Client Sample ID: GP-1 — Lab Sample ID: 720-39692-18

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics [C10-C28] | 91 | | 60 | | ug/L | 1 | | 8015B | Silica Gel Clear |
| Motor Oil Range Organics [C24-C36] | 240 | | 120 | | ug/L | 1 | | 8015B | Silica Gel Clear |

## Client Sample ID: GP-2 — Lab Sample ID: 720-39692-19

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics [C10-C28] | 150 | | 58 | | ug/L | 1 | | 8015B | Silica Gel Clear |
| Motor Oil Range Organics [C24-C36] | 370 | | 120 | | ug/L | 1 | | 8015B | Silica Gel Clear |

## Client Sample ID: GP-6 — Lab Sample ID: 720-39692-20

No Detections

## Client Sample ID: TRIP BLANK — Lab Sample ID: 720-39692-21

No Detections

Client: Geologica Inc
Project/Site: 7701 Bancroft, Oakland

TestAmerica Job ID: 720-39692-1

**Client Sample ID: GP-1-12'**
**Date Collected: 01/10/12 09:14**
**Date Received: 01/10/12 17:40**

**Lab Sample ID: 720-39692-1**
**Matrix: Solid**

### Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | ND | | 4.5 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 17:37 | 1 |
| Benzene | ND | | 4.5 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 17:37 | 1 |
| Ethylbenzene | ND | | 4.5 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 17:37 | 1 |
| Toluene | ND | | 4.5 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 17:37 | 1 |
| Xylenes, Total | ND | | 9.1 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 17:37 | 1 |
| Gasoline Range Organics (GRO) -C5-C12 | ND | | 230 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 17:37 | 1 |
| TBA | ND | | 9.1 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 17:37 | 1 |
| DIPE | ND | | 4.5 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 17:37 | 1 |
| TAME | ND | | 4.5 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 17:37 | 1 |
| Ethyl t-butyl ether | ND | | 4.5 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 17:37 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene* | *99* | | *45 - 131* | *01/11/12 14:06* | *01/11/12 17:37* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *99* | | *60 - 140* | *01/11/12 14:06* | *01/11/12 17:37* | *1* |
| *Toluene-d8 (Surr)* | *100* | | *58 - 140* | *01/11/12 14:06* | *01/11/12 17:37* | *1* |

### Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Diesel Range Organics [C10-C28]** | **8.0** | | 1.0 | | mg/Kg | | 01/12/12 09:14 | 01/13/12 18:01 | 1 |
| Motor Oil Range Organics [C24-C36] | ND | | 50 | | mg/Kg | | 01/12/12 09:14 | 01/13/12 18:01 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Capric Acid (Surr)* | *0.02* | | *0 - 1* | *01/12/12 09:14* | *01/13/12 18:01* | *1* |
| *p-Terphenyl* | *107* | | *38 - 148* | *01/12/12 09:14* | *01/13/12 18:01* | *1* |

Client: Geologica Inc
Project/Site: 7701 Bancroft, Oakland

TestAmerica Job ID: 720-39692-1

**Client Sample ID: GP-2-13'**
**Date Collected: 01/10/12 10:49**
**Date Received: 01/10/12 17:40**

**Lab Sample ID: 720-39692-3**
**Matrix: Solid**

### Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | ND | | 4.7 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 19:10 | 1 |
| Benzene | ND | | 4.7 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 19:10 | 1 |
| Ethylbenzene | ND | | 4.7 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 19:10 | 1 |
| Toluene | ND | | 4.7 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 19:10 | 1 |
| Xylenes, Total | ND | | 9.4 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 19:10 | 1 |
| Gasoline Range Organics (GRO) -C5-C12 | ND | | 230 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 19:10 | 1 |
| TBA | ND | | 9.4 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 19:10 | 1 |
| DIPE | ND | | 4.7 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 19:10 | 1 |
| TAME | ND | | 4.7 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 19:10 | 1 |
| Ethyl t-butyl ether | ND | | 4.7 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 19:10 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene* | *101* | | *45 - 131* | *01/11/12 14:06* | *01/11/12 19:10* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *96* | | *60 - 140* | *01/11/12 14:06* | *01/11/12 19:10* | *1* |
| *Toluene-d8 (Surr)* | *99* | | *58 - 140* | *01/11/12 14:06* | *01/11/12 19:10* | *1* |

### Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Diesel Range Organics [C10-C28]** | **140** | | 3.0 | | mg/Kg | | 01/12/12 09:14 | 01/17/12 10:36 | 3 |
| **Motor Oil Range Organics [C24-C36]** | **300** | | 150 | | mg/Kg | | 01/12/12 09:14 | 01/17/12 10:36 | 3 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Capric Acid (Surr)* | *15* | *X* | *0 - 1* | *01/12/12 09:14* | *01/17/12 10:36* | *3* |
| *p-Terphenyl* | *57* | | *38 - 148* | *01/12/12 09:14* | *01/17/12 10:36* | *3* |

Client: Geologica Inc
Project/Site: 7701 Bancroft, Oakland

TestAmerica Job ID: 720-39692-1

**Client Sample ID: GP-3-8'**
**Date Collected: 01/10/12 10:08**
**Date Received: 01/10/12 17:40**

**Lab Sample ID: 720-39692-4**
**Matrix: Solid**

### Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | ND | | 4.7 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 19:41 | 1 |
| Benzene | ND | | 4.7 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 19:41 | 1 |
| Ethylbenzene | ND | | 4.7 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 19:41 | 1 |
| Toluene | ND | | 4.7 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 19:41 | 1 |
| Xylenes, Total | ND | | 9.3 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 19:41 | 1 |
| Gasoline Range Organics (GRO) -C5-C12 | ND | | 230 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 19:41 | 1 |
| TBA | ND | | 9.3 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 19:41 | 1 |
| DIPE | ND | | 4.7 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 19:41 | 1 |
| TAME | ND | | 4.7 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 19:41 | 1 |
| Ethyl t-butyl ether | ND | | 4.7 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 19:41 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene* | *100* | | *45 - 131* | *01/11/12 14:06* | *01/11/12 19:41* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *98* | | *60 - 140* | *01/11/12 14:06* | *01/11/12 19:41* | *1* |
| *Toluene-d8 (Surr)* | *99* | | *58 - 140* | *01/11/12 14:06* | *01/11/12 19:41* | *1* |

### Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics [C10-C28] | ND | | 1.0 | | mg/Kg | | 01/12/12 09:14 | 01/13/12 18:50 | 1 |
| Motor Oil Range Organics [C24-C36] | ND | | 50 | | mg/Kg | | 01/12/12 09:14 | 01/13/12 18:50 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Capric Acid (Surr)* | *0.03* | | *0 - 1* | *01/12/12 09:14* | *01/13/12 18:50* | *1* |
| *p-Terphenyl* | *111* | | *38 - 148* | *01/12/12 09:14* | *01/13/12 18:50* | *1* |

Client: Geologica Inc
Project/Site: 7701 Bancroft, Oakland

TestAmerica Job ID: 720-39692-1

**Client Sample ID: GP-4-4'**
**Date Collected: 01/10/12 11:05**
**Date Received: 01/10/12 17:40**

**Lab Sample ID: 720-39692-5**
**Matrix: Solid**

### Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | ND | | 4.9 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 20:12 | 1 |
| Benzene | ND | | 4.9 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 20:12 | 1 |
| Ethylbenzene | ND | | 4.9 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 20:12 | 1 |
| Toluene | ND | | 4.9 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 20:12 | 1 |
| Xylenes, Total | ND | | 9.9 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 20:12 | 1 |
| Gasoline Range Organics (GRO) -C5-C12 | ND | | 250 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 20:12 | 1 |
| TBA | ND | | 9.9 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 20:12 | 1 |
| DIPE | ND | | 4.9 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 20:12 | 1 |
| TAME | ND | | 4.9 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 20:12 | 1 |
| Ethyl t-butyl ether | ND | | 4.9 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 20:12 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene* | *86* | | *45 - 131* | *01/11/12 14:06* | *01/11/12 20:12* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *100* | | *60 - 140* | *01/11/12 14:06* | *01/11/12 20:12* | *1* |
| *Toluene-d8 (Surr)* | *96* | | *58 - 140* | *01/11/12 14:06* | *01/11/12 20:12* | *1* |

### Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics [C10-C28] | ND | | 1.0 | | mg/Kg | | 01/12/12 09:14 | 01/13/12 19:14 | 1 |
| Motor Oil Range Organics [C24-C36] | ND | | 50 | | mg/Kg | | 01/12/12 09:14 | 01/13/12 19:14 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Capric Acid (Surr)* | *0.2* | | *0 - 1* | *01/12/12 09:14* | *01/13/12 19:14* | *1* |
| *p-Terphenyl* | *102* | | *38 - 148* | *01/12/12 09:14* | *01/13/12 19:14* | *1* |

Client: Geologica Inc
Project/Site: 7701 Bancroft, Oakland

TestAmerica Job ID: 720-39692-1

**Client Sample ID: GP-4-13'**
**Date Collected: 01/10/12 11:24**
**Date Received: 01/10/12 17:40**

**Lab Sample ID: 720-39692-7**
**Matrix: Solid**

### Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | ND | | 4.9 | | ug/Kg | | 01/13/12 19:00 | 01/14/12 02:18 | 1 |
| Benzene | ND | | 4.9 | | ug/Kg | | 01/13/12 19:00 | 01/14/12 02:18 | 1 |
| Ethylbenzene | ND | | 4.9 | | ug/Kg | | 01/13/12 19:00 | 01/14/12 02:18 | 1 |
| Toluene | ND | | 4.9 | | ug/Kg | | 01/13/12 19:00 | 01/14/12 02:18 | 1 |
| Xylenes, Total | ND | | 9.8 | | ug/Kg | | 01/13/12 19:00 | 01/14/12 02:18 | 1 |
| Gasoline Range Organics (GRO) -C5-C12 | ND | | 250 | | ug/Kg | | 01/13/12 19:00 | 01/14/12 02:18 | 1 |
| TBA | ND | | 9.8 | | ug/Kg | | 01/13/12 19:00 | 01/14/12 02:18 | 1 |
| DIPE | ND | | 4.9 | | ug/Kg | | 01/13/12 19:00 | 01/14/12 02:18 | 1 |
| TAME | ND | | 4.9 | | ug/Kg | | 01/13/12 19:00 | 01/14/12 02:18 | 1 |
| Ethyl t-butyl ether | ND | | 4.9 | | ug/Kg | | 01/13/12 19:00 | 01/14/12 02:18 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene* | *99* | | *45 - 131* | *01/13/12 19:00* | *01/14/12 02:18* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *97* | | *60 - 140* | *01/13/12 19:00* | *01/14/12 02:18* | *1* |
| *Toluene-d8 (Surr)* | *101* | | *58 - 140* | *01/13/12 19:00* | *01/14/12 02:18* | *1* |

### Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics [C10-C28] | ND | | 0.99 | | mg/Kg | | 01/17/12 19:50 | 01/18/12 10:03 | 1 |
| Motor Oil Range Organics [C24-C36] | ND | | 49 | | mg/Kg | | 01/17/12 19:50 | 01/18/12 10:03 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Capric Acid (Surr)* | *0.03* | | *0 - 1* | *01/17/12 19:50* | *01/18/12 10:03* | *1* |
| *p-Terphenyl* | *92* | | *38 - 148* | *01/17/12 19:50* | *01/18/12 10:03* | *1* |

Client: Geologica Inc
Project/Site: 7701 Bancroft, Oakland

TestAmerica Job ID: 720-39692-1

**Client Sample ID: GP-5-14'**
**Date Collected: 01/10/12 12:08**
**Date Received: 01/10/12 17:40**

**Lab Sample ID: 720-39692-10**
**Matrix: Solid**

### Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | ND | | 4.5 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 20:43 | 1 |
| Benzene | ND | | 4.5 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 20:43 | 1 |
| **Ethylbenzene** | **19** | | 4.5 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 20:43 | 1 |
| Toluene | ND | | 4.5 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 20:43 | 1 |
| Xylenes, Total | ND | | 8.9 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 20:43 | 1 |
| **Gasoline Range Organics (GRO) -C5-C12** | **110000** | | 24000 | | ug/Kg | | 01/12/12 10:34 | 01/12/12 16:03 | 100 |
| TBA | ND | | 8.9 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 20:43 | 1 |
| DIPE | ND | | 4.5 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 20:43 | 1 |
| TAME | ND | | 4.5 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 20:43 | 1 |
| Ethyl t-butyl ether | ND | | 4.5 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 20:43 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene* | *0* | *X* | *45 - 131* | *01/11/12 14:06* | *01/11/12 20:43* | *1* |
| *4-Bromofluorobenzene* | *103* | | *66 - 148* | *01/12/12 10:34* | *01/12/12 16:03* | *100* |
| *1,2-Dichloroethane-d4 (Surr)* | *100* | | *60 - 140* | *01/11/12 14:06* | *01/11/12 20:43* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *99* | | *62 - 137* | *01/12/12 10:34* | *01/12/12 16:03* | *100* |
| *Toluene-d8 (Surr)* | *91* | | *58 - 140* | *01/11/12 14:06* | *01/11/12 20:43* | *1* |
| *Toluene-d8 (Surr)* | *100* | | *65 - 141* | *01/12/12 10:34* | *01/12/12 16:03* | *100* |

### Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Diesel Range Organics [C10-C28]** | **1500** | | 50 | | mg/Kg | | 01/12/12 09:14 | 01/17/12 10:59 | 50 |
| **Motor Oil Range Organics [C24-C36]** | **4500** | | 2500 | | mg/Kg | | 01/12/12 09:14 | 01/17/12 10:59 | 50 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Capric Acid (Surr)* | *0* | *D* | *0 - 1* | *01/12/12 09:14* | *01/17/12 10:59* | *50* |
| *p-Terphenyl* | *0* | *X D* | *38 - 148* | *01/12/12 09:14* | *01/17/12 10:59* | *50* |

Client: Geologica Inc
Project/Site: 7701 Bancroft, Oakland

TestAmerica Job ID: 720-39692-1

**Client Sample ID: GP-6-4'**
**Date Collected: 01/10/12 13:33**
**Date Received: 01/10/12 17:40**

**Lab Sample ID: 720-39692-11**
**Matrix: Solid**

### Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | ND | | 5.0 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 21:13 | 1 |
| Benzene | ND | | 5.0 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 21:13 | 1 |
| Ethylbenzene | ND | | 5.0 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 21:13 | 1 |
| Toluene | ND | | 5.0 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 21:13 | 1 |
| Xylenes, Total | ND | | 10 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 21:13 | 1 |
| Gasoline Range Organics (GRO) -C5-C12 | ND | | 250 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 21:13 | 1 |
| TBA | ND | | 10 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 21:13 | 1 |
| DIPE | ND | | 5.0 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 21:13 | 1 |
| TAME | ND | | 5.0 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 21:13 | 1 |
| Ethyl t-butyl ether | ND | | 5.0 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 21:13 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene* | *94* | | *45 - 131* | *01/11/12 14:06* | *01/11/12 21:13* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *104* | | *60 - 140* | *01/11/12 14:06* | *01/11/12 21:13* | *1* |
| *Toluene-d8 (Surr)* | *96* | | *58 - 140* | *01/11/12 14:06* | *01/11/12 21:13* | *1* |

### Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Diesel Range Organics [C10-C28]** | **3.3** | | 1.0 | | mg/Kg | | 01/12/12 09:14 | 01/17/12 10:13 | 1 |
| Motor Oil Range Organics [C24-C36] | ND | | 50 | | mg/Kg | | 01/12/12 09:14 | 01/17/12 10:13 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Capric Acid (Surr)* | *0.6* | | *0 - 1* | *01/12/12 09:14* | *01/17/12 10:13* | *1* |
| *p-Terphenyl* | *94* | | *38 - 148* | *01/12/12 09:14* | *01/17/12 10:13* | *1* |

Client: Geologica Inc
Project/Site: 7701 Bancroft, Oakland

TestAmerica Job ID: 720-39692-1

**Client Sample ID: GP-6-12'**
**Date Collected: 01/10/12 13:38**
**Date Received: 01/10/12 17:40**

**Lab Sample ID: 720-39692-13**
**Matrix: Solid**

### Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | ND | | 4.8 | | ug/Kg | | 01/13/12 19:00 | 01/14/12 02:46 | 1 |
| Benzene | ND | | 4.8 | | ug/Kg | | 01/13/12 19:00 | 01/14/12 02:46 | 1 |
| Ethylbenzene | ND | | 4.8 | | ug/Kg | | 01/13/12 19:00 | 01/14/12 02:46 | 1 |
| Toluene | ND | | 4.8 | | ug/Kg | | 01/13/12 19:00 | 01/14/12 02:46 | 1 |
| Xylenes, Total | ND | | 9.6 | | ug/Kg | | 01/13/12 19:00 | 01/14/12 02:46 | 1 |
| Gasoline Range Organics (GRO) -C5-C12 | ND | | 240 | | ug/Kg | | 01/13/12 19:00 | 01/14/12 02:46 | 1 |
| TBA | ND | | 9.6 | | ug/Kg | | 01/13/12 19:00 | 01/14/12 02:46 | 1 |
| DIPE | ND | | 4.8 | | ug/Kg | | 01/13/12 19:00 | 01/14/12 02:46 | 1 |
| TAME | ND | | 4.8 | | ug/Kg | | 01/13/12 19:00 | 01/14/12 02:46 | 1 |
| Ethyl t-butyl ether | ND | | 4.8 | | ug/Kg | | 01/13/12 19:00 | 01/14/12 02:46 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene* | *96* | | *45 - 131* | *01/13/12 19:00* | *01/14/12 02:46* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *98* | | *60 - 140* | *01/13/12 19:00* | *01/14/12 02:46* | *1* |
| *Toluene-d8 (Surr)* | *100* | | *58 - 140* | *01/13/12 19:00* | *01/14/12 02:46* | *1* |

### Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics [C10-C28] | ND | | 0.99 | | mg/Kg | | 01/17/12 19:50 | 01/18/12 10:28 | 1 |
| Motor Oil Range Organics [C24-C36] | ND | | 50 | | mg/Kg | | 01/17/12 19:50 | 01/18/12 10:28 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Capric Acid (Surr)* | *0.009* | | *0 - 1* | *01/17/12 19:50* | *01/18/12 10:28* | *1* |
| *p-Terphenyl* | *85* | | *38 - 148* | *01/17/12 19:50* | *01/18/12 10:28* | *1* |

Client: Geologica Inc
Project/Site: 7701 Bancroft, Oakland

TestAmerica Job ID: 720-39692-1

**Client Sample ID: GP-7-4'**
**Date Collected: 01/10/12 14:59**
**Date Received: 01/10/12 17:40**

**Lab Sample ID: 720-39692-14**
**Matrix: Solid**

### Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | ND | | 5.0 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 21:44 | 1 |
| Benzene | ND | | 5.0 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 21:44 | 1 |
| Ethylbenzene | ND | | 5.0 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 21:44 | 1 |
| Toluene | ND | | 5.0 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 21:44 | 1 |
| Xylenes, Total | ND | | 10 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 21:44 | 1 |
| Gasoline Range Organics (GRO) -C5-C12 | ND | | 250 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 21:44 | 1 |
| TBA | ND | | 10 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 21:44 | 1 |
| DIPE | ND | | 5.0 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 21:44 | 1 |
| TAME | ND | | 5.0 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 21:44 | 1 |
| Ethyl t-butyl ether | ND | | 5.0 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 21:44 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene* | *76* | | *45 - 131* | *01/11/12 14:06* | *01/11/12 21:44* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *100* | | *60 - 140* | *01/11/12 14:06* | *01/11/12 21:44* | *1* |
| *Toluene-d8 (Surr)* | *94* | | *58 - 140* | *01/11/12 14:06* | *01/11/12 21:44* | *1* |

### Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics [C10-C28] | ND | | 0.99 | | mg/Kg | | 01/12/12 09:14 | 01/13/12 20:28 | 1 |
| Motor Oil Range Organics [C24-C36] | ND | | 50 | | mg/Kg | | 01/12/12 09:14 | 01/13/12 20:28 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Capric Acid (Surr)* | *0.01* | | *0 - 1* | *01/12/12 09:14* | *01/13/12 20:28* | *1* |
| *p-Terphenyl* | *96* | | *38 - 148* | *01/12/12 09:14* | *01/13/12 20:28* | *1* |

Client: Geologica Inc
Project/Site: 7701 Bancroft, Oakland

TestAmerica Job ID: 720-39692-1

**Client Sample ID: GP-7-12'**
**Date Collected: 01/10/12 15:05**
**Date Received: 01/10/12 17:40**

**Lab Sample ID: 720-39692-16**
**Matrix: Solid**

### Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | ND | | 4.7 | | ug/Kg | | 01/13/12 19:00 | 01/14/12 03:15 | 1 |
| Benzene | ND | | 4.7 | | ug/Kg | | 01/13/12 19:00 | 01/14/12 03:15 | 1 |
| Ethylbenzene | ND | | 4.7 | | ug/Kg | | 01/13/12 19:00 | 01/14/12 03:15 | 1 |
| Toluene | ND | | 4.7 | | ug/Kg | | 01/13/12 19:00 | 01/14/12 03:15 | 1 |
| Xylenes, Total | ND | | 9.5 | | ug/Kg | | 01/13/12 19:00 | 01/14/12 03:15 | 1 |
| Gasoline Range Organics (GRO) -C5-C12 | ND | | 240 | | ug/Kg | | 01/13/12 19:00 | 01/14/12 03:15 | 1 |
| TBA | ND | | 9.5 | | ug/Kg | | 01/13/12 19:00 | 01/14/12 03:15 | 1 |
| DIPE | ND | | 4.7 | | ug/Kg | | 01/13/12 19:00 | 01/14/12 03:15 | 1 |
| TAME | ND | | 4.7 | | ug/Kg | | 01/13/12 19:00 | 01/14/12 03:15 | 1 |
| Ethyl t-butyl ether | ND | | 4.7 | | ug/Kg | | 01/13/12 19:00 | 01/14/12 03:15 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene* | *100* | | *45 - 131* | *01/13/12 19:00* | *01/14/12 03:15* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *96* | | *60 - 140* | *01/13/12 19:00* | *01/14/12 03:15* | *1* |
| *Toluene-d8 (Surr)* | *99* | | *58 - 140* | *01/13/12 19:00* | *01/14/12 03:15* | *1* |

### Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics [C10-C28] | ND | | 0.98 | | mg/Kg | | 01/17/12 19:50 | 01/18/12 10:52 | 1 |
| Motor Oil Range Organics [C24-C36] | ND | | 49 | | mg/Kg | | 01/17/12 19:50 | 01/18/12 10:52 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Capric Acid (Surr)* | *0.009* | | *0 - 1* | *01/17/12 19:50* | *01/18/12 10:52* | *1* |
| *p-Terphenyl* | *86* | | *38 - 148* | *01/17/12 19:50* | *01/18/12 10:52* | *1* |

Client: Geologica Inc
Project/Site: 7701 Bancroft, Oakland

TestAmerica Job ID: 720-39692-1

**Client Sample ID: IDW-SOIL**
**Date Collected: 01/10/12 15:50**
**Date Received: 01/10/12 17:40**

**Lab Sample ID: 720-39692-17**
**Matrix: Solid**

### Method: 6010B - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND | | 2.0 | | mg/Kg | | 01/11/12 18:49 | 01/13/12 03:43 | 4 |
| **Arsenic** | **6.1** | | 3.9 | | mg/Kg | | 01/11/12 18:49 | 01/13/12 03:43 | 4 |
| **Barium** | **170** | | 2.0 | | mg/Kg | | 01/11/12 18:49 | 01/13/12 03:43 | 4 |
| Beryllium | ND | | 0.39 | | mg/Kg | | 01/11/12 18:49 | 01/13/12 03:43 | 4 |
| Cadmium | ND | | 0.49 | | mg/Kg | | 01/11/12 18:49 | 01/13/12 03:43 | 4 |
| **Chromium** | **51** | | 2.0 | | mg/Kg | | 01/11/12 18:49 | 01/13/12 03:43 | 4 |
| **Cobalt** | **11** | | 0.78 | | mg/Kg | | 01/11/12 18:49 | 01/13/12 03:43 | 4 |
| **Copper** | **34** | | 5.9 | | mg/Kg | | 01/11/12 18:49 | 01/13/12 03:43 | 4 |
| **Lead** | **47** | | 2.0 | | mg/Kg | | 01/11/12 18:49 | 01/13/12 03:43 | 4 |
| Molybdenum | ND | | 2.0 | | mg/Kg | | 01/11/12 18:49 | 01/13/12 03:43 | 4 |
| **Nickel** | **52** | | 2.0 | | mg/Kg | | 01/11/12 18:49 | 01/13/12 03:43 | 4 |
| Selenium | ND | | 3.9 | | mg/Kg | | 01/11/12 18:49 | 01/13/12 03:43 | 4 |
| Silver | ND | | 0.98 | | mg/Kg | | 01/11/12 18:49 | 01/13/12 03:43 | 4 |
| Thallium | ND | | 2.0 | | mg/Kg | | 01/11/12 18:49 | 01/13/12 03:43 | 4 |
| **Vanadium** | **52** | | 2.0 | | mg/Kg | | 01/11/12 18:49 | 01/13/12 03:43 | 4 |
| **Zinc** | **70** | | 5.9 | | mg/Kg | | 01/11/12 18:49 | 01/13/12 03:43 | 4 |

### Method: 7471A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Mercury** | **0.35** | | 0.0094 | | mg/Kg | | 01/12/12 12:49 | 01/12/12 18:49 | 1 |

Client: Geologica Inc
Project/Site: 7701 Bancroft, Oakland

TestAmerica Job ID: 720-39692-1

**Client Sample ID: GP-1**
**Date Collected: 01/10/12 09:32**
**Date Received: 01/10/12 17:40**

**Lab Sample ID: 720-39692-18**
**Matrix: Water**

### Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | ND | | 0.50 | | ug/L | | | 01/11/12 23:16 | 1 |
| Benzene | ND | | 0.50 | | ug/L | | | 01/11/12 23:16 | 1 |
| Ethylbenzene | ND | | 0.50 | | ug/L | | | 01/11/12 23:16 | 1 |
| Toluene | ND | | 0.50 | | ug/L | | | 01/11/12 23:16 | 1 |
| Xylenes, Total | ND | | 1.0 | | ug/L | | | 01/11/12 23:16 | 1 |
| Gasoline Range Organics (GRO) -C5-C12 | ND | | 50 | | ug/L | | | 01/11/12 23:16 | 1 |
| TBA | ND | | 4.0 | | ug/L | | | 01/11/12 23:16 | 1 |
| DIPE | ND | | 0.50 | | ug/L | | | 01/11/12 23:16 | 1 |
| TAME | ND | | 0.50 | | ug/L | | | 01/11/12 23:16 | 1 |
| Ethyl t-butyl ether | ND | | 0.50 | | ug/L | | | 01/11/12 23:16 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene* | *91* | | *67 - 130* | | *01/11/12 23:16* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *82* | | *75 - 138* | | *01/11/12 23:16* | *1* |
| *Toluene-d8 (Surr)* | *72* | | *70 - 130* | | *01/11/12 23:16* | *1* |

### Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Diesel Range Organics [C10-C28]** | **91** | | 60 | | ug/L | | 01/11/12 15:12 | 01/12/12 17:17 | 1 |
| **Motor Oil Range Organics [C24-C36]** | **240** | | 120 | | ug/L | | 01/11/12 15:12 | 01/12/12 17:17 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Capric Acid (Surr)* | *0.0005* | | *0 - 5* | *01/11/12 15:12* | *01/12/12 17:17* | *1* |
| *p-Terphenyl* | *83* | | *31 - 150* | *01/11/12 15:12* | *01/12/12 17:17* | *1* |

Client: Geologica Inc
Project/Site: 7701 Bancroft, Oakland

TestAmerica Job ID: 720-39692-1

**Client Sample ID: GP-2**
**Date Collected: 01/10/12 11:15**
**Date Received: 01/10/12 17:40**

**Lab Sample ID: 720-39692-19**
**Matrix: Water**

### Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | ND | | 0.50 | | ug/L | | | 01/12/12 00:48 | 1 |
| Benzene | ND | | 0.50 | | ug/L | | | 01/12/12 00:48 | 1 |
| Ethylbenzene | ND | | 0.50 | | ug/L | | | 01/12/12 00:48 | 1 |
| Toluene | ND | | 0.50 | | ug/L | | | 01/12/12 00:48 | 1 |
| Xylenes, Total | ND | | 1.0 | | ug/L | | | 01/12/12 00:48 | 1 |
| Gasoline Range Organics (GRO) -C5-C12 | ND | | 50 | | ug/L | | | 01/12/12 00:48 | 1 |
| TBA | ND | | 4.0 | | ug/L | | | 01/12/12 00:48 | 1 |
| DIPE | ND | | 0.50 | | ug/L | | | 01/12/12 00:48 | 1 |
| TAME | ND | | 0.50 | | ug/L | | | 01/12/12 00:48 | 1 |
| Ethyl t-butyl ether | ND | | 0.50 | | ug/L | | | 01/12/12 00:48 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene* | *100* | | *67 - 130* | | *01/12/12 00:48* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *80* | | *75 - 138* | | *01/12/12 00:48* | *1* |
| *Toluene-d8 (Surr)* | *101* | | *70 - 130* | | *01/12/12 00:48* | *1* |

### Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Diesel Range Organics [C10-C28]** | **150** | | 58 | | ug/L | | 01/11/12 15:12 | 01/12/12 17:42 | 1 |
| **Motor Oil Range Organics [C24-C36]** | **370** | | 120 | | ug/L | | 01/11/12 15:12 | 01/12/12 17:42 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Capric Acid (Surr)* | *0.002* | | *0 - 5* | *01/11/12 15:12* | *01/12/12 17:42* | *1* |
| *p-Terphenyl* | *72* | | *31 - 150* | *01/11/12 15:12* | *01/12/12 17:42* | *1* |

Client: Geologica Inc
Project/Site: 7701 Bancroft, Oakland

TestAmerica Job ID: 720-39692-1

**Client Sample ID: GP-6**
**Date Collected: 01/10/12 14:15**
**Date Received: 01/10/12 17:40**

**Lab Sample ID: 720-39692-20**
**Matrix: Water**

### Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | ND | | 0.50 | | ug/L | | | 01/12/12 01:19 | 1 |
| Benzene | ND | | 0.50 | | ug/L | | | 01/12/12 01:19 | 1 |
| Ethylbenzene | ND | | 0.50 | | ug/L | | | 01/12/12 01:19 | 1 |
| Toluene | ND | | 0.50 | | ug/L | | | 01/12/12 01:19 | 1 |
| Xylenes, Total | ND | | 1.0 | | ug/L | | | 01/12/12 01:19 | 1 |
| Gasoline Range Organics (GRO) -C5-C12 | ND | | 50 | | ug/L | | | 01/12/12 01:19 | 1 |
| TBA | ND | | 4.0 | | ug/L | | | 01/12/12 01:19 | 1 |
| DIPE | ND | | 0.50 | | ug/L | | | 01/12/12 01:19 | 1 |
| TAME | ND | | 0.50 | | ug/L | | | 01/12/12 01:19 | 1 |
| Ethyl t-butyl ether | ND | | 0.50 | | ug/L | | | 01/12/12 01:19 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene* | *92* | | *67 - 130* | | *01/12/12 01:19* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *79* | | *75 - 138* | | *01/12/12 01:19* | *1* |
| *Toluene-d8 (Surr)* | *97* | | *70 - 130* | | *01/12/12 01:19* | *1* |

### Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics [C10-C28] | ND | | 62 | | ug/L | | 01/11/12 15:12 | 01/12/12 18:06 | 1 |
| Motor Oil Range Organics [C24-C36] | ND | | 120 | | ug/L | | 01/11/12 15:12 | 01/12/12 18:06 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Capric Acid (Surr)* | *0.0002* | | *0 - 5* | *01/11/12 15:12* | *01/12/12 18:06* | *1* |
| *p-Terphenyl* | *73* | | *31 - 150* | *01/11/12 15:12* | *01/12/12 18:06* | *1* |

Client: Geologica Inc
Project/Site: 7701 Bancroft, Oakland

TestAmerica Job ID: 720-39692-1

**Client Sample ID: TRIP BLANK**
**Date Collected: 01/10/12 00:00**
**Date Received: 01/10/12 17:40**

**Lab Sample ID: 720-39692-21**
**Matrix: Water**

**Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | ND | | 0.50 | | ug/L | | | 01/12/12 20:05 | 1 |
| Benzene | ND | | 0.50 | | ug/L | | | 01/12/12 20:05 | 1 |
| Ethylbenzene | ND | | 0.50 | | ug/L | | | 01/12/12 20:05 | 1 |
| Toluene | ND | | 0.50 | | ug/L | | | 01/12/12 20:05 | 1 |
| Xylenes, Total | ND | | 1.0 | | ug/L | | | 01/12/12 20:05 | 1 |
| Gasoline Range Organics (GRO) -C5-C12 | ND | | 50 | | ug/L | | | 01/12/12 20:05 | 1 |
| TBA | ND | | 4.0 | | ug/L | | | 01/12/12 20:05 | 1 |
| DIPE | ND | | 0.50 | | ug/L | | | 01/12/12 20:05 | 1 |
| TAME | ND | | 0.50 | | ug/L | | | 01/12/12 20:05 | 1 |
| Ethyl t-butyl ether | ND | | 0.50 | | ug/L | | | 01/12/12 20:05 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene* | *100* | | *67 - 130* | | *01/12/12 20:05* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *98* | | *75 - 138* | | *01/12/12 20:05* | *1* |
| *Toluene-d8 (Surr)* | *99* | | *70 - 130* | | *01/12/12 20:05* | *1* |

## Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

**Lab Sample ID: MB 720-105833/1-A**
**Matrix: Solid**
**Analysis Batch: 105830**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 105833**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | ND | | 5.0 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 14:52 | 1 |
| Benzene | ND | | 5.0 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 14:52 | 1 |
| Ethylbenzene | ND | | 5.0 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 14:52 | 1 |
| Toluene | ND | | 5.0 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 14:52 | 1 |
| Xylenes, Total | ND | | 10 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 14:52 | 1 |
| Gasoline Range Organics (GRO) -C5-C12 | ND | | 250 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 14:52 | 1 |
| TBA | ND | | 10 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 14:52 | 1 |
| DIPE | ND | | 5.0 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 14:52 | 1 |
| TAME | ND | | 5.0 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 14:52 | 1 |
| Ethyl t-butyl ether | ND | | 5.0 | | ug/Kg | | 01/11/12 14:06 | 01/11/12 14:52 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene* | *101* | | *45 - 131* | *01/11/12 14:06* | *01/11/12 14:52* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *97* | | *60 - 140* | *01/11/12 14:06* | *01/11/12 14:52* | *1* |
| *Toluene-d8 (Surr)* | *98* | | *58 - 140* | *01/11/12 14:06* | *01/11/12 14:52* | *1* |

**Lab Sample ID: LCS 720-105833/2-A**
**Matrix: Solid**
**Analysis Batch: 105830**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 105833**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | 49.4 | 51.4 | | ug/Kg | | 104 | 70 - 144 |
| Benzene | 49.4 | 48.2 | | ug/Kg | | 98 | 70 - 130 |
| Ethylbenzene | 49.4 | 48.6 | | ug/Kg | | 98 | 80 - 137 |
| Toluene | 49.4 | 48.4 | | ug/Kg | | 98 | 80 - 128 |
| m-Xylene & p-Xylene | 98.8 | 99.2 | | ug/Kg | | 100 | 70 - 146 |
| o-Xylene | 49.4 | 48.8 | | ug/Kg | | 99 | 70 - 140 |
| TBA | 988 | 951 | | ug/Kg | | 96 | 63 - 130 |
| DIPE | 49.4 | 49.8 | | ug/Kg | | 101 | 70 - 131 |
| TAME | 49.4 | 51.4 | | ug/Kg | | 104 | 70 - 140 |
| Ethyl t-butyl ether | 49.4 | 46.2 | | ug/Kg | | 94 | 70 - 130 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene* | *99* | | *45 - 131* |
| *1,2-Dichloroethane-d4 (Surr)* | *93* | | *60 - 140* |
| *Toluene-d8 (Surr)* | *100* | | *58 - 140* |

**Lab Sample ID: LCS 720-105833/4-A**
**Matrix: Solid**
**Analysis Batch: 105830**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 105833**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) -C5-C12 | 998 | 1100 | | ug/Kg | | 110 | 61 - 128 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene* | *102* | | *45 - 131* |
| *1,2-Dichloroethane-d4 (Surr)* | *99* | | *60 - 140* |

## Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: LCS 720-105833/4-A**
**Matrix: Solid**
**Analysis Batch: 105830**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 105833**

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|---|---|---|---|
| *Toluene-d8 (Surr)* | *101* | | *58 - 140* |

**Lab Sample ID: LCSD 720-105833/3-A**
**Matrix: Solid**
**Analysis Batch: 105830**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 105833**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | | | 50.0 | 54.0 | | ug/Kg | | 108 | 70 - 144 | 5 | 20 |
| Benzene | | | 50.0 | 49.8 | | ug/Kg | | 100 | 70 - 130 | 3 | 20 |
| Ethylbenzene | | | 50.0 | 52.2 | | ug/Kg | | 104 | 80 - 137 | 7 | 20 |
| Toluene | | | 50.0 | 51.8 | | ug/Kg | | 104 | 80 - 128 | 7 | 20 |
| m-Xylene & p-Xylene | | | 100 | 107 | | ug/Kg | | 107 | 70 - 146 | 8 | 20 |
| o-Xylene | | | 50.0 | 53.2 | | ug/Kg | | 106 | 70 - 140 | 9 | 20 |
| TBA | | | 1000 | 960 | | ug/Kg | | 96 | 63 - 130 | 1 | 20 |
| DIPE | | | 50.0 | 52.2 | | ug/Kg | | 104 | 70 - 131 | 5 | 20 |
| TAME | | | 50.0 | 53.2 | | ug/Kg | | 106 | 70 - 140 | 3 | 20 |
| Ethyl t-butyl ether | | | 50.0 | 48.2 | | ug/Kg | | 96 | 70 - 130 | 4 | 20 |

| Surrogate | LCSD %Recovery | LCSD Qualifier | Limits |
|---|---|---|---|
| *4-Bromofluorobenzene* | *103* | | *45 - 131* |
| *1,2-Dichloroethane-d4 (Surr)* | *94* | | *60 - 140* |
| *Toluene-d8 (Surr)* | *99* | | *58 - 140* |

**Lab Sample ID: LCSD 720-105833/5-A**
**Matrix: Solid**
**Analysis Batch: 105830**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 105833**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) -C5-C12 | | | 996 | 1050 | | ug/Kg | | 105 | 61 - 128 | 4 | 20 |

| Surrogate | LCSD %Recovery | LCSD Qualifier | Limits |
|---|---|---|---|
| *4-Bromofluorobenzene* | *104* | | *45 - 131* |
| *1,2-Dichloroethane-d4 (Surr)* | *99* | | *60 - 140* |
| *Toluene-d8 (Surr)* | *100* | | *58 - 140* |

**Lab Sample ID: 720-39692-1 MS**
**Matrix: Solid**
**Analysis Batch: 105830**

**Client Sample ID: GP-1-12'**
**Prep Type: Total/NA**
**Prep Batch: 105833**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | ND | | 48.1 | 52.9 | | ug/Kg | | 110 | 69 - 130 |
| Benzene | ND | | 48.1 | 47.9 | | ug/Kg | | 100 | 70 - 130 |
| Ethylbenzene | ND | | 48.1 | 47.7 | | ug/Kg | | 99 | 65 - 130 |
| Toluene | ND | | 48.1 | 47.3 | | ug/Kg | | 98 | 70 - 130 |
| m-Xylene & p-Xylene | ND | | 96.2 | 97.1 | | ug/Kg | | 101 | 70 - 130 |
| o-Xylene | ND | | 48.1 | 48.8 | | ug/Kg | | 102 | 68 - 130 |
| TBA | ND | | 962 | 937 | | ug/Kg | | 98 | 70 - 130 |
| DIPE | ND | | 48.1 | 50.0 | | ug/Kg | | 104 | 70 - 130 |

## Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: 720-39692-1 MS** — **Client Sample ID: GP-1-12'**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 105830** — **Prep Batch: 105833**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| TAME | ND | | 48.1 | 52.9 | | ug/Kg | | 110 | 70 - 130 |
| Ethyl t-butyl ether | ND | | 48.1 | 47.5 | | ug/Kg | | 99 | 70 - 130 |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene* | *98* | | *45 - 131* |
| *1,2-Dichloroethane-d4 (Surr)* | *94* | | *60 - 140* |
| *Toluene-d8 (Surr)* | *99* | | *58 - 140* |

**Lab Sample ID: 720-39692-1 MSD** — **Client Sample ID: GP-1-12'**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 105830** — **Prep Batch: 105833**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | ND | | 48.1 | 52.7 | | ug/Kg | | 110 | 69 - 130 | 0 | 20 |
| Benzene | ND | | 48.1 | 47.7 | | ug/Kg | | 99 | 70 - 130 | 0 | 20 |
| Ethylbenzene | ND | | 48.1 | 49.2 | | ug/Kg | | 102 | 65 - 130 | 3 | 20 |
| Toluene | ND | | 48.1 | 50.2 | | ug/Kg | | 104 | 70 - 130 | 6 | 20 |
| m-Xylene & p-Xylene | ND | | 96.2 | 100 | | ug/Kg | | 104 | 70 - 130 | 3 | 20 |
| o-Xylene | ND | | 48.1 | 50.2 | | ug/Kg | | 104 | 68 - 130 | 3 | 20 |
| TBA | ND | | 962 | 945 | | ug/Kg | | 98 | 70 - 130 | 1 | 20 |
| DIPE | ND | | 48.1 | 51.2 | | ug/Kg | | 106 | 70 - 130 | 2 | 20 |
| TAME | ND | | 48.1 | 52.5 | | ug/Kg | | 109 | 70 - 130 | 1 | 20 |
| Ethyl t-butyl ether | ND | | 48.1 | 47.9 | | ug/Kg | | 100 | 70 - 130 | 1 | 20 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene* | *101* | | *45 - 131* |
| *1,2-Dichloroethane-d4 (Surr)* | *98* | | *60 - 140* |
| *Toluene-d8 (Surr)* | *98* | | *58 - 140* |

**Lab Sample ID: MB 720-105841/1-A** — **Client Sample ID: Method Blank**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 105878** — **Prep Batch: 105841**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) -C5-C12 | ND | | 25000 | | ug/Kg | | 01/11/12 15:17 | 01/12/12 14:05 | 100 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene* | *102* | | *66 - 148* | *01/11/12 15:17* | *01/12/12 14:05* | *100* |
| *1,2-Dichloroethane-d4 (Surr)* | *101* | | *62 - 137* | *01/11/12 15:17* | *01/12/12 14:05* | *100* |
| *Toluene-d8 (Surr)* | *101* | | *65 - 141* | *01/11/12 15:17* | *01/12/12 14:05* | *100* |

**Lab Sample ID: LCS 720-105841/6-A** — **Client Sample ID: Lab Control Sample**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 105878** — **Prep Batch: 105841**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) -C5-C12 | 50000 | 49800 | | ug/Kg | | 100 | 60 - 120 |

## Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: LCS 720-105841/6-A**
**Matrix: Solid**
**Analysis Batch: 105878**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 105841**

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|---|---|---|---|
| *4-Bromofluorobenzene* | *107* | | *66 - 148* |
| *1,2-Dichloroethane-d4 (Surr)* | *101* | | *62 - 137* |
| *Toluene-d8 (Surr)* | *101* | | *65 - 141* |

**Lab Sample ID: LCSD 720-105841/7-A**
**Matrix: Solid**
**Analysis Batch: 105878**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 105841**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) -C5-C12 | | | 50000 | 55600 | | ug/Kg | | 111 | 60 - 120 | 11 | 20 |

| Surrogate | LCSD %Recovery | LCSD Qualifier | Limits |
|---|---|---|---|
| *4-Bromofluorobenzene* | *105* | | *66 - 148* |
| *1,2-Dichloroethane-d4 (Surr)* | *103* | | *62 - 137* |
| *Toluene-d8 (Surr)* | *101* | | *65 - 141* |

**Lab Sample ID: MB 720-105849/4**
**Matrix: Water**
**Analysis Batch: 105849**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | ND | | 0.50 | | ug/L | | | 01/11/12 19:41 | 1 |
| Benzene | ND | | 0.50 | | ug/L | | | 01/11/12 19:41 | 1 |
| Ethylbenzene | ND | | 0.50 | | ug/L | | | 01/11/12 19:41 | 1 |
| Toluene | ND | | 0.50 | | ug/L | | | 01/11/12 19:41 | 1 |
| Xylenes, Total | ND | | 1.0 | | ug/L | | | 01/11/12 19:41 | 1 |
| Gasoline Range Organics (GRO) -C5-C12 | ND | | 50 | | ug/L | | | 01/11/12 19:41 | 1 |
| TBA | ND | | 4.0 | | ug/L | | | 01/11/12 19:41 | 1 |
| DIPE | ND | | 0.50 | | ug/L | | | 01/11/12 19:41 | 1 |
| TAME | ND | | 0.50 | | ug/L | | | 01/11/12 19:41 | 1 |
| Ethyl t-butyl ether | ND | | 0.50 | | ug/L | | | 01/11/12 19:41 | 1 |

| Surrogate | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene* | *91* | | *67 - 130* | | *01/11/12 19:41* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *77* | | *75 - 138* | | *01/11/12 19:41* | *1* |
| *Toluene-d8 (Surr)* | *97* | | *70 - 130* | | *01/11/12 19:41* | *1* |

**Lab Sample ID: LCS 720-105849/5**
**Matrix: Water**
**Analysis Batch: 105849**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | | | 25.0 | 22.5 | | ug/L | | 90 | 62 - 130 | | |
| Benzene | | | 25.0 | 22.7 | | ug/L | | 91 | 79 - 120 | | |
| Ethylbenzene | | | 25.0 | 21.8 | | ug/L | | 87 | 84 - 120 | | |
| Toluene | | | 25.0 | 23.0 | | ug/L | | 92 | 78 - 118 | | |
| m-Xylene & p-Xylene | | | 50.0 | 42.8 | | ug/L | | 86 | 70 - 142 | | |

## Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: LCS 720-105849/5**
**Matrix: Water**
**Analysis Batch: 105849**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| o-Xylene | 25.0 | 21.9 | | ug/L | | 88 | 85 - 127 |
| TBA | 500 | 454 | | ug/L | | 91 | 82 - 116 |
| DIPE | 25.0 | 22.2 | | ug/L | | 89 | 69 - 134 |
| TAME | 25.0 | 24.8 | | ug/L | | 99 | 79 - 129 |
| Ethyl t-butyl ether | 25.0 | 21.8 | | ug/L | | 87 | 70 - 130 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene* | *92* | | *67 - 130* |
| *1,2-Dichloroethane-d4 (Surr)* | *77* | | *75 - 138* |
| *Toluene-d8 (Surr)* | *100* | | *70 - 130* |

**Lab Sample ID: LCS 720-105849/7**
**Matrix: Water**
**Analysis Batch: 105849**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) -C5-C12 | 500 | 456 | | ug/L | | 91 | 62 - 117 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene* | *91* | | *67 - 130* |
| *1,2-Dichloroethane-d4 (Surr)* | *77* | | *75 - 138* |
| *Toluene-d8 (Surr)* | *99* | | *70 - 130* |

**Lab Sample ID: LCSD 720-105849/6**
**Matrix: Water**
**Analysis Batch: 105849**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | 25.0 | 23.6 | | ug/L | | 94 | 62 - 130 | 5 | 20 |
| Benzene | 25.0 | 22.8 | | ug/L | | 91 | 79 - 120 | 0 | 20 |
| Ethylbenzene | 25.0 | 21.3 | | ug/L | | 85 | 84 - 120 | 2 | 20 |
| Toluene | 25.0 | 22.6 | | ug/L | | 90 | 78 - 118 | 2 | 20 |
| m-Xylene & p-Xylene | 50.0 | 41.8 | | ug/L | | 84 | 70 - 142 | 2 | 20 |
| o-Xylene | 25.0 | 21.6 | | ug/L | | 86 | 85 - 127 | 1 | 20 |
| TBA | 500 | 449 | | ug/L | | 90 | 82 - 116 | 1 | 20 |
| DIPE | 25.0 | 22.6 | | ug/L | | 90 | 69 - 134 | 2 | 20 |
| TAME | 25.0 | 25.8 | | ug/L | | 103 | 79 - 129 | 4 | 20 |
| Ethyl t-butyl ether | 25.0 | 22.3 | | ug/L | | 89 | 70 - 130 | 2 | 20 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene* | *91* | | *67 - 130* |
| *1,2-Dichloroethane-d4 (Surr)* | *79* | | *75 - 138* |
| *Toluene-d8 (Surr)* | *101* | | *70 - 130* |

## Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: LCSD 720-105849/8**
**Matrix: Water**
**Analysis Batch: 105849**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) -C5-C12 | | | 500 | 473 | | ug/L | | 95 | 62 - 117 | 4 | 20 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene* | *93* | | *67 - 130* |
| *1,2-Dichloroethane-d4 (Surr)* | *77* | | *75 - 138* |
| *Toluene-d8 (Surr)* | *99* | | *70 - 130* |

**Lab Sample ID: 720-39692-18 MS**
**Matrix: Water**
**Analysis Batch: 105849**

**Client Sample ID: GP-1**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | ND | | 25.0 | 13.5 | F | ug/L | | 54 | 60 - 138 |
| Benzene | ND | | 25.0 | 23.4 | | ug/L | | 94 | 60 - 140 |
| Ethylbenzene | ND | | 25.0 | 20.7 | | ug/L | | 83 | 60 - 140 |
| Toluene | ND | | 25.0 | 21.9 | | ug/L | | 88 | 60 - 140 |
| m-Xylene & p-Xylene | ND | | 50.0 | 38.7 | | ug/L | | 77 | 60 - 140 |
| o-Xylene | ND | | 25.0 | 20.2 | | ug/L | | 81 | 60 - 140 |
| TBA | ND | | 500 | 416 | | ug/L | | 83 | 60 - 140 |
| DIPE | ND | | 25.0 | 23.5 | | ug/L | | 94 | 60 - 140 |
| TAME | ND | | 25.0 | 2.76 | F | ug/L | | 11 | 60 - 140 |
| Ethyl t-butyl ether | ND | | 25.0 | 5.34 | F | ug/L | | 21 | 60 - 140 |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene* | *96* | | *67 - 130* |
| *1,2-Dichloroethane-d4 (Surr)* | *79* | | *75 - 138* |
| *Toluene-d8 (Surr)* | *99* | | *70 - 130* |

**Lab Sample ID: 720-39692-18 MSD**
**Matrix: Water**
**Analysis Batch: 105849**

**Client Sample ID: GP-1**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | ND | | 25.0 | 18.3 | F | ug/L | | 73 | 60 - 138 | 30 | 20 |
| Benzene | ND | | 25.0 | 23.9 | | ug/L | | 96 | 60 - 140 | 2 | 20 |
| Ethylbenzene | ND | | 25.0 | 21.4 | | ug/L | | 86 | 60 - 140 | 3 | 20 |
| Toluene | ND | | 25.0 | 22.5 | | ug/L | | 90 | 60 - 140 | 3 | 20 |
| m-Xylene & p-Xylene | ND | | 50.0 | 41.7 | | ug/L | | 83 | 60 - 140 | 7 | 20 |
| o-Xylene | ND | | 25.0 | 21.6 | | ug/L | | 86 | 60 - 140 | 7 | 20 |
| TBA | ND | | 500 | 419 | | ug/L | | 84 | 60 - 140 | 1 | 20 |
| DIPE | ND | | 25.0 | 24.1 | | ug/L | | 96 | 60 - 140 | 3 | 20 |
| TAME | ND | | 25.0 | 8.91 | F | ug/L | | 36 | 60 - 140 | 105 | 20 |
| Ethyl t-butyl ether | ND | | 25.0 | 10.8 | F | ug/L | | 43 | 60 - 140 | 68 | 20 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene* | *96* | | *67 - 130* |
| *1,2-Dichloroethane-d4 (Surr)* | *80* | | *75 - 138* |
| *Toluene-d8 (Surr)* | *101* | | *70 - 130* |

## Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: MB 720-105910/4**
**Matrix: Water**
**Analysis Batch: 105910**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | ND | | 0.50 | | ug/L | | | 01/12/12 15:27 | 1 |
| Benzene | ND | | 0.50 | | ug/L | | | 01/12/12 15:27 | 1 |
| Ethylbenzene | ND | | 0.50 | | ug/L | | | 01/12/12 15:27 | 1 |
| Toluene | ND | | 0.50 | | ug/L | | | 01/12/12 15:27 | 1 |
| Xylenes, Total | ND | | 1.0 | | ug/L | | | 01/12/12 15:27 | 1 |
| Gasoline Range Organics (GRO) -C5-C12 | ND | | 50 | | ug/L | | | 01/12/12 15:27 | 1 |
| TBA | ND | | 4.0 | | ug/L | | | 01/12/12 15:27 | 1 |
| DIPE | ND | | 0.50 | | ug/L | | | 01/12/12 15:27 | 1 |
| TAME | ND | | 0.50 | | ug/L | | | 01/12/12 15:27 | 1 |
| Ethyl t-butyl ether | ND | | 0.50 | | ug/L | | | 01/12/12 15:27 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene* | *102* | | *67 - 130* | | *01/12/12 15:27* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *94* | | *75 - 138* | | *01/12/12 15:27* | *1* |
| *Toluene-d8 (Surr)* | *101* | | *70 - 130* | | *01/12/12 15:27* | *1* |

**Lab Sample ID: LCS 720-105910/5**
**Matrix: Water**
**Analysis Batch: 105910**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | 25.0 | 24.6 | | ug/L | | 98 | 62 - 130 |
| Benzene | 25.0 | 23.4 | | ug/L | | 94 | 79 - 120 |
| Ethylbenzene | 25.0 | 23.3 | | ug/L | | 93 | 84 - 120 |
| Toluene | 25.0 | 23.1 | | ug/L | | 92 | 78 - 118 |
| m-Xylene & p-Xylene | 50.0 | 47.7 | | ug/L | | 95 | 70 - 142 |
| o-Xylene | 25.0 | 23.8 | | ug/L | | 95 | 85 - 127 |
| TBA | 500 | 453 | | ug/L | | 91 | 82 - 116 |
| DIPE | 25.0 | 23.8 | | ug/L | | 95 | 69 - 134 |
| TAME | 25.0 | 24.9 | | ug/L | | 100 | 79 - 129 |
| Ethyl t-butyl ether | 25.0 | 22.6 | | ug/L | | 90 | 70 - 130 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene* | *100* | | *67 - 130* |
| *1,2-Dichloroethane-d4 (Surr)* | *92* | | *75 - 138* |
| *Toluene-d8 (Surr)* | *101* | | *70 - 130* |

**Lab Sample ID: LCS 720-105910/7**
**Matrix: Water**
**Analysis Batch: 105910**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) -C5-C12 | 500 | 519 | | ug/L | | 104 | 62 - 117 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene* | *103* | | *67 - 130* |
| *1,2-Dichloroethane-d4 (Surr)* | *95* | | *75 - 138* |

## Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: LCS 720-105910/7**
**Matrix: Water**
**Analysis Batch: 105910**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|---|---|---|---|
| *Toluene-d8 (Surr)* | *102* | | *70 - 130* |

**Lab Sample ID: LCSD 720-105910/6**
**Matrix: Water**
**Analysis Batch: 105910**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | | | 25.0 | 25.3 | | ug/L | | 101 | 62 - 130 | 3 | 20 |
| Benzene | | | 25.0 | 23.5 | | ug/L | | 94 | 79 - 120 | 0 | 20 |
| Ethylbenzene | | | 25.0 | 24.5 | | ug/L | | 98 | 84 - 120 | 5 | 20 |
| Toluene | | | 25.0 | 24.6 | | ug/L | | 98 | 78 - 118 | 6 | 20 |
| m-Xylene & p-Xylene | | | 50.0 | 50.1 | | ug/L | | 100 | 70 - 142 | 5 | 20 |
| o-Xylene | | | 25.0 | 24.8 | | ug/L | | 99 | 85 - 127 | 4 | 20 |
| TBA | | | 500 | 453 | | ug/L | | 91 | 82 - 116 | 0 | 20 |
| DIPE | | | 25.0 | 23.8 | | ug/L | | 95 | 69 - 134 | 0 | 20 |
| TAME | | | 25.0 | 25.1 | | ug/L | | 100 | 79 - 129 | 1 | 20 |
| Ethyl t-butyl ether | | | 25.0 | 22.7 | | ug/L | | 91 | 70 - 130 | 0 | 20 |

| Surrogate | LCSD %Recovery | LCSD Qualifier | Limits |
|---|---|---|---|
| *4-Bromofluorobenzene* | *102* | | *67 - 130* |
| *1,2-Dichloroethane-d4 (Surr)* | *94* | | *75 - 138* |
| *Toluene-d8 (Surr)* | *101* | | *70 - 130* |

**Lab Sample ID: LCSD 720-105910/8**
**Matrix: Water**
**Analysis Batch: 105910**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) -C5-C12 | | | 500 | 486 | | ug/L | | 97 | 62 - 117 | 7 | 20 |

| Surrogate | LCSD %Recovery | LCSD Qualifier | Limits |
|---|---|---|---|
| *4-Bromofluorobenzene* | *103* | | *67 - 130* |
| *1,2-Dichloroethane-d4 (Surr)* | *95* | | *75 - 138* |
| *Toluene-d8 (Surr)* | *101* | | *70 - 130* |

**Lab Sample ID: MB 720-106041/1-A**
**Matrix: Solid**
**Analysis Batch: 106023**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 106041**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | ND | | 5.0 | | ug/Kg | | 01/13/12 19:00 | 01/13/12 20:32 | 1 |
| Benzene | ND | | 5.0 | | ug/Kg | | 01/13/12 19:00 | 01/13/12 20:32 | 1 |
| Ethylbenzene | ND | | 5.0 | | ug/Kg | | 01/13/12 19:00 | 01/13/12 20:32 | 1 |
| Toluene | ND | | 5.0 | | ug/Kg | | 01/13/12 19:00 | 01/13/12 20:32 | 1 |
| Xylenes, Total | ND | | 10 | | ug/Kg | | 01/13/12 19:00 | 01/13/12 20:32 | 1 |
| Gasoline Range Organics (GRO) -C5-C12 | ND | | 250 | | ug/Kg | | 01/13/12 19:00 | 01/13/12 20:32 | 1 |
| TBA | ND | | 10 | | ug/Kg | | 01/13/12 19:00 | 01/13/12 20:32 | 1 |

## Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: MB 720-106041/1-A** — **Client Sample ID: Method Blank**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 106023** — **Prep Batch: 106041**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| DIPE | ND | | 5.0 | | ug/Kg | | 01/13/12 19:00 | 01/13/12 20:32 | 1 |
| TAME | ND | | 5.0 | | ug/Kg | | 01/13/12 19:00 | 01/13/12 20:32 | 1 |
| Ethyl t-butyl ether | ND | | 5.0 | | ug/Kg | | 01/13/12 19:00 | 01/13/12 20:32 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene* | *101* | | *45 - 131* | *01/13/12 19:00* | *01/13/12 20:32* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *99* | | *60 - 140* | *01/13/12 19:00* | *01/13/12 20:32* | *1* |
| *Toluene-d8 (Surr)* | *100* | | *58 - 140* | *01/13/12 19:00* | *01/13/12 20:32* | *1* |

**Lab Sample ID: LCS 720-106041/2-A** — **Client Sample ID: Lab Control Sample**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 106023** — **Prep Batch: 106041**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | 50.0 | 57.6 | | ug/Kg | | 115 | 70 - 144 |
| Benzene | 50.0 | 48.4 | | ug/Kg | | 97 | 70 - 130 |
| Ethylbenzene | 50.0 | 48.8 | | ug/Kg | | 98 | 80 - 137 |
| Toluene | 50.0 | 47.4 | | ug/Kg | | 95 | 80 - 128 |
| m-Xylene & p-Xylene | 100 | 101 | | ug/Kg | | 101 | 70 - 146 |
| o-Xylene | 50.0 | 50.6 | | ug/Kg | | 101 | 70 - 140 |
| TBA | 1000 | 912 | | ug/Kg | | 91 | 63 - 130 |
| DIPE | 50.0 | 53.2 | | ug/Kg | | 106 | 70 - 131 |
| TAME | 50.0 | 60.4 | | ug/Kg | | 121 | 70 - 140 |
| Ethyl t-butyl ether | 50.0 | 52.8 | | ug/Kg | | 106 | 70 - 130 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene* | *105* | | *45 - 131* |
| *1,2-Dichloroethane-d4 (Surr)* | *97* | | *60 - 140* |
| *Toluene-d8 (Surr)* | *102* | | *58 - 140* |

**Lab Sample ID: LCS 720-106041/4-A** — **Client Sample ID: Lab Control Sample**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 106023** — **Prep Batch: 106041**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) -C5-C12 | 1000 | 974 | | ug/Kg | | 97 | 61 - 128 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene* | *105* | | *45 - 131* |
| *1,2-Dichloroethane-d4 (Surr)* | *102* | | *60 - 140* |
| *Toluene-d8 (Surr)* | *101* | | *58 - 140* |

**Lab Sample ID: LCSD 720-106041/3-A** — **Client Sample ID: Lab Control Sample Dup**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 106023** — **Prep Batch: 106041**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | 50.0 | 54.8 | | ug/Kg | | 110 | 70 - 144 | 5 | 20 |

## Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: LCSD 720-106041/3-A**
**Matrix: Solid**
**Analysis Batch: 106023**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 106041**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 50.0 | 47.2 | | ug/Kg | | 94 | 70 - 130 | 3 | 20 |
| Ethylbenzene | | | 50.0 | 47.4 | | ug/Kg | | 95 | 80 - 137 | 3 | 20 |
| Toluene | | | 50.0 | 46.4 | | ug/Kg | | 93 | 80 - 128 | 2 | 20 |
| m-Xylene & p-Xylene | | | 100 | 98.8 | | ug/Kg | | 99 | 70 - 146 | 3 | 20 |
| o-Xylene | | | 50.0 | 49.4 | | ug/Kg | | 99 | 70 - 140 | 2 | 20 |
| TBA | | | 1000 | 976 | | ug/Kg | | 98 | 63 - 130 | 7 | 20 |
| DIPE | | | 50.0 | 51.6 | | ug/Kg | | 103 | 70 - 131 | 3 | 20 |
| TAME | | | 50.0 | 57.6 | | ug/Kg | | 115 | 70 - 140 | 5 | 20 |
| Ethyl t-butyl ether | | | 50.0 | 50.6 | | ug/Kg | | 101 | 70 - 130 | 4 | 20 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene* | *102* | | *45 - 131* |
| *1,2-Dichloroethane-d4 (Surr)* | *95* | | *60 - 140* |
| *Toluene-d8 (Surr)* | *103* | | *58 - 140* |

**Lab Sample ID: LCSD 720-106041/5-A**
**Matrix: Solid**
**Analysis Batch: 106023**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 106041**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) -C5-C12 | | | 1000 | 970 | | ug/Kg | | 97 | 61 - 128 | 0 | 20 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene* | *104* | | *45 - 131* |
| *1,2-Dichloroethane-d4 (Surr)* | *100* | | *60 - 140* |
| *Toluene-d8 (Surr)* | *101* | | *58 - 140* |

**Lab Sample ID: 720-39692-7 MS**
**Matrix: Solid**
**Analysis Batch: 106023**

**Client Sample ID: GP-4-13'**
**Prep Type: Total/NA**
**Prep Batch: 106041**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | ND | | 48.9 | 54.0 | | ug/Kg | | 110 | 69 - 130 |
| Benzene | ND | | 48.9 | 47.7 | | ug/Kg | | 98 | 70 - 130 |
| Ethylbenzene | ND | | 48.9 | 47.6 | | ug/Kg | | 97 | 65 - 130 |
| Toluene | ND | | 48.9 | 48.5 | | ug/Kg | | 98 | 70 - 130 |
| m-Xylene & p-Xylene | ND | | 97.8 | 98.4 | | ug/Kg | | 101 | 70 - 130 |
| o-Xylene | ND | | 48.9 | 50.1 | | ug/Kg | | 102 | 68 - 130 |
| TBA | ND | | 978 | 939 | | ug/Kg | | 96 | 70 - 130 |
| DIPE | ND | | 48.9 | 54.6 | | ug/Kg | | 112 | 70 - 130 |
| TAME | ND | | 48.9 | 59.1 | | ug/Kg | | 121 | 70 - 130 |
| Ethyl t-butyl ether | ND | | 48.9 | 51.7 | | ug/Kg | | 106 | 70 - 130 |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene* | *101* | | *45 - 131* |
| *1,2-Dichloroethane-d4 (Surr)* | *93* | | *60 - 140* |
| *Toluene-d8 (Surr)* | *103* | | *58 - 140* |

## Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: 720-39692-7 MSD**
**Matrix: Solid**
**Analysis Batch: 106023**

**Client Sample ID: GP-4-13'**
**Prep Type: Total/NA**
**Prep Batch: 106041**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | ND | | 47.9 | 50.6 | | ug/Kg | | 106 | 69 - 130 | 7 | 20 |
| Benzene | ND | | 47.9 | 45.6 | | ug/Kg | | 95 | 70 - 130 | 5 | 20 |
| Ethylbenzene | ND | | 47.9 | 46.0 | | ug/Kg | | 96 | 65 - 130 | 3 | 20 |
| Toluene | ND | | 47.9 | 46.6 | | ug/Kg | | 96 | 70 - 130 | 4 | 20 |
| m-Xylene & p-Xylene | ND | | 95.8 | 95.2 | | ug/Kg | | 99 | 70 - 130 | 3 | 20 |
| o-Xylene | ND | | 47.9 | 48.1 | | ug/Kg | | 100 | 68 - 130 | 4 | 20 |
| TBA | ND | | 958 | 905 | | ug/Kg | | 94 | 70 - 130 | 4 | 20 |
| DIPE | ND | | 47.9 | 51.7 | | ug/Kg | | 108 | 70 - 130 | 5 | 20 |
| TAME | ND | | 47.9 | 55.7 | | ug/Kg | | 116 | 70 - 130 | 6 | 20 |
| Ethyl t-butyl ether | ND | | 47.9 | 49.2 | | ug/Kg | | 103 | 70 - 130 | 5 | 20 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene* | *102* | | *45 - 131* |
| *1,2-Dichloroethane-d4 (Surr)* | *95* | | *60 - 140* |
| *Toluene-d8 (Surr)* | *103* | | *58 - 140* |

## Method: 8015B - Diesel Range Organics (DRO) (GC)

**Lab Sample ID: MB 720-105838/1-A**
**Matrix: Water**
**Analysis Batch: 105875**

**Client Sample ID: Method Blank**
**Prep Type: Silica Gel Cleanup**
**Prep Batch: 105838**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics [C10-C28] | ND | | 50 | | ug/L | | 01/11/12 15:12 | 01/12/12 19:19 | 1 |
| Motor Oil Range Organics [C24-C36] | ND | | 99 | | ug/L | | 01/11/12 15:12 | 01/12/12 19:19 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Capric Acid (Surr)* | *0.0007* | | *0 - 5* | *01/11/12 15:12* | *01/12/12 19:19* | *1* |
| *p-Terphenyl* | *116* | | *31 - 150* | *01/11/12 15:12* | *01/12/12 19:19* | *1* |

**Lab Sample ID: LCS 720-105838/2-A**
**Matrix: Water**
**Analysis Batch: 105875**

**Client Sample ID: Lab Control Sample**
**Prep Type: Silica Gel Cleanup**
**Prep Batch: 105838**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics [C10-C28] | | | 2500 | 1910 | | ug/L | | 77 | 32 - 119 | | |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *p-Terphenyl* | *98* | | *31 - 150* |

**Lab Sample ID: LCSD 720-105838/3-A**
**Matrix: Water**
**Analysis Batch: 105875**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Silica Gel Cleanup**
**Prep Batch: 105838**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics [C10-C28] | | | 2500 | 1780 | | ug/L | | 71 | 32 - 119 | 7 | 35 |

## Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

**Lab Sample ID: LCSD 720-105838/3-A**
**Matrix: Water**
**Analysis Batch: 105875**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Silica Gel Cleanup**
**Prep Batch: 105838**

| Surrogate | LCSD %Recovery | LCSD Qualifier | Limits |
|---|---|---|---|
| p-Terphenyl | 97 | | 31 - 150 |

**Lab Sample ID: MB 720-105890/1-A**
**Matrix: Solid**
**Analysis Batch: 105968**

**Client Sample ID: Method Blank**
**Prep Type: Silica Gel Cleanup**
**Prep Batch: 105890**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics [C10-C28] | ND | | 1.0 | | mg/Kg | | 01/12/12 09:14 | 01/13/12 22:54 | 1 |
| Motor Oil Range Organics [C24-C36] | ND | | 50 | | mg/Kg | | 01/12/12 09:14 | 01/13/12 22:54 | 1 |

| Surrogate | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| Capric Acid (Surr) | 0.01 | | 0 - 1 | 01/12/12 09:14 | 01/13/12 22:54 | 1 |
| p-Terphenyl | 94 | | 38 - 148 | 01/12/12 09:14 | 01/13/12 22:54 | 1 |

**Lab Sample ID: LCS 720-105890/2-A**
**Matrix: Solid**
**Analysis Batch: 105968**

**Client Sample ID: Lab Control Sample**
**Prep Type: Silica Gel Cleanup**
**Prep Batch: 105890**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Diesel Range Organics [C10-C28] | 82.8 | 52.9 | | mg/Kg | | 64 | 36 - 112 |

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|---|---|---|---|
| p-Terphenyl | 96 | | 38 - 148 |

**Lab Sample ID: LCSD 720-105890/3-A**
**Matrix: Solid**
**Analysis Batch: 105968**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Silica Gel Cleanup**
**Prep Batch: 105890**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics [C10-C28] | 83.0 | 63.1 | | mg/Kg | | 76 | 36 - 112 | 18 | 35 |

| Surrogate | LCSD %Recovery | LCSD Qualifier | Limits |
|---|---|---|---|
| p-Terphenyl | 107 | | 38 - 148 |

**Lab Sample ID: 720-39692-1 MS**
**Matrix: Solid**
**Analysis Batch: 105968**

**Client Sample ID: GP-1-12'**
**Prep Type: Silica Gel Cleanup**
**Prep Batch: 105890**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics [C10-C28] | 8.0 | | 82.8 | 56.0 | | mg/Kg | | 58 | 50 - 150 |

| Surrogate | MS %Recovery | MS Qualifier | Limits |
|---|---|---|---|
| p-Terphenyl | 87 | | 38 - 148 |

## Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

**Lab Sample ID: 720-39692-1 MSD** — **Client Sample ID: GP-1-12'**
**Matrix: Solid** — **Prep Type: Silica Gel Cleanup**
**Analysis Batch: 105968** — **Prep Batch: 105890**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics [C10-C28] | 8.0 | | 83.2 | 62.9 | | mg/Kg | | 66 | 50 - 150 | 12 | 20 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *p-Terphenyl* | *96* | | *38 - 148* |

**Lab Sample ID: MB 720-106222/1-A** — **Client Sample ID: Method Blank**
**Matrix: Solid** — **Prep Type: Silica Gel Cleanup**
**Analysis Batch: 106248** — **Prep Batch: 106222**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics [C10-C28] | ND | | 1.0 | | mg/Kg | | 01/17/12 19:50 | 01/18/12 10:03 | 1 |
| Motor Oil Range Organics [C24-C36] | ND | | 50 | | mg/Kg | | 01/17/12 19:50 | 01/18/12 10:03 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Capric Acid (Surr)* | *0.008* | | *0 - 1* | *01/17/12 19:50* | *01/18/12 10:03* | *1* |
| *p-Terphenyl* | *95* | | *38 - 148* | *01/17/12 19:50* | *01/18/12 10:03* | *1* |

**Lab Sample ID: LCS 720-106222/2-A** — **Client Sample ID: Lab Control Sample**
**Matrix: Solid** — **Prep Type: Silica Gel Cleanup**
**Analysis Batch: 106248** — **Prep Batch: 106222**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Diesel Range Organics [C10-C28] | 82.9 | 71.2 | | mg/Kg | | 86 | 36 - 112 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *p-Terphenyl* | *100* | | *38 - 148* |

**Lab Sample ID: LCSD 720-106222/3-A** — **Client Sample ID: Lab Control Sample Dup**
**Matrix: Solid** — **Prep Type: Silica Gel Cleanup**
**Analysis Batch: 106248** — **Prep Batch: 106222**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics [C10-C28] | 83.4 | 76.5 | | mg/Kg | | 92 | 36 - 112 | 7 | 35 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *p-Terphenyl* | *104* | | *38 - 148* |

## Method: 6010B - Metals (ICP)

**Lab Sample ID: MB 720-105862/1-A** — **Client Sample ID: Method Blank**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 105971** — **Prep Batch: 105862**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND | | 0.50 | | mg/Kg | | 01/11/12 18:49 | 01/13/12 02:06 | 1 |
| Arsenic | ND | | 1.0 | | mg/Kg | | 01/11/12 18:49 | 01/13/12 02:06 | 1 |

## Method: 6010B - Metals (ICP) (Continued)

**Lab Sample ID: MB 720-105862/1-A**
**Matrix: Solid**
**Analysis Batch: 105971**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 105862**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Barium | ND | | 0.50 | | mg/Kg | | 01/11/12 18:49 | 01/13/12 02:06 | 1 |
| Beryllium | ND | | 0.10 | | mg/Kg | | 01/11/12 18:49 | 01/13/12 02:06 | 1 |
| Cadmium | ND | | 0.13 | | mg/Kg | | 01/11/12 18:49 | 01/13/12 02:06 | 1 |
| Chromium | ND | | 0.50 | | mg/Kg | | 01/11/12 18:49 | 01/13/12 02:06 | 1 |
| Cobalt | ND | | 0.20 | | mg/Kg | | 01/11/12 18:49 | 01/13/12 02:06 | 1 |
| Copper | ND | | 1.5 | | mg/Kg | | 01/11/12 18:49 | 01/13/12 02:06 | 1 |
| Lead | ND | | 0.50 | | mg/Kg | | 01/11/12 18:49 | 01/13/12 02:06 | 1 |
| Molybdenum | ND | | 0.50 | | mg/Kg | | 01/11/12 18:49 | 01/13/12 02:06 | 1 |
| Nickel | ND | | 0.50 | | mg/Kg | | 01/11/12 18:49 | 01/13/12 02:06 | 1 |
| Selenium | ND | | 1.0 | | mg/Kg | | 01/11/12 18:49 | 01/13/12 02:06 | 1 |
| Silver | ND | | 0.25 | | mg/Kg | | 01/11/12 18:49 | 01/13/12 02:06 | 1 |
| Thallium | ND | | 0.50 | | mg/Kg | | 01/11/12 18:49 | 01/13/12 02:06 | 1 |
| Vanadium | ND | | 0.50 | | mg/Kg | | 01/11/12 18:49 | 01/13/12 02:06 | 1 |
| Zinc | ND | | 1.5 | | mg/Kg | | 01/11/12 18:49 | 01/13/12 02:06 | 1 |

**Lab Sample ID: LCS 720-105862/2-A**
**Matrix: Solid**
**Analysis Batch: 105971**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 105862**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Antimony | 50.0 | 46.5 | | mg/Kg | | 93 | 80 - 120 |
| Arsenic | 50.0 | 48.1 | | mg/Kg | | 96 | 80 - 120 |
| Barium | 50.0 | 51.1 | | mg/Kg | | 102 | 80 - 120 |
| Beryllium | 50.0 | 48.4 | | mg/Kg | | 97 | 80 - 120 |
| Cadmium | 50.0 | 48.1 | | mg/Kg | | 96 | 80 - 120 |
| Chromium | 50.0 | 48.8 | | mg/Kg | | 98 | 80 - 120 |
| Cobalt | 50.0 | 49.4 | | mg/Kg | | 99 | 80 - 120 |
| Copper | 50.0 | 48.7 | | mg/Kg | | 97 | 80 - 120 |
| Lead | 50.0 | 48.9 | | mg/Kg | | 98 | 80 - 120 |
| Molybdenum | 50.0 | 48.9 | | mg/Kg | | 98 | 80 - 120 |
| Nickel | 50.0 | 49.0 | | mg/Kg | | 98 | 80 - 120 |
| Selenium | 50.0 | 47.8 | | mg/Kg | | 96 | 80 - 120 |
| Silver | 25.0 | 24.0 | | mg/Kg | | 96 | 80 - 120 |
| Thallium | 50.0 | 49.3 | | mg/Kg | | 99 | 80 - 120 |
| Vanadium | 50.0 | 48.8 | | mg/Kg | | 98 | 80 - 120 |
| Zinc | 50.0 | 48.4 | | mg/Kg | | 97 | 80 - 120 |

**Lab Sample ID: LCSD 720-105862/3-A**
**Matrix: Solid**
**Analysis Batch: 105971**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 105862**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | 50.0 | 47.0 | | mg/Kg | | 94 | 80 - 120 | 1 | 20 |
| Arsenic | 50.0 | 48.1 | | mg/Kg | | 96 | 80 - 120 | 0 | 20 |
| Barium | 50.0 | 51.5 | | mg/Kg | | 103 | 80 - 120 | 1 | 20 |
| Beryllium | 50.0 | 49.1 | | mg/Kg | | 98 | 80 - 120 | 1 | 20 |
| Cadmium | 50.0 | 48.8 | | mg/Kg | | 98 | 80 - 120 | 1 | 20 |
| Chromium | 50.0 | 49.4 | | mg/Kg | | 99 | 80 - 120 | 1 | 20 |
| Cobalt | 50.0 | 49.5 | | mg/Kg | | 99 | 80 - 120 | 0 | 20 |
| Copper | 50.0 | 49.5 | | mg/Kg | | 99 | 80 - 120 | 2 | 20 |

## Method: 6010B - Metals (ICP) (Continued)

**Lab Sample ID: LCSD 720-105862/3-A**
**Matrix: Solid**
**Analysis Batch: 105971**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 105862**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Lead | 50.0 | 49.6 | | mg/Kg | | 99 | 80 - 120 | 1 | 20 |
| Molybdenum | 50.0 | 49.5 | | mg/Kg | | 99 | 80 - 120 | 1 | 20 |
| Nickel | 50.0 | 49.5 | | mg/Kg | | 99 | 80 - 120 | 1 | 20 |
| Selenium | 50.0 | 48.2 | | mg/Kg | | 96 | 80 - 120 | 1 | 20 |
| Silver | 25.0 | 24.1 | | mg/Kg | | 96 | 80 - 120 | 0 | 20 |
| Thallium | 50.0 | 49.8 | | mg/Kg | | 100 | 80 - 120 | 1 | 20 |
| Vanadium | 50.0 | 49.8 | | mg/Kg | | 100 | 80 - 120 | 2 | 20 |
| Zinc | 50.0 | 48.5 | | mg/Kg | | 97 | 80 - 120 | 0 | 20 |

**Lab Sample ID: LCSSRM 720-105862/20-A**
**Matrix: Solid**
**Analysis Batch: 105971**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 105862**

| Analyte | Spike Added | LCSSRM Result | LCSSRM Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Antimony | 105 | 60.7 | | mg/Kg | | 58 | 11 - 101 |
| Arsenic | 79.4 | 72.1 | | mg/Kg | | 91 | 69 - 119 |
| Barium | 391 | 341 | | mg/Kg | | 87 | 61 - 117 |
| Beryllium | 304 | 266 | | mg/Kg | | 88 | 56 - 102 |
| Cadmium | 48.3 | 41.0 | | mg/Kg | | 85 | 67 - 118 |
| Chromium | 171 | 151 | | mg/Kg | | 88 | 67 - 121 |
| Cobalt | 59.2 | 52.4 | | mg/Kg | | 89 | 64 - 133 |
| Copper | 327 | 293 | | mg/Kg | | 89 | 68 - 126 |
| Lead | 181 | 152 | | mg/Kg | | 84 | 62 - 113 |
| Molybdenum | 156 | 137 | | mg/Kg | | 88 | 62 - 128 |
| Nickel | 76.0 | 65.5 | | mg/Kg | | 86 | 65 - 117 |
| Selenium | 76.9 | 67.9 | | mg/Kg | | 88 | 63 - 126 |
| Silver | 29.1 | 25.9 | | mg/Kg | | 89 | 51 - 130 |
| Thallium | 192 | 164 | | mg/Kg | | 85 | 64 - 124 |
| Vanadium | 213 | 195 | | mg/Kg | | 91 | 67 - 123 |
| Zinc | 256 | 225 | | mg/Kg | | 88 | 62 - 110 |

## Method: 7471A - Mercury (CVAA)

**Lab Sample ID: MB 720-105907/1-A**
**Matrix: Solid**
**Analysis Batch: 105950**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 105907**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | ND | | 0.010 | | mg/Kg | | 01/12/12 12:49 | 01/12/12 17:47 | 1 |

**Lab Sample ID: LCS 720-105907/2-A**
**Matrix: Solid**
**Analysis Batch: 105950**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 105907**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Mercury | 0.833 | 0.790 | | mg/Kg | | 95 | 80 - 120 |

Client: Geologica Inc
Project/Site: 7701 Bancroft, Oakland

TestAmerica Job ID: 720-39692-1

## Method: 7471A - Mercury (CVAA) (Continued)

**Lab Sample ID: LCSD 720-105907/3-A**
**Matrix: Solid**
**Analysis Batch: 105950**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 105907**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | 0.833 | 0.802 | | mg/Kg | | 96 | 80 - 120 | 1 | 20 |

## GC/MS VOA

### Analysis Batch: 105830

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 720-39692-1 | GP-1-12' | Total/NA | Solid | 8260B/CA_LUFT MS | 105833 |
| 720-39692-1 MS | GP-1-12' | Total/NA | Solid | 8260B/CA_LUFT MS | 105833 |
| 720-39692-1 MSD | GP-1-12' | Total/NA | Solid | 8260B/CA_LUFT MS | 105833 |
| 720-39692-3 | GP-2-13' | Total/NA | Solid | 8260B/CA_LUFT MS | 105833 |
| 720-39692-4 | GP-3-8' | Total/NA | Solid | 8260B/CA_LUFT MS | 105833 |
| 720-39692-5 | GP-4-4' | Total/NA | Solid | 8260B/CA_LUFT MS | 105833 |
| 720-39692-10 | GP-5-14' | Total/NA | Solid | 8260B/CA_LUFT MS | 105833 |
| 720-39692-11 | GP-6-4' | Total/NA | Solid | 8260B/CA_LUFT MS | 105833 |
| 720-39692-14 | GP-7-4' | Total/NA | Solid | 8260B/CA_LUFT MS | 105833 |
| LCS 720-105833/2-A | Lab Control Sample | Total/NA | Solid | 8260B/CA_LUFT MS | 105833 |
| LCS 720-105833/4-A | Lab Control Sample | Total/NA | Solid | 8260B/CA_LUFT MS | 105833 |
| LCSD 720-105833/3-A | Lab Control Sample Dup | Total/NA | Solid | 8260B/CA_LUFT MS | 105833 |
| LCSD 720-105833/5-A | Lab Control Sample Dup | Total/NA | Solid | 8260B/CA_LUFT MS | 105833 |
| MB 720-105833/1-A | Method Blank | Total/NA | Solid | 8260B/CA_LUFT MS | 105833 |

### Prep Batch: 105833

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 720-39692-1 | GP-1-12' | Total/NA | Solid | 5030B | |
| 720-39692-1 MS | GP-1-12' | Total/NA | Solid | 5030B | |
| 720-39692-1 MSD | GP-1-12' | Total/NA | Solid | 5030B | |
| 720-39692-3 | GP-2-13' | Total/NA | Solid | 5030B | |
| 720-39692-4 | GP-3-8' | Total/NA | Solid | 5030B | |
| 720-39692-5 | GP-4-4' | Total/NA | Solid | 5030B | |
| 720-39692-10 | GP-5-14' | Total/NA | Solid | 5030B | |
| 720-39692-11 | GP-6-4' | Total/NA | Solid | 5030B | |
| 720-39692-14 | GP-7-4' | Total/NA | Solid | 5030B | |
| LCS 720-105833/2-A | Lab Control Sample | Total/NA | Solid | 5030B | |
| LCS 720-105833/4-A | Lab Control Sample | Total/NA | Solid | 5030B | |
| LCSD 720-105833/3-A | Lab Control Sample Dup | Total/NA | Solid | 5030B | |
| LCSD 720-105833/5-A | Lab Control Sample Dup | Total/NA | Solid | 5030B | |
| MB 720-105833/1-A | Method Blank | Total/NA | Solid | 5030B | |

### Prep Batch: 105841

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 720-39692-10 | GP-5-14' | Total/NA | Solid | 5030B | |
| LCS 720-105841/6-A | Lab Control Sample | Total/NA | Solid | 5030B | |
| LCSD 720-105841/7-A | Lab Control Sample Dup | Total/NA | Solid | 5030B | |
| MB 720-105841/1-A | Method Blank | Total/NA | Solid | 5030B | |

## GC/MS VOA (Continued)

### Analysis Batch: 105849

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 720-39692-18 | GP-1 | Total/NA | Water | 8260B/CA_LUFT MS | |
| 720-39692-18 MS | GP-1 | Total/NA | Water | 8260B/CA_LUFT MS | |
| 720-39692-18 MSD | GP-1 | Total/NA | Water | 8260B/CA_LUFT MS | |
| 720-39692-19 | GP-2 | Total/NA | Water | 8260B/CA_LUFT MS | |
| 720-39692-20 | GP-6 | Total/NA | Water | 8260B/CA_LUFT MS | |
| LCS 720-105849/5 | Lab Control Sample | Total/NA | Water | 8260B/CA_LUFT MS | |
| LCS 720-105849/7 | Lab Control Sample | Total/NA | Water | 8260B/CA_LUFT MS | |
| LCSD 720-105849/6 | Lab Control Sample Dup | Total/NA | Water | 8260B/CA_LUFT MS | |
| LCSD 720-105849/8 | Lab Control Sample Dup | Total/NA | Water | 8260B/CA_LUFT MS | |
| MB 720-105849/4 | Method Blank | Total/NA | Water | 8260B/CA_LUFT MS | |

### Analysis Batch: 105878

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 720-39692-10 | GP-5-14' | Total/NA | Solid | 8260B/CA_LUFT MS | 105841 |
| LCS 720-105841/6-A | Lab Control Sample | Total/NA | Solid | 8260B/CA_LUFT MS | 105841 |
| LCSD 720-105841/7-A | Lab Control Sample Dup | Total/NA | Solid | 8260B/CA_LUFT MS | 105841 |
| MB 720-105841/1-A | Method Blank | Total/NA | Solid | 8260B/CA_LUFT MS | 105841 |

### Analysis Batch: 105910

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 720-39692-21 | TRIP BLANK | Total/NA | Water | 8260B/CA_LUFT MS | |
| LCS 720-105910/5 | Lab Control Sample | Total/NA | Water | 8260B/CA_LUFT MS | |
| LCS 720-105910/7 | Lab Control Sample | Total/NA | Water | 8260B/CA_LUFT MS | |
| LCSD 720-105910/6 | Lab Control Sample Dup | Total/NA | Water | 8260B/CA_LUFT MS | |
| LCSD 720-105910/8 | Lab Control Sample Dup | Total/NA | Water | 8260B/CA_LUFT MS | |
| MB 720-105910/4 | Method Blank | Total/NA | Water | 8260B/CA_LUFT MS | |

### Analysis Batch: 106023

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 720-39692-7 | GP-4-13' | Total/NA | Solid | 8260B/CA_LUFT MS | 106041 |
| 720-39692-7 MS | GP-4-13' | Total/NA | Solid | 8260B/CA_LUFT MS | 106041 |
| 720-39692-7 MSD | GP-4-13' | Total/NA | Solid | 8260B/CA_LUFT MS | 106041 |
| 720-39692-13 | GP-6-12' | Total/NA | Solid | 8260B/CA_LUFT MS | 106041 |

## GC/MS VOA (Continued)

### Analysis Batch: 106023 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 720-39692-16 | GP-7-12' | Total/NA | Solid | 8260B/CA_LUFT MS | 106041 |
| LCS 720-106041/2-A | Lab Control Sample | Total/NA | Solid | 8260B/CA_LUFT MS | 106041 |
| LCS 720-106041/4-A | Lab Control Sample | Total/NA | Solid | 8260B/CA_LUFT MS | 106041 |
| LCSD 720-106041/3-A | Lab Control Sample Dup | Total/NA | Solid | 8260B/CA_LUFT MS | 106041 |
| LCSD 720-106041/5-A | Lab Control Sample Dup | Total/NA | Solid | 8260B/CA_LUFT MS | 106041 |
| MB 720-106041/1-A | Method Blank | Total/NA | Solid | 8260B/CA_LUFT MS | 106041 |

### Prep Batch: 106041

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 720-39692-7 | GP-4-13' | Total/NA | Solid | 5030B | |
| 720-39692-7 MS | GP-4-13' | Total/NA | Solid | 5030B | |
| 720-39692-7 MSD | GP-4-13' | Total/NA | Solid | 5030B | |
| 720-39692-13 | GP-6-12' | Total/NA | Solid | 5030B | |
| 720-39692-16 | GP-7-12' | Total/NA | Solid | 5030B | |
| LCS 720-106041/2-A | Lab Control Sample | Total/NA | Solid | 5030B | |
| LCS 720-106041/4-A | Lab Control Sample | Total/NA | Solid | 5030B | |
| LCSD 720-106041/3-A | Lab Control Sample Dup | Total/NA | Solid | 5030B | |
| LCSD 720-106041/5-A | Lab Control Sample Dup | Total/NA | Solid | 5030B | |
| MB 720-106041/1-A | Method Blank | Total/NA | Solid | 5030B | |

## GC Semi VOA

### Prep Batch: 105838

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 720-39692-18 | GP-1 | Silica Gel Cleanup | Water | 3510C SGC | |
| 720-39692-19 | GP-2 | Silica Gel Cleanup | Water | 3510C SGC | |
| 720-39692-20 | GP-6 | Silica Gel Cleanup | Water | 3510C SGC | |
| LCS 720-105838/2-A | Lab Control Sample | Silica Gel Cleanup | Water | 3510C SGC | |
| LCSD 720-105838/3-A | Lab Control Sample Dup | Silica Gel Cleanup | Water | 3510C SGC | |
| MB 720-105838/1-A | Method Blank | Silica Gel Cleanup | Water | 3510C SGC | |

### Analysis Batch: 105875

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 720-39692-18 | GP-1 | Silica Gel Cleanup | Water | 8015B | 105838 |
| 720-39692-19 | GP-2 | Silica Gel Cleanup | Water | 8015B | 105838 |
| 720-39692-20 | GP-6 | Silica Gel Cleanup | Water | 8015B | 105838 |
| LCS 720-105838/2-A | Lab Control Sample | Silica Gel Cleanup | Water | 8015B | 105838 |
| LCSD 720-105838/3-A | Lab Control Sample Dup | Silica Gel Cleanup | Water | 8015B | 105838 |
| MB 720-105838/1-A | Method Blank | Silica Gel Cleanup | Water | 8015B | 105838 |

### Prep Batch: 105890

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 720-39692-1 | GP-1-12' | Silica Gel Cleanup | Solid | 3546 | |
| 720-39692-1 MS | GP-1-12' | Silica Gel Cleanup | Solid | 3546 | |
| 720-39692-1 MSD | GP-1-12' | Silica Gel Cleanup | Solid | 3546 | |
| 720-39692-3 | GP-2-13' | Silica Gel Cleanup | Solid | 3546 | |
| 720-39692-4 | GP-3-8' | Silica Gel Cleanup | Solid | 3546 | |

## GC Semi VOA (Continued)

### Prep Batch: 105890 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 720-39692-5 | GP-4-4' | Silica Gel Cleanup | Solid | 3546 | |
| 720-39692-10 | GP-5-14' | Silica Gel Cleanup | Solid | 3546 | |
| 720-39692-11 | GP-6-4' | Silica Gel Cleanup | Solid | 3546 | |
| 720-39692-14 | GP-7-4' | Silica Gel Cleanup | Solid | 3546 | |
| LCS 720-105890/2-A | Lab Control Sample | Silica Gel Cleanup | Solid | 3546 | |
| LCSD 720-105890/3-A | Lab Control Sample Dup | Silica Gel Cleanup | Solid | 3546 | |
| MB 720-105890/1-A | Method Blank | Silica Gel Cleanup | Solid | 3546 | |

### Analysis Batch: 105968

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 720-39692-1 | GP-1-12' | Silica Gel Cleanup | Solid | 8015B | 105890 |
| 720-39692-1 MS | GP-1-12' | Silica Gel Cleanup | Solid | 8015B | 105890 |
| 720-39692-1 MSD | GP-1-12' | Silica Gel Cleanup | Solid | 8015B | 105890 |
| 720-39692-4 | GP-3-8' | Silica Gel Cleanup | Solid | 8015B | 105890 |
| 720-39692-5 | GP-4-4' | Silica Gel Cleanup | Solid | 8015B | 105890 |
| 720-39692-14 | GP-7-4' | Silica Gel Cleanup | Solid | 8015B | 105890 |
| LCS 720-105890/2-A | Lab Control Sample | Silica Gel Cleanup | Solid | 8015B | 105890 |
| LCSD 720-105890/3-A | Lab Control Sample Dup | Silica Gel Cleanup | Solid | 8015B | 105890 |
| MB 720-105890/1-A | Method Blank | Silica Gel Cleanup | Solid | 8015B | 105890 |

### Analysis Batch: 106132

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 720-39692-3 | GP-2-13' | Silica Gel Cleanup | Solid | 8015B | 105890 |
| 720-39692-10 | GP-5-14' | Silica Gel Cleanup | Solid | 8015B | 105890 |
| 720-39692-11 | GP-6-4' | Silica Gel Cleanup | Solid | 8015B | 105890 |

### Prep Batch: 106222

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 720-39692-7 | GP-4-13' | Silica Gel Cleanup | Solid | 3546 | |
| 720-39692-13 | GP-6-12' | Silica Gel Cleanup | Solid | 3546 | |
| 720-39692-16 | GP-7-12' | Silica Gel Cleanup | Solid | 3546 | |
| LCS 720-106222/2-A | Lab Control Sample | Silica Gel Cleanup | Solid | 3546 | |
| LCSD 720-106222/3-A | Lab Control Sample Dup | Silica Gel Cleanup | Solid | 3546 | |
| MB 720-106222/1-A | Method Blank | Silica Gel Cleanup | Solid | 3546 | |

### Analysis Batch: 106248

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| LCS 720-106222/2-A | Lab Control Sample | Silica Gel Cleanup | Solid | 8015B | 106222 |
| LCSD 720-106222/3-A | Lab Control Sample Dup | Silica Gel Cleanup | Solid | 8015B | 106222 |
| MB 720-106222/1-A | Method Blank | Silica Gel Cleanup | Solid | 8015B | 106222 |

### Analysis Batch: 106249

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 720-39692-7 | GP-4-13' | Silica Gel Cleanup | Solid | 8015B | 106222 |
| 720-39692-13 | GP-6-12' | Silica Gel Cleanup | Solid | 8015B | 106222 |
| 720-39692-16 | GP-7-12' | Silica Gel Cleanup | Solid | 8015B | 106222 |

## Metals

### Prep Batch: 105862

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 720-39692-17 | IDW-SOIL | Total/NA | Solid | 3050B | |

## Metals (Continued)

### Prep Batch: 105862 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| LCS 720-105862/2-A | Lab Control Sample | Total/NA | Solid | 3050B | |
| LCSD 720-105862/3-A | Lab Control Sample Dup | Total/NA | Solid | 3050B | |
| LCSSRM 720-105862/20-A | Lab Control Sample | Total/NA | Solid | 3050B | |
| MB 720-105862/1-A | Method Blank | Total/NA | Solid | 3050B | |

### Prep Batch: 105907

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 720-39692-17 | IDW-SOIL | Total/NA | Solid | 7471A | |
| LCS 720-105907/2-A | Lab Control Sample | Total/NA | Solid | 7471A | |
| LCSD 720-105907/3-A | Lab Control Sample Dup | Total/NA | Solid | 7471A | |
| MB 720-105907/1-A | Method Blank | Total/NA | Solid | 7471A | |

### Analysis Batch: 105950

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 720-39692-17 | IDW-SOIL | Total/NA | Solid | 7471A | 105907 |
| LCS 720-105907/2-A | Lab Control Sample | Total/NA | Solid | 7471A | 105907 |
| LCSD 720-105907/3-A | Lab Control Sample Dup | Total/NA | Solid | 7471A | 105907 |
| MB 720-105907/1-A | Method Blank | Total/NA | Solid | 7471A | 105907 |

### Analysis Batch: 105971

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 720-39692-17 | IDW-SOIL | Total/NA | Solid | 6010B | 105862 |
| LCS 720-105862/2-A | Lab Control Sample | Total/NA | Solid | 6010B | 105862 |
| LCSD 720-105862/3-A | Lab Control Sample Dup | Total/NA | Solid | 6010B | 105862 |
| LCSSRM 720-105862/20-A | Lab Control Sample | Total/NA | Solid | 6010B | 105862 |
| MB 720-105862/1-A | Method Blank | Total/NA | Solid | 6010B | 105862 |

# Lab Chronicle

Client: Geologica Inc
Project/Site: 7701 Bancroft, Oakland

TestAmerica Job ID: 720-39692-1

## Client Sample ID: GP-1-12'

**Lab Sample ID: 720-39692-1**

**Date Collected: 01/10/12 09:14**
**Matrix: Solid**
**Date Received: 01/10/12 17:40**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5030B | | | 105833 | 01/11/12 14:06 | AC | TAL SF |
| Total/NA | Analysis | 8260B/CA_LUFTMS | | 1 | 105830 | 01/11/12 17:37 | AC | TAL SF |
| Silica Gel Cleanup | Prep | 3546 | | | 105890 | 01/12/12 09:14 | MP | TAL SF |
| Silica Gel Cleanup | Analysis | 8015B | | 1 | 105968 | 01/13/12 18:01 | EC | TAL SF |

## Client Sample ID: GP-2-13'

**Lab Sample ID: 720-39692-3**

**Date Collected: 01/10/12 10:49**
**Matrix: Solid**
**Date Received: 01/10/12 17:40**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5030B | | | 105833 | 01/11/12 14:06 | AC | TAL SF |
| Total/NA | Analysis | 8260B/CA_LUFTMS | | 1 | 105830 | 01/11/12 19:10 | AC | TAL SF |
| Silica Gel Cleanup | Prep | 3546 | | | 105890 | 01/12/12 09:14 | MP | TAL SF |
| Silica Gel Cleanup | Analysis | 8015B | | 3 | 106132 | 01/17/12 10:36 | JZ | TAL SF |

## Client Sample ID: GP-3-8'

**Lab Sample ID: 720-39692-4**

**Date Collected: 01/10/12 10:08**
**Matrix: Solid**
**Date Received: 01/10/12 17:40**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5030B | | | 105833 | 01/11/12 14:06 | AC | TAL SF |
| Total/NA | Analysis | 8260B/CA_LUFTMS | | 1 | 105830 | 01/11/12 19:41 | AC | TAL SF |
| Silica Gel Cleanup | Prep | 3546 | | | 105890 | 01/12/12 09:14 | MP | TAL SF |
| Silica Gel Cleanup | Analysis | 8015B | | 1 | 105968 | 01/13/12 18:50 | EC | TAL SF |

## Client Sample ID: GP-4-4'

**Lab Sample ID: 720-39692-5**

**Date Collected: 01/10/12 11:05**
**Matrix: Solid**
**Date Received: 01/10/12 17:40**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5030B | | | 105833 | 01/11/12 14:06 | AC | TAL SF |
| Total/NA | Analysis | 8260B/CA_LUFTMS | | 1 | 105830 | 01/11/12 20:12 | AC | TAL SF |
| Silica Gel Cleanup | Prep | 3546 | | | 105890 | 01/12/12 09:14 | MP | TAL SF |
| Silica Gel Cleanup | Analysis | 8015B | | 1 | 105968 | 01/13/12 19:14 | EC | TAL SF |

## Client Sample ID: GP-4-13'

**Lab Sample ID: 720-39692-7**

**Date Collected: 01/10/12 11:24**
**Matrix: Solid**
**Date Received: 01/10/12 17:40**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5030B | | | 106041 | 01/13/12 19:00 | LL | TAL SF |
| Total/NA | Analysis | 8260B/CA_LUFTMS | | 1 | 106023 | 01/14/12 02:18 | AC | TAL SF |
| Silica Gel Cleanup | Prep | 3546 | | | 106222 | 01/17/12 19:50 | RU | TAL SF |
| Silica Gel Cleanup | Analysis | 8015B | | 1 | 106249 | 01/18/12 10:03 | JZ | TAL SF |

# Lab Chronicle

Client: Geologica Inc
Project/Site: 7701 Bancroft, Oakland

TestAmerica Job ID: 720-39692-1

## Client Sample ID: GP-5-14'

**Lab Sample ID: 720-39692-10**

**Date Collected: 01/10/12 12:08**
**Matrix: Solid**
**Date Received: 01/10/12 17:40**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5030B | | | 105833 | 01/11/12 14:06 | AC | TAL SF |
| Total/NA | Analysis | 8260B/CA_LUFTMS | | 1 | 105830 | 01/11/12 20:43 | AC | TAL SF |
| Total/NA | Prep | 5030B | | | 105841 | 01/12/12 10:34 | LL | TAL SF |
| Total/NA | Analysis | 8260B/CA_LUFTMS | | 100 | 105878 | 01/12/12 16:03 | AC | TAL SF |
| Silica Gel Cleanup | Prep | 3546 | | | 105890 | 01/12/12 09:14 | MP | TAL SF |
| Silica Gel Cleanup | Analysis | 8015B | | 50 | 106132 | 01/17/12 10:59 | JZ | TAL SF |

## Client Sample ID: GP-6-4'

**Lab Sample ID: 720-39692-11**

**Date Collected: 01/10/12 13:33**
**Matrix: Solid**
**Date Received: 01/10/12 17:40**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5030B | | | 105833 | 01/11/12 14:06 | AC | TAL SF |
| Total/NA | Analysis | 8260B/CA_LUFTMS | | 1 | 105830 | 01/11/12 21:13 | AC | TAL SF |
| Silica Gel Cleanup | Prep | 3546 | | | 105890 | 01/12/12 09:14 | MP | TAL SF |
| Silica Gel Cleanup | Analysis | 8015B | | 1 | 106132 | 01/17/12 10:13 | JZ | TAL SF |

## Client Sample ID: GP-6-12'

**Lab Sample ID: 720-39692-13**

**Date Collected: 01/10/12 13:38**
**Matrix: Solid**
**Date Received: 01/10/12 17:40**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5030B | | | 106041 | 01/13/12 19:00 | LL | TAL SF |
| Total/NA | Analysis | 8260B/CA_LUFTMS | | 1 | 106023 | 01/14/12 02:46 | AC | TAL SF |
| Silica Gel Cleanup | Prep | 3546 | | | 106222 | 01/17/12 19:50 | RU | TAL SF |
| Silica Gel Cleanup | Analysis | 8015B | | 1 | 106249 | 01/18/12 10:28 | JZ | TAL SF |

## Client Sample ID: GP-7-4'

**Lab Sample ID: 720-39692-14**

**Date Collected: 01/10/12 14:59**
**Matrix: Solid**
**Date Received: 01/10/12 17:40**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5030B | | | 105833 | 01/11/12 14:06 | AC | TAL SF |
| Total/NA | Analysis | 8260B/CA_LUFTMS | | 1 | 105830 | 01/11/12 21:44 | AC | TAL SF |
| Silica Gel Cleanup | Prep | 3546 | | | 105890 | 01/12/12 09:14 | MP | TAL SF |
| Silica Gel Cleanup | Analysis | 8015B | | 1 | 105968 | 01/13/12 20:28 | EC | TAL SF |

## Client Sample ID: GP-7-12'

**Lab Sample ID: 720-39692-16**

**Date Collected: 01/10/12 15:05**
**Matrix: Solid**
**Date Received: 01/10/12 17:40**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5030B | | | 106041 | 01/13/12 19:00 | LL | TAL SF |
| Total/NA | Analysis | 8260B/CA_LUFTMS | | 1 | 106023 | 01/14/12 03:15 | AC | TAL SF |

# Lab Chronicle

Client: Geologica Inc
Project/Site: 7701 Bancroft, Oakland

TestAmerica Job ID: 720-39692-1

## Client Sample ID: GP-7-12'

**Lab Sample ID: 720-39692-16**

**Date Collected: 01/10/12 15:05**
**Matrix: Solid**
**Date Received: 01/10/12 17:40**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Silica Gel Cleanup | Prep | 3546 | | | 106222 | 01/17/12 19:50 | RU | TAL SF |
| Silica Gel Cleanup | Analysis | 8015B | | 1 | 106249 | 01/18/12 10:52 | JZ | TAL SF |

## Client Sample ID: IDW-SOIL

**Lab Sample ID: 720-39692-17**

**Date Collected: 01/10/12 15:50**
**Matrix: Solid**
**Date Received: 01/10/12 17:40**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 7471A | | | 105907 | 01/12/12 12:49 | AM | TAL SF |
| Total/NA | Analysis | 7471A | | 1 | 105950 | 01/12/12 18:49 | SK | TAL SF |
| Total/NA | Prep | 3050B | | | 105862 | 01/11/12 18:49 | CDT | TAL SF |
| Total/NA | Analysis | 6010B | | 4 | 105971 | 01/13/12 03:43 | BA | TAL SF |

## Client Sample ID: GP-1

**Lab Sample ID: 720-39692-18**

**Date Collected: 01/10/12 09:32**
**Matrix: Water**
**Date Received: 01/10/12 17:40**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260B/CA_LUFTMS | | 1 | 105849 | 01/11/12 23:16 | AC | TAL SF |
| Silica Gel Cleanup | Prep | 3510C SGC | | | 105838 | 01/11/12 15:12 | RU | TAL SF |
| Silica Gel Cleanup | Analysis | 8015B | | 1 | 105875 | 01/12/12 17:17 | JZ | TAL SF |

## Client Sample ID: GP-2

**Lab Sample ID: 720-39692-19**

**Date Collected: 01/10/12 11:15**
**Matrix: Water**
**Date Received: 01/10/12 17:40**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260B/CA_LUFTMS | | 1 | 105849 | 01/12/12 00:48 | AC | TAL SF |
| Silica Gel Cleanup | Prep | 3510C SGC | | | 105838 | 01/11/12 15:12 | RU | TAL SF |
| Silica Gel Cleanup | Analysis | 8015B | | 1 | 105875 | 01/12/12 17:42 | JZ | TAL SF |

## Client Sample ID: GP-6

**Lab Sample ID: 720-39692-20**

**Date Collected: 01/10/12 14:15**
**Matrix: Water**
**Date Received: 01/10/12 17:40**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260B/CA_LUFTMS | | 1 | 105849 | 01/12/12 01:19 | AC | TAL SF |
| Silica Gel Cleanup | Prep | 3510C SGC | | | 105838 | 01/11/12 15:12 | RU | TAL SF |
| Silica Gel Cleanup | Analysis | 8015B | | 1 | 105875 | 01/12/12 18:06 | JZ | TAL SF |

# Lab Chronicle

Client: Geologica Inc
Project/Site: 7701 Bancroft, Oakland

TestAmerica Job ID: 720-39692-1

**Client Sample ID: TRIP BLANK**
**Date Collected: 01/10/12 00:00**
**Date Received: 01/10/12 17:40**

**Lab Sample ID: 720-39692-21**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260B/CA_LUFTMS | | 1 | 105910 | 01/12/12 20:05 | AC | TAL SF |

**Laboratory References:**

TAL SF = TestAmerica San Francisco, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

# Certification Summary

Client: Geologica Inc
Project/Site: 7701 Bancroft, Oakland

TestAmerica Job ID: 720-39692-1

| Laboratory | Authority | Program | EPA Region | Certification ID |
|---|---|---|---|---|
| TestAmerica San Francisco | California | State Program | 9 | 2496 |

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

# Method Summary

Client: Geologica Inc
Project/Site: 7701 Bancroft, Oakland

TestAmerica Job ID: 720-39692-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 8260B/CA_LUFTMS | 8260B / CA LUFT MS | SW846 | TAL SF |
| 8015B | Diesel Range Organics (DRO) (GC) | SW846 | TAL SF |
| 6010B | Metals (ICP) | SW846 | TAL SF |
| 7471A | Mercury (CVAA) | SW846 | TAL SF |

**Protocol References:**

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL SF = TestAmerica San Francisco, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

# Sample Summary

Client: Geologica Inc
Project/Site: 7701 Bancroft, Oakland

TestAmerica Job ID: 720-39692-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 720-39692-1 | GP-1-12' | Solid | 01/10/12 09:14 | 01/10/12 17:40 |
| 720-39692-3 | GP-2-13' | Solid | 01/10/12 10:49 | 01/10/12 17:40 |
| 720-39692-4 | GP-3-8' | Solid | 01/10/12 10:08 | 01/10/12 17:40 |
| 720-39692-5 | GP-4-4' | Solid | 01/10/12 11:05 | 01/10/12 17:40 |
| 720-39692-7 | GP-4-13' | Solid | 01/10/12 11:24 | 01/10/12 17:40 |
| 720-39692-10 | GP-5-14' | Solid | 01/10/12 12:08 | 01/10/12 17:40 |
| 720-39692-11 | GP-6-4' | Solid | 01/10/12 13:33 | 01/10/12 17:40 |
| 720-39692-13 | GP-6-12' | Solid | 01/10/12 13:38 | 01/10/12 17:40 |
| 720-39692-14 | GP-7-4' | Solid | 01/10/12 14:59 | 01/10/12 17:40 |
| 720-39692-16 | GP-7-12' | Solid | 01/10/12 15:05 | 01/10/12 17:40 |
| 720-39692-17 | IDW-SOIL | Solid | 01/10/12 15:50 | 01/10/12 17:40 |
| 720-39692-18 | GP-1 | Water | 01/10/12 09:32 | 01/10/12 17:40 |
| 720-39692-19 | GP-2 | Water | 01/10/12 11:15 | 01/10/12 17:40 |
| 720-39692-20 | GP-6 | Water | 01/10/12 14:15 | 01/10/12 17:40 |
| 720-39692-21 | TRIP BLANK | Water | 01/10/12 00:00 | 01/10/12 17:40 |

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

# Chain of Custody

7120-391692

TESTAMERICA San Francisco
1220 Quarry Lane • Pleasanton CA 94566-4756
Phone: (925) 484-1919 • Fax: (925) 600-3002

Reference #: 135883

Date 1/10/12 Page 1 of 3

1/18/2012

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## Report To

Attn: Brian Aubry
Company: Geologica Inc.
Address: 5 Third St Suite 224
Phone: Email:
Bill To: Sampled By: GR
Attn: Phone:

## Analysis Request

| Sample ID | Date | Time | Matrix | Preserv | TPH EPA - ☐ 8015/8021 ☐ 8260B ☐ Gas w/ ☐ BTEX ☐ MTBE | Purgeable Aromatics BTEX EPA - ☐ 8021 ☐ 8260B | TEPH EPA 8015M* ☑ Silica Gel ☑ Diesel ☑ Motor Oil ☐ Other | Fuel Tests EPA 8260B: ☑ Gas ☑ BTEX ☑ Five Oxygenates ☐ DCA, EDB ☐ Ethanol | Purgeable Halocarbons (HVOCs) EPA 8021 by 8260B | Volatile Organics GC/MS (VOCs) ☐ EPA 8260B ☐ 624 | Semivolatiles GC/MS ☐ EPA 8270 ☐ 625 | Oil and Grease ☐ Petroleum (EPA 1664) ☐ Total | Pesticides ☐ EPA 8081 ☐ 608 PCBs ☐ EPA 8082 ☐ 608 | PNAs by ☐ 8270 ☐ 8310 | CAM17 Metals (EPA 6010/7470/7471) | Metals: ☐ Lead ☐ LUFT ☐ RCRA ☐ Other: | Low Level Metals by EPA 200.8/6020 (ICP-MS): | W.E.T (STLC) ☐ TCLP | Hexavalent Chromium ☐ pH (24h hold time for $H_2O$) | Spec Cond. ☐ Alkalinity ☐ TSS ☐ | Anions: ☐ Cl ☐ $SO_4$ ☐ $NO_3$ ☐ F ☐ Br ☐ $NO_2$ ☐ $PO_4$ | | | HOLD | Number of Containers |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ✓ GP-1-12' | 1/10/12 | 9:14 | S | | | | X | X | | | | | | | | | | | | | | | | | | |
| GP-1-14' | | 9:27 | S | | | | | | | | | | | | | | | | | | | | | X | | |
| ✓ GP-2-13' | | 10:49 | S | | | | X | X | | | | | | | | | | | | | | | | | | |
| ✓ GP-3-8' | | 10:08 | S | | | | X | X | | | | | | | | | | | | | | | | | | |
| ✓ GP-4-4' | | 11:05 | S | | | | X | X | | | | | | | | | | | | | | | | | | |
| GP-4-8' | | 11:14 | S | | | | | | | | | | | | | | | | | | | | | X | | |
| GP-4-13' | | 11:24 | S | | | | | | | | | | | | | | | | | | | | | X | | |
| GP-5-4' | | 11:55 | S | | | | | | | | | | | | | | | | | | | | | X | | |
| GP-5-8' | | 11:57 | S | | | | | | | | | | | | | | | | | | | | | X | | |
| ✓ GP-5-14' | | 12:08 | S | | | | X | X | | | | | | | | | | | | | | | | | | |

## Project Info

Project Name: 7701 Bancroft
Project#:
PO#:
Credit Card#:

## Sample Receipt

# of Containers:
Head Space:
Temp: 3.4°C
Conforms to record:

TAT: (5 Day) 72h 48h 24h Other:

Report: ☐ Routine ☐ Level 3 ☐ Level 4 ☐ EDD ☐ State Tank
Fund EDF
Special Instructions / Comments: ☐ Global ID
TPH-g,d,mo, BTEX, fuel oxyg, w/ silica gel

See Terms and Conditions on reverse
*TestAmerica SF reports 8015M from $C_8$-$C_{24}$ (industry norm). Default for 8015B is $C_{10}$-$C_{28}$

| 1) Relinquished by: | 2) Relinquished by: | 3) Relinquished by: |
|---|---|---|
| Signature: G. Romero | Signature: | Signature: |
| Time: 16:15 | Time: 1740 | Time: |
| Printed Name: Greg Romero | Printed Name: T. Stitt | Printed Name: |
| Date: 1/10/12 | Date: 1-10-12 | Date: |
| Company: Geologica | Company: TASF | Company: |

| 1) Received by: | 2) Received by: | 3) Received by: |
|---|---|---|
| Signature: | Signature: | Signature: |
| Time: 1615 | Time: 1740 | Time: |
| Printed Name: T. Stitt | Printed Name: | Printed Name: |
| Date: 1-10-12 | Date: 1/10/12 | Date: |
| Company: TASF | Company: TASF | Company: |

Rev02/09

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TESTAMERICA San Francisco Chain of Custody
1220 Quarry Lane • Pleasanton, CA 94566-4756
Phone: (925) 484-1919 • Fax: (925) 600-3002

720 391692

Reference #: 135883

Date 1/12/12 Page 2 of 3

1/18/2012

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## Report To

Attn: Same as 1st page
Company:
Address:
Phone: Email:
Bill To: Sampled By:
Attn: Phone:

## Analysis Request

| Sample ID | Date | Time | Matrix | Preserv. | TPH EPA - ☐ 8015/8021 ☐ 8260B ☐ Gas w/ ☐ BTEX ☐ MTBE | Purgeable Aromatics BTEX EPA - ☐ 8021 ☐ 8260B | TEPH EPA 8015M* ☐ Silica Gel ☑ Diesel ☐ Motor Oil ☐ Other | Fuel Tests EPA 8260B: ☐ Gas ☐ BTEX ☐ Five Oxygenates ☐ DCA, EDB ☐ Ethanol | Purgeable Halocarbons (HVOCs) EPA 8021 by 8260B | Volatile Organics GC/MS (VOCs) ☐ EPA 8260B ☐ 624 | Semivolatiles GC/MS ☐ EPA 8270 ☐ 625 | Oil and Grease ☐ Petroleum (EPA 1664) ☐ Total | Pesticides ☐ EPA 8081 ☐ 608 PCBs ☐ EPA 8082 ☐ 608 | PNAs by ☐ 8270 ☐ 8310 | CAM17 Metals (EPA 6010/7470/7471) | Metals: ☐ Lead ☐ LUFT ☐ RCRA ☐ Other | Low Level Metals by EPA 200.8/6020 (ICP-MS): | ☐ W.E.T (STLC) ☐ TCLP | Hexavalent Chromium ☐ pH (24h hold time for $H_2O$) | ☐ Spec Cond: ☐ Alkalinity ☐ TSS ☐ TDS | Anions: ☐ Cl ☐ $SO_4$ ☐ $NO_3$ ☐ F ☐ Br ☐ $NO_2$ ☐ $PO_4$ | | | HOLD | Number of Containers |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GP-6-4' | 1/10/12 | 13:33 | S | | | | X | X | | | | | | | | | | | | | | | | | | |
| GP-6-8' | | 13:36 | S | | | | | | | | | | | | | | | | | | | | | | X | |
| GP-6-12' | | 13:38 | S | | | | | | | | | | | | | | | | | | | | | | X | |
| GP-7-4' | | 14:59 | S | | | | X | X | | | | | | | | | | | | | | | | | | |
| GP-7-8' | | 15:01 | S | | | | | | | | | | | | | | | | | | | | | | X | |
| GP-7-12' | | 15:05 | S | | | | | | | | | | | | | | | | | | | | | | X | |
| IDW-Soil | ↓ | 15:30 | S | | | | | | | | | | | | X | | | | | | | | | | | |

## Project Info

Project Name: 7701 Bancroft
Project#:
PO#:
Credit Card#:

## Sample Receipt

# of Containers:
Head Space:
Temp:
Conforms to record:

TAT: (5 Day) 72h 48h 24h Other:

Report: ☐ Routine ☐ Level 3 ☐ Level 4 ☐ EDD ☐ State Tank
Fund EDF
Special Instructions / Comments: ☐ Global ID

See 1st pg

*See Terms and Conditions on reverse*
*TestAmerica SF reports 8015M from $C_8$-$C_{24}$ (industry norm). Default for 8015B is $C_{10}$-$C_{28}$

| 1) Relinquished by: | 2) Relinquished by: | 3) Relinquished by: |
|---|---|---|
| Signature: Greg Romero | Signature: | Signature: |
| Time: 16:15 | Time: 1740 | Time: |
| Printed Name: Greg Romero | Printed Name: T. Stitt | Printed Name: |
| Date: 1/10/12 | Date: 1-10-12 | Date: |
| Company: Geologican | Company: TASF | Company: |

| 1) Received by: | 2) Received by: | 3) Received by: |
|---|---|---|
| Signature: | Signature: | Signature: |
| Time: 1615 | Time: 1740 | Time: |
| Printed Name: T. Stitt | Printed Name: | Printed Name: |
| Date: 1-10-12 | Date: 1/10/12 | Date: |
| Company: TASF | Company: TASF | Company: |

Rev02/09

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TESTAMERICA San Francisco Chain of Custody
1220 Quarry Lane • Pleasanton, CA 94566-4756
Phone: (925) 484-1919 • Fax: (925) 600-3002

720-29692

Reference #: 135853

Date 1/10/12 Page 3 of 3

1/18/2012

Page 52 of 54

## Report To

Attn: Same as 1st
Company: page
Address:
Phone: Email:
Bill To: Sampled By:
Attn: Phone:

## Analysis Request

| Sample ID | Date | Time | Matrix | Preserv. | TPH EPA - ☐ 8015/8021 ☐ 8260B ☐ Gas w/ ☐ BTEX ☐ MTBE | Purgeable Aromatics BTEX EPA - ☐ 8021 ☐ 8260B | TEPH EPA 8015M* ☐ Silica Gel ☐ Diesel ☐ Motor Oil ☐ Other | Fuel Tests EPA 8260B: ☐ Gas ☐ BTEX ☐ Five Oxygenates ☐ DCA, EDB ☐ Ethanol | Purgeable Halocarbons (HVOCs) EPA 8021 by 8260B | Volatile Organics GC/MS (VOCs) ☐ EPA 8260B ☐ 624 | Semivolatiles GC/MS ☐ EPA 8270 ☐ 625 | Oil and Grease ☐ Petroleum ☐ Total (EPA 1664) | Pesticides ☐ EPA 8081 ☐ 608 PCBs ☐ EPA 8082 ☐ 608 | PNAs by ☐ 8270 ☐ 8310 | CAM17 Metals (EPA 6010/7470/7471) | Metals: ☐ Lead ☐ LUFT ☐ RCRA ☐ Other: | Low Level Metals by EPA 200.8/6020 (ICP-MS): | ☐ W.E.T (STLC) ☐ TCLP | Hexavalent Chromium ☐ pH (24h hold time for $H_2O$) | ☐ Spec Cond. ☐ Alkalinity ☐ TSS ☐ TDS | Anions: ☐ Cl ☐ $SO_4$ ☐ $NO_3$ ☐ F ☐ Br ☐ $NO_2$ ☐ $PO_4$ | | | | Number of Containers |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GP-1 | 1/10/12 | 9:32 | W | | | | X | X | | | | | | | | | | | | | | | | | | | 5 |
| GP-2 | ↓ | 11:15 | W | | | | X | X | | | | | | | | | | | | | | | | | | | 5 |
| GP-6 | ↓ | 14:15 | W | | | | X | X | | | | | | | | | | | | | | | | | | | 5 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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## Project Info

Project Name: 7701 Bancroft
Project#:
PO#:
Credit Card#:

## Sample Receipt

# of Containers:
Head Space:
Temp:
Conforms to record:

TAT: (5 Day) 72h 48h 24h Other:

Report: ☐ Routine ☐ Level 3 ☐ Level 4 ☐ EDD ☐ State Tank Fund EDF

Special Instructions / Comments: ☐ Global ID

See 1st pag

*See Terms and Conditions on reverse*

*TestAmerica SF reports 8015M from $C_9$-$C_{24}$ (industry norm). Default for 8015B is $C_{10}$-$C_{28}$

| 1) Relinquished by: | 2) Relinquished by: | 3) Relinquished by: |
|---|---|---|
| Signature: Greg Romero — Time: 16:15 | Signature: — Time: 1740 | Signature: — Time: |
| Printed Name: Greg Romero — Date: 1/10/12 | Printed Name: T. Stitt — Date: 1-10-12 | Printed Name: — Date: |
| Company: Geologica | Company: TASF | Company: |

| 1) Received by: | 2) Received by: | 3) Received by: |
|---|---|---|
| Signature: — Time: 1615 | Signature: — Time: 1740 | Signature: — Time: |
| Printed Name: T. Stitt — Date: 1-10-12 | Printed Name: — Date: 1-10-12 | Printed Name: — Date: |
| Company: TASF | Company: TASF | Company: |

Rev02/09

## Sharma, Dimple

**From:** Greg Romero [gromero@geologica.net]
**Sent:** Thursday, January 12, 2012 11:44 AM
**To:** Sharma, Dimple
**Subject:** FW: Files from 720-39692-1 7701 Bancroft, Oakland

Dimple,
Please analyze the trip blanks

Thanks,
Greg

---
*Greg Romero, Project Geologist*
*Geologica, Inc.*
*5 Third Street, Suite 224*
*San Francisco, CA 94103*
*415.597.7884 (Phone)*
*415.597.7880 (Fax)*
*415.613.8330 (Mobile)*
*gromero@geologica.net*

---

**From:** Sharma, Dimple [mailto:dimple.sharma@testamericainc.com]
**Sent:** Thursday, January 12, 2012 11:01 AM
**To:** Brian Aubry; Mr. Dan Matthews
**Subject:** Files from 720-39692-1 7701 Bancroft, Oakland

The following sample(s) was submitted for analysis; however, it was not listed on the Chain-of-Custody (COC):
Trip Blank logged and placed on hold.

**DIMPLE SHARMA**

TestAmerica San Francisco
THE LEADER IN ENVIRONMENTAL TESTING

Tel: 925.484,1919
www.testamericainc.com

Reference: [096723]
Attachments: 1

# Login Sample Receipt Checklist

Client: Geologica Inc

Job Number: 720-39692-1

**Login Number: 39692**

**List Source: TestAmerica San Francisco**

**List Number: 1**

**Creator: Apostol, Anita**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity either was not measured or, if measured, is at or below background | N/A | |
| The cooler's custody seal, if present, is intact. | N/A | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 3.4 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | False | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the sample IDs on the containers and the COC. | True | |
| Samples are received within Holding Time. | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | N/A | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter. | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | True | |

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

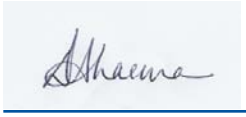
# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica San Francisco
1220 Quarry Lane
Pleasanton, CA 94566
Tel: (925)484-1919

TestAmerica Job ID: 720-39692-2
Client Project/Site: 7701 Bancroft, Oakland

For:
Geologica Inc
2625 Alcatraz Ave
Suite 504
Berkeley, California 94705

Attn: Mr. Dan Matthews



*Authorized for release by:*
*1/30/2012 3:17:58 PM*

Dimple Sharma
Project Manager I
dimple.sharma@testamericainc.com

# Table of Contents

# Definitions/Glossary

Client: Geologica Inc
Project/Site: 7701 Bancroft, Oakland

TestAmerica Job ID: 720-39692-2

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ☼ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CNF | Contains no Free Liquid |
| DL, RA, RE, IN | Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| EDL | Estimated Detection Limit |
| EPA | United States Environmental Protection Agency |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| ND | Not detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RL | Reporting Limit |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

# Case Narrative

Client: Geologica Inc
Project/Site: 7701 Bancroft, Oakland

TestAmerica Job ID: 720-39692-2

## Job ID: 720-39692-2

**Laboratory: TestAmerica San Francisco**

**Narrative**

**Job Narrative**
**720-39692-2**

**Comments**
No additional comments.

**Receipt**
All samples were received in good condition within temperature requirements.

**GC/MS VOA**
No analytical or quality issues were noted.

**GC VOA**
No analytical or quality issues were noted.

**GC Semi VOA**
No analytical or quality issues were noted.

**Organic Prep**
No analytical or quality issues were noted.

# Detection Summary

Client: Geologica Inc
Project/Site: 7701 Bancroft, Oakland

TestAmerica Job ID: 720-39692-2

## Client Sample ID: GP-5-4'

Lab Sample ID: 720-39692-8

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics [C10-C28] | 300 | | 10 | | mg/Kg | 10 | | 8015B | Silica Gel Clear |
| Motor Oil Range Organics [C24-C36] | 980 | | 500 | | mg/Kg | 10 | | 8015B | Silica Gel Clear |

## Client Sample ID: GP-5-8'

Lab Sample ID: 720-39692-9

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics [C10-C28] | 1.1 | | 0.99 | | mg/Kg | 1 | | 8015B | Silica Gel Clear |

Client: Geologica Inc
Project/Site: 7701 Bancroft, Oakland

TestAmerica Job ID: 720-39692-2

**Client Sample ID: GP-5-4'**
**Date Collected: 01/10/12 11:55**
**Date Received: 01/10/12 17:40**

**Lab Sample ID: 720-39692-8**
**Matrix: Solid**

### Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | ND | | 5.0 | | ug/Kg | | 01/23/12 16:57 | 01/23/12 17:11 | 1 |
| Benzene | ND | | 5.0 | | ug/Kg | | 01/23/12 16:57 | 01/23/12 17:11 | 1 |
| Ethylbenzene | ND | | 5.0 | | ug/Kg | | 01/23/12 16:57 | 01/23/12 17:11 | 1 |
| Toluene | ND | | 5.0 | | ug/Kg | | 01/23/12 16:57 | 01/23/12 17:11 | 1 |
| Xylenes, Total | ND | | 9.9 | | ug/Kg | | 01/23/12 16:57 | 01/23/12 17:11 | 1 |
| Gasoline Range Organics (GRO) -C5-C12 | ND | | 250 | | ug/Kg | | 01/23/12 16:57 | 01/23/12 17:11 | 1 |
| TBA | ND | | 9.9 | | ug/Kg | | 01/23/12 16:57 | 01/23/12 17:11 | 1 |
| DIPE | ND | | 5.0 | | ug/Kg | | 01/23/12 16:57 | 01/23/12 17:11 | 1 |
| TAME | ND | | 5.0 | | ug/Kg | | 01/23/12 16:57 | 01/23/12 17:11 | 1 |
| Ethyl t-butyl ether | ND | | 5.0 | | ug/Kg | | 01/23/12 16:57 | 01/23/12 17:11 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene* | *92* | | *45 - 131* | *01/23/12 16:57* | *01/23/12 17:11* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *124* | | *60 - 140* | *01/23/12 16:57* | *01/23/12 17:11* | *1* |
| *Toluene-d8 (Surr)* | *93* | | *58 - 140* | *01/23/12 16:57* | *01/23/12 17:11* | *1* |

### Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Diesel Range Organics [C10-C28]** | **300** | | 10 | | mg/Kg | | 01/23/12 20:01 | 01/24/12 16:43 | 10 |
| **Motor Oil Range Organics [C24-C36]** | **980** | | 500 | | mg/Kg | | 01/23/12 20:01 | 01/24/12 16:43 | 10 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Capric Acid (Surr)* | *0* | | *0 - 1* | *01/23/12 20:01* | *01/24/12 16:43* | *10* |
| *p-Terphenyl* | *84* | | *38 - 148* | *01/23/12 20:01* | *01/24/12 16:43* | *10* |

Client: Geologica Inc
Project/Site: 7701 Bancroft, Oakland

TestAmerica Job ID: 720-39692-2

**Client Sample ID: GP-5-8'**
**Date Collected: 01/10/12 11:57**
**Date Received: 01/10/12 17:40**

**Lab Sample ID: 720-39692-9**
**Matrix: Solid**

### Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | ND | | 5.0 | | ug/Kg | | 01/23/12 16:57 | 01/23/12 17:39 | 1 |
| Benzene | ND | | 5.0 | | ug/Kg | | 01/23/12 16:57 | 01/23/12 17:39 | 1 |
| Ethylbenzene | ND | | 5.0 | | ug/Kg | | 01/23/12 16:57 | 01/23/12 17:39 | 1 |
| Toluene | ND | | 5.0 | | ug/Kg | | 01/23/12 16:57 | 01/23/12 17:39 | 1 |
| Xylenes, Total | ND | | 9.9 | | ug/Kg | | 01/23/12 16:57 | 01/23/12 17:39 | 1 |
| Gasoline Range Organics (GRO) -C5-C12 | ND | | 250 | | ug/Kg | | 01/23/12 16:57 | 01/23/12 17:39 | 1 |
| TBA | ND | | 9.9 | | ug/Kg | | 01/23/12 16:57 | 01/23/12 17:39 | 1 |
| DIPE | ND | | 5.0 | | ug/Kg | | 01/23/12 16:57 | 01/23/12 17:39 | 1 |
| TAME | ND | | 5.0 | | ug/Kg | | 01/23/12 16:57 | 01/23/12 17:39 | 1 |
| Ethyl t-butyl ether | ND | | 5.0 | | ug/Kg | | 01/23/12 16:57 | 01/23/12 17:39 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene* | *99* | | *45 - 131* | *01/23/12 16:57* | *01/23/12 17:39* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *119* | | *60 - 140* | *01/23/12 16:57* | *01/23/12 17:39* | *1* |
| *Toluene-d8 (Surr)* | *97* | | *58 - 140* | *01/23/12 16:57* | *01/23/12 17:39* | *1* |

### Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Diesel Range Organics [C10-C28]** | **1.1** | | 0.99 | | mg/Kg | | 01/23/12 20:01 | 01/24/12 14:09 | 1 |
| Motor Oil Range Organics [C24-C36] | ND | | 50 | | mg/Kg | | 01/23/12 20:01 | 01/24/12 14:09 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Capric Acid (Surr)* | *0.0005* | | *0 - 1* | *01/23/12 20:01* | *01/24/12 14:09* | *1* |
| *p-Terphenyl* | *81* | | *38 - 148* | *01/23/12 20:01* | *01/24/12 14:09* | *1* |

Client: Geologica Inc
Project/Site: 7701 Bancroft, Oakland

TestAmerica Job ID: 720-39692-2

## Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

**Lab Sample ID: MB 720-106524/1-A**
**Matrix: Solid**
**Analysis Batch: 106492**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 106524**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | ND | | 5.0 | | ug/Kg | | 01/23/12 06:30 | 01/23/12 08:22 | 1 |
| Benzene | ND | | 5.0 | | ug/Kg | | 01/23/12 06:30 | 01/23/12 08:22 | 1 |
| Ethylbenzene | ND | | 5.0 | | ug/Kg | | 01/23/12 06:30 | 01/23/12 08:22 | 1 |
| Toluene | ND | | 5.0 | | ug/Kg | | 01/23/12 06:30 | 01/23/12 08:22 | 1 |
| Xylenes, Total | ND | | 10 | | ug/Kg | | 01/23/12 06:30 | 01/23/12 08:22 | 1 |
| Gasoline Range Organics (GRO) -C5-C12 | ND | | 250 | | ug/Kg | | 01/23/12 06:30 | 01/23/12 08:22 | 1 |
| TBA | ND | | 10 | | ug/Kg | | 01/23/12 06:30 | 01/23/12 08:22 | 1 |
| DIPE | ND | | 5.0 | | ug/Kg | | 01/23/12 06:30 | 01/23/12 08:22 | 1 |
| TAME | ND | | 5.0 | | ug/Kg | | 01/23/12 06:30 | 01/23/12 08:22 | 1 |
| Ethyl t-butyl ether | ND | | 5.0 | | ug/Kg | | 01/23/12 06:30 | 01/23/12 08:22 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene* | *101* | | *45 - 131* | *01/23/12 06:30* | *01/23/12 08:22* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *110* | | *60 - 140* | *01/23/12 06:30* | *01/23/12 08:22* | *1* |
| *Toluene-d8 (Surr)* | *101* | | *58 - 140* | *01/23/12 06:30* | *01/23/12 08:22* | *1* |

**Lab Sample ID: LCS 720-106524/2-A**
**Matrix: Solid**
**Analysis Batch: 106492**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 106524**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | 50.0 | 51.4 | | ug/Kg | | 103 | 70 - 144 |
| Benzene | 50.0 | 47.8 | | ug/Kg | | 96 | 70 - 130 |
| Ethylbenzene | 50.0 | 49.2 | | ug/Kg | | 98 | 80 - 137 |
| Toluene | 50.0 | 48.2 | | ug/Kg | | 96 | 80 - 128 |
| m-Xylene & p-Xylene | 100 | 100 | | ug/Kg | | 100 | 70 - 146 |
| o-Xylene | 50.0 | 50.2 | | ug/Kg | | 100 | 70 - 140 |
| TBA | 1000 | 982 | | ug/Kg | | 98 | 63 - 130 |
| DIPE | 50.0 | 48.4 | | ug/Kg | | 97 | 70 - 131 |
| TAME | 50.0 | 50.6 | | ug/Kg | | 101 | 70 - 140 |
| Ethyl t-butyl ether | 50.0 | 47.2 | | ug/Kg | | 94 | 70 - 130 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene* | *103* | | *45 - 131* |
| *1,2-Dichloroethane-d4 (Surr)* | *105* | | *60 - 140* |
| *Toluene-d8 (Surr)* | *102* | | *58 - 140* |

**Lab Sample ID: LCS 720-106524/4-A**
**Matrix: Solid**
**Analysis Batch: 106492**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 106524**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) -C5-C12 | 1000 | 976 | | ug/Kg | | 98 | 61 - 128 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene* | *106* | | *45 - 131* |
| *1,2-Dichloroethane-d4 (Surr)* | *110* | | *60 - 140* |

## Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: LCS 720-106524/4-A**
**Matrix: Solid**
**Analysis Batch: 106492**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 106524**

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|---|---|---|---|
| *Toluene-d8 (Surr)* | *103* | | *58 - 140* |

**Lab Sample ID: LCSD 720-106524/3-A**
**Matrix: Solid**
**Analysis Batch: 106492**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 106524**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | | | 50.0 | 51.8 | | ug/Kg | | 104 | 70 - 144 | 1 | 20 |
| Benzene | | | 50.0 | 47.6 | | ug/Kg | | 95 | 70 - 130 | 0 | 20 |
| Ethylbenzene | | | 50.0 | 48.0 | | ug/Kg | | 96 | 80 - 137 | 2 | 20 |
| Toluene | | | 50.0 | 47.2 | | ug/Kg | | 94 | 80 - 128 | 2 | 20 |
| m-Xylene & p-Xylene | | | 100 | 97.4 | | ug/Kg | | 97 | 70 - 146 | 3 | 20 |
| o-Xylene | | | 50.0 | 50.2 | | ug/Kg | | 100 | 70 - 140 | 0 | 20 |
| TBA | | | 1000 | 947 | | ug/Kg | | 95 | 63 - 130 | 4 | 20 |
| DIPE | | | 50.0 | 47.6 | | ug/Kg | | 95 | 70 - 131 | 2 | 20 |
| TAME | | | 50.0 | 52.2 | | ug/Kg | | 104 | 70 - 140 | 3 | 20 |
| Ethyl t-butyl ether | | | 50.0 | 47.4 | | ug/Kg | | 95 | 70 - 130 | 0 | 20 |

| Surrogate | LCSD %Recovery | LCSD Qualifier | Limits |
|---|---|---|---|
| *4-Bromofluorobenzene* | *104* | | *45 - 131* |
| *1,2-Dichloroethane-d4 (Surr)* | *107* | | *60 - 140* |
| *Toluene-d8 (Surr)* | *101* | | *58 - 140* |

**Lab Sample ID: LCSD 720-106524/5-A**
**Matrix: Solid**
**Analysis Batch: 106492**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 106524**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) -C5-C12 | | | 1000 | 943 | | ug/Kg | | 94 | 61 - 128 | 3 | 20 |

| Surrogate | LCSD %Recovery | LCSD Qualifier | Limits |
|---|---|---|---|
| *4-Bromofluorobenzene* | *107* | | *45 - 131* |
| *1,2-Dichloroethane-d4 (Surr)* | *102* | | *60 - 140* |
| *Toluene-d8 (Surr)* | *103* | | *58 - 140* |

## Method: 8015B - Diesel Range Organics (DRO) (GC)

**Lab Sample ID: MB 720-106503/1-A**
**Matrix: Solid**
**Analysis Batch: 106501**

**Client Sample ID: Method Blank**
**Prep Type: Silica Gel Cleanup**
**Prep Batch: 106503**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics [C10-C28] | ND | | 1.0 | | mg/Kg | | 01/23/12 08:12 | 01/24/12 04:35 | 1 |
| Motor Oil Range Organics [C24-C36] | ND | | 50 | | mg/Kg | | 01/23/12 08:12 | 01/24/12 04:35 | 1 |

| Surrogate | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| *Capric Acid (Surr)* | *0* | | *0 - 1* | *01/23/12 08:12* | *01/24/12 04:35* | *1* |

## Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

**Lab Sample ID: MB 720-106503/1-A**
**Matrix: Solid**
**Analysis Batch: 106501**

**Client Sample ID: Method Blank**
**Prep Type: Silica Gel Cleanup**
**Prep Batch: 106503**

| Surrogate | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| *p-Terphenyl* | *96* | | *38 - 148* | *01/23/12 08:12* | *01/24/12 04:35* | *1* |

**Lab Sample ID: LCS 720-106503/2-A**
**Matrix: Solid**
**Analysis Batch: 106501**

**Client Sample ID: Lab Control Sample**
**Prep Type: Silica Gel Cleanup**
**Prep Batch: 106503**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Diesel Range Organics [C10-C28] | 82.3 | 69.3 | | mg/Kg | | 84 | 36 - 112 |

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|---|---|---|---|
| *p-Terphenyl* | *98* | | *38 - 148* |

**Lab Sample ID: LCSD 720-106503/3-A**
**Matrix: Solid**
**Analysis Batch: 106501**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Silica Gel Cleanup**
**Prep Batch: 106503**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics [C10-C28] | 82.4 | 70.8 | | mg/Kg | | 86 | 36 - 112 | 2 | 35 |

| Surrogate | LCSD %Recovery | LCSD Qualifier | Limits |
|---|---|---|---|
| *p-Terphenyl* | *104* | | *38 - 148* |

# QC Association Summary

Client: Geologica Inc
Project/Site: 7701 Bancroft, Oakland

TestAmerica Job ID: 720-39692-2

## GC/MS VOA

### Analysis Batch: 106492

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 720-39692-8 | GP-5-4' | Total/NA | Solid | 8260B/CA_LUFT MS | 106524 |
| 720-39692-9 | GP-5-8' | Total/NA | Solid | 8260B/CA_LUFT MS | 106524 |
| LCS 720-106524/2-A | Lab Control Sample | Total/NA | Solid | 8260B/CA_LUFT MS | 106524 |
| LCS 720-106524/4-A | Lab Control Sample | Total/NA | Solid | 8260B/CA_LUFT MS | 106524 |
| LCSD 720-106524/3-A | Lab Control Sample Dup | Total/NA | Solid | 8260B/CA_LUFT MS | 106524 |
| LCSD 720-106524/5-A | Lab Control Sample Dup | Total/NA | Solid | 8260B/CA_LUFT MS | 106524 |
| MB 720-106524/1-A | Method Blank | Total/NA | Solid | 8260B/CA_LUFT MS | 106524 |

### Prep Batch: 106524

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 720-39692-8 | GP-5-4' | Total/NA | Solid | 5030B | |
| 720-39692-9 | GP-5-8' | Total/NA | Solid | 5030B | |
| LCS 720-106524/2-A | Lab Control Sample | Total/NA | Solid | 5030B | |
| LCS 720-106524/4-A | Lab Control Sample | Total/NA | Solid | 5030B | |
| LCSD 720-106524/3-A | Lab Control Sample Dup | Total/NA | Solid | 5030B | |
| LCSD 720-106524/5-A | Lab Control Sample Dup | Total/NA | Solid | 5030B | |
| MB 720-106524/1-A | Method Blank | Total/NA | Solid | 5030B | |

## GC Semi VOA

### Analysis Batch: 106501

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| LCS 720-106503/2-A | Lab Control Sample | Silica Gel Cleanup | Solid | 8015B | 106503 |
| LCSD 720-106503/3-A | Lab Control Sample Dup | Silica Gel Cleanup | Solid | 8015B | 106503 |
| MB 720-106503/1-A | Method Blank | Silica Gel Cleanup | Solid | 8015B | 106503 |

### Prep Batch: 106503

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 720-39692-8 | GP-5-4' | Silica Gel Cleanup | Solid | 3546 | |
| 720-39692-9 | GP-5-8' | Silica Gel Cleanup | Solid | 3546 | |
| LCS 720-106503/2-A | Lab Control Sample | Silica Gel Cleanup | Solid | 3546 | |
| LCSD 720-106503/3-A | Lab Control Sample Dup | Silica Gel Cleanup | Solid | 3546 | |
| MB 720-106503/1-A | Method Blank | Silica Gel Cleanup | Solid | 3546 | |

### Analysis Batch: 106583

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 720-39692-8 | GP-5-4' | Silica Gel Cleanup | Solid | 8015B | 106503 |
| 720-39692-9 | GP-5-8' | Silica Gel Cleanup | Solid | 8015B | 106503 |

# Lab Chronicle

Client: Geologica Inc
Project/Site: 7701 Bancroft, Oakland

TestAmerica Job ID: 720-39692-2

## Client Sample ID: GP-5-4'

**Lab Sample ID: 720-39692-8**

**Date Collected: 01/10/12 11:55**

**Matrix: Solid**

**Date Received: 01/10/12 17:40**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5030B | | | 106524 | 01/23/12 16:57 | YB | TAL SF |
| Total/NA | Analysis | 8260B/CA_LUFTMS | | 1 | 106492 | 01/23/12 17:11 | LL | TAL SF |
| Silica Gel Cleanup | Prep | 3546 | | | 106503 | 01/23/12 20:01 | NP | TAL SF |
| Silica Gel Cleanup | Analysis | 8015B | | 10 | 106583 | 01/24/12 16:43 | WR | TAL SF |

## Client Sample ID: GP-5-8'

**Lab Sample ID: 720-39692-9**

**Date Collected: 01/10/12 11:57**

**Matrix: Solid**

**Date Received: 01/10/12 17:40**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5030B | | | 106524 | 01/23/12 16:57 | YB | TAL SF |
| Total/NA | Analysis | 8260B/CA_LUFTMS | | 1 | 106492 | 01/23/12 17:39 | LL | TAL SF |
| Silica Gel Cleanup | Prep | 3546 | | | 106503 | 01/23/12 20:01 | NP | TAL SF |
| Silica Gel Cleanup | Analysis | 8015B | | 1 | 106583 | 01/24/12 14:09 | WR | TAL SF |

**Laboratory References:**

TAL SF = TestAmerica San Francisco, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

# Certification Summary

Client: Geologica Inc
Project/Site: 7701 Bancroft, Oakland

TestAmerica Job ID: 720-39692-2

| Laboratory | Authority | Program | EPA Region | Certification ID |
|---|---|---|---|---|
| TestAmerica San Francisco | California | State Program | 9 | 2496 |

Accreditation may not be offered or required for all methods and analytes reported in this package . Please contact your project manager for the laboratory's current list of certified methods and analytes.

# Method Summary

Client: Geologica Inc
Project/Site: 7701 Bancroft, Oakland

TestAmerica Job ID: 720-39692-2

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 8260B/CA_LUFTMS | 8260B / CA LUFT MS | SW846 | TAL SF |
| 8015B | Diesel Range Organics (DRO) (GC) | SW846 | TAL SF |

**Protocol References:**

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL SF = TestAmerica San Francisco, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

# Sample Summary

Client: Geologica Inc
Project/Site: 7701 Bancroft, Oakland

TestAmerica Job ID: 720-39692-2

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 720-39692-8 | GP-5-4' | Solid | 01/10/12 11:55 | 01/10/12 17:40 |
| 720-39692-9 | GP-5-8' | Solid | 01/10/12 11:57 | 01/10/12 17:40 |

720 · 39692- email

## Sharma, Dimple

**From:** Greg Romero [gromero@geologica.net]
**Sent:** Friday, January 20, 2012 3:14 PM
**To:** Sharma, Dimple; 'Brian Aubry'
**Subject:** RE: Files from 720-39692-1 7701 Bancroft, Oakland

Dimple,
Please test additional samples, GP-5-4' and GP-5-8', for same analysis. Note that these samples are close to their holding times.

Also, can you please confirm that the GP-5-14' sample data previously analyzed is correct and can you compare those results to the diesel and motor oil that were detected in samples GP-1-12' and GP-2-13'.

Thank you,
Greg

---

*Greg Romero, Project Geologist*
*Geologica, Inc.*
*5 Third Street, Suite 224*
*San Francisco, CA 94103*
*415.597.7884 (Phone)*
*415.597.7880 (Fax)*
*415.613.8330 (Mobile)*
*gromero@geologica.net*

**From:** Sharma, Dimple [mailto:Dimple.Sharma@testamericainc.com]
**Sent:** Friday, January 13, 2012 3:07 PM
**To:** Brian Aubry; Greg Romero
**Subject:** RE: Files from 720-39692-1 7701 Bancroft, Oakland

Will do!

**DIMPLE SHARMA**

Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

1220 Quarry Lane
Pleasanton, CA 94566
Tel 925.484.1919 | Fax 925.600.3002
www.testamericainc.com www.stl-inc.com

-----Original Message-----
**From:** Brian Aubry [mailto:baubry@geologica.net]
**Sent:** Friday, January 13, 2012 2:52 PM
**To:** 'Greg Romero'; Sharma, Dimple
**Subject:** RE: Files from 720-39692-1 7701 Bancroft, Oakland

# Login Sample Receipt Checklist

Client: Geologica Inc

Job Number: 720-39692-2

**Login Number: 39692**

**List Source: TestAmerica San Francisco**

**List Number: 1**

**Creator: Apostol, Anita**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity either was not measured or, if measured, is at or below background | N/A | |
| The cooler's custody seal, if present, is intact. | N/A | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 3.4 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | False | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the sample IDs on the containers and the COC. | True | |
| Samples are received within Holding Time. | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | N/A | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter. | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | True | |

# Attachment D

## Credentials

geologica

**BRIAN F. AUBRY, P.G., C.E.G, C.Hg.**

*Senior Hydrogeologist*

## EXPERIENCE SUMMARY

Brian Aubry has over 23 years of professional experience with technical responsibility for hydrogeological, geological, and geotechnical engineering tasks on environmental, litigation, redevelopment, and water resources projects in the San Francisco Bay Area of California. Mr. Aubry's expertise is in hazardous waste management, hydrogeological evaluation, and contaminant fate and transport. He is skilled in technical problem solving, regulatory agency negotiation, litigation support and strategy development, communication, and project management. Mr. Aubry is particularly capable in review and evaluation of complex data sets, project scoping, and environmental and water resources projects involving multiple stakeholders. He is broadly experienced in undertaking major CERCLA and RCRA projects for the public and private sector and the DOD, facility closure, and interaction with agencies and PRP groups, as well as projects in the water resources services market.

## PROFESSIONAL REGISTRATIONS

Certified Hydrogeologist, California
Certified Engineering Geologist, California
Registered Geologist, California
Registered Environmental Assessor, California

## PROFESSIONAL AFFILIATIONS

Society of Am. Military Engineers
American Geophysical Union

## EDUCATION

M.S., Geological Sciences, Univ. of Washington, Seattle, Washington, 1984.
B.S., Geology, Stanford University, Stanford, California, 1978.

## REPRESENTATIVE PROJECT EXPERIENCE

• Project Manager for environmental portion of The Gap corporate headquarters construction in waterfront area of downtown San Francisco. Project required site characterization and disposal management of hazardous soil generated during excavation of approximately 80,000 cubic yards for the building parking garage. Duties included development of approach, agency negotiation, and subcontractor management.

• Principal-in-Charge for BART General Environmental Services contract related to system extensions. The three-year, $3 MM contract included ISA and PSIs for land acquisition; site characterization and remediation; hazardous waste mitigation prior to demolition; construction monitoring; regulatory and health and safety compliance.

• Project Manager on Preliminary Roadway Design and Soil and Groundwater Contamination investigation for a road-widening along Sebastopol Road in Santa Rosa, California. The objective was to provide a preliminary design and assist Sonoma County Community Development Commission make informed decisions regarding financial and regulatory liabilities related to the road widening.

• Project Manager for contract with City and County of San Francisco to perform a subsurface contamination assessment along the 3-mile segment of San Francisco Bay waterfront property currently occupied by the Embarcadero automobile/light rail transportation corridor. Approximately 50 borings were drilled to characterize soil and groundwater conditions. Work was conducted during restricted hours.

## PRIOR PROFESSIONAL EXPERIENCE

***Dames & Moore*** *1984 -- 1998*

*Corporate Officer and Vice President,*
*Manager, San Francisco Geosciences and Geotechnical Engineering Services Group*

Built and maintained successful environmental services group through dedication to superior client service, operational growth and expansion, and commitment to staff development. Maintained a loyal group of diverse, motivated, creative, and client-oriented practitioners.

geologica

# GREG ROMERO

***Project Geologist***

**EXPERIENCE SUMMARY**

Greg Romero has 8 years of experience with the Environmental Consulting Industry. Mr. Romero has provided 4 years of analytical and consulting services for asbestos management and 4 years of technical analysis for geological and hydrogeological tasks on environmental, redevelopment, and water resources projects. He has experience on a broad range of sites in California, the San Francisco Bay Area, and the US.

**EXPERTISE**

Phase I and II Environmental Site Assessments
Soil and groundwater sampling
Monitoring well installation/development
Asbestos Consultation and Analysis

**EDUCATION**

B.S. in Earth Sciences 2001, University of California at Santa Cruz, Santa Cruz, CA.
Field Geology Course, summer 2000, University of California at Santa Cruz, Santa Cruz, CA.

**AWARDS AND CERTIFICATIONS**

OSHA HAZWOPR 40-hour training (April 2010)
EPA/AHERA Asbestos Building Inspector (February 2006)

**REPRESENTATIVE PROJECT EXPERIENCE**

**Geologica, Inc.**
*Project Geologist (May 2006 - present)*

Mr. Romero has provided environmental consulting services for regulatory compliance of hazardous materials, waste management, and environmental health & safety concerns. Key project experience is described below:

- Performed Phase I and II environmental site assessments for commercial, residential, and industrial facilities including shopping malls and retail facilities, banks, office buildings and complexes, gasoline service stations, dry cleaners, apartment complexes, and many other types of facilities in California.
- Performed soil and/or groundwater subsurface investigations including groundwater, and soil sampling, soil vapor, as well as well installation, development, and closure in sites in California and the US.
- Supervised the excavation and removal of contaminated soils in accordance to OSHA/HAZWOPER regulations for the EBMUD facility in Oakland, CA.

**PROFESSIONAL EXPERIENCE**

*RJ Lee Group Inc.* *2002 -- 2006*
Performed Polarized Light Microscopy (PLM) analysis for bulk asbestos samples and Phase Contrast Microscopy (PCM) analysis for asbestos air samples. Consulted in analytical results with written and verbal reports to various clientele. Assisted in TEM and AA Lead testing preparation and analysis. Consulted on Natural Occurring Asbestos (NOA) sampling and testing procedures for California.

*Tim Best, CEG Engineering & Geologic Consulting* *2000 -- 2001*
Assisted in technical and data review for Northern California Landslide and Water-Shed Analysis. Used computer models for the transfer of roads, landslides, and geologic data from various aerial photos and plots.

geologica

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