SGI environmental THE SOURCE GROUP, INC.

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By Alameda County Environmental Health at 4:32 pm, Jan 17, 2014

January 15, 2014

Mr. Jerry Wickham, P.G.
Alameda County Health Care Services Agency
Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

**Subject:** **Sub-Slab Vapor and Indoor Air Investigation Report**
**Former Francis Plating Site, 751-785 7th Street, Oakland, California**

Dear Mr. Wickham:

Enclosed please find the Sub-Slab Vapor and Indoor Air Investigation Report (Report) for the Former Francis Plating Site. The Report presents details regarding investigation activities and laboratory results, and provides conclusions and recommendations based on the results of the investigation. Sub-slab vapor data and empirical outdoor ambient and indoor air data collected suggest that vapor intrusion from the subsurface is not impacting indoor air at the Site. SGI is preparing a simple risk management plan to ensure that the current cap on the Site remains in place and that any breach of the cap or exposure to residual contaminants in the soil are performed in a manner that does not expose users of the Site or construction workers to unacceptable health risks.

With respect to earlier discussions of division of the large parcel, the administrative aspects of the parcel split, (shown on Figures 2 and 3 of the Report), are complete. After your review of the report, we would appreciate the opportunity to discuss process and option details as they pertain to gaining an NFA on the eastern parcel and enabling focused attention on the western parcel (the parcel with the former "Frog Pond").

Perjury Statement:
*I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge.*

If you have any questions or comments regarding the Report, please feel free to call me on my direct line at (925) 951-6386.

Sincerely,
**The Source Group, Inc.**

Matthew C. Sutton, P.E.
Project Manager

Cc: Tom McCoy, The Brush Street Group, LLC
Enclosure

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Pleasant Hill, CA 94523
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# SUB-SLAB VAPOR AND INDOOR AIR SAMPLING REPORT

**Former Francis Plating Site**
**751-785 7th Street**
**Oakland, California**

01-FP-002

Prepared For:

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Prepared By:

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January 15, 2014

Prepared By:

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Reviewed By:

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# 1.0 INTRODUCTION

The Source Group, Inc. (SGI), on behalf of The Brush Street Group, LLC (Brush Street Group), is submitting this *Sub-Slab Vapor and Indoor Air Sampling Report* (Report) for the Former Francis Plating Site located at 751-785 7th Street, Oakland, California (Site) (Figures 1 and 2). This sampling was performed at the request of Alameda County Environmental Health (ACEH) following their review of the initial investigation performed by SGI in May and June 2013 (ACEH, 2013). The initial investigation, summarized in the report *Soil Gas, Sub-Slab Vapor, and Indoor Air Investigations, 751-785 Seventh Street, Oakland, California*, was performed to further characterize soil gas and sub-slab vapor concentrations at the Site as well as evaluate potential health risks for users of onsite and adjacent commercial buildings (SGI, 2013). Concentrations of volatile organic compounds (VOCs) in soil gas and indoor air samples collected during the May and June investigation did not exceed applicable Environmental Screening Levels (ESLs).

In order to confirm the results of the initial investigation by SGI, ACEH requested the collection of additional data. SGI collected additional samples on December 6, 2013. These samples included two sub-slab vapor samples from existing probes located within the former plating shop, two indoor air samples, and one ambient air sample outside the building. Sample locations are depicted on Figures 2 and 3. Analytical results are provided in Tables 1 and 2 and further discussed in Section 3.2.

## 2.0 SITE BACKGROUND

The Site was operated as a plating facility from approximately 1957 to 1998. In 1998, the property was found to be abandoned along with chemicals and equipment on Site. As part of an emergency response action, the U.S. Environmental Protection Agency (U.S. EPA) removed abandoned chemicals and equipment, and excavated shallow soil in areas without asphalt or concrete coverings. In 2003, the current owner, Brush Street Group, LLC, acquired the property.

The Site is currently occupied by the Kinetic Arts Center, a circus and fitness facility. This facility operates within the existing building in the northeastern corner of the property. The remaining property is covered by concrete or asphalt, with the exception of an exposed strip of soil along the western property line and small landscaped areas along Brush Street.

Numerous Site investigations have been conducted at the Site. A Conceptual Site Model (CSM) prepared by BASELINE in 2012 was presented in the *Conceptual Site Model and Work Plan: Sub-Slab Vapor Investigation* (BASELINE, 2012). The CSM discusses in further detail the previous investigations conducted at the Site through 2012. In May and June 2013, SGI performed an investigation summarized in the *Soil Gas, Sub-Slab Vapor, and Indoor Air Investigation Report* in order to further characterize the soil gas, sub-slab vapor, and indoor air conditions at the Site (SGI, 2013). The results of that investigation indicated that VOC concentrations in the soil vapor and indoor air did not pose a risk to users of the Site or nearby facilities; the December 2013 sampling event was performed in order to confirm the results of that investigation.

# 3.0 SUB-SLAB VAPOR AND INDOOR AIR INVESTIGATION

Sub-slab vapor and indoor air sampling activities were conducted in accordance with the request from ACEH dated September 19, 2013 (ACEH, 2013). Two indoor air samples, one ambient air sample, and two sub-slab vapor samples were collected with the objective of confirming results from the May and June 2013 investigation (SGI, 2013).

## 3.1 Sub-Slab Vapor Point and Indoor Air Sampling

### 3.1.1 Sub-Slab Vapor Point Sampling

Sub-slab vapor sampling occurred on December 6, 2013. Two sub-slab vapor probes were sampled: Sub-Slab2, located near the center of the building over the former containment vault, and Sub-Slab 3, located near the best wing of the building. Approximate sample locations are shown on Figure 2.

Sub-slab vapor samples were collected from each point using a 1-liter SUMMA™ canister and sampling manifold provided by Torrent Laboratory (Torrent). A stainless steel ball valve was screwed into each sample port, which connected to the manifold with Teflon™ tubing. The manifold, which was equipped with a flow regulator that limited the flow to between 80 and 180 milliliters per minute (mL/min), connected directly to the 1-liter SUMMA™ canister.

Prior to sampling, a shut-in test was performed according to DTSC guidance (DTSC, 2012). Purging was also performed to ensure that stagnant or ambient air was removed from the sampling system and to ensure that samples collected were representative of subsurface conditions. Approximately three volumes of the sampling system were purged through the manifold into a purge canister by opening the manifold valve to the purge canister and then opening the canister valve. After the purging was complete, samples were collected in the 1-liter SUMMA™ canisters by opening the valve on the 1-liter SUMMA™ sample canister. SUMMA™ canister vacuum was monitored and recorded on field measurement logs during sampling.

Leak detection during sampling was conducted using a helium tracer shroud. The helium tracer was used as a quality control measure during sampling. During sampling, a concentration of approximately 20 percent helium was maintained around the sampling train and above the sample probe by positioning a shroud over the soil gas probe. Helium concentrations were monitored using a helium detector and adjusted as needed throughout sampling.

Following collection of each sample, the canister valve was closed and the sample container was prepared for delivery to the laboratory for analyses. The sample containers were labeled with sample point identification, date, and time of collection. The samples were relinquished under chain-of-custody documentation to Torrent for analysis by EPA method TO-15 for VOCs and by ASTM D1946 for helium.

### 3.1.2 Ambient and Indoor Air Sampling

Two indoor air samples were collected from the building on Site on December 6, 2013. The approximate sample locations are shown on Figure 3. The first sample, Indoor Air 1 (IA1), was collected near the center of the building between the office area and the main student instruction area. The second sample, Indoor Air 2 (IA2), was collected in the northwest corner of the building near the student lounge, kitchen, and storage areas.

An ambient air sample (Ambient) was also collected from the Site on December 6, 2013, concurrent with the indoor air samples mentioned above. The sample location, shown in Figure 3, was near the southwest corner of the Site and was upwind of the building.

During the sampling event, air samples were collected in 6-liter pre-evacuated, lab-certified SUMMA™ canisters with laboratory-calibrated flow controllers and particulate filters. All samples were collected over an eight-hour interval to simulate worker exposure. At the end of the eight-hour sampling period, the SUMMA™ canisters were closed tightly and relinquished under chain-of-custody to Torrent. The samples were analyzed by EPA method TO-15 using gas chromatography/mass spectrometry (GC/MS) in the Selective Ion Monitoring (SIM) acquisition mode.

## 3.2 Sub-Slab and Indoor Air Sampling Results

### 3.2.1 Sub-Slab Vapor Sample Results

As described in Section 3.1.1, sub-slab vapor sampling was conducted on December 6, 2013. Sample results for VOCs by USEPA Method TO-15 are presented in Table 1, and for helium by ASTM D1946 in Table 3. Full laboratory analytical reports are presented in Appendix B.

Helium, the leak detection compound, was detected at low concentrations in both of the sub-slab vapor samples, indicating ambient air leakage during sampling. To account for this leakage, a dilution factor (DF) was calculated using the concentration of helium in the sample and the average concentration of helium under the shroud during sampling using the following formula:

DF = [Concentration of Helium in Sample (%)] / [Concentration of Helium in Shroud (%)]

The dilution factors for each sample are calculated in Table 3, and were then used to adjust the laboratory-reported VOC concentrations to account for the ambient air leakage using the following formula:

Corrected concentrations ($\mu g/m^3$) = Reported concentration ($\mu g/m^3$) x [1 + DF]

DTSC guidance states that an ambient air leak of up to 5 percent is acceptable when a quantitative tracer is used under the sampling shroud (DTSC, 2012). Both of the samples had helium concentrations well under 5 percent, and so the corrected concentrations are deemed acceptable.

In order to estimate indoor air concentrations, the soil gas results were multiplied by an attenuation factor of 0.05 as recommended by the DTSC (DTSC, 2011). As shown in Table 1, the estimated indoor air concentrations of VOCs are below industrial indoor air ESLs.

### 3.2.2 Ambient and Indoor Air Sample Results

As described in Section 3.1.2, indoor air samples were collected from the building on Site on December 6, 2013. An ambient air sample was concurrently collected upwind of the building. Laboratory analytical results for the indoor air samples are presented on Table 2, with full laboratory analytical reports presented in Appendix B. As shown on Table 2, a variety of VOCs were detected in the ambient air sample and in each of the indoor air samples. The only constituent detected above the industrial indoor air ESL was benzene, with an ESL value of 0.42 µg/$m^3$. Benzene concentrations in samples Ambient, IA1, IA2 were 0.90, 0.90, and 1.0 µg/$m^3$, respectively.

# 4.0 DATA EVALUATION

Sampling activities at the Site were performed on December 6, 2013. These activities included the collection of samples from two sub-slab vapor probes within the building as well as the collection of two indoor air and one ambient air samples. The purpose of the sampling event was to confirm results from the previous investigation performed by SGI in May and June 2013.

## 4.1 Comparison to Previous Data

The laboratory analytical results from the December 2013 sampling event were compared to results from the previous investigation conducted by SGI in May and June 2013 (SGI, 2013). Sub-slab vapor data from the December sampling event revealed generally lower VOC concentrations than the data collected in May and June. VOC concentrations detected in indoor air samples in December were slightly higher than those detected in June; However, the chemicals that were detected at increased concentrations were not present due to sub-slab conditions, as discussed in more detail below.

## 4.2 Comparison to ESLs

The results of sub-slab soil vapor and indoor/ambient air sampling were compared to the ESLs for commercial/industrial land use. The ESLs are based on the lowest chemical-specific value that would be expected to represent an adverse cancer or non-cancer health risk using conservative exposure assumptions. The ESLs assume an unacceptable health risk to be an excess cancer risk over one in a million ($1 \times 10^{-6}$) or a non-cancer hazard index over 0.2 (CRWQCB, 2013). If detected VOC concentrations exceed the commercial/industrial ESLs, site-specific human health risk calculations may be necessary to determine if the site poses an unacceptable risk to potential receptors.

### 4.2.1 Sub-Slab Vapor Data

The adjusted December 2013 sub-slab vapor results from points Sub-Slab 2 and Sub-Slab3 were used to estimate indoor air concentrations within the building. A soil vapor to indoor air attenuation factor of 0.05 was used to estimate indoor air concentrations using the sub-slab vapor concentrations. Estimated hexane, trichlorofluoromethane, and toluene indoor air concentrations were 2.98, 0.705, and 0.116 µg/m$^3$, respectively. None of these concentrations exceed commercial/industrial ESLs. No other constituents were detected above laboratory reporting limits. Benzene was detected in indoor air (Section 4.2.2) but not detected above the method reporting limit of 0.08 µg/m$^3$ in sub-slab vapor samples. The complete data are presented in Table 1.

## 4.3 Ambient and Indoor Air Data

Indoor air sample results from December 2013 were compared to the commercial/industrial ESLs.

As discussed in Section 3.2, the only constituent detected above the indoor air ESL was benzene, with an ESL value of 0.42 µg/$m^3$. Benzene concentrations in samples Ambient, IA1, IA2 were 0.90, 0.90, and 1.0 µg/$m^3$, respectively. The benzene concentrations in ambient outdoor air and indoor air are essentially the same concentration.

The estimated indoor air concentration of benzene based on sub-slab vapor data (non-detect at 0.08 µg/$m^3$ method detection limit) was 10 times lower than the empirical indoor air concentration of benzene (up to 1.0 µg/$m^3$). Benzene was not detected in sub-slab vapor samples and the benzene concentration in the ambient outdoor air sample was consistent with the indoor air sample, which suggests that benzene in indoor air is not present as a result of vapor intrusion from the subsurface. Sub-slab vapor and indoor air data suggest ambient outdoor air conditions are impacting indoor air at the Site.

## 5.0 CONCLUSIONS AND RECOMMENDATIONS

This report documents the December 2013 sampling of the sub-slab vapor and indoor air performed to confirm results of previous Site investigations. Data collected during this event are generally consistent with the results of earlier sampling events (SGI, 2013). While indoor air concentrations of benzene exceeded the industrial ESL, ambient air and sub-slab vapor data indicate that subsurface contamination is not the cause. Because of this, site-specific health risk calculations were not performed.

SGI is currently preparing a risk management plan (RMP) to ensure that the current cap on the Site remains in place and that any breach of the cap or exposure to residual contaminants in the soil are performed in a manner that does not expose users of the Site or construction workers to unacceptable health risks. This RMP will be submitted under a separate cover.

## 6.0 REFERENCES

Alameda County Environmental Health (ACEH). 2013. Case File Review for SLIC Case RO0002586 and GeoTracker Global ID SL0600130797, Francis Plating, 752-785 7th Street, Oakland, CA 94607. September 13.

BASELINE. 2012. Conceptual Site Model and Work Plan for Sub-Slab Vapor Investigation. June.

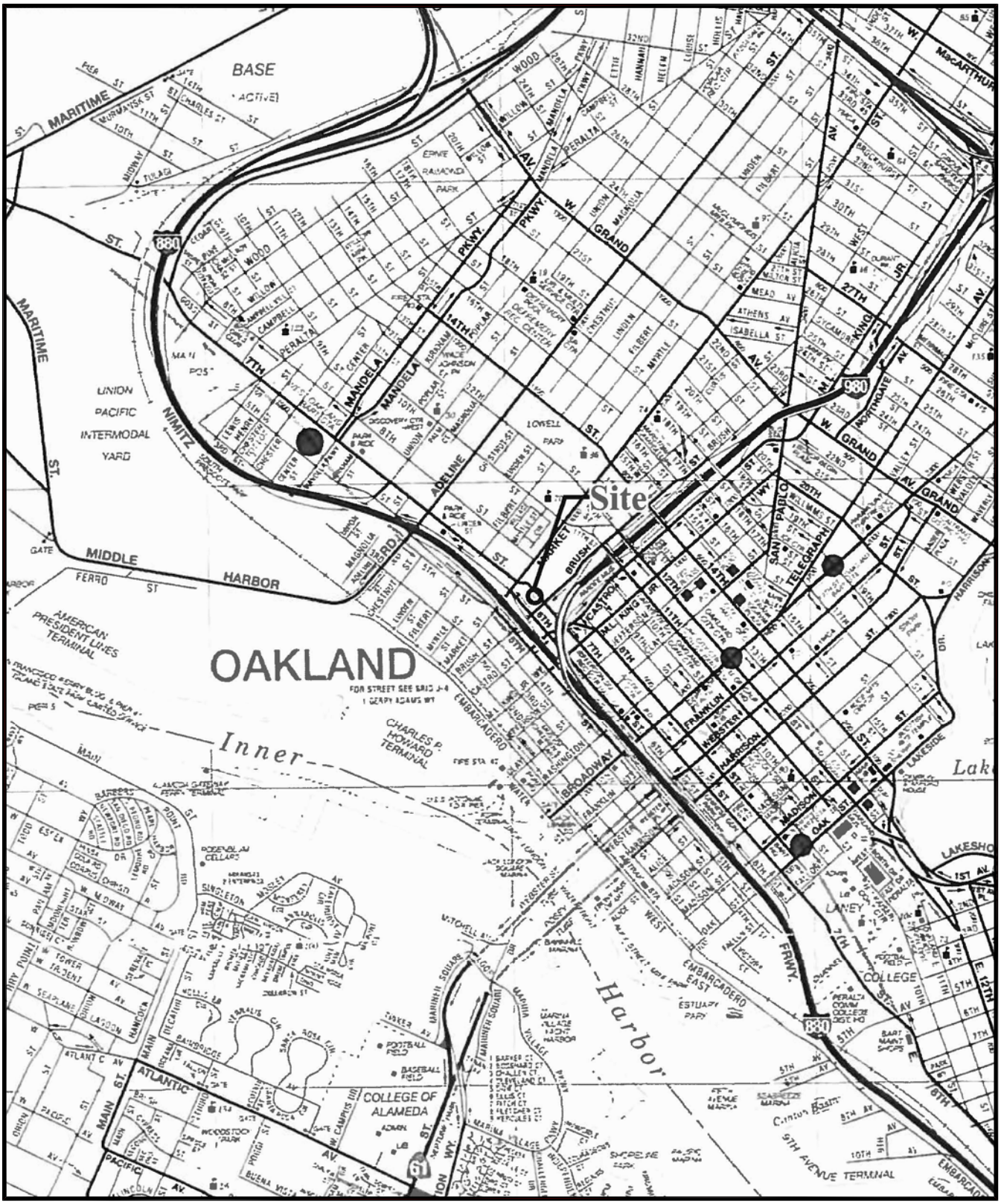
California Regional Water Quality Control Board (CRWQCB), San Francisco Bay Area Region. 2013. Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater, Summary Table E. February.

Department of Toxic Substances Control (DTSC), Los Angeles Regional Water Quality Control Board, and San Francisco Regional Water Quality Control Board. 2012. Advisory – Active Soil Gas Investigations. April.

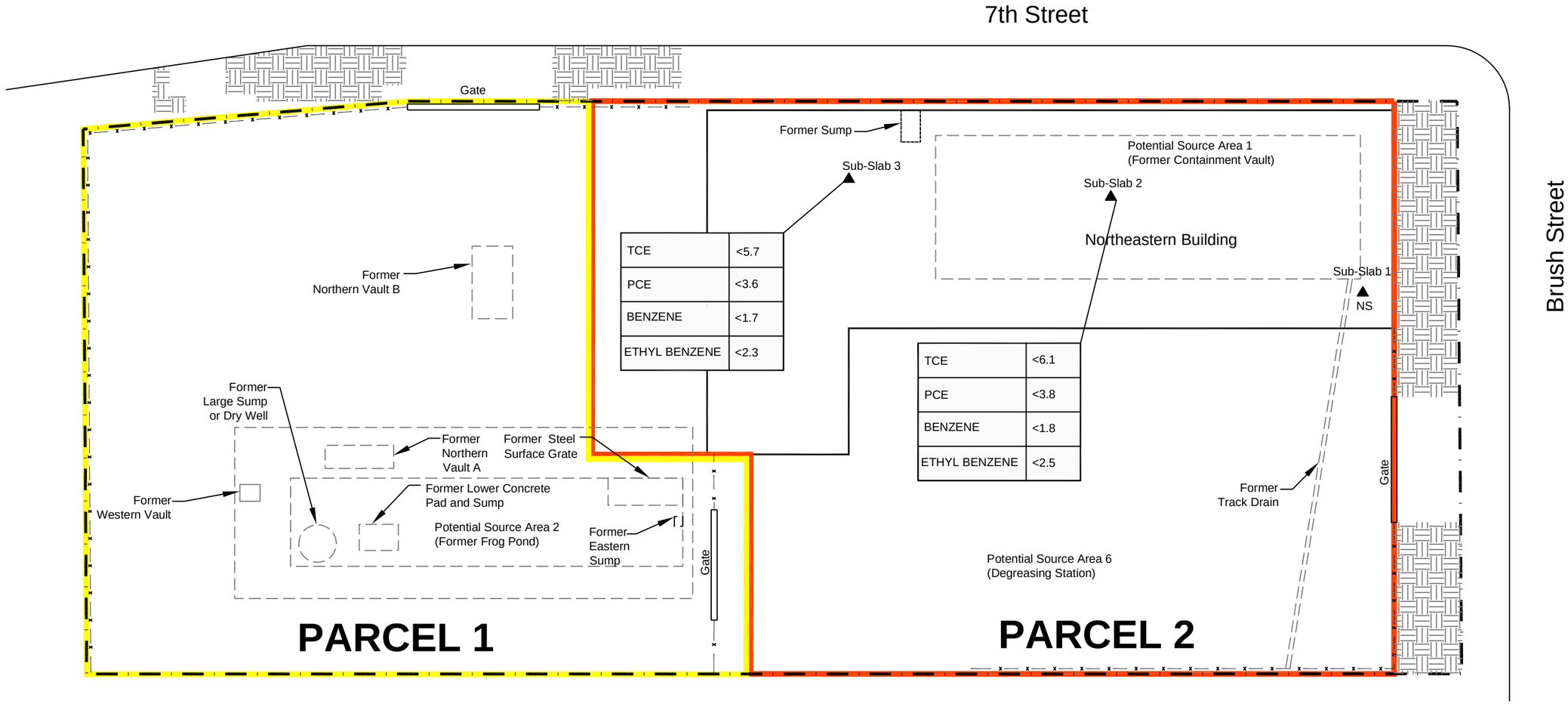
DTSC. 2011. Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air. October.

The Source Group, Inc. (SGI). 2013. Soil Gas, Sub-Slab Vapor, and Indoor Air Investigation Report, Former Francis Plating Site, 751-785 7th Street, Oakland, California. August.

**FIGURES**




| | | | | | |
|---|---|---|---|---|---|
| SGI environmental THE SOURCE GROUP, INC.<br>3478 BURSKIRK AVENUE, SUITE 100<br>PLEASANT HILL, CA 94523 | FORMER FRANCIS PLATING<br>751-785 SEVENTH STREET<br>OAKLAND, CALIFORNIA | | | **SITE LOCATION MAP** | N |
| | PROJECT NO.<br>01-FP-001 | DATE<br>07/15/2013 | DR.BY:<br>ZA | APP. BY:<br>JH | 0 200 400<br>HORIZONTAL SCALE IN FEET |
| | | | | | **FIGURE 1** |




LEGEND

| | |
|---|---|
| Sub-Slab 2 ▲ | Sub Slab Sample Location |
| <5.7 | Compound Not Detected at or Above Adjusted Laboratory Reporting Results |
| TCE | Trichloroethene |
| PCE | Tetrachloroethene |
| | Exposed Soil Area |
| | Location of Historical Features Since Removed or Sealed and Capped |
| NS | Not Sampled |
| | Site Boundary |
| | Fence |
| | Parcel 1 Boundary |
| | Parcel 2 Boundary |

Notes:

1. Laboratory reported results were adjusted to account for ambient air leakage during sampling. See report text for detail.
2. All concentration reported in micrograms per cubic meter ($\mu g/m^3$)

FORMER FRANCIS PLATING SITE
751-785 BRUSH STREET
OAKLAND, CA

| PROJECT NO. | DATE | DRAWN BY: | APP. BY: |
|---|---|---|---|
| 01-FP-001 | 12/18/2013 | ZA | MC |

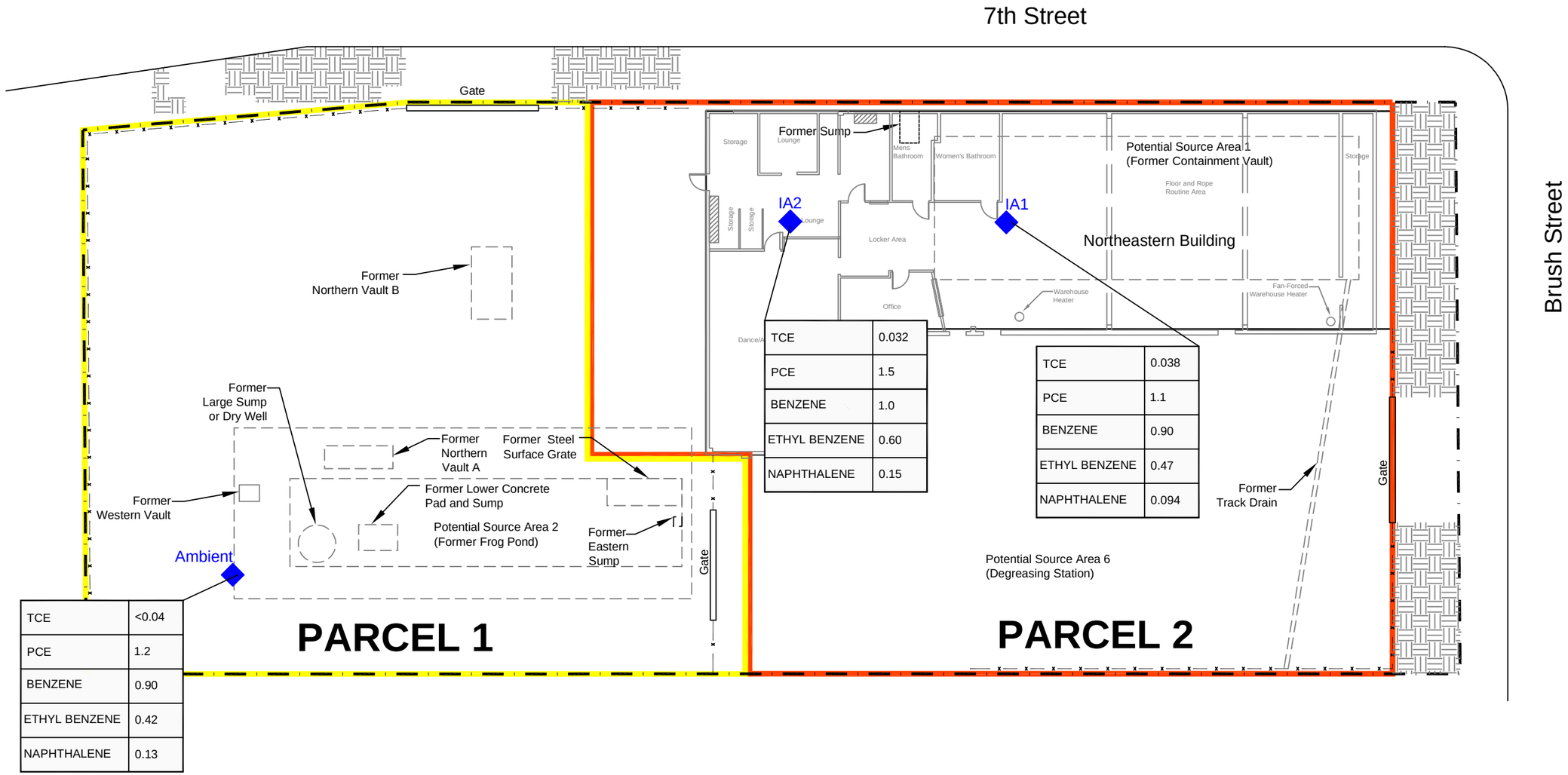
0 20 40
HORIZONTAL SCALE IN FEET

# SUB-SLAB VAPOR SAMPLE LOCATIONS AND DECEMBER 2013 RESULTS


SGI environmental
THE SOURCE GROUP, INC.
3478 BUSKIRK AVENUE, SUITE 100
PLEASANT HILL, CA 94523


N

**FIGURE 2**




| | |
|---|---|
| TCE | 0.032 |
| PCE | 1.5 |
| BENZENE | 1.0 |
| ETHYL BENZENE | 0.60 |
| NAPHTHALENE | 0.15 |

| | |
|---|---|
| TCE | 0.038 |
| PCE | 1.1 |
| BENZENE | 0.90 |
| ETHYL BENZENE | 0.47 |
| NAPHTHALENE | 0.094 |

| | |
|---|---|
| TCE | <0.04 |
| PCE | 1.2 |
| BENZENE | 0.90 |
| ETHYL BENZENE | 0.42 |
| NAPHTHALENE | 0.13 |

LEGEND

- IA2 — Ambient or Indoor Air Sampling Location
- Site Boundary
- Fence
- Chemical Storage Area
- Exposed Soil Area
- Location of Historical Features Since Removed or Sealed and Capped
- Parcel 1 Boundary
- Parcel 2 Boundary

TCE — Trichloroethene
PCE — Tetrachloroethene
<0.04 — Compound Not Detected at or Above Laboratory Reporting Results

Notes:

1. All concentration reported in micrograms per cubic meter (µg/m³)

FORMER FRANCIS PLATING SITE
751-785 BRUSH STREET
OAKLAND, CA

| PROJECT NO. | DATE | DRAWN BY: | APP. BY: |
|---|---|---|---|
| 01-FP-001 | 12/18/2013 | ZA | MC |

0 20 40
HORIZONTAL SCALE IN FEET

# AMBIENT AND INDOOR AIR SAMPLE LOCATIONS AND DECEMBER 2013 RESULTS

SGI environmental
THE SOURCE GROUP, INC.
3478 BUSKIRK AVENUE, SUITE 100
PLEASANT HILL, CA 94523

N

FIGURE 3

**TABLES**

**Table 1**
**Sub-Slab Soil Vapor Results - December 2013**
Former Francis Plating
785 7th St., Oakland, California

| Analyte | Sub-Slab Sample Results - As-Reported | | Sub-Slab Sample Results - Adjusted[1] | | Estimated Indoor Air Concentration[2] | | Indoor Air ESL[3] | |
|---|---|---|---|---|---|---|---|---|
| | Sub-Slab 2 | Sub-Slab 3 | Sub-Slab 2 | Sub-Slab 3 | Sub-Slab 2 | Sub-Slab 3 | Residential Ambient and Indoor Air | Industrial Ambient and Indoor Air |
| **1,1-Dichloroethene** | < 2.0 | < 2.0 | < 2.2 | < 2.1 | < 0.10 | < 0.10 | 210 | 880 |
| **Acetone** | < 19 | < 19 | < 21 | < 20 | < 0.95 | < 0.95 | 32,000 | 140,000 |
| **Hexane** | **59.5** | **2.03** | **66.9** | **2.15** | **2.98** | **0.10** | NA | NA |
| **tert-Butanol** | < 8.4 | < 8.4 | < 9.4 | < 8.9 | < 0.42 | < 0.42 | NA | NA |
| **Carbon Tetrachloride** | < 3.2 | < 3.2 | < 3.6 | < 3.4 | < 0.16 | < 0.16 | 0.058 | 0.29 |
| **1,1,1-Trichloroethane** | < 2.8 | < 2.8 | < 3.1 | < 3.0 | < 0.14 | < 0.14 | 5,200 | 22,000 |
| **2-Butanone (MEK)** | < 1.5 | < 1.5 | < 1.7 | < 1.6 | < 0.08 | < 0.08 | 5,200 | 22,000 |
| **Ethyl Acetate** | < 1.8 | < 1.8 | < 2.0 | < 1.9 | < 0.09 | < 0.09 | NA | NA |
| **Benzene** | < 1.6 | < 1.6 | < 1.8 | < 1.7 | < 0.08 | < 0.08 | 0.084 | 0.42 |
| **Trichloroethylene** | < 5.4 | < 5.4 | < 6.1 | < 5.7 | < 0.27 | < 0.27 | 0.59 | 3.0 |
| **Trichlorofluoromethane** | **14.1** | < 5.6 | **15.86** | < 5.9 | **0.705** | < 0.28 | NA | NA |
| **Toluene** | **2.32** | < 1.9 | **2.61** | < 2.0 | **0.116** | < 0.10 | 310 | 1300 |
| **Tetrachloroethylene** | < 3.4 | < 3.4 | < 3.8 | < 3.6 | < 0.17 | < 0.17 | 0.41 | 2.1 |
| **Ethyl Benzene** | < 2.2 | < 2.2 | < 2.5 | < 2.3 | < 0.11 | < 0.11 | 0.97 | 4.9 |
| **m,p-Xylene** | < 4.3 | < 4.3 | < 4.8 | < 4.6 | < 0.22 | < 0.22 | 100[4] | 440[4] |
| **o-Xylene** | < 2.2 | < 2.2 | < 2.5 | < 2.3 | < 0.11 | < 0.11 | 100[4] | 440[4] |
| **Styrene** | < 2.2 | < 2.2 | < 2.5 | < 2.3 | < 0.11 | < 0.11 | 940 | 3900 |
| **4-Ethyl Toluene** | < 2.5 | < 2.5 | < 2.8 | < 2.6 | < 0.13 | < 0.13 | NA | NA |
| **1,3,5-Trimethylbenzene** | < 2.5 | < 2.5 | < 2.8 | < 2.6 | < 0.13 | < 0.13 | NA | NA |
| **1,2,4-Trimethylbenzene** | < 2.5 | < 2.5 | < 2.8 | < 2.6 | < 0.13 | < 0.13 | NA | NA |

**Notes:**

All results given in micrograms per cubic meter ($\mu g/m^3$)
Results given only for parameters detected in one or more samples. See Appendix B for complete results.
Values reported above the laboratory reporting limits are shown in **bold**
Note 1 = Laboratory-reported results were adjusted to account for ambient air leakage using the dilution factors (DF) calculated in Table 3. The as-reported results were multiplied by (1 + DF) to calculate the adjusted result.
Note 2 = Results multiplied by 0.05 attenuation factor as recommended by the Cal/EPA Department of Toxic Substances Control.
Note 3 = California Regional Water Quality Control Board, San Francisco Bay Area Region, February 2013, *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater, Summary Table E.*
Note 4 = Based on ESL for total xylenes
ESLs = Environmental Screening Levels
<x.x = Compound was not identified above the laboratory reporting limit of x.x.

**Table 2**
**Ambient and Indoor Air Sampling Results - December 2013**
Former Francis Plating
785 7th St., Oakland, California

| Analyte | Ambient Air Concentration | Indoor Air Concentration | | Indoor Air ESL[2] | |
|---|---|---|---|---|---|
| | | Location 1 (IA1) | Location 2 (IA2) | Residential Ambient and Indoor Air | Industrial Ambient and Indoor Air |
| **Acetone** | **7.6** | **72** | **28** | 32,000 | 140,000 |
| **Benzene** | **0.90** | **0.90** | **1.0** | 0.084 | 0.42 |
| **Bromomethane** | **0.71** | **0.43** | **0.30** | 5.2 | 220 |
| **1,3-Butadiene** | **0.11** | **0.10** | **0.14** | NA | NA |
| **2-Butanone (MEK)** | **0.95** | < 0.02 | **0.81** | 5,200 | 22,000 |
| **Carbon disulfide** | **0.036** | **0.050** | **0.062** | NA | NA |
| **Carbon Tetrachloride** | < 0.05 | **0.0504** | **0.0504** | 0.058 | 0.29 |
| **Chloroethane** | **0.056** | **0.029** | **0.034** | 31,000 | 130,000 |
| **Chloroform** | **0.0569** | **0.0735** | **0.0637** | 0.46 | 2.3 |
| **Chloromethane** | **0.27** | **0.23** | **0.21** | 94 | 390 |
| **1,4-Dichlorobenzene** | **0.090** | **0.10** | **0.090** | 0.22 | 1.1 |
| **Dichlorodifluoromethane** | **1.10** | **0.95** | **0.80** | NA | NA |
| **1,2-Dichloroethane (EDC)** | **0.054** | < 0.02 | **0.041** | 0.12 | 0.58 |
| **1,1-Dichloroethene** | < 0.03 | **0.024** | **0.020** | 210 | 880 |
| **1,2-Dichloropropane** | < 0.04 | **0.046** | < 0.02 | 0.24 | 1.2 |
| **Ethyl Acetate** | **0.18** | **0.40** | **0.54** | NA | NA |
| **Ethyl Benzene** | **0.42** | **0.47** | **0.60** | 0.97 | 4.9 |
| **4-Ethyl Toluene** | **0.24** | **0.31** | **0.36** | NA | NA |
| **Freon 113** | **0.38** | **0.34** | **0.32** | NA | NA |
| **Heptane** | **0.47** | **11** | **1.4** | NA | NA |
| **Hexane** | **0.70** | **0.81** | **0.84** | NA | NA |
| **2-Hexanone** | **0.20** | **0.078** | **0.23** | NA | NA |
| **m,p-Xylene** | **1.4** | **1.5** | **2.0** | 100[3] | 440[3] |
| **Methylene Chloride** | **0.33** | **0.53** | **0.74** | 5.2 | 260 |
| **Methyl Isobutyl Ketone (MIBK)** | **0.18** | **0.20** | **0.18** | 3,100 | 13,000 |
| **Napthalene** | **0.13** | **0.094** | **0.15** | 0.072 | 0.36 |
| **o-Xylene** | **0.49** | **0.47** | **0.60** | 100[3] | 440[3] |
| **Styrene** | **0.15** | **0.19** | **0.28** | 940 | 3,900 |
| **tert-Butanol** | **0.55** | < 0.03 | **0.45** | NA | NA |
| **1,1,2,2-Tetrachloroethane** | < 0.06 | < 0.007 | **0.0138** | 0.042 | 0.21 |
| **Tetrachloroethylene** | **1.2** | **1.1** | **1.5** | 0.41 | 2.1 |
| **Toluene** | **1.9** | **1.9** | **2.3** | 310 | 1300 |
| **1,2,4-Trichlorobenzene** | < 0.06 | < 0.04 | **0.052** | 4.2 | 180 |
| **Trichloroethylene** | < 0.04 | **0.038** | **0.032** | 0.59 | 3.0 |
| **Trichloromonofluoromethane** | **0.167** | **0.174** | **0.134** | NA | NA |
| **1,2,4-Trimethylbenzene** | **0.59** | **0.49** | **0.64** | NA | NA |
| **1,3,5-Trimethylbenzene** | **0.18** | **0.15** | **0.20** | NA | NA |
| **Vinyl Chloride** | < 0.02 | **0.016** | **0.010** | 0.031 | 0.16 |

**Notes:**

All results given in micrograms per cubic meter ($\mu g/m^3$)
Results given only for parameters detected in one or more samples. See Appendix B for complete results.
Values reported above the laboratory reporting limits are shown in **bold**
Note 1 = Results multiplied by 0.05 attenuation factor as recommended by the Cal/EPA Department of Toxic Substances Control.
Note 2 = California Regional Water Quality Control Board, San Francisco Bay Area Region, February 2013, *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater, Summary Table E.*
Note 3 = Based on ESL for total xylenes
E = Estimated value due to being outside of calibration range.
ESLs = Environmental Screening Levels
<x.x = Compound was not identified above the laboratory reporting limit of x.x.

**Table 3**
**Helium Results and Dilution Factor Calculations - December 2013**
Former Francis Plating
785 7th St., Oakland, California

| | Helium in Sample (%) | Average Helium Under Shroud (%) | Dilution Factor (DF)[1] |
|---|---|---|---|
| **Sub-Slab 2** | 2.1 | 16.8 | 0.125 |
| **Sub-Slab 3** | 1.2 | 20.2 | 0.059 |

**Notes:**
Note 1 = Dilution factor is calculated by dividing the helium concentration detected in the sample by the average helium concentration under the shroud during sampling

# APPENDIX A

# SAMPLING FIELD FORMS

# DAILY FIELD RECORD

SGI environmental THE SOURCE GROUP, INC.



| | |
|---|---|
| Project and Task Number: 01-FP-002 | Date: 12/6/13 |
| Project Name: FRANCIS PLATING | Field Activity: Subslab/Ambient/IA sampling |
| Location: 7TH ST OAKLAND | Weather clear, 40° F |

| PERSONNEL: Name | Company | Time In | Time Out |
|---|---|---|---|
| Mary Cunningham | SGI | 0830 | 1600 |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

**PERSONAL SAFETY CHECKLIST**

| | | | | | |
|---|---|---|---|---|---|
| | Steel-toed Boots | | Hard Hat | | Tyvek Coveralls |
| | Rubber Gloves | | Safety Goggles | | ½ Face Respirator |

| DRUM I.D. | DESCRIPTION OF CONTENTS AND QUANTITY | LOCATION |
|---|---|---|
| | | |
| | | |
| | | |

| TIME | DESCRIPTION OF WORK PERFORMED |
|---|---|
| 0830 | Arrive e site |
| 0900 | Deploy IA1, IA2, and Ambient 8 hr canisters (6 L SUMMA) |
| 0915 | Set up for Subslab 2 - leak test, purge. |
| 0930 | Sample Subslab 2 |
| 0945 | Leave site, purchase He canister |
| 1000 | Set up for subslab 3. Leak test, purge. |
| 1020 | Sample subslab 3. Note staining surrounding probe due to spilled veg. oil |
| 1100 | Check on 8 hour canisters. Note IA 2 is filling fast |
| 1430 | Recheck 8 hour canisters |
| 1530 | Finish IA1, IA2, Ambient |
| 1600 | Depart site |
| | |
| | |
| | |
| | |
| | |

SOIL VAPOR FIELD MEASUREMENT LOG

# The Source Group, Inc.

| | | | |
|---|---|---|---|
| **Date:** 12/6/13 | | **Sampler:** M CUMMINGHAM | |
| **Client:** FRANCIS PLATING | | **Project #:** 01-FP-002 | |
| **Container ID:** 6127 | | | |
| **Sample ID:** Subslab2 | | | |
| **Weather Conditions** | **Temperature:** 40 | **Precipitation:** clear | |

| | | | |
|---|---|---|---|
| **Sampling Device:** 1L SUMMA | | | |
| **Leak Test:** Y | | **Leak Check Compound:** Helium | |
| **Purge Volume:** 1 minute | | | |
| **Purge Start Time:** 0925 | | **End Time:** 0926 | |
| **Sample Start Time:** 0930 | | **End Time:** 0935 | |
| **Canister Start Vacuum:** -30" Hg | | **End Vacuum:** -5" Hg | |

**Field Measurements**

| Time | Flow (ml/min) | Vacuum Pressure (inches Hg) | Comments |
|---|---|---|---|
| 0930 | | -30 | He: 17% |
| 0931 | | -25 | 19% |
| 0932 | | -15 | 19% |
| 0934 | | -10 | 16% |
| 0935 | | -5 | 14% |
| 0935 | | | 16% |
| | | | |
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| Notes |
|---|
| |
| Av He = 16.83% |
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| |

SOIL VAPOR FIELD MEASUREMENT LOG

# The Source Group, Inc.

| | | | |
|---|---|---|---|
| **Date:** 12/6/13 | | **Sampler:** M. Cunningham | |
| **Client:** FRANCIS PLATING | | **Project #:** 01-FP-002 | |
| **Container ID:** A 7465 | | | |
| **Sample ID:** sublab 3 | | | |
| **Weather Conditions** | **Temperature:** 40 F | | **Precipitation:** clear |

| | | | |
|---|---|---|---|
| **Sampling Device:** 1 L SUMMA | | | |
| **Leak Test:** YES | | **Leak Check Compound:** Helium | |
| **Purge Volume:** 1 minute | | | |
| **Purge Start Time:** 1015 | | **End Time:** 1016 | |
| **Sample Start Time:** 1020 | | **End Time:** 1029 | |
| **Canister Start Vacuum:** -30" Hg | | **End Vacuum:** -5" Hg | |

**Field Measurements**

| Time | Flow (ml/min) | Vacuum Pressure (inches Hg) | Comments |
|---|---|---|---|
| 1020 | 150 | -30 | He - 21% |
| 1022 | ↓ | -25 | 23% |
| 1024 | ↓ | -20 | 19% |
| 1026 | ↓ | -15 | 21% |
| 1028 | ↓ | -10 | 19% |
| 1029 | ↓ | -5 | 19% |
| | | | |
| | | | |
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| | | | |

**Notes**

Oil staining e probe, likely from deep fryer located nearby (veg oil). Didn't appear to be oil in probe

Atm He = 20.17%

# APPENDIX B

# LABORATORY ANALYTICAL DATA

Matthew C. Sutton
The Source Group, Inc
3478 Buskirk Avenue, Suite 100
Pleasant Hill, California 94523
Tel: 925.951.6386
Fax: 925.944.2859
Email: msutton@thesourcegroup.net

RE:

Work Order No.: 1312039

Dear Mary Cunningham:

Torrent Laboratory, Inc. received 5 sample(s) on December 09, 2013 for the analyses presented in the following Report.

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

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

Patti Sandrock
QA Officer

December 16, 2013
Date

**Date:** 12/16/2013

**Client:** The Source Group, Inc

**Project:**

**Work Order:** 1312039

## CASE NARRATIVE

No issues encountered with the receiving, preparation, analysis or reporting of the results associated with this work order.

Unless otherwise indicated in the following narrative, no results have been method and/or field blank corrected.

Reported results relate only to the items/samples tested by the laboratory.

This report shall not be reproduced, except in full, without the written approval of Torrent Analytical, Inc.

The associated report containing the data for the individually certified canisters can be found on WO 1312069.

Torrent LABORATORY, INC.

## Sample Result Summary

**Report prepared for:** Mary Cunningham
The Source Group, Inc

**Date Received:** 12/09/13
**Date Reported:** 12/16/13

**IA 1**

1312039-001A

| Parameters: | Analysis Method | DF | MDL | PQL | Results ug/m3 |
|---|---|---|---|---|---|
| Dichlorodifluoromethane | TO15SIM | 1 | 0.018 | 0.05 | 0.95 |
| Chloromethane | TO15SIM | 1 | 0.0088 | 0.02 | 0.23 |
| Vinyl Chloride | TO15SIM | 1 | 0.0037 | 0.01 | 0.016 |
| 1,3-Butadiene | TO15SIM | 1 | 0.022 | 0.04 | 0.10 |
| Bromomethane | TO15SIM | 1 | 0.0082 | 0.02 | 0.43 |
| Chloroethane | TO15SIM | 1 | 0.0021 | 0.01 | 0.029 |
| Trichloromonofluoromethane | TO15SIM | 1 | 0.012 | 0.03 | 0.174 |
| 1,1-Dichloroethene | TO15SIM | 1 | 0.0068 | 0.02 | 0.024 |
| Methylene Chloride | TO15SIM | 1 | 0.015 | 0.04 | 0.53 |
| Freon 113 | TO15SIM | 1 | 0.013 | 0.04 | 0.34 |
| Carbon disulfide | TO15SIM | 1 | 0.0028 | 0.02 | 0.050 |
| Hexane | TO15SIM | 1 | 0.0045 | 0.02 | 0.81 |
| Ethyl Acetate | TO15SIM | 1 | 0.0033 | 0.02 | 0.40 |
| Chloroform | TO15SIM | 1 | 0.00813 | 0.02 | 0.0735 |
| Carbon Tetrachloride | TO15SIM | 1 | 0.0085 | 0.03 | 0.0504 |
| Benzene | TO15SIM | 1 | 0.034 | 0.06 | 0.90 |
| 1,2-Dichloropropane | TO15SIM | 1 | 0.0047 | 0.02 | 0.046 |
| Trichloroethylene | TO15SIM | 1 | 0.011 | 0.03 | 0.038 |
| Methyl Isobutyl Ketone (MIBK) | TO15SIM | 1 | 0.0064 | 0.02 | 0.20 |
| Toluene | TO15SIM | 1 | 0.0042 | 0.02 | 1.9 |
| 2-Hexanone | TO15SIM | 1 | 0.0089 | 0.02 | 0.078 |
| Tetrachloroethylene | TO15SIM | 1 | 0.026 | 0.07 | 1.1 |
| Ethylbenzene | TO15SIM | 1 | 0.0023 | 0.02 | 0.47 |
| m,p-Xylene | TO15SIM | 1 | 0.0042 | 0.02 | 1.5 |
| Styrene | TO15SIM | 1 | 0.0031 | 0.02 | 0.19 |
| o-Xylene | TO15SIM | 1 | 0.0022 | 0.02 | 0.47 |
| 4-Ethyl toluene | TO15SIM | 1 | 0.0034 | 0.02 | 0.31 |
| 1,3,5-Trimethylbenzene | TO15SIM | 1 | 0.0035 | 0.02 | 0.15 |
| 1,2,4-Trimethylbenzene | TO15SIM | 1 | 0.0033 | 0.02 | 0.49 |
| 1,4-Dichlorobenzene | TO15SIM | 1 | 0.0052 | 0.03 | 0.10 |
| Naphthalene | TO15SIM | 1 | 0.0047 | 0.03 | 0.094 |
| Isopropyl Alcohol | TO15SIM | 20 | 0.32 | 30 | 55 |
| Acetone | TO15SIM | 20 | 0.52 | 1 | 72 |
| Heptane | TO15SIM | 20 | 0.066 | 0.4 | 11 |

Torrent LABORATORY, INC.

## Sample Result Summary

**Report prepared for:** Mary Cunningham
The Source Group, Inc

**Date Received:** 12/09/13
**Date Reported:** 12/16/13

**IA 2**

1312039-002A

| Parameters: | Analysis Method | DF | MDL | PQL | Results ug/m3 |
|---|---|---|---|---|---|
| Dichlorodifluoromethane | TO15SIM | 1 | 0.018 | 0.05 | 0.80 |
| Chloromethane | TO15SIM | 1 | 0.0088 | 0.02 | 0.21 |
| Vinyl Chloride | TO15SIM | 1 | 0.0037 | 0.01 | 0.010 |
| 1,3-Butadiene | TO15SIM | 1 | 0.022 | 0.04 | 0.14 |
| Bromomethane | TO15SIM | 1 | 0.0082 | 0.02 | 0.30 |
| Chloroethane | TO15SIM | 1 | 0.0021 | 0.01 | 0.034 |
| Trichloromonofluoromethane | TO15SIM | 1 | 0.012 | 0.03 | 0.134 |
| 1,1-Dichloroethene | TO15SIM | 1 | 0.0068 | 0.02 | 0.020 |
| tert-Butanol | TO15SIM | 1 | 0.011 | 0.03 | 0.45 |
| Methylene Chloride | TO15SIM | 1 | 0.015 | 0.04 | 0.74 |
| Freon 113 | TO15SIM | 1 | 0.013 | 0.04 | 0.32 |
| Carbon disulfide | TO15SIM | 1 | 0.0028 | 0.02 | 0.062 |
| Hexane | TO15SIM | 1 | 0.0045 | 0.02 | 0.84 |
| 2-Butanone (MEK) | TO15SIM | 1 | 0.0028 | 0.02 | 0.81 |
| Ethyl Acetate | TO15SIM | 1 | 0.0033 | 0.02 | 0.54 |
| Chloroform | TO15SIM | 1 | 0.00813 | 0.02 | 0.0637 |
| ETBE | TO15SIM | 1 | 0.0048 | 0.02 | 0.025 |
| 1,2-Dichloroethane (EDC) | TO15SIM | 1 | 0.0050 | 0.02 | 0.041 |
| Carbon Tetrachloride | TO15SIM | 1 | 0.0085 | 0.03 | 0.0504 |
| Benzene | TO15SIM | 1 | 0.034 | 0.06 | 1.0 |
| Heptane | TO15SIM | 1 | 0.0033 | 0.02 | 1.4 |
| Trichloroethylene | TO15SIM | 1 | 0.011 | 0.03 | 0.032 |
| Methyl Isobutyl Ketone (MIBK) | TO15SIM | 1 | 0.0064 | 0.02 | 0.18 |
| 2-Hexanone | TO15SIM | 1 | 0.0089 | 0.02 | 0.23 |
| Tetrachloroethylene | TO15SIM | 1 | 0.026 | 0.07 | 1.5 |
| Ethylbenzene | TO15SIM | 1 | 0.0023 | 0.02 | 0.60 |
| m,p-Xylene | TO15SIM | 1 | 0.0042 | 0.02 | 2.0 |
| Styrene | TO15SIM | 1 | 0.0031 | 0.02 | 0.28 |
| 1,1,2,2-Tetrachloroethane | TO15SIM | 1 | 0.0023 | 0.007 | 0.0138 |
| o-Xylene | TO15SIM | 1 | 0.0022 | 0.02 | 0.60 |
| 4-Ethyl toluene | TO15SIM | 1 | 0.0034 | 0.02 | 0.36 |
| 1,3,5-Trimethylbenzene | TO15SIM | 1 | 0.0035 | 0.02 | 0.20 |
| 1,2,4-Trimethylbenzene | TO15SIM | 1 | 0.0033 | 0.02 | 0.64 |
| 1,4-Dichlorobenzene | TO15SIM | 1 | 0.0052 | 0.03 | 0.090 |
| 1,2,4-trichlorobenzene | TO15SIM | 1 | 0.066 | 0.04 | 0.052 |
| Naphthalene | TO15SIM | 1 | 0.0047 | 0.03 | 0.15 |
| Acetone | TO15SIM | 50 | 1.3 | 2 | 28 |
| Toluene | TO15SIM | 50 | 0.21 | 1 | 2.3 |

Torrent LABORATORY, INC.

## Sample Result Summary

**Report prepared for:** Mary Cunningham
The Source Group, Inc

**Date Received:** 12/09/13
**Date Reported:** 12/16/13

**Ambient** 1312039-003A

| Parameters: | Analysis Method | DF | MDL | PQL | Results ug/m3 |
|---|---|---|---|---|---|
| Dichlorodifluoromethane | TO15SIM | 1.66 | 0.030 | 0.08 | 1.1 |
| Chloromethane | TO15SIM | 1.66 | 0.015 | 0.03 | 0.27 |
| 1,3-Butadiene | TO15SIM | 1.66 | 0.036 | 0.07 | 0.11 |
| Bromomethane | TO15SIM | 1.66 | 0.014 | 0.03 | 0.71 |
| Chloroethane | TO15SIM | 1.66 | 0.0034 | 0.02 | 0.056 |
| Trichloromonofluoromethane | TO15SIM | 1.66 | 0.020 | 0.05 | 0.167 |
| tert-Butanol | TO15SIM | 1.66 | 0.019 | 0.05 | 0.55 |
| Methylene Chloride | TO15SIM | 1.66 | 0.024 | 0.06 | 0.33 |
| Freon 113 | TO15SIM | 1.66 | 0.022 | 0.06 | 0.38 |
| Carbon disulfide | TO15SIM | 1.66 | 0.0047 | 0.03 | 0.036 |
| Hexane | TO15SIM | 1.66 | 0.0074 | 0.03 | 0.70 |
| 2-Butanone (MEK) | TO15SIM | 1.66 | 0.0046 | 0.02 | 0.95 |
| Ethyl Acetate | TO15SIM | 1.66 | 0.0055 | 0.03 | 0.18 |
| Chloroform | TO15SIM | 1.66 | 0.0135 | 0.04 | 0.0569 |
| 1,2-Dichloroethane (EDC) | TO15SIM | 1.66 | 0.0084 | 0.03 | 0.054 |
| Benzene | TO15SIM | 1.66 | 0.056 | 0.1 | 0.90 |
| Heptane | TO15SIM | 1.66 | 0.0055 | 0.03 | 0.47 |
| Methyl Isobutyl Ketone (MIBK) | TO15SIM | 1.66 | 0.011 | 0.03 | 0.18 |
| Toluene | TO15SIM | 1.66 | 0.0069 | 0.03 | 1.9 |
| 2-Hexanone | TO15SIM | 1.66 | 0.015 | 0.03 | 0.20 |
| Tetrachloroethylene | TO15SIM | 1.66 | 0.043 | 0.1 | 1.2 |
| Ethylbenzene | TO15SIM | 1.66 | 0.0039 | 0.04 | 0.42 |
| m,p-Xylene | TO15SIM | 1.66 | 0.0070 | 0.04 | 1.4 |
| Styrene | TO15SIM | 1.66 | 0.0052 | 0.04 | 0.15 |
| o-Xylene | TO15SIM | 1.66 | 0.0036 | 0.04 | 0.49 |
| 4-Ethyl toluene | TO15SIM | 1.66 | 0.0057 | 0.04 | 0.24 |
| 1,3,5-Trimethylbenzene | TO15SIM | 1.66 | 0.0059 | 0.04 | 0.18 |
| 1,2,4-Trimethylbenzene | TO15SIM | 1.66 | 0.0055 | 0.04 | 0.59 |
| 1,4-Dichlorobenzene | TO15SIM | 1.66 | 0.0086 | 0.05 | 0.090 |
| Naphthalene | TO15SIM | 1.66 | 0.0078 | 0.04 | 0.13 |
| Acetone | TO15SIM | 83 | 2.2 | 4 | 7.6 |

Torrent LABORATORY, INC.

## Sample Result Summary

**Report prepared for:** Mary Cunningham
The Source Group, Inc

**Date Received:** 12/09/13
**Date Reported:** 12/16/13

**Subslab 2** 1312039-004A

| Parameters: | Analysis Method | DF | MDL | PQL | Results ug/m3 |
|---|---|---|---|---|---|
| Trichlorofluoromethane | ETO15 | 1 | 1.8 | 5.6 | 14.1 |
| Hexane | ETO15 | 1 | 0.53 | 1.8 | 59.5 |
| Toluene | ETO15 | 1 | 0.95 | 1.9 | 2.32 |
| Helium | D1946 | 5.3 | 0.027 | 0.13 | 2.1% |

**Subslab 3** 1312039-005A

| Parameters: | Analysis Method | DF | MDL | PQL | Results ug/m3 |
|---|---|---|---|---|---|
| Hexane | ETO15 | 1 | 0.53 | 1.8 | 2.03 |
| Helium | D1946 | 5.1 | 0.026 | 0.13 | 1.2% |

Torrent LABORATORY, INC.

## SAMPLE RESULTS

**Report prepared for:** Mary Cunningham
The Source Group, Inc

**Date Received:** 12/09/13
**Date Reported:** 12/16/13

| | | | |
|---|---|---|---|
| **Client Sample ID:** | IA 1 | **Lab Sample ID:** | 1312039-001A |
| **Project Name/Location:** | | **Sample Matrix:** | Ambient Air |
| **Project Number:** | | | |
| **Date/Time Sampled:** | 12/06/13 / 9:00 | **Certified Clean WO # :** | |
| **Canister/Tube ID:** | 449 | **Received PSI :** | 13.5 |
| **Collection Volume (L):** | 0.00 | **Corrected PSI :** | 0.0 |

| Parameters: | Analysis Method | Prep Date | Date Analyzed | DF | MDL ug/m3 | PQL ug/m3 | Results ug/m3 | Results ppbv | Lab Qualifier | Analytical Batch | Prep Batch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | TO15SIM | NA | 12/12/13 | 1 | 0.018 | 0.05 | 0.95 | 0.19 | | 418630 | NA |
| Chloromethane | TO15SIM | NA | 12/12/13 | 1 | 0.0088 | 0.02 | 0.23 | 0.11 | | 418630 | NA |
| Vinyl Chloride | TO15SIM | NA | 12/12/13 | 1 | 0.0037 | 0.01 | 0.016 | 0.01 | | 418630 | NA |
| 1,3-Butadiene | TO15SIM | NA | 12/12/13 | 1 | 0.022 | 0.04 | 0.10 | 0.05 | | 418630 | NA |
| Bromomethane | TO15SIM | NA | 12/12/13 | 1 | 0.0082 | 0.02 | 0.43 | 0.11 | | 418630 | NA |
| Chloroethane | TO15SIM | NA | 12/12/13 | 1 | 0.0021 | 0.01 | 0.029 | 0.01 | | 418630 | NA |
| Trichloromonofluoromethane | TO15SIM | NA | 12/12/13 | 1 | 0.012 | 0.03 | 0.174 | 0.03 | | 418630 | NA |
| 1,1-Dichloroethene | TO15SIM | NA | 12/12/13 | 1 | 0.0068 | 0.02 | 0.024 | 0.01 | | 418630 | NA |
| tert-Butanol | TO15SIM | NA | 12/12/13 | 1 | 0.011 | 0.03 | ND | ND | | 418630 | NA |
| Methylene Chloride | TO15SIM | NA | 12/12/13 | 1 | 0.015 | 0.04 | 0.53 | 0.15 | | 418630 | NA |
| Freon 113 | TO15SIM | NA | 12/12/13 | 1 | 0.013 | 0.04 | 0.34 | 0.04 | | 418630 | NA |
| Carbon disulfide | TO15SIM | NA | 12/12/13 | 1 | 0.0028 | 0.02 | 0.050 | 0.02 | | 418630 | NA |
| trans-1,2-Dichloroethene | TO15SIM | NA | 12/12/13 | 1 | 0.0038 | 0.02 | ND | ND | | 418630 | NA |
| MTBE | TO15SIM | NA | 12/12/13 | 1 | 0.0062 | 0.02 | ND | ND | | 418630 | NA |
| 1,1-Dichloroethane | TO15SIM | NA | 12/12/13 | 1 | 0.0050 | 0.02 | ND | ND | | 418630 | NA |
| Vinyl Acetate | TO15SIM | NA | 12/12/13 | 1 | 0.0050 | 0.02 | ND | ND | | 418630 | NA |
| Hexane | TO15SIM | NA | 12/12/13 | 1 | 0.0045 | 0.02 | 0.81 | 0.23 | | 418630 | NA |
| 2-Butanone (MEK) | TO15SIM | NA | 12/12/13 | 1 | 0.0028 | 0.02 | ND | ND | | 418630 | NA |
| DIPE | TO15SIM | NA | 12/12/13 | 1 | 0.0044 | 0.02 | ND | ND | | 418630 | NA |
| cis-1,2-Dichloroethene | TO15SIM | NA | 12/12/13 | 1 | 0.0041 | 0.02 | ND | ND | | 418630 | NA |
| Ethyl Acetate | TO15SIM | NA | 12/12/13 | 1 | 0.0033 | 0.02 | 0.40 | 0.11 | | 418630 | NA |
| Chloroform | TO15SIM | NA | 12/12/13 | 1 | 0.00813 | 0.02 | 0.0735 | 0.02 | | 418630 | NA |
| ETBE | TO15SIM | NA | 12/12/13 | 1 | 0.0048 | 0.02 | ND | ND | | 418630 | NA |
| Tetrahydrofuran | TO15SIM | NA | 12/12/13 | 1 | 0.029 | 0.06 | ND | ND | | 418630 | NA |
| 1,2-Dichloroethane (EDC) | TO15SIM | NA | 12/12/13 | 1 | 0.0050 | 0.02 | ND | ND | | 418630 | NA |
| 1,1,1-Trichloroethane | TO15SIM | NA | 12/12/13 | 1 | 0.0083 | 0.03 | ND | ND | | 418630 | NA |
| Carbon Tetrachloride | TO15SIM | NA | 12/12/13 | 1 | 0.0085 | 0.03 | 0.0504 | 0.01 | | 418630 | NA |
| Benzene | TO15SIM | NA | 12/12/13 | 1 | 0.034 | 0.06 | 0.90 | 0.28 | | 418630 | NA |
| TAME | TO15SIM | NA | 12/12/13 | 1 | 0.0025 | 0.02 | ND | ND | | 418630 | NA |
| 1,2-Dichloropropane | TO15SIM | NA | 12/12/13 | 1 | 0.0047 | 0.02 | 0.046 | 0.01 | | 418630 | NA |
| Trichloroethylene | TO15SIM | NA | 12/12/13 | 1 | 0.011 | 0.03 | 0.038 | 0.01 | | 418630 | NA |
| Bromodichloromethane | TO15SIM | NA | 12/12/13 | 1 | 0.0056 | 0.03 | ND | ND | | 418630 | NA |
| 1,4-Dioxane | TO15SIM | NA | 12/12/13 | 1 | 0.011 | 0.02 | ND | ND | | 418630 | NA |
| cis-1,3-Dichloropropene | TO15SIM | NA | 12/12/13 | 1 | 0.0036 | 0.02 | ND | ND | | 418630 | NA |
| Methyl Isobutyl Ketone (MIBK) | TO15SIM | NA | 12/12/13 | 1 | 0.0064 | 0.02 | 0.20 | 0.05 | | 418630 | NA |
| trans-1,3-Dichloropropene | TO15SIM | NA | 12/12/13 | 1 | 0.0040 | 0.02 | ND | ND | | 418630 | NA |

Torrent LABORATORY, INC.

## SAMPLE RESULTS

**Report prepared for:** Mary Cunningham
The Source Group, Inc

**Date Received:** 12/09/13
**Date Reported:** 12/16/13

| | | | |
|---|---|---|---|
| **Client Sample ID:** | IA 1 | **Lab Sample ID:** | 1312039-001A |
| **Project Name/Location:** | | **Sample Matrix:** | Ambient Air |
| **Project Number:** | | | |
| **Date/Time Sampled:** | 12/06/13 / 9:00 | **Certified Clean WO # :** | |
| **Canister/Tube ID:** | 449 | **Received PSI :** | 13.5 |
| **Collection Volume (L):** | 0.00 | **Corrected PSI :** | 0.0 |

| Parameters: | Analysis Method | Prep Date | Date Analyzed | DF | MDL ug/m3 | PQL ug/m3 | Results ug/m3 | Results ppbv | Lab Qualifier | Analytical Batch | Prep Batch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,2-Trichloroethane | TO15SIM | NA | 12/12/13 | 1 | 0.00325 | 0.03 | ND | ND | | 418630 | NA |
| Toluene | TO15SIM | NA | 12/12/13 | 1 | 0.0042 | 0.02 | 1.9 | 0.50 | | 418630 | NA |
| Isopropyl Alcohol | TO15SIM | NA | 12/12/13 | 20 | 0.32 | 30 | 55 | 22.00 | | 418630 | NA |
| Acetone | TO15SIM | NA | 12/12/13 | 20 | 0.52 | 1 | 72 | 30.00 | | 418630 | NA |
| Heptane | TO15SIM | NA | 12/12/13 | 20 | 0.066 | 0.4 | 11 | 2.68 | | 418630 | NA |
| 2-Hexanone | TO15SIM | NA | 12/12/13 | 1 | 0.0089 | 0.02 | 0.078 | 0.02 | | 418630 | NA |
| Dibromochloromethane | TO15SIM | NA | 12/12/13 | 1 | 0.021 | 0.04 | ND | ND | | 418630 | NA |
| 1,2-Dibromoethane (EDB) | TO15SIM | NA | 12/12/13 | 1 | 0.0042 | 0.04 | ND | ND | | 418630 | NA |
| Tetrachloroethylene | TO15SIM | NA | 12/12/13 | 1 | 0.026 | 0.07 | 1.1 | 0.16 | | 418630 | NA |
| 1,1,1,2-Tetrachloroethane | TO15SIM | NA | 12/12/13 | 1 | 0.0090 | 0.03 | ND | ND | | 418630 | NA |
| Chlorobenzene | TO15SIM | NA | 12/12/13 | 1 | 0.0023 | 0.005 | ND | ND | | 418630 | NA |
| Ethylbenzene | TO15SIM | NA | 12/12/13 | 1 | 0.0023 | 0.02 | 0.47 | 0.11 | | 418630 | NA |
| m,p-Xylene | TO15SIM | NA | 12/12/13 | 1 | 0.0042 | 0.02 | 1.5 | 0.35 | | 418630 | NA |
| Bromoform | TO15SIM | NA | 12/12/13 | 1 | 0.033 | 0.1 | ND | ND | | 418630 | NA |
| Styrene | TO15SIM | NA | 12/12/13 | 1 | 0.0031 | 0.02 | 0.19 | 0.04 | | 418630 | NA |
| 1,1,2,2-Tetrachloroethane | TO15SIM | NA | 12/12/13 | 1 | 0.0023 | 0.007 | ND | ND | | 418630 | NA |
| o-Xylene | TO15SIM | NA | 12/12/13 | 1 | 0.0022 | 0.02 | 0.47 | 0.11 | | 418630 | NA |
| 4-Ethyl toluene | TO15SIM | NA | 12/12/13 | 1 | 0.0034 | 0.02 | 0.31 | 0.06 | | 418630 | NA |
| 1,3,5-Trimethylbenzene | TO15SIM | NA | 12/12/13 | 1 | 0.0035 | 0.02 | 0.15 | 0.03 | | 418630 | NA |
| 1,2,4-Trimethylbenzene | TO15SIM | NA | 12/12/13 | 1 | 0.0033 | 0.02 | 0.49 | 0.10 | | 418630 | NA |
| 1,3-Dichlorobenzene | TO15SIM | NA | 12/12/13 | 1 | 0.0056 | 0.03 | ND | ND | | 418630 | NA |
| 1,4-Dichlorobenzene | TO15SIM | NA | 12/12/13 | 1 | 0.0052 | 0.03 | 0.10 | 0.02 | | 418630 | NA |
| 1,2-Dichlorobenzene | TO15SIM | NA | 12/12/13 | 1 | 0.0056 | 0.03 | ND | ND | | 418630 | NA |
| 1,2,4-trichlorobenzene | TO15SIM | NA | 12/12/13 | 1 | 0.066 | 0.04 | ND | ND | | 418630 | NA |
| Naphthalene | TO15SIM | NA | 12/12/13 | 1 | 0.0047 | 0.03 | 0.094 | 0.02 | | 418630 | NA |
| Hexachlorobutadiene | TO15SIM | NA | 12/12/13 | 1 | 0.11 | 0.2 | ND | ND | | 418630 | NA |

Torrent LABORATORY, INC.

## SAMPLE RESULTS

**Report prepared for:** Mary Cunningham
The Source Group, Inc

**Date Received:** 12/09/13
**Date Reported:** 12/16/13

| | | | |
|---|---|---|---|
| **Client Sample ID:** | IA 2 | **Lab Sample ID:** | 1312039-002A |
| **Project Name/Location:** | | **Sample Matrix:** | Ambient Air |
| **Project Number:** | | | |
| **Date/Time Sampled:** | 12/06/13 / 9:05 | **Certified Clean WO # :** | |
| **Canister/Tube ID:** | 1438 | **Received PSI :** | 12.1 |
| **Collection Volume (L):** | 0.00 | **Corrected PSI :** | 0.0 |

| Parameters: | Analysis Method | Prep Date | Date Analyzed | DF | MDL ug/m3 | PQL ug/m3 | Results ug/m3 | Results ppbv | Lab Qualifier | Analytical Batch | Prep Batch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | TO15SIM | NA | 12/12/13 | 1 | 0.018 | 0.05 | 0.80 | 0.16 | | 418630 | NA |
| Chloromethane | TO15SIM | NA | 12/12/13 | 1 | 0.0088 | 0.02 | 0.21 | 0.10 | | 418630 | NA |
| Vinyl Chloride | TO15SIM | NA | 12/12/13 | 1 | 0.0037 | 0.01 | 0.010 | 0.00 | | 418630 | NA |
| 1,3-Butadiene | TO15SIM | NA | 12/12/13 | 1 | 0.022 | 0.04 | 0.14 | 0.06 | | 418630 | NA |
| Bromomethane | TO15SIM | NA | 12/12/13 | 1 | 0.0082 | 0.02 | 0.30 | 0.08 | | 418630 | NA |
| Chloroethane | TO15SIM | NA | 12/12/13 | 1 | 0.0021 | 0.01 | 0.034 | 0.01 | | 418630 | NA |
| Trichloromonofluoromethane | TO15SIM | NA | 12/12/13 | 1 | 0.012 | 0.03 | 0.134 | 0.02 | | 418630 | NA |
| 1,1-Dichloroethene | TO15SIM | NA | 12/12/13 | 1 | 0.0068 | 0.02 | 0.020 | 0.01 | | 418630 | NA |
| tert-Butanol | TO15SIM | NA | 12/12/13 | 1 | 0.011 | 0.03 | 0.45 | 0.15 | | 418630 | NA |
| Methylene Chloride | TO15SIM | NA | 12/12/13 | 1 | 0.015 | 0.04 | 0.74 | 0.21 | | 418630 | NA |
| Freon 113 | TO15SIM | NA | 12/12/13 | 1 | 0.013 | 0.04 | 0.32 | 0.04 | | 418630 | NA |
| Carbon disulfide | TO15SIM | NA | 12/12/13 | 1 | 0.0028 | 0.02 | 0.062 | 0.02 | | 418630 | NA |
| trans-1,2-Dichloroethene | TO15SIM | NA | 12/12/13 | 1 | 0.0038 | 0.02 | ND | ND | | 418630 | NA |
| MTBE | TO15SIM | NA | 12/12/13 | 1 | 0.0062 | 0.02 | ND | ND | | 418630 | NA |
| 1,1-Dichloroethane | TO15SIM | NA | 12/12/13 | 1 | 0.0050 | 0.02 | ND | ND | | 418630 | NA |
| Vinyl Acetate | TO15SIM | NA | 12/12/13 | 1 | 0.0050 | 0.02 | ND | ND | | 418630 | NA |
| Hexane | TO15SIM | NA | 12/12/13 | 1 | 0.0045 | 0.02 | 0.84 | 0.24 | | 418630 | NA |
| 2-Butanone (MEK) | TO15SIM | NA | 12/12/13 | 1 | 0.0028 | 0.02 | 0.81 | 0.27 | | 418630 | NA |
| DIPE | TO15SIM | NA | 12/12/13 | 1 | 0.0044 | 0.02 | ND | ND | | 418630 | NA |
| cis-1,2-Dichloroethene | TO15SIM | NA | 12/12/13 | 1 | 0.0041 | 0.02 | ND | ND | | 418630 | NA |
| Ethyl Acetate | TO15SIM | NA | 12/12/13 | 1 | 0.0033 | 0.02 | 0.54 | 0.15 | | 418630 | NA |
| Chloroform | TO15SIM | NA | 12/12/13 | 1 | 0.00813 | 0.02 | 0.0637 | 0.01 | | 418630 | NA |
| ETBE | TO15SIM | NA | 12/12/13 | 1 | 0.0048 | 0.02 | 0.025 | 0.01 | | 418630 | NA |
| Tetrahydrofuran | TO15SIM | NA | 12/12/13 | 1 | 0.029 | 0.06 | ND | ND | | 418630 | NA |
| 1,2-Dichloroethane (EDC) | TO15SIM | NA | 12/12/13 | 1 | 0.0050 | 0.02 | 0.041 | 0.01 | | 418630 | NA |
| 1,1,1-Trichloroethane | TO15SIM | NA | 12/12/13 | 1 | 0.0083 | 0.03 | ND | ND | | 418630 | NA |
| Carbon Tetrachloride | TO15SIM | NA | 12/12/13 | 1 | 0.0085 | 0.03 | 0.0504 | 0.01 | | 418630 | NA |
| Benzene | TO15SIM | NA | 12/12/13 | 1 | 0.034 | 0.06 | 1.0 | 0.31 | | 418630 | NA |
| TAME | TO15SIM | NA | 12/12/13 | 1 | 0.0025 | 0.02 | ND | ND | | 418630 | NA |
| Heptane | TO15SIM | NA | 12/12/13 | 1 | 0.0033 | 0.02 | 1.4 | 0.34 | | 418630 | NA |
| 1,2-Dichloropropane | TO15SIM | NA | 12/12/13 | 1 | 0.0047 | 0.02 | ND | ND | | 418630 | NA |
| Trichloroethylene | TO15SIM | NA | 12/12/13 | 1 | 0.011 | 0.03 | 0.032 | 0.01 | | 418630 | NA |
| Bromodichloromethane | TO15SIM | NA | 12/12/13 | 1 | 0.0056 | 0.03 | ND | ND | | 418630 | NA |
| 1,4-Dioxane | TO15SIM | NA | 12/12/13 | 1 | 0.011 | 0.02 | ND | ND | | 418630 | NA |
| cis-1,3-Dichloropropene | TO15SIM | NA | 12/12/13 | 1 | 0.0036 | 0.02 | ND | ND | | 418630 | NA |
| Methyl Isobutyl Ketone (MIBK) | TO15SIM | NA | 12/12/13 | 1 | 0.0064 | 0.02 | 0.18 | 0.04 | | 418630 | NA |

Torrent LABORATORY, INC.

## SAMPLE RESULTS

**Report prepared for:** Mary Cunningham
The Source Group, Inc

**Date Received:** 12/09/13
**Date Reported:** 12/16/13

| | | | |
|---|---|---|---|
| **Client Sample ID:** | IA 2 | **Lab Sample ID:** | 1312039-002A |
| **Project Name/Location:** | | **Sample Matrix:** | Ambient Air |
| **Project Number:** | | | |
| **Date/Time Sampled:** | 12/06/13 / 9:05 | **Certified Clean WO # :** | |
| **Canister/Tube ID:** | 1438 | **Received PSI :** | 12.1 |
| **Collection Volume (L):** | 0.00 | **Corrected PSI :** | 0.0 |

| Parameters: | Analysis Method | Prep Date | Date Analyzed | DF | MDL ug/m3 | PQL ug/m3 | Results ug/m3 | Results ppbv | Lab Qualifier | Analytical Batch | Prep Batch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| trans-1,3-Dichloropropene | TO15SIM | NA | 12/12/13 | 1 | 0.0040 | 0.02 | ND | ND | | 418630 | NA |
| 1,1,2-Trichloroethane | TO15SIM | NA | 12/12/13 | 1 | 0.00325 | 0.03 | ND | ND | | 418630 | NA |
| Isopropyl Alcohol | TO15SIM | NA | 12/12/13 | 50 | 0.79 | 60 | ND | ND | | 418630 | NA |
| Acetone | TO15SIM | NA | 12/12/13 | 50 | 1.3 | 2 | 28 | 11.67 | | 418630 | NA |
| Toluene | TO15SIM | NA | 12/12/13 | 50 | 0.21 | 1 | 2.3 | 0.61 | | 418630 | NA |
| 2-Hexanone | TO15SIM | NA | 12/12/13 | 1 | 0.0089 | 0.02 | 0.23 | 0.06 | | 418630 | NA |
| Dibromochloromethane | TO15SIM | NA | 12/12/13 | 1 | 0.021 | 0.04 | ND | ND | | 418630 | NA |
| 1,2-Dibromoethane (EDB) | TO15SIM | NA | 12/12/13 | 1 | 0.0042 | 0.04 | ND | ND | | 418630 | NA |
| Tetrachloroethylene | TO15SIM | NA | 12/12/13 | 1 | 0.026 | 0.07 | 1.5 | 0.22 | | 418630 | NA |
| 1,1,1,2-Tetrachloroethane | TO15SIM | NA | 12/12/13 | 1 | 0.0090 | 0.03 | ND | ND | | 418630 | NA |
| Chlorobenzene | TO15SIM | NA | 12/12/13 | 1 | 0.0023 | 0.005 | ND | ND | | 418630 | NA |
| Ethylbenzene | TO15SIM | NA | 12/12/13 | 1 | 0.0023 | 0.02 | 0.60 | 0.14 | | 418630 | NA |
| m,p-Xylene | TO15SIM | NA | 12/12/13 | 1 | 0.0042 | 0.02 | 2.0 | 0.47 | | 418630 | NA |
| Bromoform | TO15SIM | NA | 12/12/13 | 1 | 0.033 | 0.1 | ND | ND | | 418630 | NA |
| Styrene | TO15SIM | NA | 12/12/13 | 1 | 0.0031 | 0.02 | 0.28 | 0.07 | | 418630 | NA |
| 1,1,2,2-Tetrachloroethane | TO15SIM | NA | 12/12/13 | 1 | 0.0023 | 0.007 | 0.0138 | 0.00 | | 418630 | NA |
| o-Xylene | TO15SIM | NA | 12/12/13 | 1 | 0.0022 | 0.02 | 0.60 | 0.14 | | 418630 | NA |
| 4-Ethyl toluene | TO15SIM | NA | 12/12/13 | 1 | 0.0034 | 0.02 | 0.36 | 0.07 | | 418630 | NA |
| 1,3,5-Trimethylbenzene | TO15SIM | NA | 12/12/13 | 1 | 0.0035 | 0.02 | 0.20 | 0.04 | | 418630 | NA |
| 1,2,4-Trimethylbenzene | TO15SIM | NA | 12/12/13 | 1 | 0.0033 | 0.02 | 0.64 | 0.13 | | 418630 | NA |
| 1,3-Dichlorobenzene | TO15SIM | NA | 12/12/13 | 1 | 0.0056 | 0.03 | ND | ND | | 418630 | NA |
| 1,4-Dichlorobenzene | TO15SIM | NA | 12/12/13 | 1 | 0.0052 | 0.03 | 0.090 | 0.02 | | 418630 | NA |
| 1,2-Dichlorobenzene | TO15SIM | NA | 12/12/13 | 1 | 0.0056 | 0.03 | ND | ND | | 418630 | NA |
| 1,2,4-trichlorobenzene | TO15SIM | NA | 12/12/13 | 1 | 0.066 | 0.04 | 0.052 | 0.01 | | 418630 | NA |
| Naphthalene | TO15SIM | NA | 12/12/13 | 1 | 0.0047 | 0.03 | 0.15 | 0.03 | | 418630 | NA |
| Hexachlorobutadiene | TO15SIM | NA | 12/12/13 | 1 | 0.11 | 0.2 | ND | ND | | 418630 | NA |

Torrent LABORATORY, INC.

## SAMPLE RESULTS

**Report prepared for:** Mary Cunningham
The Source Group, Inc

**Date Received:** 12/09/13
**Date Reported:** 12/16/13

| | | | |
|---|---|---|---|
| **Client Sample ID:** | Ambient | **Lab Sample ID:** | 1312039-003A |
| **Project Name/Location:** | | **Sample Matrix:** | Ambient Air |
| **Project Number:** | | | |
| **Date/Time Sampled:** | 12/06/13 / 9:10 | **Certified Clean WO # :** | |
| **Canister/Tube ID:** | 1435 | **Received PSI :** | 8.0 |
| **Collection Volume (L):** | 0.00 | **Corrected PSI :** | 0.0 |

| Parameters: | Analysis Method | Prep Date | Date Analyzed | DF | MDL ug/m3 | PQL ug/m3 | Results ug/m3 | Results ppbv | Lab Qualifier | Analytical Batch | Prep Batch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | TO15SIM | NA | 12/12/13 | 1.66 | 0.030 | 0.08 | 1.1 | 0.22 | | 418630 | NA |
| Chloromethane | TO15SIM | NA | 12/12/13 | 1.66 | 0.015 | 0.03 | 0.27 | 0.13 | | 418630 | NA |
| Vinyl Chloride | TO15SIM | NA | 12/12/13 | 1.66 | 0.0062 | 0.02 | ND | ND | | 418630 | NA |
| 1,3-Butadiene | TO15SIM | NA | 12/12/13 | 1.66 | 0.036 | 0.07 | 0.11 | 0.05 | | 418630 | NA |
| Bromomethane | TO15SIM | NA | 12/12/13 | 1.66 | 0.014 | 0.03 | 0.71 | 0.18 | | 418630 | NA |
| Chloroethane | TO15SIM | NA | 12/12/13 | 1.66 | 0.0034 | 0.02 | 0.056 | 0.02 | | 418630 | NA |
| Trichloromonofluoromethane | TO15SIM | NA | 12/12/13 | 1.66 | 0.020 | 0.05 | 0.167 | 0.03 | | 418630 | NA |
| Isopropyl Alcohol | TO15SIM | NA | 12/12/13 | 1.66 | 0.026 | 2 | ND | ND | | 418630 | NA |
| 1,1-Dichloroethene | TO15SIM | NA | 12/12/13 | 1.66 | 0.011 | 0.03 | ND | ND | | 418630 | NA |
| tert-Butanol | TO15SIM | NA | 12/12/13 | 1.66 | 0.019 | 0.05 | 0.55 | 0.18 | | 418630 | NA |
| Methylene Chloride | TO15SIM | NA | 12/12/13 | 1.66 | 0.024 | 0.06 | 0.33 | 0.09 | | 418630 | NA |
| Freon 113 | TO15SIM | NA | 12/12/13 | 1.66 | 0.022 | 0.06 | 0.38 | 0.05 | | 418630 | NA |
| Carbon disulfide | TO15SIM | NA | 12/12/13 | 1.66 | 0.0047 | 0.03 | 0.036 | 0.01 | | 418630 | NA |
| trans-1,2-Dichloroethene | TO15SIM | NA | 12/12/13 | 1.66 | 0.0062 | 0.03 | ND | ND | | 418630 | NA |
| MTBE | TO15SIM | NA | 12/12/13 | 1.66 | 0.010 | 0.03 | ND | ND | | 418630 | NA |
| 1,1-Dichloroethane | TO15SIM | NA | 12/12/13 | 1.66 | 0.0084 | 0.03 | ND | ND | | 418630 | NA |
| Vinyl Acetate | TO15SIM | NA | 12/12/13 | 1.66 | 0.0083 | 0.03 | ND | ND | | 418630 | NA |
| Hexane | TO15SIM | NA | 12/12/13 | 1.66 | 0.0074 | 0.03 | 0.70 | 0.20 | | 418630 | NA |
| 2-Butanone (MEK) | TO15SIM | NA | 12/12/13 | 1.66 | 0.0046 | 0.02 | 0.95 | 0.32 | | 418630 | NA |
| DIPE | TO15SIM | NA | 12/12/13 | 1.66 | 0.0073 | 0.03 | ND | ND | | 418630 | NA |
| cis-1,2-Dichloroethene | TO15SIM | NA | 12/12/13 | 1.66 | 0.0068 | 0.03 | ND | ND | | 418630 | NA |
| Ethyl Acetate | TO15SIM | NA | 12/12/13 | 1.66 | 0.0055 | 0.03 | 0.18 | 0.05 | | 418630 | NA |
| Chloroform | TO15SIM | NA | 12/12/13 | 1.66 | 0.0135 | 0.04 | 0.0569 | 0.01 | | 418630 | NA |
| ETBE | TO15SIM | NA | 12/12/13 | 1.66 | 0.0079 | 0.03 | ND | ND | | 418630 | NA |
| Tetrahydrofuran | TO15SIM | NA | 12/12/13 | 1.66 | 0.048 | 0.1 | ND | ND | | 418630 | NA |
| 1,2-Dichloroethane (EDC) | TO15SIM | NA | 12/12/13 | 1.66 | 0.0084 | 0.03 | 0.054 | 0.01 | | 418630 | NA |
| 1,1,1-Trichloroethane | TO15SIM | NA | 12/12/13 | 1.66 | 0.014 | 0.05 | ND | ND | | 418630 | NA |
| Carbon Tetrachloride | TO15SIM | NA | 12/12/13 | 1.66 | 0.014 | 0.05 | ND | ND | | 418630 | NA |
| Benzene | TO15SIM | NA | 12/12/13 | 1.66 | 0.056 | 0.1 | 0.90 | 0.28 | | 418630 | NA |
| TAME | TO15SIM | NA | 12/12/13 | 1.66 | 0.0041 | 0.03 | ND | ND | | 418630 | NA |
| Heptane | TO15SIM | NA | 12/12/13 | 1.66 | 0.0055 | 0.03 | 0.47 | 0.11 | | 418630 | NA |
| 1,2-Dichloropropane | TO15SIM | NA | 12/12/13 | 1.66 | 0.0078 | 0.04 | ND | ND | | 418630 | NA |
| Trichloroethylene | TO15SIM | NA | 12/12/13 | 1.66 | 0.019 | 0.04 | ND | ND | | 418630 | NA |
| Bromodichloromethane | TO15SIM | NA | 12/12/13 | 1.66 | 0.0092 | 0.06 | ND | ND | | 418630 | NA |
| 1,4-Dioxane | TO15SIM | NA | 12/12/13 | 1.66 | 0.018 | 0.03 | ND | ND | | 418630 | NA |
| cis-1,3-Dichloropropene | TO15SIM | NA | 12/12/13 | 1.66 | 0.0059 | 0.04 | ND | ND | | 418630 | NA |

Torrent LABORATORY, INC.

## SAMPLE RESULTS

**Report prepared for:** Mary Cunningham
The Source Group, Inc

**Date Received:** 12/09/13
**Date Reported:** 12/16/13

| | | | |
|---|---|---|---|
| **Client Sample ID:** | Ambient | **Lab Sample ID:** | 1312039-003A |
| **Project Name/Location:** | | **Sample Matrix:** | Ambient Air |
| **Project Number:** | | | |
| **Date/Time Sampled:** | 12/06/13 / 9:10 | **Certified Clean WO # :** | |
| **Canister/Tube ID:** | 1435 | **Received PSI :** | 8.0 |
| **Collection Volume (L):** | 0.00 | **Corrected PSI :** | 0.0 |

| Parameters: | Analysis Method | Prep Date | Date Analyzed | DF | MDL ug/m3 | PQL ug/m3 | Results ug/m3 | Results ppbv | Lab Qualifier | Analytical Batch | Prep Batch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Methyl Isobutyl Ketone (MIBK) | TO15SIM | NA | 12/12/13 | 1.66 | 0.011 | 0.03 | 0.18 | 0.04 | | 418630 | NA |
| trans-1,3-Dichloropropene | TO15SIM | NA | 12/12/13 | 1.66 | 0.0066 | 0.04 | ND | ND | | 418630 | NA |
| 1,1,2-Trichloroethane | TO15SIM | NA | 12/12/13 | 1.66 | 0.00539 | 0.05 | ND | ND | | 418630 | NA |
| Toluene | TO15SIM | NA | 12/12/13 | 1.66 | 0.0069 | 0.03 | 1.9 | 0.50 | | 418630 | NA |
| **NOTE:** Due to insufficient sample volume available to SIM analysis, sample was analyzed with appropriate dilution. | | | | | | | | | | | |
| Acetone | TO15SIM | NA | 12/12/13 | 83 | 2.2 | 4 | 7.6 | 3.17 | | 418630 | NA |
| 2-Hexanone | TO15SIM | NA | 12/12/13 | 1.66 | 0.015 | 0.03 | 0.20 | 0.05 | | 418630 | NA |
| Dibromochloromethane | TO15SIM | NA | 12/12/13 | 1.66 | 0.035 | 0.07 | ND | ND | | 418630 | NA |
| 1,2-Dibromoethane (EDB) | TO15SIM | NA | 12/12/13 | 1.66 | 0.0069 | 0.06 | ND | ND | | 418630 | NA |
| Tetrachloroethylene | TO15SIM | NA | 12/12/13 | 1.66 | 0.043 | 0.1 | 1.2 | 0.18 | | 418630 | NA |
| 1,1,1,2-Tetrachloroethane | TO15SIM | NA | 12/12/13 | 1.66 | 0.015 | 0.06 | ND | ND | | 418630 | NA |
| Chlorobenzene | TO15SIM | NA | 12/12/13 | 1.66 | 0.0038 | 0.008 | ND | ND | | 418630 | NA |
| Ethylbenzene | TO15SIM | NA | 12/12/13 | 1.66 | 0.0039 | 0.04 | 0.42 | 0.10 | | 418630 | NA |
| m,p-Xylene | TO15SIM | NA | 12/12/13 | 1.66 | 0.0070 | 0.04 | 1.4 | 0.33 | | 418630 | NA |
| Bromoform | TO15SIM | NA | 12/12/13 | 1.66 | 0.055 | 0.2 | ND | ND | | 418630 | NA |
| Styrene | TO15SIM | NA | 12/12/13 | 1.66 | 0.0052 | 0.04 | 0.15 | 0.03 | | 418630 | NA |
| 1,1,2,2-Tetrachloroethane | TO15SIM | NA | 12/12/13 | 1.66 | 0.0039 | 0.01 | ND | ND | | 418630 | NA |
| o-Xylene | TO15SIM | NA | 12/12/13 | 1.66 | 0.0036 | 0.04 | 0.49 | 0.11 | | 418630 | NA |
| 4-Ethyl toluene | TO15SIM | NA | 12/12/13 | 1.66 | 0.0057 | 0.04 | 0.24 | 0.05 | | 418630 | NA |
| 1,3,5-Trimethylbenzene | TO15SIM | NA | 12/12/13 | 1.66 | 0.0059 | 0.04 | 0.18 | 0.04 | | 418630 | NA |
| 1,2,4-Trimethylbenzene | TO15SIM | NA | 12/12/13 | 1.66 | 0.0055 | 0.04 | 0.59 | 0.12 | | 418630 | NA |
| 1,3-Dichlorobenzene | TO15SIM | NA | 12/12/13 | 1.66 | 0.0094 | 0.05 | ND | ND | | 418630 | NA |
| 1,4-Dichlorobenzene | TO15SIM | NA | 12/12/13 | 1.66 | 0.0086 | 0.05 | 0.090 | 0.02 | | 418630 | NA |
| 1,2-Dichlorobenzene | TO15SIM | NA | 12/12/13 | 1.66 | 0.0094 | 0.05 | ND | ND | | 418630 | NA |
| 1,2,4-trichlorobenzene | TO15SIM | NA | 12/12/13 | 1.66 | 0.11 | 0.06 | ND | ND | | 418630 | NA |
| Naphthalene | TO15SIM | NA | 12/12/13 | 1.66 | 0.0078 | 0.04 | 0.13 | 0.03 | | 418630 | NA |
| Hexachlorobutadiene | TO15SIM | NA | 12/12/13 | 1.66 | 0.18 | 0.4 | ND | ND | | 418630 | NA |

Torrent LABORATORY, INC.

# SAMPLE RESULTS

**Report prepared for:** Mary Cunningham
The Source Group, Inc

**Date Received:** 12/09/13
**Date Reported:** 12/16/13

| | | | |
|---|---|---|---|
| **Client Sample ID:** | Subslab 2 | **Lab Sample ID:** | 1312039-004A |
| **Project Name/Location:** | | **Sample Matrix:** | Soil Vapor |
| **Project Number:** | | | |
| **Date/Time Sampled:** | 12/06/13 / 9:10 | **Certified Clean WO # :** | |
| **Canister/Tube ID:** | 6127 | **Received PSI :** | 12.4 |
| **Collection Volume (L):** | 0.00 | **Corrected PSI :** | 0.0 |

| Parameters: | Analysis Method | Prep Date | Date Analyzed | DF | MDL ug/m3 | PQL ug/m3 | Results ug/m3 | Results ppbv | Lab Qualifier | Analytical Batch | Prep Batch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | ETO15 | NA | 12/12/13 | 1 | 1.5 | 5.0 | ND | ND | | 418586 | NA |
| 1,1-Difluoroethane | ETO15 | NA | 12/12/13 | 1 | 0.50 | 1.4 | ND | ND | | 418586 | NA |
| 1,2-Dichlorotetrafluoroethane | ETO15 | NA | 12/12/13 | 1 | 4.9 | 14 | ND | ND | | 418586 | NA |
| Chloromethane | ETO15 | NA | 12/12/13 | 1 | 0.32 | 1.1 | ND | ND | | 418586 | NA |
| Vinyl Chloride | ETO15 | NA | 12/12/13 | 1 | 0.67 | 2.6 | ND | ND | | 418586 | NA |
| 1,3-Butadiene | ETO15 | NA | 12/12/13 | 1 | 0.45 | 1.1 | ND | ND | | 418586 | NA |
| Bromomethane | ETO15 | NA | 12/12/13 | 1 | 0.72 | 2.0 | ND | ND | | 418586 | NA |
| Chloroethane | ETO15 | NA | 12/12/13 | 1 | 0.50 | 1.3 | ND | ND | | 418586 | NA |
| Trichlorofluoromethane | ETO15 | NA | 12/12/13 | 1 | 1.8 | 5.6 | 14.1 | 2.52 | | 418586 | NA |
| 1,1-Dichloroethene | ETO15 | NA | 12/12/13 | 1 | 0.61 | 2.0 | ND | ND | | 418586 | NA |
| Freon 113 | ETO15 | NA | 12/12/13 | 1 | 0.85 | 3.9 | ND | ND | | 418586 | NA |
| Carbon Disulfide | ETO15 | NA | 12/12/13 | 1 | 0.81 | 3.1 | ND | ND | | 418586 | NA |
| 2-Propanol (Isopropyl Alcohol) | ETO15 | NA | 12/12/13 | 1 | 0.97 | 20 | ND | ND | | 418586 | NA |
| Methylene Chloride | ETO15 | NA | 12/12/13 | 1 | 0.58 | 28 | ND | ND | | 418586 | NA |
| Acetone | ETO15 | NA | 12/12/13 | 1 | 0.88 | 19 | ND | ND | | 418586 | NA |
| trans-1,2-Dichloroethene | ETO15 | NA | 12/12/13 | 1 | 0.64 | 2.0 | ND | ND | | 418586 | NA |
| Hexane | ETO15 | NA | 12/12/13 | 1 | 0.53 | 1.8 | 59.5 | 17.00 | | 418586 | NA |
| MTBE | ETO15 | NA | 12/12/13 | 1 | 0.87 | 1.8 | ND | ND | | 418586 | NA |
| tert-Butanol | ETO15 | NA | 12/12/13 | 1 | 0.91 | 8.4 | ND | ND | | 418586 | NA |
| Diisopropyl ether (DIPE) | ETO15 | NA | 12/12/13 | 1 | 0.88 | 2.1 | ND | ND | | 418586 | NA |
| 1,1-Dichloroethane | ETO15 | NA | 12/12/13 | 1 | 0.75 | 2.1 | ND | ND | | 418586 | NA |
| ETBE | ETO15 | NA | 12/12/13 | 1 | 0.68 | 2.1 | ND | ND | | 418586 | NA |
| cis-1,2-Dichloroethene | ETO15 | NA | 12/12/13 | 1 | 0.54 | 2.0 | ND | ND | | 418586 | NA |
| Chloroform | ETO15 | NA | 12/12/13 | 1 | 1.2 | 4.9 | ND | ND | | 418586 | NA |
| Vinyl Acetate | ETO15 | NA | 12/12/13 | 1 | 0.57 | 1.8 | ND | ND | | 418586 | NA |
| Carbon Tetrachloride | ETO15 | NA | 12/12/13 | 1 | 0.86 | 3.2 | ND | ND | | 418586 | NA |
| 1,1,1-Trichloroethane | ETO15 | NA | 12/12/13 | 1 | 0.85 | 2.8 | ND | ND | | 418586 | NA |
| 2-Butanone (MEK) | ETO15 | NA | 12/12/13 | 1 | 0.63 | 1.5 | ND | ND | | 418586 | NA |
| Ethyl Acetate | ETO15 | NA | 12/12/13 | 1 | 0.74 | 1.8 | ND | ND | | 418586 | NA |
| Tetrahydrofuran | ETO15 | NA | 12/12/13 | 1 | 0.30 | 1.5 | ND | ND | | 418586 | NA |
| Benzene | ETO15 | NA | 12/12/13 | 1 | 0.69 | 1.6 | ND | ND | | 418586 | NA |
| TAME | ETO15 | NA | 12/12/13 | 1 | 0.36 | 2.1 | ND | ND | | 418586 | NA |
| 1,2-Dichloroethane (EDC) | ETO15 | NA | 12/12/13 | 1 | 0.99 | 2.1 | ND | ND | | 418586 | NA |
| Trichloroethylene | ETO15 | NA | 12/12/13 | 1 | 1.4 | 5.4 | ND | ND | | 418586 | NA |
| 1,2-Dichloropropane | ETO15 | NA | 12/12/13 | 1 | 1.3 | 4.6 | ND | ND | | 418586 | NA |
| Bromodichloromethane | ETO15 | NA | 12/12/13 | 1 | 0.89 | 3.4 | ND | ND | | 418586 | NA |

Torrent LABORATORY, INC.

## SAMPLE RESULTS

**Report prepared for:** Mary Cunningham
The Source Group, Inc

**Date Received:** 12/09/13
**Date Reported:** 12/16/13

| | | | |
|---|---|---|---|
| **Client Sample ID:** | Subslab 2 | **Lab Sample ID:** | 1312039-004A |
| **Project Name/Location:** | | **Sample Matrix:** | Soil Vapor |
| **Project Number:** | | | |
| **Date/Time Sampled:** | 12/06/13 / 9:10 | **Certified Clean WO # :** | |
| **Canister/Tube ID:** | 6127 | **Received PSI :** | 12.4 |
| **Collection Volume (L):** | 0.00 | **Corrected PSI :** | 0.0 |

| Parameters: | Analysis Method | Prep Date | Date Analyzed | DF | MDL ug/m3 | PQL ug/m3 | Results ug/m3 | Results ppbv | Lab Qualifier | Analytical Batch | Prep Batch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | ETO15 | NA | 12/12/13 | 1 | 1.2 | 3.6 | ND | ND | | 418586 | NA |
| trans-1,3-Dichloropropene | ETO15 | NA | 12/12/13 | 1 | 0.87 | 2.3 | ND | ND | | 418586 | NA |
| Toluene | ETO15 | NA | 12/12/13 | 1 | 0.95 | 1.9 | 2.32 | 0.61 | | 418586 | NA |
| 4-Methyl-2-Pentanone (MIBK) | ETO15 | NA | 12/12/13 | 1 | 0.85 | 2.1 | ND | ND | | 418586 | NA |
| cis-1,3-Dichloropropene | ETO15 | NA | 12/12/13 | 1 | 1.1 | 2.3 | ND | ND | | 418586 | NA |
| Tetrachloroethylene | ETO15 | NA | 12/12/13 | 1 | 0.91 | 3.4 | ND | ND | | 418586 | NA |
| 1,1,2-Trichloroethane | ETO15 | NA | 12/12/13 | 1 | 0.93 | 2.8 | ND | ND | | 418586 | NA |
| Dibromochloromethane | ETO15 | NA | 12/12/13 | 1 | 1.7 | 4.3 | ND | ND | | 418586 | NA |
| 1,2-Dibromoethane (EDB) | ETO15 | NA | 12/12/13 | 1 | 2.0 | 7.7 | ND | ND | | 418586 | NA |
| 2-Hexanone | ETO15 | NA | 12/12/13 | 1 | 1.1 | 4.1 | ND | ND | | 418586 | NA |
| Ethyl Benzene | ETO15 | NA | 12/12/13 | 1 | 0.99 | 2.2 | ND | ND | | 418586 | NA |
| Chlorobenzene | ETO15 | NA | 12/12/13 | 1 | 0.71 | 2.3 | ND | ND | | 418586 | NA |
| 1,1,1,2-Tetrachloroethane | ETO15 | NA | 12/12/13 | 1 | 1.0 | 3.5 | ND | ND | | 418586 | NA |
| m,p-Xylene | ETO15 | NA | 12/12/13 | 1 | 1.6 | 4.3 | ND | ND | | 418586 | NA |
| o-Xylene | ETO15 | NA | 12/12/13 | 1 | 0.81 | 2.2 | ND | ND | | 418586 | NA |
| Styrene | ETO15 | NA | 12/12/13 | 1 | 0.69 | 2.2 | ND | ND | | 418586 | NA |
| Bromoform | ETO15 | NA | 12/12/13 | 1 | 1.1 | 5.0 | ND | ND | | 418586 | NA |
| 1,1,2,2-Tetrachloroethane | ETO15 | NA | 12/12/13 | 1 | 0.70 | 3.5 | ND | ND | | 418586 | NA |
| 4-Ethyl Toluene | ETO15 | NA | 12/12/13 | 1 | 0.82 | 2.5 | ND | ND | | 418586 | NA |
| 1,3,5-Trimethylbenzene | ETO15 | NA | 12/12/13 | 1 | 0.76 | 2.5 | ND | ND | | 418586 | NA |
| 1,2,4-Trimethylbenzene | ETO15 | NA | 12/12/13 | 1 | 0.69 | 2.5 | ND | ND | | 418586 | NA |
| 1,4-Dichlorobenzene | ETO15 | NA | 12/12/13 | 1 | 0.65 | 3.0 | ND | ND | | 418586 | NA |
| 1,3-Dichlorobenzene | ETO15 | NA | 12/12/13 | 1 | 0.84 | 3.0 | ND | ND | | 418586 | NA |
| 1,2-Dichlorobenzene | ETO15 | NA | 12/12/13 | 1 | 0.91 | 3.0 | ND | ND | | 418586 | NA |
| Hexachlorobutadiene | ETO15 | NA | 12/12/13 | 1 | 2.4 | 5.5 | ND | ND | | 418586 | NA |
| 1,2,4-Trichlorobenzene | ETO15 | NA | 12/12/13 | 1 | 3.4 | 7.4 | ND | ND | | 418586 | NA |
| Naphthalene | ETO15 | NA | 12/12/13 | 1 | 1.5 | 5.2 | ND | ND | | 418586 | NA |
| (S) 4-Bromofluorobenzene | ETO15 | NA | 12/12/13 | 1 | 65 | 135 | 82.4 % | | | 418586 | NA |

| Parameters: | Analysis Method | Prep Date | Date Analyzed | DF | MDL ug/m3 | PQL % | Results % | Results ppmv | Lab Qualifier | Analytical Batch | Prep Batch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Helium | D1946 | NA | 12/16/13 | 5.3 | 0.027 | 0.13 | 2.1 | | | 418631 | NA |

Torrent LABORATORY, INC.

## SAMPLE RESULTS

**Report prepared for:** Mary Cunningham
The Source Group, Inc

**Date Received:** 12/09/13
**Date Reported:** 12/16/13

| | | | |
|---|---|---|---|
| **Client Sample ID:** | Subslab 3 | **Lab Sample ID:** | 1312039-005A |
| **Project Name/Location:** | | **Sample Matrix:** | Soil Vapor |
| **Project Number:** | | | |
| **Date/Time Sampled:** | 12/06/13 / 9:10 | **Certified Clean WO # :** | |
| **Canister/Tube ID:** | A7465 | **Received PSI :** | 13.0 |
| **Collection Volume (L):** | 0.00 | **Corrected PSI :** | 0.0 |

| Parameters: | Analysis Method | Prep Date | Date Analyzed | DF | MDL ug/m3 | PQL ug/m3 | Results ug/m3 | Results ppbv | Lab Qualifier | Analytical Batch | Prep Batch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | ETO15 | NA | 12/12/13 | 1 | 1.5 | 5.0 | ND | ND | | 418586 | NA |
| 1,1-Difluoroethane | ETO15 | NA | 12/12/13 | 1 | 0.50 | 1.4 | ND | ND | | 418586 | NA |
| 1,2-Dichlorotetrafluoroethane | ETO15 | NA | 12/12/13 | 1 | 4.9 | 14 | ND | ND | | 418586 | NA |
| Chloromethane | ETO15 | NA | 12/12/13 | 1 | 0.32 | 1.1 | ND | ND | | 418586 | NA |
| Vinyl Chloride | ETO15 | NA | 12/12/13 | 1 | 0.67 | 2.6 | ND | ND | | 418586 | NA |
| 1,3-Butadiene | ETO15 | NA | 12/12/13 | 1 | 0.45 | 1.1 | ND | ND | | 418586 | NA |
| Bromomethane | ETO15 | NA | 12/12/13 | 1 | 0.72 | 2.0 | ND | ND | | 418586 | NA |
| Chloroethane | ETO15 | NA | 12/12/13 | 1 | 0.50 | 1.3 | ND | ND | | 418586 | NA |
| Trichlorofluoromethane | ETO15 | NA | 12/12/13 | 1 | 1.8 | 5.6 | ND | ND | | 418586 | NA |
| 1,1-Dichloroethene | ETO15 | NA | 12/12/13 | 1 | 0.61 | 2.0 | ND | ND | | 418586 | NA |
| Freon 113 | ETO15 | NA | 12/12/13 | 1 | 0.85 | 3.9 | ND | ND | | 418586 | NA |
| Carbon Disulfide | ETO15 | NA | 12/12/13 | 1 | 0.81 | 3.1 | ND | ND | | 418586 | NA |
| 2-Propanol (Isopropyl Alcohol) | ETO15 | NA | 12/12/13 | 1 | 0.97 | 20 | ND | ND | | 418586 | NA |
| Methylene Chloride | ETO15 | NA | 12/12/13 | 1 | 0.58 | 28 | ND | ND | | 418586 | NA |
| Acetone | ETO15 | NA | 12/12/13 | 1 | 0.88 | 19 | ND | ND | | 418586 | NA |
| trans-1,2-Dichloroethene | ETO15 | NA | 12/12/13 | 1 | 0.64 | 2.0 | ND | ND | | 418586 | NA |
| Hexane | ETO15 | NA | 12/12/13 | 1 | 0.53 | 1.8 | 2.03 | 0.58 | | 418586 | NA |
| MTBE | ETO15 | NA | 12/12/13 | 1 | 0.87 | 1.8 | ND | ND | | 418586 | NA |
| tert-Butanol | ETO15 | NA | 12/12/13 | 1 | 0.91 | 8.4 | ND | ND | | 418586 | NA |
| Diisopropyl ether (DIPE) | ETO15 | NA | 12/12/13 | 1 | 0.88 | 2.1 | ND | ND | | 418586 | NA |
| 1,1-Dichloroethane | ETO15 | NA | 12/12/13 | 1 | 0.75 | 2.1 | ND | ND | | 418586 | NA |
| ETBE | ETO15 | NA | 12/12/13 | 1 | 0.68 | 2.1 | ND | ND | | 418586 | NA |
| cis-1,2-Dichloroethene | ETO15 | NA | 12/12/13 | 1 | 0.54 | 2.0 | ND | ND | | 418586 | NA |
| Chloroform | ETO15 | NA | 12/12/13 | 1 | 1.2 | 4.9 | ND | ND | | 418586 | NA |
| Vinyl Acetate | ETO15 | NA | 12/12/13 | 1 | 0.57 | 1.8 | ND | ND | | 418586 | NA |
| Carbon Tetrachloride | ETO15 | NA | 12/12/13 | 1 | 0.86 | 3.2 | ND | ND | | 418586 | NA |
| 1,1,1-Trichloroethane | ETO15 | NA | 12/12/13 | 1 | 0.85 | 2.8 | ND | ND | | 418586 | NA |
| 2-Butanone (MEK) | ETO15 | NA | 12/12/13 | 1 | 0.63 | 1.5 | ND | ND | | 418586 | NA |
| Ethyl Acetate | ETO15 | NA | 12/12/13 | 1 | 0.74 | 1.8 | ND | ND | | 418586 | NA |
| Tetrahydrofuran | ETO15 | NA | 12/12/13 | 1 | 0.30 | 1.5 | ND | ND | | 418586 | NA |
| Benzene | ETO15 | NA | 12/12/13 | 1 | 0.69 | 1.6 | ND | ND | | 418586 | NA |
| TAME | ETO15 | NA | 12/12/13 | 1 | 0.36 | 2.1 | ND | ND | | 418586 | NA |
| 1,2-Dichloroethane (EDC) | ETO15 | NA | 12/12/13 | 1 | 0.99 | 2.1 | ND | ND | | 418586 | NA |
| Trichloroethylene | ETO15 | NA | 12/12/13 | 1 | 1.4 | 5.4 | ND | ND | | 418586 | NA |
| 1,2-Dichloropropane | ETO15 | NA | 12/12/13 | 1 | 1.3 | 4.6 | ND | ND | | 418586 | NA |
| Bromodichloromethane | ETO15 | NA | 12/12/13 | 1 | 0.89 | 3.4 | ND | ND | | 418586 | NA |

Torrent LABORATORY, INC.

## SAMPLE RESULTS

**Report prepared for:** Mary Cunningham
The Source Group, Inc

**Date Received:** 12/09/13
**Date Reported:** 12/16/13

| | | | |
|---|---|---|---|
| **Client Sample ID:** | Subslab 3 | **Lab Sample ID:** | 1312039-005A |
| **Project Name/Location:** | | **Sample Matrix:** | Soil Vapor |
| **Project Number:** | | | |
| **Date/Time Sampled:** | 12/06/13 / 9:10 | **Certified Clean WO # :** | |
| **Canister/Tube ID:** | A7465 | **Received PSI :** | 13.0 |
| **Collection Volume (L):** | 0.00 | **Corrected PSI :** | 0.0 |

| Parameters: | Analysis Method | Prep Date | Date Analyzed | DF | MDL ug/m3 | PQL ug/m3 | Results ug/m3 | Results ppbv | Lab Qualifier | Analytical Batch | Prep Batch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | ETO15 | NA | 12/12/13 | 1 | 1.2 | 3.6 | ND | ND | | 418586 | NA |
| trans-1,3-Dichloropropene | ETO15 | NA | 12/12/13 | 1 | 0.87 | 2.3 | ND | ND | | 418586 | NA |
| Toluene | ETO15 | NA | 12/12/13 | 1 | 0.95 | 1.9 | ND | ND | | 418586 | NA |
| 4-Methyl-2-Pentanone (MIBK) | ETO15 | NA | 12/12/13 | 1 | 0.85 | 2.1 | ND | ND | | 418586 | NA |
| cis-1,3-Dichloropropene | ETO15 | NA | 12/12/13 | 1 | 1.1 | 2.3 | ND | ND | | 418586 | NA |
| Tetrachloroethylene | ETO15 | NA | 12/12/13 | 1 | 0.91 | 3.4 | ND | ND | | 418586 | NA |
| 1,1,2-Trichloroethane | ETO15 | NA | 12/12/13 | 1 | 0.93 | 2.8 | ND | ND | | 418586 | NA |
| Dibromochloromethane | ETO15 | NA | 12/12/13 | 1 | 1.7 | 4.3 | ND | ND | | 418586 | NA |
| 1,2-Dibromoethane (EDB) | ETO15 | NA | 12/12/13 | 1 | 2.0 | 7.7 | ND | ND | | 418586 | NA |
| 2-Hexanone | ETO15 | NA | 12/12/13 | 1 | 1.1 | 4.1 | ND | ND | | 418586 | NA |
| Ethyl Benzene | ETO15 | NA | 12/12/13 | 1 | 0.99 | 2.2 | ND | ND | | 418586 | NA |
| Chlorobenzene | ETO15 | NA | 12/12/13 | 1 | 0.71 | 2.3 | ND | ND | | 418586 | NA |
| 1,1,1,2-Tetrachloroethane | ETO15 | NA | 12/12/13 | 1 | 1.0 | 3.5 | ND | ND | | 418586 | NA |
| m,p-Xylene | ETO15 | NA | 12/12/13 | 1 | 1.6 | 4.3 | ND | ND | | 418586 | NA |
| o-Xylene | ETO15 | NA | 12/12/13 | 1 | 0.81 | 2.2 | ND | ND | | 418586 | NA |
| Styrene | ETO15 | NA | 12/12/13 | 1 | 0.69 | 2.2 | ND | ND | | 418586 | NA |
| Bromoform | ETO15 | NA | 12/12/13 | 1 | 1.1 | 5.0 | ND | ND | | 418586 | NA |
| 1,1,2,2-Tetrachloroethane | ETO15 | NA | 12/12/13 | 1 | 0.70 | 3.5 | ND | ND | | 418586 | NA |
| 4-Ethyl Toluene | ETO15 | NA | 12/12/13 | 1 | 0.82 | 2.5 | ND | ND | | 418586 | NA |
| 1,3,5-Trimethylbenzene | ETO15 | NA | 12/12/13 | 1 | 0.76 | 2.5 | ND | ND | | 418586 | NA |
| 1,2,4-Trimethylbenzene | ETO15 | NA | 12/12/13 | 1 | 0.69 | 2.5 | ND | ND | | 418586 | NA |
| 1,4-Dichlorobenzene | ETO15 | NA | 12/12/13 | 1 | 0.65 | 3.0 | ND | ND | | 418586 | NA |
| 1,3-Dichlorobenzene | ETO15 | NA | 12/12/13 | 1 | 0.84 | 3.0 | ND | ND | | 418586 | NA |
| 1,2-Dichlorobenzene | ETO15 | NA | 12/12/13 | 1 | 0.91 | 3.0 | ND | ND | | 418586 | NA |
| Hexachlorobutadiene | ETO15 | NA | 12/12/13 | 1 | 2.4 | 5.5 | ND | ND | | 418586 | NA |
| 1,2,4-Trichlorobenzene | ETO15 | NA | 12/12/13 | 1 | 3.4 | 7.4 | ND | ND | | 418586 | NA |
| Naphthalene | ETO15 | NA | 12/12/13 | 1 | 1.5 | 5.2 | ND | ND | | 418586 | NA |
| (S) 4-Bromofluorobenzene | ETO15 | NA | 12/12/13 | 1 | 65 | 135 | 85.5 % | | | 418586 | NA |

| Parameters: | Analysis Method | Prep Date | Date Analyzed | DF | MDL ug/m3 | PQL % | Results % | Results ppmv | Lab Qualifier | Analytical Batch | Prep Batch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Helium | D1946 | NA | 12/13/13 | 5.1 | 0.026 | 0.13 | 1.2 | | | 418619 | NA |

Torrent LABORATORY, INC.

# MB Summary Report

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Work Order:** | 1312039 | **Prep Method:** | NA | **Prep Date:** | NA | **Prep Batch:** | NA |
| **Matrix:** | Air | **Analytical Method:** | ETO15 | **Analyzed Date:** | 12/12/13 | **Analytical Batch:** | 418586 |
| **Units:** | ppbv | | | | | | |

| Parameters | MDL | PQL | Method Blank Conc. | Lab Qualifier |
|---|---|---|---|---|
| Dichlorodifluoromethane | 0.30 | 1.00 | ND | |
| 1,1-Difluoroethane | 0.18 | 10.0 | ND | |
| 1,2-Dichlorotetrafluoroethane | 0.70 | 2.00 | ND | |
| Chloromethane | 0.15 | 0.500 | ND | |
| Vinyl Chloride | 0.26 | 1.00 | ND | |
| 1,3-Butadiene | 0.20 | 0.500 | ND | |
| Bromomethane | 0.18 | 0.500 | ND | |
| Chloroethane | 0.19 | 0.500 | ND | |
| Trichlorofluoromethane | 0.32 | 1.00 | ND | |
| 1,1-Dichloroethene | 0.15 | 0.500 | ND | |
| Freon 113 | 0.11 | 0.500 | ND | |
| Carbon Disulfide | 0.26 | 1.00 | ND | |
| 2-Propanol (Isopropyl Alcohol) | 0.39 | 8.00 | ND | |
| Methylene Chloride | 0.17 | 8.00 | ND | |
| Acetone | 0.37 | 8.00 | ND | |
| trans-1,2-Dichloroethene | 0.16 | 0.500 | ND | |
| Hexane | 0.15 | 0.500 | ND | |
| MTBE | 0.24 | 0.500 | ND | |
| tert-Butanol | 0.22 | 2.00 | ND | |
| Diisopropyl ether (DIPE) | 0.21 | 0.500 | ND | |
| 1,1-Dichloroethane | 0.18 | 0.500 | ND | |
| ETBE | 0.16 | 0.500 | ND | |
| cis-1,2-Dichloroethene | 0.13 | 0.500 | ND | |
| Chloroform | 0.25 | 1.00 | ND | |
| Vinyl Acetate | 0.16 | 0.500 | ND | |
| Carbon Tetrachloride | 0.14 | 0.500 | ND | |
| 1,1,1-Trichloroethane | 0.15 | 0.500 | ND | |
| 2-Butanone (MEK) | 0.21 | 0.500 | ND | |
| Ethyl Acetate | 0.21 | 0.500 | ND | |
| Tetrahydrofuran | 0.10 | 0.500 | ND | |
| Benzene | 0.21 | 0.500 | ND | |
| TAME | 0.086 | 0.500 | ND | |
| 1,2-Dichloroethane (EDC) | 0.24 | 0.500 | ND | |
| Trichloroethylene | 0.26 | 1.00 | ND | |
| 1,2-Dichloropropane | 0.29 | 1.00 | ND | |
| Bromodichloromethane | 0.13 | 0.500 | ND | |
| 1,4-Dioxane | 0.35 | 1.00 | ND | |
| trans-1,3-Dichloropropene | 0.19 | 0.500 | ND | |
| Toluene | 0.25 | 0.500 | ND | |
| 4-Methyl-2-Pentanone (MIBK) | 0.21 | 0.500 | ND | |
| cis-1,3-Dichloropropene | 0.25 | 0.500 | ND | |

Torrent LABORATORY, INC.

# MB Summary Report

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Work Order:** | 1312039 | **Prep Method:** | NA | **Prep Date:** | NA | **Prep Batch:** | NA |
| **Matrix:** | Air | **Analytical Method:** | ETO15 | **Analyzed Date:** | 12/12/13 | **Analytical Batch:** | 418586 |
| **Units:** | ppbv | | | | | | |

| Parameters | MDL | PQL | Method Blank Conc. | Lab Qualifier |
|---|---|---|---|---|
| Tetrachloroethylene | 0.13 | 0.500 | ND | |
| 1,1,2-Trichloroethane | 0.17 | 0.500 | ND | |
| Dibromochloromethane | 0.20 | 0.500 | ND | |
| 1,2-Dibromoethane (EDB) | 0.27 | 1.00 | ND | |
| 2-Hexanone | 0.27 | 1.00 | ND | |
| Ethyl Benzene | 0.23 | 0.500 | ND | |
| Chlorobenzene | 0.15 | 0.500 | ND | |
| 1,1,1,2-Tetrachloroethane | 0.15 | 0.500 | ND | |
| m,p-Xylene | 0.38 | 1.00 | ND | |
| o-Xylene | 0.19 | 0.500 | ND | |
| Styrene | 0.16 | 0.500 | ND | |
| Bromoform | 0.11 | 0.500 | ND | |
| 1,1,2,2-Tetrachloroethane | 0.10 | 0.500 | ND | |
| 4-Ethyl Toluene | 0.17 | 0.500 | ND | |
| 1,3,5-Trimethylbenzene | 0.15 | 0.500 | ND | |
| 1,2,4-Trimethylbenzene | 0.14 | 0.500 | ND | |
| 1,4-Dichlorobenzene | 0.11 | 0.500 | ND | |
| 1,3-Dichlorobenzene | 0.14 | 0.500 | ND | |
| 1,2-Dichlorobenzene | 0.15 | 0.500 | ND | |
| Hexachlorobutadiene | 0.22 | 0.500 | ND | |
| 1,2,4-Trichlorobenzene | 0.46 | 1.00 | ND | |
| Naphthalene | 0.28 | 1.00 | ND | |
| (S) 4-Bromofluorobenzene | | | 93.8 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Work Order:** | 1312039 | **Prep Method:** | NA | **Prep Date:** | NA | **Prep Batch:** | NA |
| **Matrix:** | Air | **Analytical Method:** | D1946 | **Analyzed Date:** | 12/13/13 | **Analytical Batch:** | 418619 |
| **Units:** | % | | | | | | |

| Parameters | MDL | PQL | Method Blank Conc. | Lab Qualifier |
|---|---|---|---|---|
| Carbon Dioxide | 0.025 | 0.025 | ND | |
| Ethene | 0.025 | 0.025 | ND | |
| Ethane | 0.025 | 0.025 | ND | |
| Helium | 0.0050 | 0.025 | ND | |
| Hydrogen | 0.025 | 0.025 | ND | |
| Oxygen | 0.025 | 0.025 | ND | |
| Nitrogen | 0.025 | 0.025 | ND | |
| Methane | 0.0005 | 0.0005 | ND | |
| Carbon Monoxide | 0.025 | 0.025 | ND | |

Torrent LABORATORY, INC.

# MB Summary Report

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Work Order:** | 1312039 | **Prep Method:** | NA | **Prep Date:** | NA | **Prep Batch:** | NA |
| **Matrix:** | Air | **Analytical Method:** | ETO15SIM | **Analyzed Date:** | 12/12/13 | **Analytical Batch:** | 418630 |
| **Units:** | ppbv | | | | | | |

| Parameters | MDL | PQL | Method Blank Conc. | Lab Qualifier |
|---|---|---|---|---|
| Dichlorodifluoromethane | 0.0036 | 0.01 | ND | |
| Chloromethane | 0.0042 | 0.01 | ND | |
| Vinyl Chloride | 0.0014 | 0.005 | 0.0020 | |
| 1,3-Butadiene | 0.0099 | 0.02 | ND | |
| Bromomethane | 0.0021 | 0.005 | 0.0070 | B |
| Chloroethane | 0.00079 | 0.005 | 0.0030 | |
| Trichloromonofluoromethane | 0.0022 | 0.005 | ND | |
| Isopropyl Alcohol | 0.0063 | 0.05 | ND | |
| Acetone | 0.011 | 0.02 | 0.018 | |
| 1,1-Dichloroethene | 0.0017 | 0.005 | ND | |
| tert-Butanol | 0.0038 | 0.1 | ND | |
| Methylene Chloride | 0.0042 | 0.01 | 0.0050 | |
| Freon 113 | 0.0017 | 0.005 | 0.0030 | |
| Carbon disulfide | 0.00091 | 0.005 | 0.0040 | |
| trans-1,2-Dichloroethene | 0.00094 | 0.005 | 0.0020 | |
| MTBE | 0.0017 | 0.005 | ND | |
| 1,1-Dichloroethane | 0.0012 | 0.005 | ND | |
| Vinyl Acetate | 0.0014 | 0.005 | ND | |
| Hexane | 0.0013 | 0.005 | 0.0030 | |
| 2-Butanone (MEK) | 0.00092 | 0.005 | ND | |
| DIPE | 0.0011 | 0.005 | 0.0030 | |
| cis-1,2-Dichloroethene | 0.0010 | 0.005 | 0.0020 | |
| Ethyl Acetate | 0.00092 | 0.005 | ND | |
| Chloroform | 0.00166 | 0.005 | 0.0020 | |
| ETBE | 0.0011 | 0.005 | 0.0030 | |
| Tetrahydrofuran | 0.0097 | 0.02 | ND | |
| 1,2-Dichloroethane (EDC) | 0.0012 | 0.005 | 0.0030 | |
| 1,1,1-Trichloroethane | 0.0015 | 0.005 | 0.0020 | |
| Carbon Tetrachloride | 0.0014 | 0.005 | ND | |
| Benzene | 0.011 | 0.02 | ND | |
| TAME | 0.00059 | 0.005 | 0.0010 | |
| Heptane | 0.00081 | 0.005 | 0.0010 | |
| 1,2-Dichloropropane | 0.0010 | 0.005 | 0.0010 | |
| Trichloroethylene | 0.0021 | 0.005 | ND | |
| Bromodichloromethane | 0.00083 | 0.005 | ND | |
| 1,4-Dioxane | 0.0030 | 0.005 | ND | |
| cis-1,3-Dichloropropene | 0.00079 | 0.005 | 0.0010 | |
| Methyl Isobutyl Ketone (MIBK) | 0.0016 | 0.005 | 0.0020 | |
| trans-1,3-Dichloropropene | 0.00088 | 0.005 | 0.0020 | |
| 1,1,2-Trichloroethane | 0.000590 | 0.005 | 0.0010 | |
| Toluene | 0.0011 | 0.005 | ND | |

Torrent LABORATORY, INC.

# MB Summary Report

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Work Order:** | 1312039 | **Prep Method:** | NA | **Prep Date:** | NA | **Prep Batch:** | NA |
| **Matrix:** | Air | **Analytical Method:** | ETO15SIM | **Analyzed Date:** | 12/12/13 | **Analytical Batch:** | 418630 |
| **Units:** | ppbv | | | | | | |

| Parameters | MDL | PQL | Method Blank Conc. | Lab Qualifier |
|---|---|---|---|---|
| 2-Hexanone | 0.0022 | 0.005 | ND | |
| Dibromochloromethane | 0.0025 | 0.005 | ND | |
| 1,2-Dibromoethane (EDB) | 0.00054 | 0.005 | 0.0020 | |
| Tetrachloroethylene | 0.0038 | 0.01 | ND | |
| 1,1,1,2-Tetrachloroethane | 0.0013 | 0.005 | ND | |
| Chlorobenzene | 0.00050 | 0.001 | ND | |
| Ethylbenzene | 0.00054 | 0.005 | 0.0010 | |
| m,p-Xylene | 0.00061 | 0.005 | 0.0030 | |
| Bromoform | 0.0033 | 0.01 | ND | |
| Styrene | 0.00073 | 0.005 | 0.0030 | |
| 1,1,2,2-Tetrachloroethane | 0.00034 | 0.001 | 0.0010 | |
| o-Xylene | 0.00051 | 0.005 | 0.0010 | |
| 4-Ethyl toluene | 0.00070 | 0.005 | 0.0020 | |
| 1,3,5-Trimethylbenzene | 0.00072 | 0.005 | 0.0020 | |
| 1,2,4-Trimethylbenzene | 0.00068 | 0.005 | 0.0020 | |
| 1,3-Dichlorobenzene | 0.00094 | 0.005 | ND | |
| 1,4-Dichlorobenzene | 0.00086 | 0.005 | ND | |
| 1,2-Dichlorobenzene | 0.00094 | 0.005 | 0.0010 | |
| 1,2,4-trichlorobenzene | 0.0090 | 0.005 | ND | |
| Naphthalene | 0.00090 | 0.005 | 0.0030 | |
| Hexachlorobutadiene | 0.0099 | 0.02 | ND | |
| 1,1-Difluoroethane | 0.050 | 0.1 | ND | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Work Order:** | 1312039 | **Prep Method:** | NA | **Prep Date:** | NA | **Prep Batch:** | NA |
| **Matrix:** | Air | **Analytical Method:** | D1946 | **Analyzed Date:** | 12/16/13 | **Analytical Batch:** | 418631 |
| **Units:** | % | | | | | | |

| Parameters | MDL | PQL | Method Blank Conc. | Lab Qualifier |
|---|---|---|---|---|
| Helium | 0.0050 | 0.025 | ND | |

Torrent LABORATORY, INC.

# LCS/LCSD Summary Report

*Raw values are used in quality control assessment.*

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Work Order:** | 1312039 | **Prep Method:** | NA | **Prep Date:** | NA | **Prep Batch:** | NA |
| **Matrix:** | Air | **Analytical Method:** | ETO15 | **Analyzed Date:** | 12/12/13 | **Analytical Batch:** | 418586 |
| **Units:** | ppbv | | | | | | |

| Parameters | MDL | PQL | Method Blank Conc. | Spike Conc. | LCS % Recovery | LCSD % Recovery | LCS/LCSD % RPD | % Recovery Limits | % RPD Limits | Lab Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 0.15 | 0.500 | ND | 20 | 116 | 123 | 6.32 | 65 - 135 | 30 | |
| Benzene | 0.21 | 0.500 | ND | 20 | 111 | 116 | 4.29 | 65 - 135 | 30 | |
| Trichloroethylene | 0.26 | 1.00 | ND | 20 | 110 | 109 | 0.958 | 65 - 135 | 30 | |
| Toluene | 0.25 | 0.500 | ND | 20 | 95.2 | 95.8 | 0.681 | 65 - 135 | 30 | |
| Chlorobenzene | 0.15 | 0.500 | ND | 20 | 116 | 103 | 11.6 | 65 - 135 | 30 | |
| (S) 4-Bromofluorobenzene | | | ND | 20 | 115 | 110 | | 65 - 135 | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Work Order:** | 1312039 | **Prep Method:** | NA | **Prep Date:** | NA | **Prep Batch:** | NA |
| **Matrix:** | Air | **Analytical Method:** | D1946 | **Analyzed Date:** | 12/13/13 | **Analytical Batch:** | 418619 |
| **Units:** | % | | | | | | |

| Parameters | MDL | PQL | Method Blank Conc. | Spike Conc. | LCS % Recovery | LCSD % Recovery | LCS/LCSD % RPD | % Recovery Limits | % RPD Limits | Lab Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| Helium | 0.0050 | 0.025 | ND | 1000 | 100 | 104 | 3.79 | 65 - 135 | 30 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Work Order:** | 1312039 | **Prep Method:** | NA | **Prep Date:** | NA | **Prep Batch:** | NA |
| **Matrix:** | Air | **Analytical Method:** | ETO15SIM | **Analyzed Date:** | 12/12/13 | **Analytical Batch:** | 418630 |
| **Units:** | ppbv | | | | | | |

| Parameters | MDL | PQL | Method Blank Conc. | Spike Conc. | LCS % Recovery | LCSD % Recovery | LCS/LCSD % RPD | % Recovery Limits | % RPD Limits | Lab Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 0.0017 | 0.005 | ND | 0.1 | 99.0 | 94.0 | 5.18 | 70 - 130 | 30 | |
| Benzene | 0.011 | 0.02 | 0.00 | 0.1 | 96.0 | 95.0 | 1.05 | 70 - 130 | 30 | |
| Trichloroethylene | 0.0021 | 0.005 | ND | 0.1 | 105 | 105 | 0.000 | 70 - 130 | 30 | |
| Toluene | 0.0011 | 0.005 | 0.0020 | 0.1 | 94.0 | 92.0 | 2.15 | 70 - 130 | 30 | |
| Chlorobenzene | 0.00050 | 0.001 | ND | 0.1 | 110 | 103 | 6.57 | 70 - 130 | 30 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Work Order:** | 1312039 | **Prep Method:** | NA | **Prep Date:** | NA | **Prep Batch:** | NA |
| **Matrix:** | Air | **Analytical Method:** | D1946 | **Analyzed Date:** | 12/16/13 | **Analytical Batch:** | 418631 |
| **Units:** | % | | | | | | |

| Parameters | MDL | PQL | Method Blank Conc. | Spike Conc. | LCS % Recovery | LCSD % Recovery | LCS/LCSD % RPD | % Recovery Limits | % RPD Limits | Lab Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| Helium | 0.005 | 0.025 | ND | 1000 | 116.24 | 109.5 | 5.9714716 0450076 | 65 - 135 | 30 | |

Torrent LABORATORY, INC.

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# Laboratory Qualifiers and Definitions

## DEFINITIONS:

| |
|---|
| **Accuracy/Bias (% Recovery)** - The closeness of agreement between an observed value and an accepted reference value. |
| **Blank (Method/Preparation Blank)** -MB/PB - An analyte-free matrix to which all reagents are added in the same volumes/proportions as used in sample processing. The method blank is used to document contamination resulting from the analytical process. |
| **Duplicate** - a field sample and/or laboratory QC sample prepared in duplicate following all of the same processes and procedures used on the original sample (sample duplicate, LCSD, MSD) |
| **Laboratory Control Sample (LCS ad LCSD)** - A known matrix spiked with compounds representative of the target analyte(s). This is used to document laboratory performance. |
| **Matrix** - the component or substrate that contains the analyte of interest (e.g., - groundwater, sediment, soil, waste water, etc) |
| **Matrix Spike (MS/MSD)** - Client sample spiked with identical concentrations of target analyte (s). The spiking occurs prior to the sample preparation and analysis. They are used to document the precision and bias of a method in a given sample matrix. |
| **Method Detection Limit (MDL)** - the minimum concentration of a substance that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero |
| **Practical Quantitation Limit (PQL)** - a laboratory determined value at 2 to 5 times above the MDL that can be reproduced in a manner that results in a 99% confidence level that the result is both accurate and precise. PQLs reflect all preparation factors and/or dilution factors that have been applied to the sample during the preparation and/or analytical processes. |
| **Precision (%RPD)** - The agreement among a set of replicate/duplicate measurements without regard to known value of the replicates |
| **Surrogate (S) or (Surr)** - An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. Surrogates are used in most organic analysis to demonstrate matrix compatibility with the chosen method of analysis |
| **Tentatively Identified Compound (TIC) -** A compound not contained within the analytical calibration standards but present in the GCMS library of defined compounds. When the library is searched for an unknown compound, it can frequently give a tentative identification to the compound based on retention time and primary and secondary ion match. TICs are reported as estimates and are candidates for further investigation. |
| **Units:** the unit of measure used to express the reported result - **mg/L** and ***mg/Kg*** (equivalent to PPM - parts per million in **liquid** and ***solid***), **ug/L** and ***ug/Kg*** (equivalent to PPB - parts per billion in **liquid** and ***solid***), **ug/m3**, ***mg.m3***, **ppbv** and ***ppmv*** (all units of measure for reporting concentrations in air), **%** ( equivalent to 10000 ppm or 1,000,000 ppb), **ug/Wipe** ( concentration found on the surface of a single Wipe usually taken over a 100cm2 surface) |

## LABORATORY QUALIFIERS:

**B** - Indicates when the anlayte is found in the associated method or preparation blank
**D** - Surrogate is not recoverable due to the necessary dilution of the sample
**E** - Indicates the reportable value is outside of the calibration range of the instrument but within the linear range of the instrument (unless otherwise noted) Values reported with an E qualifier should be considered as estimated.
**H**- Indicates that the recommended holding time for the analyte or compound has been exceeded
**J**- Indicates a value between the method MDL and PQL and that the reported concentration should be considered as estimated rather the quantitative
**NA** - Not Analyzed
**N/A** - Not Applicable
**NR** - Not recoverable - a matrix spike concentration is not recoverable due to a concentration within the original sample that is greater than four times the spike concentration added
**R**- The % RPD between a duplicate set of samples is outside of the absolute values established by laboratory control charts
**S**- Spike recovery is outside of established method and/or laboratory control limits. Further explanation of the use of this qualifier should be included within a case narrative
**X** -Used to indicate that a value based on pattern identification is within the pattern range but not typical of the pattern found in standards. Further explanation may or may not be provided within the sample footnote and/or the case narrative.

# Sample Receipt Checklist

Client Name: The Source Group, Inc

Project Name:

Work Order No.: 1312039

Date and Time Received: 12/9/2013 12:00

Received By: ng

Physically Logged By: ng

Checklist Completed By: ng

Carrier Name: First Courier

## Chain of Custody (COC) Information

| | |
|---|---|
| Chain of custody present? | Yes |
| Chain of custody signed when relinquished and received? | Yes |
| Chain of custody agrees with sample labels? | Yes |
| Custody seals intact on sample bottles? | Not Present |

## Sample Receipt Information

| | |
|---|---|
| Custody seals intact on shipping container/cooler? | Not Present |
| Shipping Container/Cooler In Good Condition? | Yes |
| Samples in proper container/bottle? | Yes |
| Samples containers intact? | Yes |
| Sufficient sample volume for indicated test? | Yes |

## Sample Preservation and Hold Time (HT) Information

| | | | |
|---|---|---|---|
| All samples received within holding time? | Yes | | |
| Container/Temp Blank temperature in compliance? | Yes | Temperature: | °C |
| Water-VOA vials have zero headspace? | No VOA vials submitted | | |
| Water-pH acceptable upon receipt? | N/A | | |

pH Checked by: n/a

pH Adjusted by: n/a

Torrent LABORATORY, INC.

Torrent LABORATORY, INC.
483 Sinclair Frontage Road
Milpitas, CA 95035
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FAX: 408.263.8293
www.torrentlab.com

# CHAIN OF CUSTODY

• NOTE: SHADED AREAS ARE FOR TORRENT LAB USE ONLY •

LAB WORK ORDER NO: 1312039

Company Name: SGI ☐ Env. ☐ IH ☐ Food ☐ Special | Location of Sampling:

Address: 3479 Buskirk Ave | Purpose:

City: Pleasant Hill | State: CA | Zip Code: 94523 | Special Instructions / Comments:

Telephone: 925 951 6397 | FAX:

REPORT TO: mcunningham@thesaurusgroup.net | SAMPLER: M Cunningham | P.O. #: 01-FP-002 | EMAIL: mcunningham@thesaurusgroup.net

TURNAROUND TIME:
☐ 10 Work Days ☐ 4 Work Days ☐ 1 Work Day
☐ 7 Work Days ☐ 3 Work Days ☐ Noon - Nxt Day
☒ 5 Work Days ☐ 2 Work Days ☐ 2 - 8 Hours

SAMPLE TYPE:
☐ Storm Water ☒ Air
☐ Waste Water ☐ Other
☐ Ground Water
☐ Soil

REPORT FORMAT:
☐ QC Level IV
☐ EDF
☐ Excel / EDD

ANALYSIS REQUESTED

| LAB ID | CANISTER I.D. | CLIENT'S SAMPLE I.D. | DATE / TIME SAMPLED | MATRIX | # OF CONT | CONT TYPE | TO-15 | Helium | | | | | | | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 001A | 449 | IA1 | 12/6/13 0900 | air | 1 | 6L Summa | X | | | | | | | | |
| 002A | 1438 | IA2 | 12/6/13 0905 | ↓ | ↓ | ↓ | X | | | | | | | | |
| 003A | | Ambient | 0910 | | | | X | | | | | | | | |
| 004A | 6127 | Sub lab 2 | | | | 1L Summa | X | X | | | | | | | |
| 005A | A7465 | Sub lab 3 | ↓ | ↓ | ↓ | ↓ | X | X | | | | | | | |

| | Relinquished By: | Print: | Date: | Time: | Received By: | Print: | Date: | Time: |
|---|---|---|---|---|---|---|---|---|
| 1 | | M Cunningham | 12/9/13 | 1040 | Rebecca E | Rebecca E | 12-9-13 | 10:40 |
| 2 | Rebecca E | Rebecca E | 12-9-13 | 12 | | NAVIN G | 12-9-13 | 12:00 PM |

Were Samples Received in Good Condition? ☒ Yes ☐ NO | Samples on Ice? ☐ Yes ☒ NO | Method of Shipment FCS | Sample seals intact? ☐ Yes ☐ NO ☒ N/A

NOTE: Samples are discarded by the laboratory 30 days from date of receipt unless other arrangements are made. | Temp ____ °C | Page 1 of 1

Log In By: ____ Date: ____ | Log In Reviewed By: ____ Date: ____

NG, LING, LBL NG LIR

TORRENT LAB