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## **Sub-slab soil gas sampling results for lease properties LP-072 and LP-125, Alaska Railroad Corporation, Anchorage Terminal Reserve USEPA Docket No. CERCLA 10-2004-0065**

### **1. Introduction**

This report documents the results of the sub-slab soil gas sampling conducted in October of 2009, on lease properties LP-072 and LP-125 of the Alaska Railroad Corporation, Anchorage Terminal Reserve (Figure 1). These lease lots are in the vicinity of a groundwater plume described as GW-1. Groundwater flow in the area is generally from the east southeast toward the west northwest. The primary contaminant of GW-1 is trichloroethene (TCE) and the source of the plume has not been identified (as described in the Remedial Investigation). The sub-slab soil gas sampling was conducted because previous groundwater monitoring data and soil gas sampling data collected on or near lease properties LP-072 and LP-125 did not adequately demonstrate that the project vapor intrusion risk criteria are met for workers in the existing buildings on these two lease lots.

The objective of the sub-slab soil gas sampling, laboratory analysis and risk calculations described herein was to evaluate vapor intrusion risk for the existing buildings on lease lots LP-072 and LP-125.

### **2. General Site Conditions**

Lease Property LP-072 is currently occupied by Karen's RV, a recreational vehicle repair and maintenance company. The only building on the site is a modern, steel frame, warehouse style building, approximately 176 feet long by 70 feet wide. The site outside of the building is used for recreational vehicle parking. The building has a slab on grade foundation, and the slab appeared to be relatively thick (9 to 11-inches) in the holes drilled to install the soil gas probes. There are no floor drains in the building and the concrete slab was not significantly cracked (only one, narrow or closed crack a few feet long was observed). The building was reportedly originally constructed to serve as a tire warehouse. The northeastern corner of the building has a small framed office and parts storage area. There is a paint bay in the northwestern corner of the building and a restroom in the southeastern corner. The remainder of

the building is one large open space. Heat is supplied by gas-fired space heaters suspended from the ceiling. There are large garage doors on the north and south side of the building. The recreational vehicle repair and maintenance operations include activities such as welding, painting, furniture repair, upholstery repair, laminate counter and table repair, plumbing system repair, winterizing, awning installation, appliance installation and electrical system work. The company does not appear to do engine, drive train or chassis work on the recreational vehicles. The slab floor did not appear significantly stained. Chemicals observed in the building included paints, glues, mastics, battery terminal cleaner and propylene glycol. Photographs of the LP-072 site are in Attachment 1.

Lease Property LP-125 is currently occupied by Taylor Leasing. The only building on the site is an older, Quonset style building, approximately 100 feet long by 50 feet wide. The site outside of the building is used for vehicle and trailer parking. The building has a slab on grade foundation, and the slab appeared to be about 6 to 8-inches thick in the holes drilled to install the soil gas probes. There is a floor drain in the southern portion of the building and at least 2 additional floor penetrations reportedly used to brace equipment which straightens the frames of damaged vehicles. In addition, the concrete slab was cracked in several places. The southwestern corner of the building has a small framed office area, the northeastern and southeastern corners of the building have small framed storage areas, and there are restrooms near the center of the building. (The seam between the floor slab and the foundation wall in the southwestern corner office was observed to be sealed with a flexible caulk which minimizes vapor intrusion into the office). The remainder of the building is one large space with an approximately 10 foot high wall dividing the southern half of the building from the northern half. Heat for the main building space is supplied by gas-fired space heaters suspended from the ceiling and by waste oil heaters. There are large garage doors on the north and south side of the building. The primary personnel door for the building is on the south side of the building. Operations in the building currently include taxi cab maintenance in the southern half of the building and trailer construction in the northern half of the building. The slab floor appeared to be significantly stained with motor oil and glycol. Chemicals observed in the building included motor oils, penetrating lubricants (e.g. WD-40), paints, glues, brake cleaner, battery terminal cleaner and ethylene glycol. Photographs of the LP-125 site are in Attachment 1.

### **3. Soil Gas Sampling**

Three sub-slab soil gas samples and one field duplicate were collected from the existing building on lease lot LP-072 and three sub-slab soil gas samples were collected from the existing building on lease lot LP-125. Both buildings have a long axis that runs north-south. As shown on Figure 1, in each building the sampling collected one sample in the northern third of the building, one sample in the middle third of the building, and one sample in the southern third of the building. The exact locations of the samples in each building were selected in the field after talking with the building lessee, and after reviewing utility locations and the distribution of work space within the buildings. The sub-slab soil gas

samples were collected following the work plan submitted to the EPA on September 24, 2009 and approved by the EPA on September 28, 2009.

The installation of the sub-slab sampling points involved the following: using a rotary percussion drill with a 3/8-inch bit to penetrate the floor slab and several inches into the underlying soil; over-drilling the top 1 to 1.5 inches of the slab with a 1-inch bit; and cementing a stainless steel tube and “Swagelock” fitting into the hole through the slab. The soil gas sample collection was conducted after allowing the cement to set for at least 24 hours.

The soil gas sampling included a helium leak test to assess if the sampling points were sealed properly and a vacuum test to ensure that the sampling manifold did not leak. The helium leak test involved connecting Teflon tubing to the sub-slab sample point with Swagelock fittings and using a peristaltic pump to collect sub-slab soil gas in a “Tedlar bag”, while balloon grade helium was injected under a mixing bowl placed over the sub-slab sampling point. After purging the sampling point and collecting a few liters of sub-slab soil gas in the Tedlar bag, the gas in the bag was screened for the presence of helium using a helium detector. If the helium concentration in the Tedlar bag was less than about 5% of the helium concentration under the mixing bowl, then the sample point was assumed to be adequately sealed. The middle sample location at LP-072 and the northern sample location at LP-125 initially failed the helium leak test. The sub-slab sample points were resealed with a slurry of “Fix-it-All”, and then purged and retested using the helium leak test procedure. The sampling points passed the helium leak test after they were resealed. The vacuum test of the sampling manifold involved connecting an evacuated Summa canister to the sampling manifold (rented from Air Toxics Limited), opening and then closing the valve on the Summa canister with the other valves or connection points on the manifold in the closed position, and then monitoring the vacuum level in the manifold for several minutes (one Summa canister was dedicated to the vacuum leak tests). If the manifold held vacuum, then the manifold was assumed to be adequately sealed. A separate manifold was used for each soil gas sample and all of the manifolds passed the vacuum test. Note that all fittings used during the sub-slab sampling were stainless steel Swagelock fittings and that vapor flow rates were controlled so as to not exceed a flow rate of about 100 to 200 milliliters per minute.

After a sampling point passed the leak tests, the soil gas samples were collected for laboratory analysis. The soil gas samples analyzed in the laboratory were collected in 10% certified, 1-liter Summa canisters (the canisters and manifolds were rented from, and cleaned and certified by Air Toxics Limited). The manifolds had a flow restrictor that provided flow rate of about 167 milliliters per minute, which resulted in a 5 to 10 minute sample collection period. The Summa canister valves were closed while the canisters still had a slight vacuum and the vacuum levels were recorded so that a canister leak check could be performed in the laboratory (i.e. if the canister had the same vacuum in the laboratory as it had in the field, then the canister passed the leak test). The Summa canisters were shipped to Air Toxics, Ltd. for analysis following chain-of-custody procedures.

#### 4. Soil Gas Laboratory Results & Screening

The sub-slab soil gas samples were analyzed for volatile organic compounds by EPA Method TO-15. The sample results are summarized in Table 1 and the complete results are provided in Attachment 2. Table 1 lists compounds which were detected in the soil gas samples at the top of the table, and provides generic and site specific soil gas screening levels. The generic screening levels are the lower of either the EPA or ADEC screening levels for commercial sites; are based on a carcinogenic risk level of  $10^{-5}$  and a non-carcinogenic HI of 1; and an attenuation factor of 0.1. Of the compounds which were detected at the site only trichloroethene (TCE) and tetrachloroethene (PCE) exceed the generic screening levels. The detection of TCE in the soil gas at LP-072 and LP-125 was not surprising because the RI has confirmed the existence of a TCE groundwater plume underlying these leased properties. The detection of PCE was not expected because soil sampling, soil gas sampling and groundwater monitoring had not detected PCE on either LP-072 or LP-125. Of the compounds which were not detected, four compounds (3-Chloropropene, 1,2-Dibromoethane (EDB), 1,1,2,2-Tetrachloroethane, and Hexachlorobutadiene) had reporting limits which exceeded the generic screening levels. To further assess if the compounds which were not detected, but had reporting limits above generic screening levels, should be considered further, site specific screening levels were applied. The site specific screening level was based on an attenuation factor of 0.0025 (which is about  $1/10^{\text{th}}$  of the attenuation factor calculated by the Johnson and Ettinger Model for the TCE and PCE at the LP-125 location). The site specific screening levels show that the four compounds in question (compounds not detected but with reporting limits above the generic screening levels) would not contribute significantly to risk if they were present at the reporting limit and should not be considered further.

The absence of significant benzene, toluene, ethylbenzene, xylene and trimethylbenzene in the soil gas (and their absence or extremely low concentration in the existing groundwater data set) suggest that there is not a significant hydrocarbon source at either the LP-072 or LP-125 location.

#### 5. Vapor Intrusion Risk Calculations

To assess potential vapor intrusion risks the soil gas results were evaluated using the advanced *Johnson and Ettinger (1991) Model for Subsurface Vapor Intrusion into Buildings, Updated 2003* (SG-ADV Version 3.1; 02/04) (U.S. Environmental Protection Agency [EPA], 2003). The Johnson and Ettinger vapor intrusion model typically assumes that the air in the building being evaluated is well mixed and that the risk calculated by the model is for the building as a whole. Input parameter values for the Johnson and Ettinger model are listed in Table 2. In general, the soil conditions, building dimensions and foundation dimensions used in the modeling were based on the site specific measurements or site specific estimates as shown in Table 2. To account for the cracked slab in the building on LP-125 a perimeter crack width of 0.2 cm was used, which provides for a total crack area twice that derived using the default crack width (and recall that the seam between the floor slab and the foundation wall in the southwestern corner office is sealed with a flexible caulk, mitigating potential vapor intrusion in the office

area at LP-125). To account for the presence of the heated building a sub-slab system temperature of 15 degrees C was estimated. The exposure point concentrations used in the Johnson and Ettinger modeling were the maximum concentrations measured in each building.

The vapor intrusion attenuation factors and risks for the existing buildings on LP-072 and LP-125 are shown in Table 3. The attenuation factors in the building on LP-125 are calculated as approximately  $2 \times 10^{-4}$  (which is an order of magnitude more attenuation than assumed in the site specific screening level calculation). The attenuation factor in the building on LP-072 is calculated as approximately  $1 \times 10^{-5}$ , which is more than two orders of magnitude more attenuation than assumed in the site specific screening level calculation.

At the LP-072 location the TCE vapor intrusion carcinogenic risk was calculated as  $8.0 \times 10^{-8}$ , and at the LP-125 location the TCE vapor intrusion carcinogenic risk was calculated as  $9.0 \times 10^{-6}$ . The PCE vapor intrusion carcinogenic risk at the LP-125 location was calculated as  $4.7 \times 10^{-7}$ , which is more than an order of magnitude less risk than that that posed by the TCE. PCE was also detected at the LP-072 location, but only at concentrations far below TCE soil gas screening levels, hence, risks associated with PCE at LP-072 location were not calculated. Table 3 also presents cumulative risk for the vapor intrusion route and as indicated above, the majority of the vapor intrusion risk is posed by the TCE. These risk calculations (based on the measured values listed in Table 2) show that the buildings at both LP-072 and LP-125 meet the risk standard (i.e. the site conditions do not present unacceptable risk to workers in the buildings).

In a simple sensitivity analysis, two alternate sets of vapor intrusion risk calculations were made for lease properties LP-072 and LP-125. The alternate risk calculations included: 1) assuming low moisture content sandy soils are present under the slab and 2) using the new draft TCE unit risk factor and reference concentration released values by the EPA on November 3, 2009. The low soil moisture condition assumed a water filled porosity of 0.054 which is the EPA default moisture content for sandy soils, and at LP-072, a soil vapor permeability of  $6.56 \times 10^{-8} \text{ cm}^2$ , which is the measured value for the sandy soils at the LP-125 location. As shown in Table 3, assuming low moisture content soils were present, the cumulative vapor intrusion carcinogenic risk was calculated as  $7.8 \times 10^{-7}$  at the LP-072 location and as  $9.6 \times 10^{-6}$  at the LP-125 location. Using the new TCE unit risk factor value (and the low moisture content soil conditions) the carcinogenic risk was calculated as  $2.7 \times 10^{-8}$  at the LP-072 location and  $8.0 \times 10^{-7}$  at the LP-125 location. The TCE vapor intrusion risk using the new TCE unit risk factor value is more than an order of magnitude lower than the risk using the older unit risk factor value. These additional vapor intrusion risk calculations show that both LP-072 and LP-125 meet the risk standard (i.e. the site conditions do not present unacceptable risk to workers in the buildings).

## **6. Evaluation of the LP-072 and LP-125 Soil Gas Data as an Indicator of a Source Area**

The soil gas data may be used to assess if a “source” of chemical risk, or the “source” of an environmental criteria exceedance, is present under the buildings on LP-072 and LP-125. Chemical

phase partitioning equations were used to calculate the soil, soil moisture and groundwater concentrations in equilibrium with the measured soil gas concentrations. These soil, soil moisture and groundwater concentrations were then compared to screening criteria to evaluate if a “source area” is indicated by the soil gas data from LP-072 and LP-125. The maximum TCE and PCE vapor concentrations measured at each building were used in the calculation of soil, soil moisture and groundwater concentrations as follows:

- The soil moisture concentration was calculated by dividing the vapor concentration by the temperature corrected Henry’s Constant.
- A groundwater concentration was estimated as the soil moisture concentration divided by a dilution-attenuation factor (DAF). The EPA uses a default DAF value of 20 and ADEC uses a default DAF value of 13.3 for vadose zone sites subject to infiltrating precipitation. Groundwater concentrations were estimated using both of these DAF values in Table 4, but only the higher groundwater concentration, calculated using the ADEC DAF, is shown on Figures 2, 3 and 4. Since little or no precipitation infiltration would occur beneath the LP-072 and LP-125 buildings, the DAF with the buildings in place would be much higher, and the groundwater concentrations would be much lower than estimated here. The groundwater concentrations listed here are more representative of conditions with the building removed.
- The bulk soil concentration in equilibrium with the soil gas and soil moisture may be calculated using a soil-water partitioning coefficient (Kd) as shown in the EPA Soil Screening Levels Technical Background Document (1997).

The results of the phase partitioning calculations are shown in Table 4 and in Figures 2, 3 and 4. Table 4 also lists soil and groundwater screening levels which, as described by the EPA, may be used to define areas, contaminants and conditions that do not require further attention---that is, at sites with concentrations below the screening levels, no further action or study is warranted. The figures are pictorial conceptual site models which show the maximum soil gas concentration measured under the buildings, the soil moisture concentration in equilibrium with the soil gas, the groundwater concentration calculated using a conservative default DAF, the calculated equilibrium soil concentration, and the approximate groundwater concentration measured at the location.

**LP-072 (Karen’s RV)** As shown in Table 4 and Figure 2, at LP-072 the vadose zone TCE soil moisture concentration in equilibrium with the measured TCE vapor would be approximately 2.3 µg/L, which is below the TCE maximum contaminant level (MCL). Assuming a vadose zone source were present and using the ADEC default DAF, the estimated groundwater concentration would be only 0.17 µg/L, which is below the MCL and near or below typical laboratory method 8260 reporting limits. The bulk soil concentration in equilibrium with the soil gas would be approximately 0.0026 mg/kg which is near typical method 8260 reporting limits, and orders of magnitude below the screening criteria for soil direct contact, outdoor inhalation and migration to groundwater. The sub-slab soil gas data from the LP-072 location indicates that there is not unacceptable risk, there is not a migration to groundwater source, and

consequently, remediation is not needed. The existing groundwater data shows that the plume flowing under the LP-072 (Karen's RV) building has a TCE concentration significantly higher than what would be expected if the vadose zone soils under the building contained the TCE source, and hence it is more reasonable that at LP-072, the groundwater plume is the source of the TCE measured in the sub-slab soil gas.

The PCE soil gas results from LP-072 indicate that: the calculated soil moisture and groundwater concentrations are below the MCL and below method 8260 aqueous detection limits; that the calculated soil concentrations are below soil detection limits, and several orders of magnitude below the screening criteria for soil direct contact, outdoor inhalation and migration to groundwater; and consequently, remediation is not needed.

**LP-125 (Taylor Leasing)** As shown in Table 4 and Figure 3, at LP-125 the vadose zone TCE soil moisture concentration in equilibrium with the measured TCE vapor would be approximately 14.8 µg/L. Assuming a vadose zone source were present and the ADEC default DAF, the estimated groundwater concentration would be only 1.1 µg/L, which is below the MCL and well below the TCE concentrations measured in the groundwater up and down-gradient of the LP-125 building. The TCE bulk soil concentration in equilibrium with the soil gas would be approximately 0.0023 mg/kg which is below ADEC soil direct contact, outdoor inhalation and migration to groundwater screening criteria. The sub-slab TCE soil gas data from the LP-125 site indicates that there is not unacceptable risk, there is not a migration to groundwater source and consequently, remediation is not needed.

As shown in Table 4 and Figure 4, at LP-125 the vadose zone PCE soil moisture concentration in equilibrium with the measured PCE vapor would be approximately 8.8 µg/L. Assuming a vadose zone source were present and that the ADEC default DAF is representative, the estimated groundwater concentration would be only 0.66 µg/L, which is below the MCL and near the method 8260 reporting limit. Because there is little or no infiltration in the building footprint area, the true DAF for the building footprint area is likely to be higher, and the groundwater concentration much lower, than shown in Table 4 or Figure 4 (i.e. below the method 8260 reporting limit). Hence, it is not surprising that PCE has not previously been detected in the soil, soil gas or up- or down-gradient groundwater at LP-125. (The nearest detection of PCE found during the RI was at location DPB23 located over 300 ft west of the site at a concentration of 0.47 µg/L in groundwater and 0.0035 mg/kg in soil. The DPB23 detection is thought to not be related to the PCE at LP-125). The PCE is interpreted to be in the vadose zone under the LP-125 building, because if spilled liquids would have reached the water table the groundwater concentration would likely be closer to the soil moisture concentration and a plume would likely have been detected. The PCE bulk soil concentration in equilibrium with the soil gas would be approximately 0.0015 mg/kg which is below ADEC screening criteria for soil direct contact, outdoor inhalation and migration to groundwater. The ARRC understands that PCE was detected under the building at LP-125 and not elsewhere on the site, but that soil gas data are not indicative of a "source"; that is, the sub-slab PCE soil

gas data from the LP-125 site indicate that there is not unacceptable risk, there is not a migration to groundwater source and consequently, further study and remediation are not needed.

Attachments:

Table 1

Table 2

Table 3

Table 4

Figure 1

Figure 2

Figure 3

Figure 4

Site Photographs

Laboratory Data Package



**Table 1**  
**Summary of Sub-Slab Soil Gas Laboratory Results & COPC Screening**  
**Alaska Railroad Corporation**  
**Anchorage Terminal Reserve**

| COMPOUND NAME                    | CASNUM    | Generic Commercial Sub-Slab Screening Level (ug/M^3; attenuation factor=1/10) | Screening Level Source | Site Specific Commercial Sub-Slab Screening Level (ug/M^3; attenuation factor=1/400) | Sample Name/Location   |                           |  |                        |                       |                        |                         |  |     | COPC? |
|----------------------------------|-----------|---|------------------------|--|------------------------|---------------------------|--|------------------------|-----------------------|------------------------|-------------------------|--|-----|-------|
|                                  |           |   |                        |  | Karen's South (ug/M^3) | Karen's Middle 1 (ug/M^3) | Karen's Middle 2 (ug/M^3; field duplicate) | Karen's North (ug/M^3) | Taylor South (ug/M^3) | Taylor Middle (ug/M^3) | Taylor North 1 (ug/M^3) | Taylor North 1 (ug/M^3; lab duplicate) |     |       |
| Tetrachloroethene                | 127-18-4  | 210   | 3                      | 8,400  | ND (8.1)               | ND (7.5)                  | ND (7.4)                                   | 9.1                    | 3,900                 | 190                    | 2,000                   | 2,200.0                                | Yes |       |
| Trichloroethene                  | 79-01-6   | 11  | 1                      | 440  | 110                    | 22                        | 22   | 610                    | 1,300                 | 2,400                  | 3,800                   | 3,900                                  | Yes |       |
| Freon 12                         | 75-71-8   | 8,800   | 3                      | 352,000  | 210                    | 860                       | 850  | 830                    | 4,900                 | 500                    | 200                     | 220                                    | No  |       |
| Freon 11                         | 75-69-4   | 31,000  | 3                      | 1,240,000  | ND (6.7)               | 28                        | 28   | 19                     | 16                    | 14                     | 29                      | 31                                     | No  |       |
| Ethanol                          | 64-17-5   |   |                        |  | ND (9)                 | 10                        | ND (8.2)                                   | 54                     | ND (22)               | ND (16)                | ND (27)                 | ND (27)                                | No  |       |
| Acetone                          | 67-64-1   | 138,000   | 1                      | 5,520,000  | 19                     | 64                        | 43   | 43                     | ND (28)               | 22                     | ND (34)                 | ND (34)                                | No  |       |
| 2-Butanone (Methyl Ethyl Ketone) | 78-93-3   | 219,000   | 1                      | 8,760,000  | ND (3.5)               | 4.7                       | 5.8  | 3.9                    | ND (8.6)              | ND (6.4)               | ND (11)                 | ND (11)                                | No  |       |
| Chloroform                       | 67-66-3   | 53  | 3                      | 2,120  | ND (5.8)               | ND (5.4)                  | ND (5.3)                                   | ND (5.6)               | 26.0                  | 35.0                   | 18.0                    | 18.0                                   | No  |       |
| 1,1,1-Trichloroethane            | 71-55-6   | 96,000  | 1                      | 3,840,000  | ND (6.5)               | ND (6)                    | ND (5.9)                                   | 7.5                    | ND (16)               | ND (12)                | 33.0                    | 31.0                                   | No  |       |
| Benzene                          | 71-43-2   | 160   | 3                      | 6,400  | ND (3.8)               | 4.2                       | ND (3.5)                                   | ND (3.7)               | ND (9.3)              | ND (6.9)               | ND (12)                 | ND (12)                                | No  |       |
| Heptane                          | 142-82-5  |   |                        |  | 16                     | 34                        | 21   | 16                     | 50                    | 13                     | ND (15)                 | ND (15)                                | No  |       |
| Toluene                          | 108-88-3  | 219,000   | 1                      | 8,760,000  | 34                     | 47                        | 33   | 29                     | 23                    | 21                     | 14                      | 14                                     | No  |       |
| Ethyl Benzene                    | 100-41-4  | 490   | 2                      | 19,600   | ND (5.2)               | ND (4.8)                  | ND (4.7)                                   | ND (5)                 | 16.0                  | ND (9.4)               | ND (16)                 | ND (16)                                | No  |       |
| m,p-Xylene                       | 106-42-3  | 31,000  | 2                      | 1,240,000  | 5.8                    | 11                        | 7  | 7.4                    | 41                    | 14                     | 22                      | 22                                     | No  |       |
| Styrene                          | 100-42-5  | 44,000  | 3                      | 1,760,000  | ND (5.1)               | 13                        | 7.1  | 4.9                    | ND (12)               | ND (9.2)               | ND (15)                 | ND (15)                                | No  |       |
| 3-Chloropropene                  | 107-05-1  | 44  | 2                      | 1,760  | ND (15)                | ND (14)                   | ND (14)                                    | ND (14)                | ND (36)               | ND (27)                | ND (46)                 | ND (46)                                | No  |       |
| 1,2-Dibromoethane (EDB)          | 106-93-4  | 2   | 3                      | 80   | ND (9.2)               | ND (8.4)                  | ND (8.4)                                   | ND (8.8)               | ND (22)               | ND (16)                | ND (28)                 | ND (28)                                | No  |       |
| 1,1,2,2-Tetrachloroethane        | 79-34-5   | 21  | 3                      | 840  | ND (8.2)               | ND (7.6)                  | ND (7.5)                                   | ND (7.9)               | ND (20)               | ND (15)                | ND (25)                 | ND (25)                                | No  |       |
| Hexachlorobutadiene              | 87-68-3   | 56  | 3                      | 2,240  | ND (51)                | ND (47)                   | ND (46)                                    | ND (49)                | ND (120)              | ND (92)                | ND (160)                | ND (160)                               | No  |       |
| Freon 114                        | 76-14-2   |   |                        |  | ND (8.4)               | ND (7.7)                  | ND (7.6)                                   | ND (8)                 | ND (20)               | ND (15)                | ND (25)                 | ND (25)                                | No  |       |
| Chloromethane                    | 74-87-3   | 680   | 1                      | 27,200   | ND (9.9)               | ND (9.1)                  | ND (9)                                     | ND (9.5)               | ND (24)               | ND (18)                | ND (30)                 | ND (30)                                | No  |       |
| Vinyl Chloride                   | 75-01-4   | 11  | 1                      | 440  | ND (3)                 | ND (2.8)                  | ND (2.8)                                   | ND (2.9)               | ND (7.4)              | ND (5.5)               | ND (9.3)                | ND (9.3)                               | No  |       |
| 1,3-Butadiene                    | 106-99-0  | 41  | 2                      | 1,640  | ND (2.6)               | ND (2.4)                  | ND (2.4)                                   | ND (2.5)               | ND (6.4)              | ND (4.8)               | ND (8)                  | ND (8)                                 | No  |       |
| Bromomethane                     | 74-83-9   | 220   | 3                      | 8,800  | ND (4.6)               | ND (4.3)                  | ND (4.2)                                   | ND (4.5)               | ND (11)               | ND (8.4)               | ND (14)                 | ND (14)                                | No  |       |
| Chloroethane                     | 75-00-3   | 1,500   | 1                      | 60,000   | ND (3.2)               | ND (2.9)                  | ND (2.9)                                   | ND (3)                 | ND (7.7)              | ND (5.7)               | ND (9.6)                | ND (9.6)                               | No  |       |
| Freon 113                        | 76-13-1   | 1,300,000   | 2                      | 52,000,000   | ND (9.2)               | ND (8.4)                  | ND (8.4)                                   | ND (8.8)               | ND (22)               | ND (16)                | ND (28)                 | ND (28)                                | No  |       |
| 1,1-Dichloroethene               | 75-35-4   | 25  | 1                      | 1,000  | ND (4.7)               | ND (4.4)                  | ND (4.3)                                   | ND (4.6)               | ND (12)               | ND (8.6)               | ND (14)                 | ND (14)                                | No  |       |
| 2-Propanol                       | 67-63-0   | 310,000   | 2                      | 12,400,000   | ND (12)                | ND (11)                   | ND (11)                                    | ND (11)                | ND (28)               | ND (21)                | ND (36)                 | ND (36)                                | No  |       |
| Carbon Disulfide                 | 75-15-0   | 31,000  | 3                      | 1,240,000  | ND (3.7)               | ND (3.4)                  | ND (3.4)                                   | ND (3.6)               | ND (9)                | ND (6.7)               | ND (11)                 | ND (11)                                | No  |       |
| Methylene Chloride               | 75-09-2   | 2,600   | 3                      | 104,000  | ND (4.2)               | ND (3.8)                  | ND (3.8)                                   | ND (4)                 | ND (10)               | ND (7.5)               | ND (13)                 | ND (13)                                | No  |       |
| Methyl tert-butyl ether          | 1634-04-4 | 2,400   | 1                      | 96,000   | ND (4.3)               | ND (4)                    | ND (3.9)                                   | ND (4.1)               | ND (10)               | ND (7.8)               | ND (13)                 | ND (13)                                | No  |       |
| trans-1,2-Dichloroethene         | 156-60-5  | 2,600   | 3                      | 104,000  | ND (4.7)               | ND (4.4)                  | ND (4.3)                                   | ND (4.6)               | ND (12)               | ND (8.6)               | ND (14)                 | ND (14)                                | No  |       |
| Hexane                           | 110-54-3  | 31,000  | 2                      | 1,240,000  | ND (4.2)               | ND (3.9)                  | ND (3.8)                                   | ND (4)                 | ND (10)               | ND (7.6)               | ND (13)                 | ND (13)                                | No  |       |
| 1,1-Dichloroethane               | 75-34-3   | 770   | 2                      | 30,800   | ND (4.8)               | ND (4.4)                  | ND (4.4)                                   | ND (4.6)               | ND (12)               | ND (8.7)               | ND (15)                 | ND (15)                                | No  |       |
| cis-1,2-Dichloroethene           | 156-59-2  | 1,500   | 1                      | 60,000   | ND (4.7)               | ND (4.4)                  | ND (4.3)                                   | ND (4.6)               | ND (12)               | ND (8.6)               | ND (14)                 | ND (14)                                | No  |       |
| Tetrahydrofuran                  | 109-99-9  |   |                        |  | ND (3.5)               | ND (3.2)                  | ND (3.2)                                   | ND (3.4)               | ND (8.6)              | ND (6.4)               | ND (11)                 | ND (11)                                | No  |       |
| Cyclohexane                      | 110-82-7  | 260,000   | 2                      | 10,400,000   | ND (4.1)               | ND (3.8)                  | ND (3.8)                                   | ND (4)                 | ND (10)               | ND (7.4)               | ND (12)                 | ND (12)                                | No  |       |
| Carbon Tetrachloride             | 56-23-5   | 82  | 3                      | 3,280  | ND (7.5)               | ND (6.9)                  | ND (6.8)                                   | ND (7.2)               | ND (18)               | ND (14)                | ND (23)                 | ND (23)                                | No  |       |
| 2,2,4-Trimethylpentane           | 540-84-1  |   |                        |  | ND (5.6)               | ND (5.1)                  | ND (5.1)                                   | ND (5.4)               | ND (14)               | ND (10)                | ND (17)                 | ND (17)                                | No  |       |
| 1,2-Dichloroethane               | 107-06-2  | 47  | 3                      | 1,880  | ND (4.8)               | ND (4.4)                  | ND (4.4)                                   | ND (4.6)               | ND (12)               | ND (8.7)               | ND (15)                 | ND (15)                                | No  |       |
| 1,2-Dichloropropane              | 78-87-5   | 63  | 1                      | 2,520  | ND (5.5)               | ND (5.1)                  | ND (5)                                     | ND (5.3)               | ND (13)               | ND (10)                | ND (17)                 | ND (17)                                | No  |       |

**Table 1  
Summary of Sub-Slab Soil Gas Laboratory Results & COPC Screening  
Alaska Railroad Corporation  
Anchorage Terminal Reserve**

| COMPOUND NAME             | CASNUM     | Generic Commercial Sub-Slab Screening Level (ug/M <sup>3</sup> ; attenuation factor=1/10) | Screening Level Source | Site Specific Commercial Sub-Slab Screening Level (ug/M <sup>3</sup> ; attenuation factor=1/400) | Sample Name/Location               |                                       |  |                                    |                                   |                                    |                                     |  |    | COPC? |
|---------------------------|------------|---|------------------------|--|------------------------------------|---------------------------------------|--|------------------------------------|-----------------------------------|------------------------------------|-------------------------------------|--|----|-------|
|                           |            |   |                        |  | Karen's South (ug/M <sup>3</sup> ) | Karen's Middle 1 (ug/M <sup>3</sup> ) | Karen's Middle 2 (ug/M <sup>3</sup> ; field duplicate) | Karen's North (ug/M <sup>3</sup> ) | Taylor South (ug/M <sup>3</sup> ) | Taylor Middle (ug/M <sup>3</sup> ) | Taylor North 1 (ug/M <sup>3</sup> ) | Taylor North 1 (ug/M <sup>3</sup> ; lab duplicate) |    |       |
| 1,4-Dioxane               | 123-91-1   | 160   | 2                      | 6,400  | ND (17)                            | ND (16)                               | ND (16)  | ND (16)                            | ND (42)                           | ND (31)                            | ND (52)                             | ND (52)  | No |       |
| Bromodichloromethane      | 75-27-4    | 33  | 2                      | 1,320  | ND (8)                             | ND (7.4)                              | ND (7.3)   | ND (7.7)                           | ND (19)                           | ND (14)                            | ND (24)                             | ND (24)  | No |       |
| cis-1,3-Dichloropropene   | 10061-01-5 |   |                        |  | ND (5.4)                           | ND (5)                                | ND (4.9)   | ND (5.2)                           | ND (13)                           | ND (9.8)                           | ND (16)                             | ND (16)  | No |       |
| 4-Methyl-2-pentanone      | 108-10-1   | 130,000   | 2                      | 5,200,000  | ND (4.9)                           | ND (4.5)                              | ND (4.5)   | ND (4.7)                           | ND (12)                           | ND (8.8)                           | ND (15)                             | ND (15)  | No |       |
| trans-1,3-Dichloropropene | 10061-02-6 |   |                        |  | ND (5.4)                           | ND (5)                                | ND (4.9)   | ND (5.2)                           | ND (13)                           | ND (9.8)                           | ND (16)                             | ND (16)  | No |       |
| 1,1,2-Trichloroethane     | 79-00-5    | 77  | 3                      | 3,080  | ND (6.5)                           | ND (6)                                | ND (5.9)   | ND (6.3)                           | ND (16)                           | ND (12)                            | ND (20)                             | ND (20)  | No |       |
| 2-Hexanone                | 591-78-6   |   |                        |  | ND (20)                            | ND (18)                               | ND (18)  | ND (19)                            | ND (48)                           | ND (35)                            | ND (60)                             | ND (60)  | No |       |
| Dibromochloromethane      | 124-48-1   | 45  | 2                      | 1,800  | ND (10)                            | ND (9.4)                              | ND (9.3)   | ND (9.8)                           | ND (25)                           | ND (18)                            | ND (31)                             | ND (31)  | No |       |
| Chlorobenzene             | 108-90-7   | 2,200   | 3                      | 88,000   | ND (5.5)                           | ND (5.1)                              | ND (5)   | ND (5.3)                           | ND (13)                           | ND (9.9)                           | ND (17)                             | ND (17)  | No |       |
| o-Xylene                  | 95-47-6    | 31,000  | 2                      | 1,240,000  | ND (5.2)                           | ND (4.8)                              | ND (4.7)   | ND (5)                             | ND (13)                           | ND (9.4)                           | ND (16)                             | ND (16)  | No |       |
| Bromoform                 | 75-25-2    | 1,100   | 3                      | 44,000   | ND (12)                            | ND (11)                               | ND (11)  | ND (12)                            | ND (30)                           | ND (22)                            | ND (38)                             | ND (38)  | No |       |
| Cumene                    | 98-82-8    | 18,000  | 3                      | 720,000  | ND (5.9)                           | ND (5.4)                              | ND (5.4)   | ND (5.6)                           | ND (14)                           | ND (11)                            | ND (18)                             | ND (18)  | No |       |
| Propylbenzene             | 103-65-1   | 1,500   | 1                      | 60,000   | ND (5.9)                           | ND (5.4)                              | ND (5.4)   | ND (5.6)                           | ND (14)                           | ND (11)                            | ND (18)                             | ND (18)  | No |       |
| 4-Ethyltoluene            | 622-96-8   |   |                        |  | ND (5.9)                           | ND (5.4)                              | ND (5.4)   | ND (5.6)                           | ND (14)                           | ND (11)                            | ND (18)                             | ND (18)  | No |       |
| 1,3,5-Trimethylbenzene    | 108-67-8   | 260   | 2                      | 10,400   | ND (5.9)                           | ND (5.4)                              | ND (5.4)   | ND (5.6)                           | ND (14)                           | ND (11)                            | ND (18)                             | ND (18)  | No |       |
| 1,2,4-Trimethylbenzene    | 95-63-6    | 310   | 3                      | 12,400   | ND (5.9)                           | ND (5.4)                              | ND (5.4)   | ND (5.6)                           | ND (14)                           | ND (11)                            | ND (18)                             | ND (18)  | No |       |
| 1,3-Dichlorobenzene       | 541-73-1   | 8,800   | 1                      | 352,000  | ND (7.2)                           | ND (6.6)                              | ND (6.6)   | ND (6.9)                           | ND (17)                           | ND (13)                            | ND (22)                             | ND (22)  | No |       |
| 1,4-Dichlorobenzene       | 106-46-7   | 110   | 2                      | 4,400  | ND (7.2)                           | ND (6.6)                              | ND (6.6)   | ND (6.9)                           | ND (17)                           | ND (13)                            | ND (22)                             | ND (22)  | No |       |
| alpha-Chlorotoluene       | 100-44-7   | 25  | 2                      | 1,000  | ND (6.2)                           | ND (5.7)                              | ND (5.6)   | ND (6)                             | ND (15)                           | ND (11)                            | ND (19)                             | ND (19)  | No |       |
| 1,2-Dichlorobenzene       | 95-50-1    | 8,800   | 3                      | 352,000  | ND (7.2)                           | ND (6.6)                              | ND (6.6)   | ND (6.9)                           | ND (17)                           | ND (13)                            | ND (22)                             | ND (22)  | No |       |
| 1,2,4-Trichlorobenzene    | 120-82-1   | 180   | 3                      | 7,200  | ND (35)                            | ND (33)                               | ND (32)  | ND (34)                            | ND (86)                           | ND (64)                            | ND (110)                            | ND (110)   | No |       |

Screening levels are for commercial sites and are based on a carcinogenic risk of 10-5 and a non carcinogenic HI of 1.

gray shading indicates detections which exceed the default screening levels

1= ADEC Vapor Intrusion Guidance

2= EPA PRGs

3= ADEC & EPA have same value

Site specific sub-slab screening level based on J&E model results which show an attenuation factor of over 4000

**Table 2**  
**Summary of Site-Specific Input Parameters for the Johnson and Ettinger Vapor Intrusion Model**

| <b>J&amp;E Model Input Parameter</b>                         | <b>Data Source</b>   | <b>Units</b>           | <b>LP-072 (Karen's RV)</b> | <b>LP-125 (Taylor Leasing)</b> |
|--|--|------------------------|----------------------------|--------------------------------|
| Soil Type  | PTS Laboratories, 2006 (alt. assumption sand)              | NA                     | Silty Sand (Sand)          | Sand                           |
| Stratum A Soil Bulk Density                                  | PTS Laboratories, 2006                                     | g/cm <sup>3</sup>      | 1.82                       | 1.9                            |
| Stratum A Total Soil Porosity                                | PTS Laboratories, 2006                                     | Unitless               | 0.332                      | 0.307                          |
| Stratum A Water-Filled Porosity                              | PTS Laboratories, 2006 (alt. EPA default for sand)         | Unitless               | 0.245 (0.054)              | 0.122 (0.054)                  |
| Thickness of Soil Stratum A to Shallow Soil Gas Sample       | Site-specific Measurement                                  | cm                     | 27.432                     | 18.288                         |
| Stratum A Soil Vapor Permeability                            | PTS Laboratories, 2006 (alt. site specific value for sand) | cm <sup>2</sup>        | 6.77E-09 (6.56E-08)        | 6.56E-08                       |
| Depth below grade to bottom of enclosed space floor          | Site-specific Estimate                                     | ft                     | 0.9                        | 0.6                            |
| Depth below grade to bottom of enclosed space floor          | Site-specific Estimate                                     | cm                     | 27.432                     | 18.288                         |
| Depth below grade to soil gas sample                         | Site-specific Measurement                                  | ft                     | 0.9                        | 0.6                            |
| Depth below grade to soil gas sample                         | Site-specific Measurement                                  | cm                     | 27.432                     | 18.288                         |
| Soil Temperature   | Site-specific Estimate                                     | degrees C              | 15                         | 15                             |
| Industrial Enclosed Space Floor Thickness                    | Site-specific Measurement                                  | ft                     | 0.9                        | 0.6                            |
| Industrial Enclosed Space Floor Thickness                    | Site-specific Measurement                                  | cm                     | 27.432                     | 18.288                         |
| Industrial Soil-Bldg. Pressure Differential                  | USEPA, 2004  | g/cm-s <sup>2</sup>    | 40                         | 40                             |
| Industrial Enclosed Space Floor Length                       | Site-specific Measurement                                  | ft                     | 176                        | 100                            |
| Industrial Enclosed Space Floor Length                       | Site-specific Measurement                                  | cm                     | 5364.48                    | 3048                           |
| Industrial Enclosed Space Floor Width                        | Site-specific Measurement                                  | ft                     | 70                         | 50                             |
| Industrial Enclosed Space Floor Width                        | Site-specific Measurement                                  | cm                     | 2133.6                     | 1524                           |
| Industrial Enclosed Space Height                             | Site-specific Estimate                                     | ft                     | 24                         | 24                             |
| Industrial Enclosed Space Height                             | Site-specific Estimate                                     | cm                     | 731.52                     | 731.52                         |
| Indoor Air Exchange Rate (commercial)                        | ASTM, 1995   | 1/hr                   | 0.828                      | 0.828                          |
| Floor- Wall Seam Crack Width                                 | USEPA, 2004 & Site-specific Estimate                       | cm                     | 0.1                        | 0.2                            |
| Averaging time carcinogen                                    | USEPA, 2004  | (years)                | 70                         | 70                             |
| Averaging time non-carcinogen                                | USEPA, 2004  | (years)                | 25                         | 25                             |
| Exposure duration  | USEPA, 2004  | (years)                | 25                         | 25                             |
| Exposure frequency   | USEPA, 2004  | (days/yr)              | 100                        | 100                            |
| TCE Carcinogenic Inhalation Unit Risk Factor (URF)           | USEPA Region 6 value (2009 proposed value)                 | (ug/m3 <sup>-1</sup> ) | 1.14E-04 (4E-06)           | 1.14E-04 (4E-06)               |
| PCE Carcinogenic Inhalation Unit Risk Factor (URF)           | USEPA Region 6 value                                       | (ug/m3 <sup>-1</sup> ) | 6.00E-06                   | 6.00E-06                       |
| TCE Noncarcinogenic Inhalation Reference Concentration (RfC) | USEPA Region 6 value (2009 proposed value)                 | (mg/m3)                | 0.0385 (0.005)             | 0.0385 (0.005)                 |
| PCE Noncarcinogenic Inhalation Reference Concentration (RfC) | USEPA Region 6 value                                       | (mg/m3)                | 0.385                      | 0.385                          |

**References:**

Alternate input values in parenthesis

PTS Laboratories, 2006. Physical Properties Data - Vapor Transport Package. November.

U.S. EPA, 2004. User's Guide for Evaluating Subsurface Vapor Intrusion into Buildings. U.S. Environmental Protection Agency, Office of Emergency and Remedial Response, Washington, D.C. Revised February 22.

ASTM, 1995. American Society for Testing and Materials, *Standard Guide for Risk-Based Corrective Action Applied at Petroleum Release Sites*. ASTM Designation: E 1739-95. November.

**Table 3**  
**Summary of Vapor Intrusion Risks for LP-072 and LP-125**

| Lease Property          |            | LP-072 (Karen's RV)                               |   |                               |                                | LP-125 (Taylor Leasing)                           |   |                               |                                |
|-------------------------|------------|---|---|-------------------------------|--------------------------------|---|---|-------------------------------|--------------------------------|
| Scenario                |            | Measured Parameters as Listed                     |   |                               |                                | Measured Parameters as Listed                     |   |                               |                                |
| Compound                | CAS Number | Exposure Point Concentration (ug/m <sup>3</sup> ) | Attenuation Factor (over inverse of Attenuation Factor; unitless) | Sub-slab Soil Gas Cancer Risk | Sub-slab Soil Gas Noncancer HI | Exposure Point Concentration (ug/m <sup>3</sup> ) | Attenuation Factor (over inverse of Attenuation Factor; unitless) | Sub-slab Soil Gas Cancer Risk | Sub-slab Soil Gas Noncancer HI |
| Trichloroethene         | 79-01-6    | 610   | 1.18E-05  | 8.0E-08                       | 0.000051                       | 3900  | 2.07E-04  | 9.0E-06                       | 0.0057                         |
|                         |            |   | 85,024  |                               |                                |   | 4,830   |                               |                                |
| Tetrachloroethene       | 127-18-4   | NA  | NA  | NA                            | NA                             | 3900  | 2.07E-04  | 4.7E-07                       | 0.00057                        |
|                         |            |   | NA  |                               |                                |   | 4,836   |                               |                                |
| <b>Cumulative Risk:</b> |            |   |   | 8.0E-08                       | 0.000051                       |   |   | 9.5E-06                       | 0.0063                         |

**Vapor Intrusion Alternate Risk Calculations/Sensitivity Analysis**

| Lease Property          |            | LP-072 (Karen's RV)   |   |                               |                                | LP-125 (Taylor Leasing)                           |   |                               |                                |
|-------------------------|------------|---|---|-------------------------------|--------------------------------|---|---|-------------------------------|--------------------------------|
| Scenario                |            | EPA default soil moisture content & site specific sand permeability |   |                               |                                | EPA default soil moisture content                 |   |                               |                                |
| Compound                | CAS Number | Exposure Point Concentration (ug/m <sup>3</sup> )                   | Attenuation Factor (over inverse of Attenuation Factor; unitless) | Sub-slab Soil Gas Cancer Risk | Sub-slab Soil Gas Noncancer HI | Exposure Point Concentration (ug/m <sup>3</sup> ) | Attenuation Factor (over inverse of Attenuation Factor; unitless) | Sub-slab Soil Gas Cancer Risk | Sub-slab Soil Gas Noncancer HI |
| Trichloroethene         | 79-01-6    | 610   | 1.15E-04  | 7.8E-07                       | 0.00050                        | 3900  | 2.09E-04  | 9.1E-06                       | 0.0058                         |
|                         |            |   | 8,710   |                               |                                |   | 4,795   |                               |                                |
| Tetrachloroethene       | 127-18-4   | NA  | NA  | NA                            | NA                             | 3900  | 2.08E-04  | 4.8E-07                       | 0.00058                        |
|                         |            |   | NA  |                               |                                |   | 4,796   |                               |                                |
| <b>Cumulative Risk:</b> |            |   |   | 7.8E-07                       | 0.00050                        |   |   | 9.6E-06                       | 0.0064                         |

| Lease Property          |            | LP-072 (Karen's RV)                               |   |                               |                                | LP-125 (Taylor Leasing)                           |   |                               |                                |
|-------------------------|------------|---|---|-------------------------------|--------------------------------|---|---|-------------------------------|--------------------------------|
| Scenario                |            | EPA proposed TCE Toxicity Values                  |   |                               |                                | EPA proposed TCE Toxicity Values                  |   |                               |                                |
| Compound                | CAS Number | Exposure Point Concentration (ug/m <sup>3</sup> ) | Attenuation Factor (over inverse of Attenuation Factor; unitless) | Sub-slab Soil Gas Cancer Risk | Sub-slab Soil Gas Noncancer HI | Exposure Point Concentration (ug/m <sup>3</sup> ) | Attenuation Factor (over inverse of Attenuation Factor; unitless) | Sub-slab Soil Gas Cancer Risk | Sub-slab Soil Gas Noncancer HI |
| Trichloroethene         | 79-01-6    | 610   | 1.15E-04  | 2.7E-08                       | 0.0038                         | 3900  | 2.09E-04  | 3.2E-07                       | 0.045                          |
|                         |            |   | 8,710   |                               |                                |   | 4,795   |                               |                                |
| Tetrachloroethene       | 127-18-4   | NA  | NA  | NA                            | NA                             | 3900  | 2.08E-04  | 4.8E-07                       | 0.00058                        |
|                         |            |   | NA  |                               |                                |   | 4,796   |                               |                                |
| <b>Cumulative Risk:</b> |            |   |   | 2.7E-08                       | 0.0038                         |   |   | 8.0E-07                       | 0.045                          |

NA= not applicable --Tetrachloroethene is below screening levels at LP-072

**Table 4**

**Summary of Migration to Groundwater and Soil Direct Contact Calculations for LP-072 and LP-125**

| Location                                     | Concentrations   | Trichloroethene                              | Tetrachloroethene                          |
|--|--|--|--|
| Screening Criteria                           | MCL (ug/L)   | 5  | 5  |
|  | Typical 8260 detection limit in water (ug/L)                           | 0.2  | 0.25                                       |
|  | Typical 8260 detection limit in soil (mg/kg)                           | 0.001  | 0.0012                                     |
|  | ADEC migration to groundwater (mg/kg)                                  | 0.02   | 0.024                                      |
|  | ADEC Soil Direct Contact (mg/kg)                                       | 21   | 15   |
|  | ADEC Outdoor Inhalation (mg/kg)  | 0.57   | 10   |
| LP-072<br>(Karen's RV)                       | Maximum Vapor Concentration (ug/m <sup>3</sup> )                       | 610  | 9.1  |
|  | Maximum Vapor Concentration (ug/L)                                     | 0.61   | 0.0091                                     |
|  | Equilibrium Concentration in soil moisture (ug/L)                      | 2.311  | 0.020                                      |
|  | Concentration in groundwater assuming ADEC default DAF of 13.3 (ug/L)  | 0.1737                                       | 0.0015                                     |
|  | Concentration in groundwater assuming EPA default DAF of 20 (ug/L)     | 0.1155                                       | 0.0010                                     |
|  | Significance to groundwater  | below MCL                                    | below MCL                                  |
|  |  | below 8260 detection limit                   | below 8260 detection limit                 |
|  |  | acceptable risk & not a MTGW source          | acceptable risk & not a MTGW source        |
|  | Equilibrium Concentration in soil assuming NAPL is not present (mg/kg) | 0.0026                                       | 0.000025                                   |
|  | Significance to Soil (assuming NAPL is not present)                    | detectable                                   | below 8260 detection limit                 |
|  |  | below ADEC soil direct contact criteria      | below ADEC soil direct contact criteria    |
|  |  | below ADEC outdoor air inhalation criteria   | below ADEC outdoor air inhalation criteria |
| below ADEC migration to groundwater criteria |  | below ADEC migration to groundwater criteria |  |
| not a risk & not a MTGW source               |  | not a risk & not a MTGW source               |  |
| LP-125<br>(Taylor Leasing)                   | Maximum Vapor Concentration (ug/m <sup>3</sup> )                       | 3900   | 3900                                       |
|  | Maximum Vapor Concentration (ug/L)                                     | 3.9  | 3.9  |
|  | Equilibrium Concentration in soil moisture (ug/L)                      | 14.773                                       | 8.764                                      |
|  | Concentration groundwater assuming ADEC default DAF of 13.3 (ug/L)     | 1.111  | 0.659                                      |
|  | Concentration groundwater assuming EPA default DAF of 20 (ug/L)        | 0.739  | 0.438                                      |
|  | Significance to groundwater  | detectable                                   | detectable                                 |
|  |  | below MCL                                    | below MCL                                  |
|  |  | acceptable risk & not a MTGW source          | acceptable risk & not a MTGW source        |
|  | Equilibrium Concentration in soil assuming NAPL is not present (mg/kg) | 0.0023                                       | 0.0015                                     |
|  | Significance to Soil assuming NAPL is not present                      | detectable                                   | detectable                                 |
|  |  | below ADEC soil direct contact criteria      | below ADEC soil direct contact criteria    |
|  |  | below ADEC outdoor air inhalation criteria   | below ADEC outdoor air inhalation criteria |
| below ADEC migration to groundwater criteria |  | below ADEC migration to groundwater criteria |  |
| acceptable risk & not a MTGW source          |  | acceptable risk & not a MTGW source          |  |

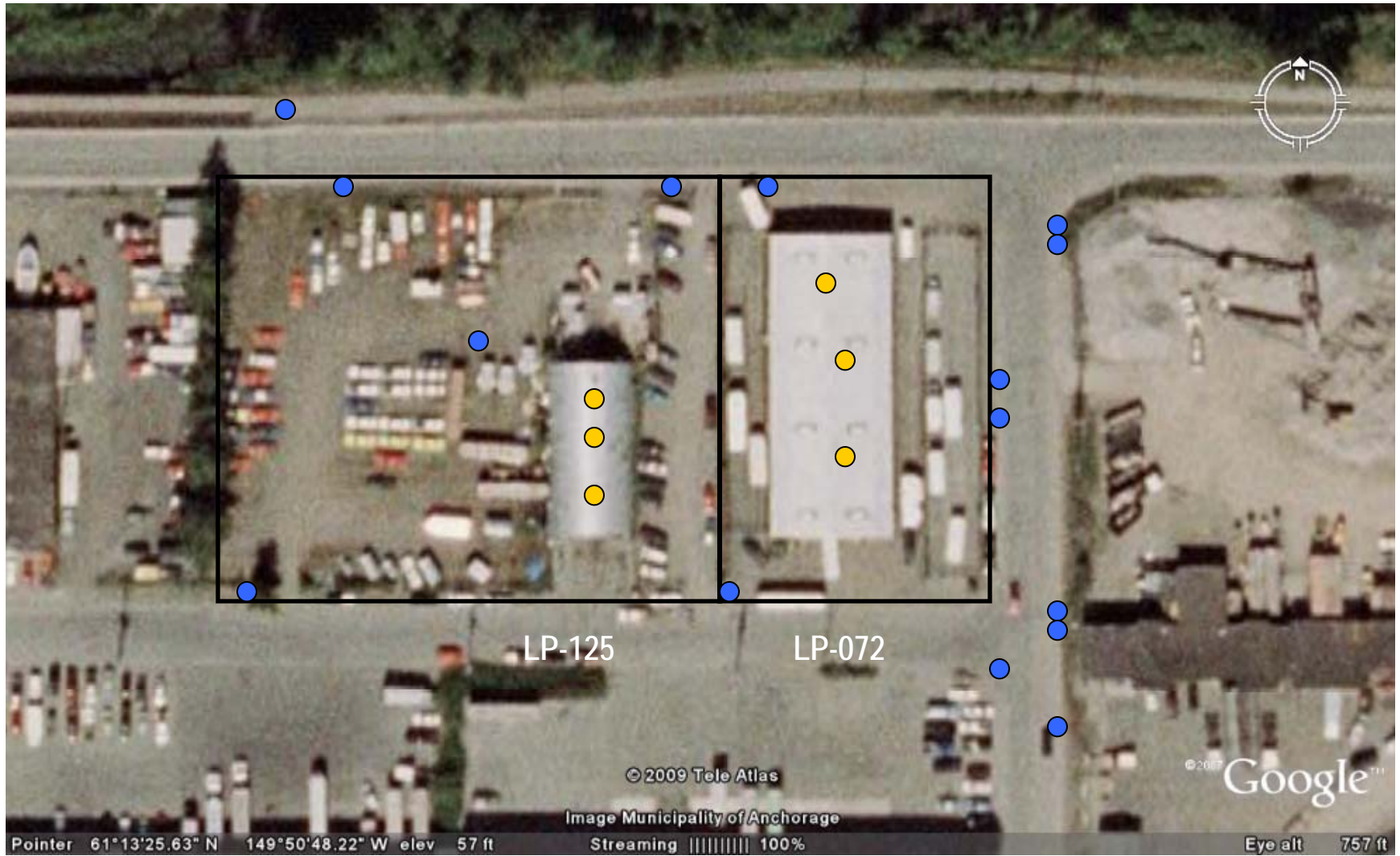
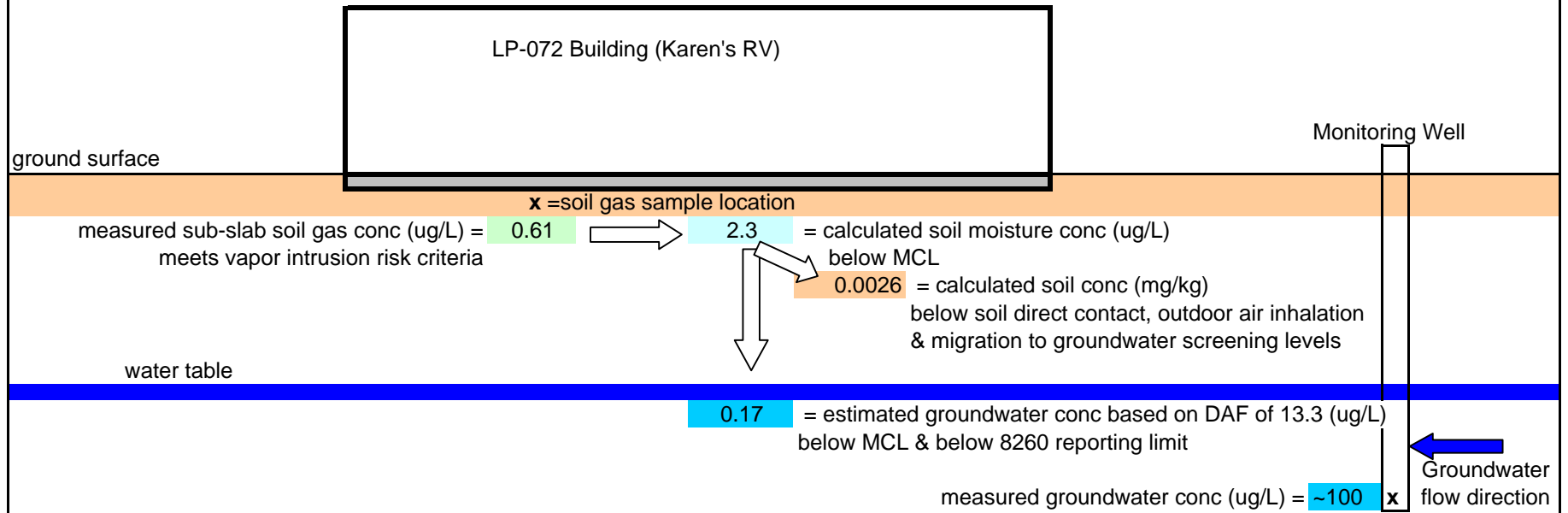


Figure 1 Approximate Sub-slab Soil Gas Sampling Locations

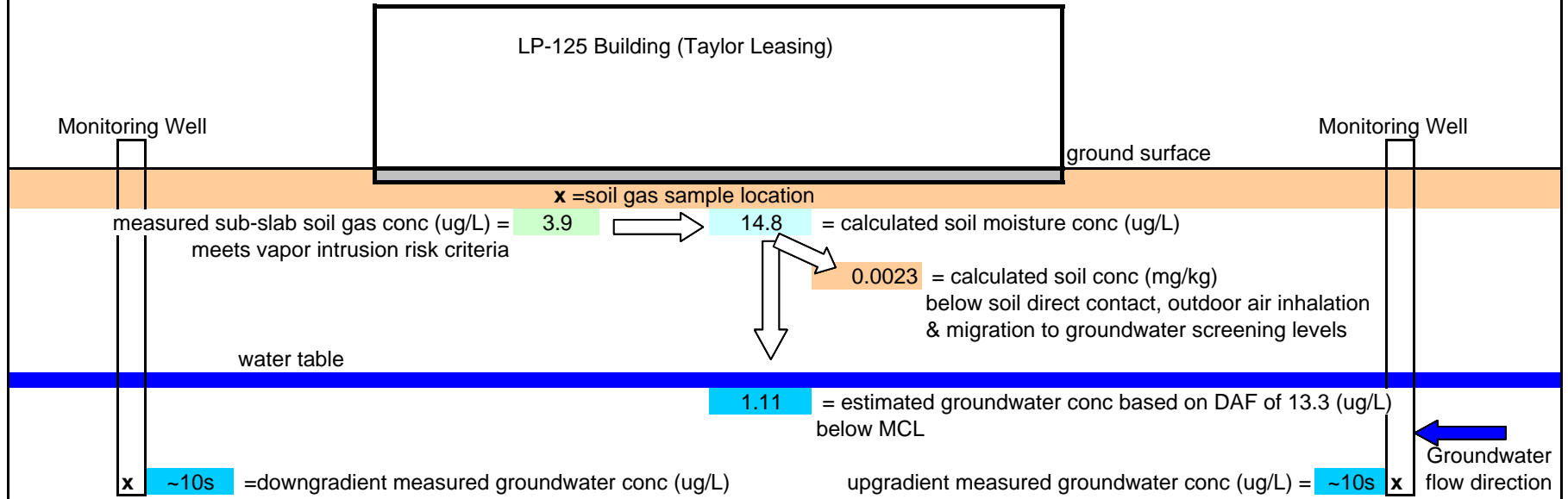
- Soil Gas Sample Locations ●
- Previous Groundwater Sample Location ●

**Figure 2 Conceptual Model for LP-072 showing the distribution of TCE**



**Conclusion: measured soil gas concentrations at LP-072 are not indicative of a "source", rather the source of the soil gas appears to be the groundwater plume.**

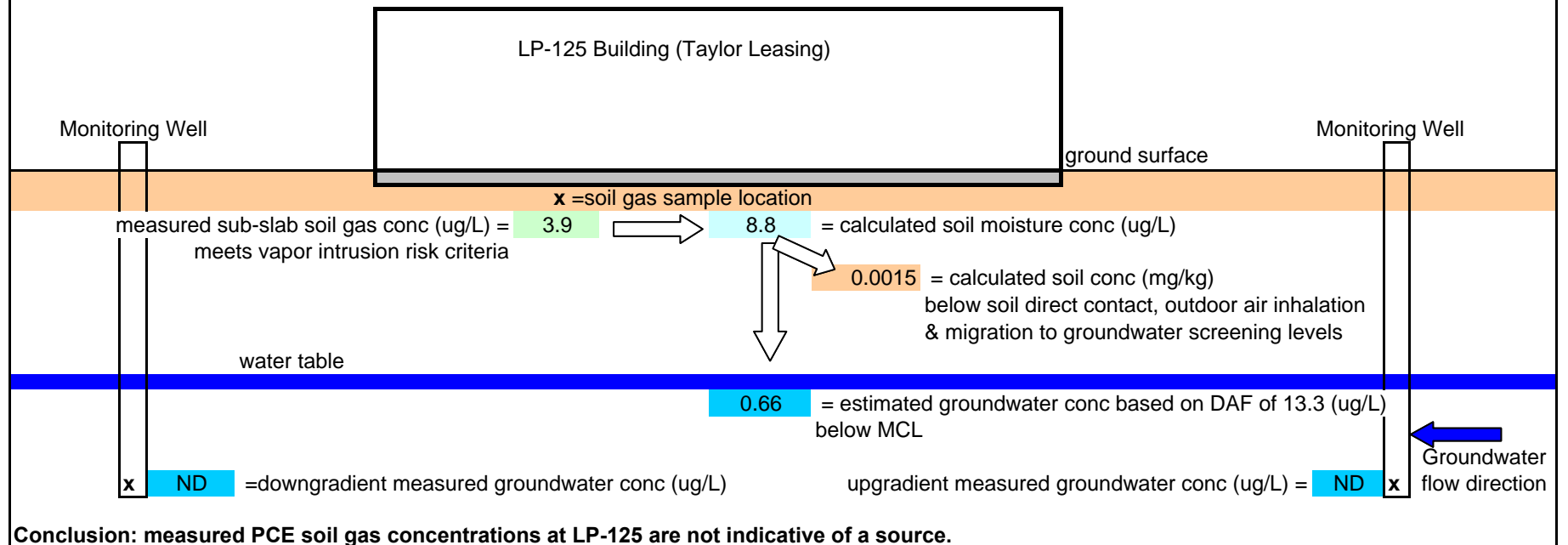
**Figure 3 Conceptual Model for LP-125 showing the distribution of TCE**



**Conclusion: measured TCE soil gas concentrations at LP-125 are not indicative of a source.**



**Figure 4 Conceptual Model for LP-125 showing the distribution of PCE**





Photograph 1 LP-072 from the northeast looking toward the southwest..



Photograph 2 Interior of LP-072 building. The paint bay is the brightly lit area to the left.



Photograph 3 A sub-slab sampling point cemented into the floor at LP-072.



Photograph 4 Helium tank and regulator used in leak testing.



Photograph 5 LP-125 from the southwest looking toward the northeast.



Photograph 6 Interior of the southern portion of the LP-125 building.

10/26/2009

Mr. Lawrence Acomb  
Geosphere, Inc.  
3120 Legacy Drive

Anchorage AK 99516

Project Name: ARRC GW-1  
Project #:  
Workorder #: 0910315

Dear Mr. Lawrence Acomb

The following report includes the data for the above referenced project for sample(s) received on 10/13/2009 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kelly Buettner at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Kelly Buettner  
Project Manager

**WORK ORDER #: 0910315**

Work Order Summary

**CLIENT:** Mr. Lawrence Acomb  
Geosphere, Inc.  
3120 Legacy Drive  
Anchorage, AK 99516

**BILL TO:** Mr. Lawrence Acomb  
Geosphere, Inc.  
3120 Legacy Drive  
Anchorage, AK 99516

**PHONE:** 907-345-7596

**P.O. #**

**FAX:**

**PROJECT #** ARRC GW-1

**DATE RECEIVED:** 10/13/2009

**CONTACT:** Kelly Buettner

**DATE COMPLETED:** 10/26/2009

| <u>FRACTION #</u> | <u>NAME</u>                  | <u>TEST</u>    | <u>RECEIPT<br/>VAC./PRES.</u> | <u>FINAL<br/>PRESSURE</u> |
|-------------------|------------------------------|----------------|-------------------------------|---------------------------|
| 01A               | Karen's South                | Modified TO-15 | 4.6 "Hg                       | 15 psi                    |
| 02A               | Karen's Middle 1             | Modified TO-15 | 2.4 "Hg                       | 15 psi                    |
| 03A               | Karen's Middle 2             | Modified TO-15 | 2.2 "Hg                       | 15 psi                    |
| 04A               | Karen's North                | Modified TO-15 | 3.6 "Hg                       | 15 psi                    |
| 05A               | Taylor South                 | Modified TO-15 | 2.2 "Hg                       | 15 psi                    |
| 06A               | Taylor Middle                | Modified TO-15 | 2.0 "Hg                       | 15 psi                    |
| 07A               | Taylor North 1               | Modified TO-15 | 2.2 "Hg                       | 15 psi                    |
| 07AA              | Taylor North 1 Lab Duplicate | Modified TO-15 | 2.2 "Hg                       | 15 psi                    |
| 08A               | Lab Blank                    | Modified TO-15 | NA                            | NA                        |
| 08B               | Lab Blank                    | Modified TO-15 | NA                            | NA                        |
| 08C               | Lab Blank                    | Modified TO-15 | NA                            | NA                        |
| 09A               | CCV                          | Modified TO-15 | NA                            | NA                        |
| 09B               | CCV                          | Modified TO-15 | NA                            | NA                        |
| 09C               | CCV                          | Modified TO-15 | NA                            | NA                        |
| 10A               | LCS                          | Modified TO-15 | NA                            | NA                        |
| 10B               | LCS                          | Modified TO-15 | NA                            | NA                        |
| 10C               | LCS                          | Modified TO-15 | NA                            | NA                        |

CERTIFIED BY: 

DATE: 10/26/09

Laboratory Director

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
Accreditation number: E87680, Effective date: 07/01/09, Expiration date: 06/30/10

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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**LABORATORY NARRATIVE  
Modified TO-15  
Geosphere, Inc.  
Workorder# 0910315**

Seven 1 Liter Summa Canister samples were received on October 13, 2009. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

| <i>Requirement</i>      | <i>TO-15</i>               | <i>ATL Modifications</i>  |
|-------------------------|----------------------------|---|
| Daily CCV               | <= 30% Difference          | <= 30% Difference; Compounds exceeding this criterion and associated data are flagged and narrated.   |
| Sample collection media | Summa canister             | ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request  |
| Method Detection Limit  | Follow 40CFR Pt.136 App. B | The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases |

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

**Definition of Data Qualifying Flags**

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



**Summary of Detected Compounds  
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

**Client Sample ID: Karen's South**

**Lab ID#: 0910315-01A**

| <b>Compound</b> | <b>Rpt. Limit (ppbv)</b> | <b>Amount (ppbv)</b> | <b>Rpt. Limit (ug/m3)</b> | <b>Amount (ug/m3)</b> |
|-----------------|--------------------------|----------------------|---------------------------|-----------------------|
| Freon 12        | 1.2                      | 43                   | 5.9                       | 210                   |
| Acetone         | 4.8                      | 8.2                  | 11                        | 19                    |
| Heptane         | 1.2                      | 3.9                  | 4.9                       | 16                    |
| Trichloroethene | 1.2                      | 20                   | 6.4                       | 110                   |
| Toluene         | 1.2                      | 8.9                  | 4.5                       | 34                    |
| m,p-Xylene      | 1.2                      | 1.3                  | 5.2                       | 5.8                   |

**Client Sample ID: Karen's Middle 1**

**Lab ID#: 0910315-02A**

| <b>Compound</b>                  | <b>Rpt. Limit (ppbv)</b> | <b>Amount (ppbv)</b> | <b>Rpt. Limit (ug/m3)</b> | <b>Amount (ug/m3)</b> |
|----------------------------------|--------------------------|----------------------|---------------------------|-----------------------|
| Freon 12                         | 1.1                      | 170 J                | 5.4                       | 860 J                 |
| Freon 11                         | 1.1                      | 5.0                  | 6.2                       | 28                    |
| Ethanol                          | 4.4                      | 5.4                  | 8.3                       | 10                    |
| Acetone                          | 4.4                      | 27                   | 10                        | 64                    |
| 2-Butanone (Methyl Ethyl Ketone) | 1.1                      | 1.6                  | 3.2                       | 4.7                   |
| Benzene                          | 1.1                      | 1.3                  | 3.5                       | 4.2                   |
| Heptane                          | 1.1                      | 8.4                  | 4.5                       | 34                    |
| Trichloroethene                  | 1.1                      | 4.0                  | 5.9                       | 22                    |
| Toluene                          | 1.1                      | 12                   | 4.1                       | 47                    |
| m,p-Xylene                       | 1.1                      | 2.5                  | 4.8                       | 11                    |
| Styrene                          | 1.1                      | 3.0                  | 4.7                       | 13                    |

**Client Sample ID: Karen's Middle 2**

**Lab ID#: 0910315-03A**

| <b>Compound</b>                  | <b>Rpt. Limit (ppbv)</b> | <b>Amount (ppbv)</b> | <b>Rpt. Limit (ug/m3)</b> | <b>Amount (ug/m3)</b> |
|----------------------------------|--------------------------|----------------------|---------------------------|-----------------------|
| Freon 12                         | 1.1                      | 170 J                | 5.4                       | 850 J                 |
| Freon 11                         | 1.1                      | 4.9                  | 6.1                       | 28                    |
| Acetone                          | 4.4                      | 18                   | 10                        | 43                    |
| 2-Butanone (Methyl Ethyl Ketone) | 1.1                      | 2.0                  | 3.2                       | 5.8                   |
| Heptane                          | 1.1                      | 5.1                  | 4.5                       | 21                    |
| Trichloroethene                  | 1.1                      | 4.2                  | 5.8                       | 22                    |
| Toluene                          | 1.1                      | 8.8                  | 4.1                       | 33                    |
| m,p-Xylene                       | 1.1                      | 1.6                  | 4.7                       | 7.0                   |

**Summary of Detected Compounds  
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

**Client Sample ID: Karen's Middle 2**

**Lab ID#: 0910315-03A**

|         |     |     |     |     |
|---------|-----|-----|-----|-----|
| Styrene | 1.1 | 1.7 | 4.6 | 7.1 |
|---------|-----|-----|-----|-----|

**Client Sample ID: Karen's North**

**Lab ID#: 0910315-04A**

| Compound                         | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|----------------------------------|-------------------|---------------|--------------------|----------------|
| Freon 12                         | 1.2               | 170 J         | 5.7                | 830 J          |
| Freon 11                         | 1.2               | 3.4           | 6.5                | 19             |
| Ethanol                          | 4.6               | 28            | 8.7                | 54             |
| Acetone                          | 4.6               | 18            | 11                 | 43             |
| 2-Butanone (Methyl Ethyl Ketone) | 1.2               | 1.3           | 3.4                | 3.9            |
| 1,1,1-Trichloroethane            | 1.2               | 1.4           | 6.3                | 7.5            |
| Heptane                          | 1.2               | 3.9           | 4.7                | 16             |
| Trichloroethene                  | 1.2               | 110           | 6.2                | 610            |
| Toluene                          | 1.2               | 7.8           | 4.3                | 29             |
| Tetrachloroethene                | 1.2               | 1.3           | 7.8                | 9.1            |
| m,p-Xylene                       | 1.2               | 1.7           | 5.0                | 7.4            |
| Styrene                          | 1.2               | 1.2           | 4.9                | 4.9            |

**Client Sample ID: Taylor South**

**Lab ID#: 0910315-05A**

| Compound          | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|-------------------|-------------------|---------------|--------------------|----------------|
| Freon 12          | 2.9               | 980           | 14                 | 4900           |
| Freon 11          | 2.9               | 2.9           | 16                 | 16             |
| Chloroform        | 2.9               | 5.2           | 14                 | 26             |
| Heptane           | 2.9               | 12            | 12                 | 50             |
| Trichloroethene   | 2.9               | 240           | 16                 | 1300           |
| Toluene           | 2.9               | 6.2           | 11                 | 23             |
| Tetrachloroethene | 2.9               | 580           | 20                 | 3900           |
| Ethyl Benzene     | 2.9               | 3.6           | 13                 | 16             |
| m,p-Xylene        | 2.9               | 9.4           | 13                 | 41             |

**Client Sample ID: Taylor Middle**

**Lab ID#: 0910315-06A**

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|----------|-------------------|---------------|--------------------|----------------|
|----------|-------------------|---------------|--------------------|----------------|

**Summary of Detected Compounds  
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

**Client Sample ID: Taylor Middle**

**Lab ID#: 0910315-06A**

| <b>Compound</b>   | <b>Rpt. Limit (ppbv)</b> | <b>Amount (ppbv)</b> | <b>Rpt. Limit (ug/m3)</b> | <b>Amount (ug/m3)</b> |
|-------------------|--------------------------|----------------------|---------------------------|-----------------------|
| Freon 12          | 2.2                      | 100                  | 11                        | 500                   |
| Freon 11          | 2.2                      | 2.5                  | 12                        | 14                    |
| Acetone           | 8.6                      | 9.2                  | 20                        | 22                    |
| Chloroform        | 2.2                      | 7.3                  | 10                        | 35                    |
| Heptane           | 2.2                      | 3.1                  | 8.8                       | 13                    |
| Trichloroethene   | 2.2                      | 440                  | 12                        | 2400                  |
| Toluene           | 2.2                      | 5.6                  | 8.1                       | 21                    |
| Tetrachloroethene | 2.2                      | 28                   | 15                        | 190                   |
| m,p-Xylene        | 2.2                      | 3.3                  | 9.4                       | 14                    |

**Client Sample ID: Taylor North 1**

**Lab ID#: 0910315-07A**

| <b>Compound</b>       | <b>Rpt. Limit (ppbv)</b> | <b>Amount (ppbv)</b> | <b>Rpt. Limit (ug/m3)</b> | <b>Amount (ug/m3)</b> |
|-----------------------|--------------------------|----------------------|---------------------------|-----------------------|
| Freon 12              | 3.6                      | 40                   | 18                        | 200                   |
| Freon 11              | 3.6                      | 5.2                  | 20                        | 29                    |
| Chloroform            | 3.6                      | 3.7                  | 18                        | 18                    |
| 1,1,1-Trichloroethane | 3.6                      | 6.0                  | 20                        | 33                    |
| Trichloroethene       | 3.6                      | 710                  | 20                        | 3800                  |
| Toluene               | 3.6                      | 3.8                  | 14                        | 14                    |
| Tetrachloroethene     | 3.6                      | 300                  | 25                        | 2000                  |
| m,p-Xylene            | 3.6                      | 5.0                  | 16                        | 22                    |

**Client Sample ID: Taylor North 1 Lab Duplicate**

**Lab ID#: 0910315-07AA**

| <b>Compound</b>       | <b>Rpt. Limit (ppbv)</b> | <b>Amount (ppbv)</b> | <b>Rpt. Limit (ug/m3)</b> | <b>Amount (ug/m3)</b> |
|-----------------------|--------------------------|----------------------|---------------------------|-----------------------|
| Freon 12              | 3.6                      | 45                   | 18                        | 220                   |
| Freon 11              | 3.6                      | 5.5                  | 20                        | 31                    |
| Chloroform            | 3.6                      | 3.6                  | 18                        | 18                    |
| 1,1,1-Trichloroethane | 3.6                      | 5.7                  | 20                        | 31                    |
| Trichloroethene       | 3.6                      | 720                  | 20                        | 3900                  |
| Toluene               | 3.6                      | 3.8                  | 14                        | 14                    |
| Tetrachloroethene     | 3.6                      | 320                  | 25                        | 2200                  |
| m,p-Xylene            | 3.6                      | 5.0                  | 16                        | 22                    |

Client Sample ID: Karen's South

Lab ID#: 0910315-01A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

|                     |                |  |
|---------------------|----------------|--|
| <b>File Name:</b>   | <b>x101820</b> | <b>Date of Collection:</b> 10/9/09 11:00:00 AM |
| <b>Dil. Factor:</b> | <b>2.39</b>    | <b>Date of Analysis:</b> 10/18/09 10:27 PM     |

| Compound                         | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|----------------------------------|-------------------|---------------|--------------------|----------------|
| Freon 12                         | 1.2               | 43            | 5.9                | 210            |
| Freon 114                        | 1.2               | Not Detected  | 8.4                | Not Detected   |
| Chloromethane                    | 4.8               | Not Detected  | 9.9                | Not Detected   |
| Vinyl Chloride                   | 1.2               | Not Detected  | 3.0                | Not Detected   |
| 1,3-Butadiene                    | 1.2               | Not Detected  | 2.6                | Not Detected   |
| Bromomethane                     | 1.2               | Not Detected  | 4.6                | Not Detected   |
| Chloroethane                     | 1.2               | Not Detected  | 3.2                | Not Detected   |
| Freon 11                         | 1.2               | Not Detected  | 6.7                | Not Detected   |
| Ethanol                          | 4.8               | Not Detected  | 9.0                | Not Detected   |
| Freon 113                        | 1.2               | Not Detected  | 9.2                | Not Detected   |
| 1,1-Dichloroethene               | 1.2               | Not Detected  | 4.7                | Not Detected   |
| Acetone                          | 4.8               | 8.2           | 11                 | 19             |
| 2-Propanol                       | 4.8               | Not Detected  | 12                 | Not Detected   |
| Carbon Disulfide                 | 1.2               | Not Detected  | 3.7                | Not Detected   |
| 3-Chloropropene                  | 4.8               | Not Detected  | 15                 | Not Detected   |
| Methylene Chloride               | 1.2               | Not Detected  | 4.2                | Not Detected   |
| Methyl tert-butyl ether          | 1.2               | Not Detected  | 4.3                | Not Detected   |
| trans-1,2-Dichloroethene         | 1.2               | Not Detected  | 4.7                | Not Detected   |
| Hexane                           | 1.2               | Not Detected  | 4.2                | Not Detected   |
| 1,1-Dichloroethane               | 1.2               | Not Detected  | 4.8                | Not Detected   |
| 2-Butanone (Methyl Ethyl Ketone) | 1.2               | Not Detected  | 3.5                | Not Detected   |
| cis-1,2-Dichloroethene           | 1.2               | Not Detected  | 4.7                | Not Detected   |
| Tetrahydrofuran                  | 1.2               | Not Detected  | 3.5                | Not Detected   |
| Chloroform                       | 1.2               | Not Detected  | 5.8                | Not Detected   |
| 1,1,1-Trichloroethane            | 1.2               | Not Detected  | 6.5                | Not Detected   |
| Cyclohexane                      | 1.2               | Not Detected  | 4.1                | Not Detected   |
| Carbon Tetrachloride             | 1.2               | Not Detected  | 7.5                | Not Detected   |
| 2,2,4-Trimethylpentane           | 1.2               | Not Detected  | 5.6                | Not Detected   |
| Benzene                          | 1.2               | Not Detected  | 3.8                | Not Detected   |
| 1,2-Dichloroethane               | 1.2               | Not Detected  | 4.8                | Not Detected   |
| Heptane                          | 1.2               | 3.9           | 4.9                | 16             |
| Trichloroethene                  | 1.2               | 20            | 6.4                | 110            |
| 1,2-Dichloropropane              | 1.2               | Not Detected  | 5.5                | Not Detected   |
| 1,4-Dioxane                      | 4.8               | Not Detected  | 17                 | Not Detected   |
| Bromodichloromethane             | 1.2               | Not Detected  | 8.0                | Not Detected   |
| cis-1,3-Dichloropropene          | 1.2               | Not Detected  | 5.4                | Not Detected   |
| 4-Methyl-2-pentanone             | 1.2               | Not Detected  | 4.9                | Not Detected   |
| Toluene                          | 1.2               | 8.9           | 4.5                | 34             |
| trans-1,3-Dichloropropene        | 1.2               | Not Detected  | 5.4                | Not Detected   |

Client Sample ID: Karen's South

Lab ID#: 0910315-01A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

|                     |                |  |
|---------------------|----------------|--|
| <b>File Name:</b>   | <b>x101820</b> | <b>Date of Collection:</b> 10/9/09 11:00:00 AM |
| <b>Dil. Factor:</b> | <b>2.39</b>    | <b>Date of Analysis:</b> 10/18/09 10:27 PM     |

| Compound                  | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---------------------------|-------------------|---------------|--------------------|----------------|
| 1,1,2-Trichloroethane     | 1.2               | Not Detected  | 6.5                | Not Detected   |
| Tetrachloroethene         | 1.2               | Not Detected  | 8.1                | Not Detected   |
| 2-Hexanone                | 4.8               | Not Detected  | 20                 | Not Detected   |
| Dibromochloromethane      | 1.2               | Not Detected  | 10                 | Not Detected   |
| 1,2-Dibromoethane (EDB)   | 1.2               | Not Detected  | 9.2                | Not Detected   |
| Chlorobenzene             | 1.2               | Not Detected  | 5.5                | Not Detected   |
| Ethyl Benzene             | 1.2               | Not Detected  | 5.2                | Not Detected   |
| m,p-Xylene                | 1.2               | 1.3           | 5.2                | 5.8            |
| o-Xylene                  | 1.2               | Not Detected  | 5.2                | Not Detected   |
| Styrene                   | 1.2               | Not Detected  | 5.1                | Not Detected   |
| Bromoform                 | 1.2               | Not Detected  | 12                 | Not Detected   |
| Cumene                    | 1.2               | Not Detected  | 5.9                | Not Detected   |
| 1,1,2,2-Tetrachloroethane | 1.2               | Not Detected  | 8.2                | Not Detected   |
| Propylbenzene             | 1.2               | Not Detected  | 5.9                | Not Detected   |
| 4-Ethyltoluene            | 1.2               | Not Detected  | 5.9                | Not Detected   |
| 1,3,5-Trimethylbenzene    | 1.2               | Not Detected  | 5.9                | Not Detected   |
| 1,2,4-Trimethylbenzene    | 1.2               | Not Detected  | 5.9                | Not Detected   |
| 1,3-Dichlorobenzene       | 1.2               | Not Detected  | 7.2                | Not Detected   |
| 1,4-Dichlorobenzene       | 1.2               | Not Detected  | 7.2                | Not Detected   |
| alpha-Chlorotoluene       | 1.2               | Not Detected  | 6.2                | Not Detected   |
| 1,2-Dichlorobenzene       | 1.2               | Not Detected  | 7.2                | Not Detected   |
| 1,2,4-Trichlorobenzene    | 4.8               | Not Detected  | 35                 | Not Detected   |
| Hexachlorobutadiene       | 4.8               | Not Detected  | 51                 | Not Detected   |

**Container Type: 1 Liter Summa Canister**

| Surrogates            | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| Toluene-d8            | 98        | 70-130        |
| 1,2-Dichloroethane-d4 | 75        | 70-130        |
| 4-Bromofluorobenzene  | 94        | 70-130        |

Client Sample ID: Karen's Middle 1

Lab ID#: 0910315-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

|              |         |                     |                    |
|--------------|---------|---------------------|--------------------|
| File Name:   | y102124 | Date of Collection: | 10/9/09 1:00:00 AM |
| Dil. Factor: | 2.20    | Date of Analysis:   | 10/21/09 11:10 PM  |

| Compound                         | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|----------------------------------|-------------------|---------------|--------------------|----------------|
| Freon 12                         | 1.1               | 170 J         | 5.4                | 860 J          |
| Freon 114                        | 1.1               | Not Detected  | 7.7                | Not Detected   |
| Chloromethane                    | 4.4               | Not Detected  | 9.1                | Not Detected   |
| Vinyl Chloride                   | 1.1               | Not Detected  | 2.8                | Not Detected   |
| 1,3-Butadiene                    | 1.1               | Not Detected  | 2.4                | Not Detected   |
| Bromomethane                     | 1.1               | Not Detected  | 4.3                | Not Detected   |
| Chloroethane                     | 1.1               | Not Detected  | 2.9                | Not Detected   |
| Freon 11                         | 1.1               | 5.0           | 6.2                | 28             |
| Ethanol                          | 4.4               | 5.4           | 8.3                | 10             |
| Freon 113                        | 1.1               | Not Detected  | 8.4                | Not Detected   |
| 1,1-Dichloroethene               | 1.1               | Not Detected  | 4.4                | Not Detected   |
| Acetone                          | 4.4               | 27            | 10                 | 64             |
| 2-Propanol                       | 4.4               | Not Detected  | 11                 | Not Detected   |
| Carbon Disulfide                 | 1.1               | Not Detected  | 3.4                | Not Detected   |
| 3-Chloropropene                  | 4.4               | Not Detected  | 14                 | Not Detected   |
| Methylene Chloride               | 1.1               | Not Detected  | 3.8                | Not Detected   |
| Methyl tert-butyl ether          | 1.1               | Not Detected  | 4.0                | Not Detected   |
| trans-1,2-Dichloroethene         | 1.1               | Not Detected  | 4.4                | Not Detected   |
| Hexane                           | 1.1               | Not Detected  | 3.9                | Not Detected   |
| 1,1-Dichloroethane               | 1.1               | Not Detected  | 4.4                | Not Detected   |
| 2-Butanone (Methyl Ethyl Ketone) | 1.1               | 1.6           | 3.2                | 4.7            |
| cis-1,2-Dichloroethene           | 1.1               | Not Detected  | 4.4                | Not Detected   |
| Tetrahydrofuran                  | 1.1               | Not Detected  | 3.2                | Not Detected   |
| Chloroform                       | 1.1               | Not Detected  | 5.4                | Not Detected   |
| 1,1,1-Trichloroethane            | 1.1               | Not Detected  | 6.0                | Not Detected   |
| Cyclohexane                      | 1.1               | Not Detected  | 3.8                | Not Detected   |
| Carbon Tetrachloride             | 1.1               | Not Detected  | 6.9                | Not Detected   |
| 2,2,4-Trimethylpentane           | 1.1               | Not Detected  | 5.1                | Not Detected   |
| Benzene                          | 1.1               | 1.3           | 3.5                | 4.2            |
| 1,2-Dichloroethane               | 1.1               | Not Detected  | 4.4                | Not Detected   |
| Heptane                          | 1.1               | 8.4           | 4.5                | 34             |
| Trichloroethene                  | 1.1               | 4.0           | 5.9                | 22             |
| 1,2-Dichloropropane              | 1.1               | Not Detected  | 5.1                | Not Detected   |
| 1,4-Dioxane                      | 4.4               | Not Detected  | 16                 | Not Detected   |
| Bromodichloromethane             | 1.1               | Not Detected  | 7.4                | Not Detected   |
| cis-1,3-Dichloropropene          | 1.1               | Not Detected  | 5.0                | Not Detected   |
| 4-Methyl-2-pentanone             | 1.1               | Not Detected  | 4.5                | Not Detected   |
| Toluene                          | 1.1               | 12            | 4.1                | 47             |
| trans-1,3-Dichloropropene        | 1.1               | Not Detected  | 5.0                | Not Detected   |

Client Sample ID: Karen's Middle 1

Lab ID#: 0910315-02A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

|                     |                |   |
|---------------------|----------------|---|
| <b>File Name:</b>   | <b>y102124</b> | <b>Date of Collection:</b> 10/9/09 1:00:00 AM |
| <b>Dil. Factor:</b> | <b>2.20</b>    | <b>Date of Analysis:</b> 10/21/09 11:10 PM    |

| Compound                  | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---------------------------|-------------------|---------------|--------------------|----------------|
| 1,1,2-Trichloroethane     | 1.1               | Not Detected  | 6.0                | Not Detected   |
| Tetrachloroethene         | 1.1               | Not Detected  | 7.5                | Not Detected   |
| 2-Hexanone                | 4.4               | Not Detected  | 18                 | Not Detected   |
| Dibromochloromethane      | 1.1               | Not Detected  | 9.4                | Not Detected   |
| 1,2-Dibromoethane (EDB)   | 1.1               | Not Detected  | 8.4                | Not Detected   |
| Chlorobenzene             | 1.1               | Not Detected  | 5.1                | Not Detected   |
| Ethyl Benzene             | 1.1               | Not Detected  | 4.8                | Not Detected   |
| m,p-Xylene                | 1.1               | 2.5           | 4.8                | 11             |
| o-Xylene                  | 1.1               | Not Detected  | 4.8                | Not Detected   |
| Styrene                   | 1.1               | 3.0           | 4.7                | 13             |
| Bromoform                 | 1.1               | Not Detected  | 11                 | Not Detected   |
| Cumene                    | 1.1               | Not Detected  | 5.4                | Not Detected   |
| 1,1,2,2-Tetrachloroethane | 1.1               | Not Detected  | 7.6                | Not Detected   |
| Propylbenzene             | 1.1               | Not Detected  | 5.4                | Not Detected   |
| 4-Ethyltoluene            | 1.1               | Not Detected  | 5.4                | Not Detected   |
| 1,3,5-Trimethylbenzene    | 1.1               | Not Detected  | 5.4                | Not Detected   |
| 1,2,4-Trimethylbenzene    | 1.1               | Not Detected  | 5.4                | Not Detected   |
| 1,3-Dichlorobenzene       | 1.1               | Not Detected  | 6.6                | Not Detected   |
| 1,4-Dichlorobenzene       | 1.1               | Not Detected  | 6.6                | Not Detected   |
| alpha-Chlorotoluene       | 1.1               | Not Detected  | 5.7                | Not Detected   |
| 1,2-Dichlorobenzene       | 1.1               | Not Detected  | 6.6                | Not Detected   |
| 1,2,4-Trichlorobenzene    | 4.4               | Not Detected  | 33                 | Not Detected   |
| Hexachlorobutadiene       | 4.4               | Not Detected  | 47                 | Not Detected   |

J = Estimated value due to bias in the CCV.

**Container Type: 1 Liter Summa Canister**

| Surrogates            | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| Toluene-d8            | 99        | 70-130        |
| 1,2-Dichloroethane-d4 | 106       | 70-130        |
| 4-Bromofluorobenzene  | 104       | 70-130        |

Client Sample ID: Karen's Middle 2

Lab ID#: 0910315-03A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

|                     |                |   |
|---------------------|----------------|---|
| <b>File Name:</b>   | <b>y102126</b> | <b>Date of Collection:</b> 10/9/09 1:30:00 AM |
| <b>Dil. Factor:</b> | <b>2.18</b>    | <b>Date of Analysis:</b> 10/22/09 12:22 AM    |

| Compound                         | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|----------------------------------|-------------------|---------------|--------------------|----------------|
| Freon 12                         | 1.1               | 170 J         | 5.4                | 850 J          |
| Freon 114                        | 1.1               | Not Detected  | 7.6                | Not Detected   |
| Chloromethane                    | 4.4               | Not Detected  | 9.0                | Not Detected   |
| Vinyl Chloride                   | 1.1               | Not Detected  | 2.8                | Not Detected   |
| 1,3-Butadiene                    | 1.1               | Not Detected  | 2.4                | Not Detected   |
| Bromomethane                     | 1.1               | Not Detected  | 4.2                | Not Detected   |
| Chloroethane                     | 1.1               | Not Detected  | 2.9                | Not Detected   |
| Freon 11                         | 1.1               | 4.9           | 6.1                | 28             |
| Ethanol                          | 4.4               | Not Detected  | 8.2                | Not Detected   |
| Freon 113                        | 1.1               | Not Detected  | 8.4                | Not Detected   |
| 1,1-Dichloroethene               | 1.1               | Not Detected  | 4.3                | Not Detected   |
| Acetone                          | 4.4               | 18            | 10                 | 43             |
| 2-Propanol                       | 4.4               | Not Detected  | 11                 | Not Detected   |
| Carbon Disulfide                 | 1.1               | Not Detected  | 3.4                | Not Detected   |
| 3-Chloropropene                  | 4.4               | Not Detected  | 14                 | Not Detected   |
| Methylene Chloride               | 1.1               | Not Detected  | 3.8                | Not Detected   |
| Methyl tert-butyl ether          | 1.1               | Not Detected  | 3.9                | Not Detected   |
| trans-1,2-Dichloroethene         | 1.1               | Not Detected  | 4.3                | Not Detected   |
| Hexane                           | 1.1               | Not Detected  | 3.8                | Not Detected   |
| 1,1-Dichloroethane               | 1.1               | Not Detected  | 4.4                | Not Detected   |
| 2-Butanone (Methyl Ethyl Ketone) | 1.1               | 2.0           | 3.2                | 5.8            |
| cis-1,2-Dichloroethene           | 1.1               | Not Detected  | 4.3                | Not Detected   |
| Tetrahydrofuran                  | 1.1               | Not Detected  | 3.2                | Not Detected   |
| Chloroform                       | 1.1               | Not Detected  | 5.3                | Not Detected   |
| 1,1,1-Trichloroethane            | 1.1               | Not Detected  | 5.9                | Not Detected   |
| Cyclohexane                      | 1.1               | Not Detected  | 3.8                | Not Detected   |
| Carbon Tetrachloride             | 1.1               | Not Detected  | 6.8                | Not Detected   |
| 2,2,4-Trimethylpentane           | 1.1               | Not Detected  | 5.1                | Not Detected   |
| Benzene                          | 1.1               | Not Detected  | 3.5                | Not Detected   |
| 1,2-Dichloroethane               | 1.1               | Not Detected  | 4.4                | Not Detected   |
| Heptane                          | 1.1               | 5.1           | 4.5                | 21             |
| Trichloroethene                  | 1.1               | 4.2           | 5.8                | 22             |
| 1,2-Dichloropropane              | 1.1               | Not Detected  | 5.0                | Not Detected   |
| 1,4-Dioxane                      | 4.4               | Not Detected  | 16                 | Not Detected   |
| Bromodichloromethane             | 1.1               | Not Detected  | 7.3                | Not Detected   |
| cis-1,3-Dichloropropene          | 1.1               | Not Detected  | 4.9                | Not Detected   |
| 4-Methyl-2-pentanone             | 1.1               | Not Detected  | 4.5                | Not Detected   |
| Toluene                          | 1.1               | 8.8           | 4.1                | 33             |
| trans-1,3-Dichloropropene        | 1.1               | Not Detected  | 4.9                | Not Detected   |



Client Sample ID: Karen's Middle 2

Lab ID#: 0910315-03A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

|                     |                |   |
|---------------------|----------------|---|
| <b>File Name:</b>   | <b>y102126</b> | <b>Date of Collection:</b> 10/9/09 1:30:00 AM |
| <b>Dil. Factor:</b> | <b>2.18</b>    | <b>Date of Analysis:</b> 10/22/09 12:22 AM    |

| Compound                  | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---------------------------|-------------------|---------------|--------------------|----------------|
| 1,1,2-Trichloroethane     | 1.1               | Not Detected  | 5.9                | Not Detected   |
| Tetrachloroethene         | 1.1               | Not Detected  | 7.4                | Not Detected   |
| 2-Hexanone                | 4.4               | Not Detected  | 18                 | Not Detected   |
| Dibromochloromethane      | 1.1               | Not Detected  | 9.3                | Not Detected   |
| 1,2-Dibromoethane (EDB)   | 1.1               | Not Detected  | 8.4                | Not Detected   |
| Chlorobenzene             | 1.1               | Not Detected  | 5.0                | Not Detected   |
| Ethyl Benzene             | 1.1               | Not Detected  | 4.7                | Not Detected   |
| m,p-Xylene                | 1.1               | 1.6           | 4.7                | 7.0            |
| o-Xylene                  | 1.1               | Not Detected  | 4.7                | Not Detected   |
| Styrene                   | 1.1               | 1.7           | 4.6                | 7.1            |
| Bromoform                 | 1.1               | Not Detected  | 11                 | Not Detected   |
| Cumene                    | 1.1               | Not Detected  | 5.4                | Not Detected   |
| 1,1,2,2-Tetrachloroethane | 1.1               | Not Detected  | 7.5                | Not Detected   |
| Propylbenzene             | 1.1               | Not Detected  | 5.4                | Not Detected   |
| 4-Ethyltoluene            | 1.1               | Not Detected  | 5.4                | Not Detected   |
| 1,3,5-Trimethylbenzene    | 1.1               | Not Detected  | 5.4                | Not Detected   |
| 1,2,4-Trimethylbenzene    | 1.1               | Not Detected  | 5.4                | Not Detected   |
| 1,3-Dichlorobenzene       | 1.1               | Not Detected  | 6.6                | Not Detected   |
| 1,4-Dichlorobenzene       | 1.1               | Not Detected  | 6.6                | Not Detected   |
| alpha-Chlorotoluene       | 1.1               | Not Detected  | 5.6                | Not Detected   |
| 1,2-Dichlorobenzene       | 1.1               | Not Detected  | 6.6                | Not Detected   |
| 1,2,4-Trichlorobenzene    | 4.4               | Not Detected  | 32                 | Not Detected   |
| Hexachlorobutadiene       | 4.4               | Not Detected  | 46                 | Not Detected   |

J = Estimated value due to bias in the CCV.

**Container Type: 1 Liter Summa Canister**

| Surrogates            | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| Toluene-d8            | 100       | 70-130        |
| 1,2-Dichloroethane-d4 | 103       | 70-130        |
| 4-Bromofluorobenzene  | 104       | 70-130        |

Client Sample ID: Karen's North

Lab ID#: 0910315-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

|              |         |                     |                    |
|--------------|---------|---------------------|--------------------|
| File Name:   | y102127 | Date of Collection: | 10/9/09 2:30:00 AM |
| Dil. Factor: | 2.30    | Date of Analysis:   | 10/22/09 12:59 AM  |

| Compound                         | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|----------------------------------|-------------------|---------------|--------------------|----------------|
| Freon 12                         | 1.2               | 170 J         | 5.7                | 830 J          |
| Freon 114                        | 1.2               | Not Detected  | 8.0                | Not Detected   |
| Chloromethane                    | 4.6               | Not Detected  | 9.5                | Not Detected   |
| Vinyl Chloride                   | 1.2               | Not Detected  | 2.9                | Not Detected   |
| 1,3-Butadiene                    | 1.2               | Not Detected  | 2.5                | Not Detected   |
| Bromomethane                     | 1.2               | Not Detected  | 4.5                | Not Detected   |
| Chloroethane                     | 1.2               | Not Detected  | 3.0                | Not Detected   |
| Freon 11                         | 1.2               | 3.4           | 6.5                | 19             |
| Ethanol                          | 4.6               | 28            | 8.7                | 54             |
| Freon 113                        | 1.2               | Not Detected  | 8.8                | Not Detected   |
| 1,1-Dichloroethene               | 1.2               | Not Detected  | 4.6                | Not Detected   |
| Acetone                          | 4.6               | 18            | 11                 | 43             |
| 2-Propanol                       | 4.6               | Not Detected  | 11                 | Not Detected   |
| Carbon Disulfide                 | 1.2               | Not Detected  | 3.6                | Not Detected   |
| 3-Chloropropene                  | 4.6               | Not Detected  | 14                 | Not Detected   |
| Methylene Chloride               | 1.2               | Not Detected  | 4.0                | Not Detected   |
| Methyl tert-butyl ether          | 1.2               | Not Detected  | 4.1                | Not Detected   |
| trans-1,2-Dichloroethene         | 1.2               | Not Detected  | 4.6                | Not Detected   |
| Hexane                           | 1.2               | Not Detected  | 4.0                | Not Detected   |
| 1,1-Dichloroethane               | 1.2               | Not Detected  | 4.6                | Not Detected   |
| 2-Butanone (Methyl Ethyl Ketone) | 1.2               | 1.3           | 3.4                | 3.9            |
| cis-1,2-Dichloroethene           | 1.2               | Not Detected  | 4.6                | Not Detected   |
| Tetrahydrofuran                  | 1.2               | Not Detected  | 3.4                | Not Detected   |
| Chloroform                       | 1.2               | Not Detected  | 5.6                | Not Detected   |
| 1,1,1-Trichloroethane            | 1.2               | 1.4           | 6.3                | 7.5            |
| Cyclohexane                      | 1.2               | Not Detected  | 4.0                | Not Detected   |
| Carbon Tetrachloride             | 1.2               | Not Detected  | 7.2                | Not Detected   |
| 2,2,4-Trimethylpentane           | 1.2               | Not Detected  | 5.4                | Not Detected   |
| Benzene                          | 1.2               | Not Detected  | 3.7                | Not Detected   |
| 1,2-Dichloroethane               | 1.2               | Not Detected  | 4.6                | Not Detected   |
| Heptane                          | 1.2               | 3.9           | 4.7                | 16             |
| Trichloroethene                  | 1.2               | 110           | 6.2                | 610            |
| 1,2-Dichloropropane              | 1.2               | Not Detected  | 5.3                | Not Detected   |
| 1,4-Dioxane                      | 4.6               | Not Detected  | 16                 | Not Detected   |
| Bromodichloromethane             | 1.2               | Not Detected  | 7.7                | Not Detected   |
| cis-1,3-Dichloropropene          | 1.2               | Not Detected  | 5.2                | Not Detected   |
| 4-Methyl-2-pentanone             | 1.2               | Not Detected  | 4.7                | Not Detected   |
| Toluene                          | 1.2               | 7.8           | 4.3                | 29             |
| trans-1,3-Dichloropropene        | 1.2               | Not Detected  | 5.2                | Not Detected   |

Client Sample ID: Karen's North

Lab ID#: 0910315-04A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

|                     |                |   |
|---------------------|----------------|---|
| <b>File Name:</b>   | <b>y102127</b> | <b>Date of Collection:</b> 10/9/09 2:30:00 AM |
| <b>Dil. Factor:</b> | <b>2.30</b>    | <b>Date of Analysis:</b> 10/22/09 12:59 AM    |

| Compound                  | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---------------------------|-------------------|---------------|--------------------|----------------|
| 1,1,2-Trichloroethane     | 1.2               | Not Detected  | 6.3                | Not Detected   |
| Tetrachloroethene         | 1.2               | 1.3           | 7.8                | 9.1            |
| 2-Hexanone                | 4.6               | Not Detected  | 19                 | Not Detected   |
| Dibromochloromethane      | 1.2               | Not Detected  | 9.8                | Not Detected   |
| 1,2-Dibromoethane (EDB)   | 1.2               | Not Detected  | 8.8                | Not Detected   |
| Chlorobenzene             | 1.2               | Not Detected  | 5.3                | Not Detected   |
| Ethyl Benzene             | 1.2               | Not Detected  | 5.0                | Not Detected   |
| m,p-Xylene                | 1.2               | 1.7           | 5.0                | 7.4            |
| o-Xylene                  | 1.2               | Not Detected  | 5.0                | Not Detected   |
| Styrene                   | 1.2               | 1.2           | 4.9                | 4.9            |
| Bromoform                 | 1.2               | Not Detected  | 12                 | Not Detected   |
| Cumene                    | 1.2               | Not Detected  | 5.6                | Not Detected   |
| 1,1,2,2-Tetrachloroethane | 1.2               | Not Detected  | 7.9                | Not Detected   |
| Propylbenzene             | 1.2               | Not Detected  | 5.6                | Not Detected   |
| 4-Ethyltoluene            | 1.2               | Not Detected  | 5.6                | Not Detected   |
| 1,3,5-Trimethylbenzene    | 1.2               | Not Detected  | 5.6                | Not Detected   |
| 1,2,4-Trimethylbenzene    | 1.2               | Not Detected  | 5.6                | Not Detected   |
| 1,3-Dichlorobenzene       | 1.2               | Not Detected  | 6.9                | Not Detected   |
| 1,4-Dichlorobenzene       | 1.2               | Not Detected  | 6.9                | Not Detected   |
| alpha-Chlorotoluene       | 1.2               | Not Detected  | 6.0                | Not Detected   |
| 1,2-Dichlorobenzene       | 1.2               | Not Detected  | 6.9                | Not Detected   |
| 1,2,4-Trichlorobenzene    | 4.6               | Not Detected  | 34                 | Not Detected   |
| Hexachlorobutadiene       | 4.6               | Not Detected  | 49                 | Not Detected   |

J = Estimated value due to bias in the CCV.

**Container Type: 1 Liter Summa Canister**

| Surrogates            | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| Toluene-d8            | 100       | 70-130        |
| 1,2-Dichloroethane-d4 | 100       | 70-130        |
| 4-Bromofluorobenzene  | 105       | 70-130        |

Client Sample ID: Taylor South

Lab ID#: 0910315-05A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

|                     |                |   |
|---------------------|----------------|---|
| <b>File Name:</b>   | <b>y102220</b> | <b>Date of Collection:</b> 10/9/09 3:30:00 AM |
| <b>Dil. Factor:</b> | <b>5.81</b>    | <b>Date of Analysis:</b> 10/22/09 11:37 PM    |

| Compound                         | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|----------------------------------|-------------------|---------------|--------------------|----------------|
| Freon 12                         | 2.9               | 980           | 14                 | 4900           |
| Freon 114                        | 2.9               | Not Detected  | 20                 | Not Detected   |
| Chloromethane                    | 12                | Not Detected  | 24                 | Not Detected   |
| Vinyl Chloride                   | 2.9               | Not Detected  | 7.4                | Not Detected   |
| 1,3-Butadiene                    | 2.9               | Not Detected  | 6.4                | Not Detected   |
| Bromomethane                     | 2.9               | Not Detected  | 11                 | Not Detected   |
| Chloroethane                     | 2.9               | Not Detected  | 7.7                | Not Detected   |
| Freon 11                         | 2.9               | 2.9           | 16                 | 16             |
| Ethanol                          | 12                | Not Detected  | 22                 | Not Detected   |
| Freon 113                        | 2.9               | Not Detected  | 22                 | Not Detected   |
| 1,1-Dichloroethene               | 2.9               | Not Detected  | 12                 | Not Detected   |
| Acetone                          | 12                | Not Detected  | 28                 | Not Detected   |
| 2-Propanol                       | 12                | Not Detected  | 28                 | Not Detected   |
| Carbon Disulfide                 | 2.9               | Not Detected  | 9.0                | Not Detected   |
| 3-Chloropropene                  | 12                | Not Detected  | 36                 | Not Detected   |
| Methylene Chloride               | 2.9               | Not Detected  | 10                 | Not Detected   |
| Methyl tert-butyl ether          | 2.9               | Not Detected  | 10                 | Not Detected   |
| trans-1,2-Dichloroethene         | 2.9               | Not Detected  | 12                 | Not Detected   |
| Hexane                           | 2.9               | Not Detected  | 10                 | Not Detected   |
| 1,1-Dichloroethane               | 2.9               | Not Detected  | 12                 | Not Detected   |
| 2-Butanone (Methyl Ethyl Ketone) | 2.9               | Not Detected  | 8.6                | Not Detected   |
| cis-1,2-Dichloroethene           | 2.9               | Not Detected  | 12                 | Not Detected   |
| Tetrahydrofuran                  | 2.9               | Not Detected  | 8.6                | Not Detected   |
| Chloroform                       | 2.9               | 5.2           | 14                 | 26             |
| 1,1,1-Trichloroethane            | 2.9               | Not Detected  | 16                 | Not Detected   |
| Cyclohexane                      | 2.9               | Not Detected  | 10                 | Not Detected   |
| Carbon Tetrachloride             | 2.9               | Not Detected  | 18                 | Not Detected   |
| 2,2,4-Trimethylpentane           | 2.9               | Not Detected  | 14                 | Not Detected   |
| Benzene                          | 2.9               | Not Detected  | 9.3                | Not Detected   |
| 1,2-Dichloroethane               | 2.9               | Not Detected  | 12                 | Not Detected   |
| Heptane                          | 2.9               | 12            | 12                 | 50             |
| Trichloroethene                  | 2.9               | 240           | 16                 | 1300           |
| 1,2-Dichloropropane              | 2.9               | Not Detected  | 13                 | Not Detected   |
| 1,4-Dioxane                      | 12                | Not Detected  | 42                 | Not Detected   |
| Bromodichloromethane             | 2.9               | Not Detected  | 19                 | Not Detected   |
| cis-1,3-Dichloropropene          | 2.9               | Not Detected  | 13                 | Not Detected   |
| 4-Methyl-2-pentanone             | 2.9               | Not Detected  | 12                 | Not Detected   |
| Toluene                          | 2.9               | 6.2           | 11                 | 23             |
| trans-1,3-Dichloropropene        | 2.9               | Not Detected  | 13                 | Not Detected   |

Client Sample ID: Taylor South

Lab ID#: 0910315-05A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

|                     |                |   |
|---------------------|----------------|---|
| <b>File Name:</b>   | <b>y102220</b> | <b>Date of Collection:</b> 10/9/09 3:30:00 AM |
| <b>Dil. Factor:</b> | <b>5.81</b>    | <b>Date of Analysis:</b> 10/22/09 11:37 PM    |

| Compound                  | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---------------------------|-------------------|---------------|--------------------|----------------|
| 1,1,2-Trichloroethane     | 2.9               | Not Detected  | 16                 | Not Detected   |
| Tetrachloroethene         | 2.9               | 580           | 20                 | 3900           |
| 2-Hexanone                | 12                | Not Detected  | 48                 | Not Detected   |
| Dibromochloromethane      | 2.9               | Not Detected  | 25                 | Not Detected   |
| 1,2-Dibromoethane (EDB)   | 2.9               | Not Detected  | 22                 | Not Detected   |
| Chlorobenzene             | 2.9               | Not Detected  | 13                 | Not Detected   |
| Ethyl Benzene             | 2.9               | 3.6           | 13                 | 16             |
| m,p-Xylene                | 2.9               | 9.4           | 13                 | 41             |
| o-Xylene                  | 2.9               | Not Detected  | 13                 | Not Detected   |
| Styrene                   | 2.9               | Not Detected  | 12                 | Not Detected   |
| Bromoform                 | 2.9               | Not Detected  | 30                 | Not Detected   |
| Cumene                    | 2.9               | Not Detected  | 14                 | Not Detected   |
| 1,1,2,2-Tetrachloroethane | 2.9               | Not Detected  | 20                 | Not Detected   |
| Propylbenzene             | 2.9               | Not Detected  | 14                 | Not Detected   |
| 4-Ethyltoluene            | 2.9               | Not Detected  | 14                 | Not Detected   |
| 1,3,5-Trimethylbenzene    | 2.9               | Not Detected  | 14                 | Not Detected   |
| 1,2,4-Trimethylbenzene    | 2.9               | Not Detected  | 14                 | Not Detected   |
| 1,3-Dichlorobenzene       | 2.9               | Not Detected  | 17                 | Not Detected   |
| 1,4-Dichlorobenzene       | 2.9               | Not Detected  | 17                 | Not Detected   |
| alpha-Chlorotoluene       | 2.9               | Not Detected  | 15                 | Not Detected   |
| 1,2-Dichlorobenzene       | 2.9               | Not Detected  | 17                 | Not Detected   |
| 1,2,4-Trichlorobenzene    | 12                | Not Detected  | 86                 | Not Detected   |
| Hexachlorobutadiene       | 12                | Not Detected  | 120                | Not Detected   |

**Container Type: 1 Liter Summa Canister**

| Surrogates            | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| Toluene-d8            | 100       | 70-130        |
| 1,2-Dichloroethane-d4 | 104       | 70-130        |
| 4-Bromofluorobenzene  | 100       | 70-130        |

Client Sample ID: Taylor Middle

Lab ID#: 0910315-06A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

|                     |                |   |
|---------------------|----------------|---|
| <b>File Name:</b>   | <b>y102221</b> | <b>Date of Collection:</b> 10/9/09 4:45:00 AM |
| <b>Dil. Factor:</b> | <b>4.32</b>    | <b>Date of Analysis:</b> 10/23/09 12:14 AM    |

| Compound                         | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|----------------------------------|-------------------|---------------|--------------------|----------------|
| Freon 12                         | 2.2               | 100           | 11                 | 500            |
| Freon 114                        | 2.2               | Not Detected  | 15                 | Not Detected   |
| Chloromethane                    | 8.6               | Not Detected  | 18                 | Not Detected   |
| Vinyl Chloride                   | 2.2               | Not Detected  | 5.5                | Not Detected   |
| 1,3-Butadiene                    | 2.2               | Not Detected  | 4.8                | Not Detected   |
| Bromomethane                     | 2.2               | Not Detected  | 8.4                | Not Detected   |
| Chloroethane                     | 2.2               | Not Detected  | 5.7                | Not Detected   |
| Freon 11                         | 2.2               | 2.5           | 12                 | 14             |
| Ethanol                          | 8.6               | Not Detected  | 16                 | Not Detected   |
| Freon 113                        | 2.2               | Not Detected  | 16                 | Not Detected   |
| 1,1-Dichloroethene               | 2.2               | Not Detected  | 8.6                | Not Detected   |
| Acetone                          | 8.6               | 9.2           | 20                 | 22             |
| 2-Propanol                       | 8.6               | Not Detected  | 21                 | Not Detected   |
| Carbon Disulfide                 | 2.2               | Not Detected  | 6.7                | Not Detected   |
| 3-Chloropropene                  | 8.6               | Not Detected  | 27                 | Not Detected   |
| Methylene Chloride               | 2.2               | Not Detected  | 7.5                | Not Detected   |
| Methyl tert-butyl ether          | 2.2               | Not Detected  | 7.8                | Not Detected   |
| trans-1,2-Dichloroethene         | 2.2               | Not Detected  | 8.6                | Not Detected   |
| Hexane                           | 2.2               | Not Detected  | 7.6                | Not Detected   |
| 1,1-Dichloroethane               | 2.2               | Not Detected  | 8.7                | Not Detected   |
| 2-Butanone (Methyl Ethyl Ketone) | 2.2               | Not Detected  | 6.4                | Not Detected   |
| cis-1,2-Dichloroethene           | 2.2               | Not Detected  | 8.6                | Not Detected   |
| Tetrahydrofuran                  | 2.2               | Not Detected  | 6.4                | Not Detected   |
| Chloroform                       | 2.2               | 7.3           | 10                 | 35             |
| 1,1,1-Trichloroethane            | 2.2               | Not Detected  | 12                 | Not Detected   |
| Cyclohexane                      | 2.2               | Not Detected  | 7.4                | Not Detected   |
| Carbon Tetrachloride             | 2.2               | Not Detected  | 14                 | Not Detected   |
| 2,2,4-Trimethylpentane           | 2.2               | Not Detected  | 10                 | Not Detected   |
| Benzene                          | 2.2               | Not Detected  | 6.9                | Not Detected   |
| 1,2-Dichloroethane               | 2.2               | Not Detected  | 8.7                | Not Detected   |
| Heptane                          | 2.2               | 3.1           | 8.8                | 13             |
| Trichloroethene                  | 2.2               | 440           | 12                 | 2400           |
| 1,2-Dichloropropane              | 2.2               | Not Detected  | 10                 | Not Detected   |
| 1,4-Dioxane                      | 8.6               | Not Detected  | 31                 | Not Detected   |
| Bromodichloromethane             | 2.2               | Not Detected  | 14                 | Not Detected   |
| cis-1,3-Dichloropropene          | 2.2               | Not Detected  | 9.8                | Not Detected   |
| 4-Methyl-2-pentanone             | 2.2               | Not Detected  | 8.8                | Not Detected   |
| Toluene                          | 2.2               | 5.6           | 8.1                | 21             |
| trans-1,3-Dichloropropene        | 2.2               | Not Detected  | 9.8                | Not Detected   |

Client Sample ID: Taylor Middle

Lab ID#: 0910315-06A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

|                     |                |   |
|---------------------|----------------|---|
| <b>File Name:</b>   | <b>y102221</b> | <b>Date of Collection:</b> 10/9/09 4:45:00 AM |
| <b>Dil. Factor:</b> | <b>4.32</b>    | <b>Date of Analysis:</b> 10/23/09 12:14 AM    |

| Compound                  | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---------------------------|-------------------|---------------|--------------------|----------------|
| 1,1,2-Trichloroethane     | 2.2               | Not Detected  | 12                 | Not Detected   |
| Tetrachloroethene         | 2.2               | 28            | 15                 | 190            |
| 2-Hexanone                | 8.6               | Not Detected  | 35                 | Not Detected   |
| Dibromochloromethane      | 2.2               | Not Detected  | 18                 | Not Detected   |
| 1,2-Dibromoethane (EDB)   | 2.2               | Not Detected  | 16                 | Not Detected   |
| Chlorobenzene             | 2.2               | Not Detected  | 9.9                | Not Detected   |
| Ethyl Benzene             | 2.2               | Not Detected  | 9.4                | Not Detected   |
| m,p-Xylene                | 2.2               | 3.3           | 9.4                | 14             |
| o-Xylene                  | 2.2               | Not Detected  | 9.4                | Not Detected   |
| Styrene                   | 2.2               | Not Detected  | 9.2                | Not Detected   |
| Bromoform                 | 2.2               | Not Detected  | 22                 | Not Detected   |
| Cumene                    | 2.2               | Not Detected  | 11                 | Not Detected   |
| 1,1,2,2-Tetrachloroethane | 2.2               | Not Detected  | 15                 | Not Detected   |
| Propylbenzene             | 2.2               | Not Detected  | 11                 | Not Detected   |
| 4-Ethyltoluene            | 2.2               | Not Detected  | 11                 | Not Detected   |
| 1,3,5-Trimethylbenzene    | 2.2               | Not Detected  | 11                 | Not Detected   |
| 1,2,4-Trimethylbenzene    | 2.2               | Not Detected  | 11                 | Not Detected   |
| 1,3-Dichlorobenzene       | 2.2               | Not Detected  | 13                 | Not Detected   |
| 1,4-Dichlorobenzene       | 2.2               | Not Detected  | 13                 | Not Detected   |
| alpha-Chlorotoluene       | 2.2               | Not Detected  | 11                 | Not Detected   |
| 1,2-Dichlorobenzene       | 2.2               | Not Detected  | 13                 | Not Detected   |
| 1,2,4-Trichlorobenzene    | 8.6               | Not Detected  | 64                 | Not Detected   |
| Hexachlorobutadiene       | 8.6               | Not Detected  | 92                 | Not Detected   |

**Container Type: 1 Liter Summa Canister**

| Surrogates            | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| Toluene-d8            | 99        | 70-130        |
| 1,2-Dichloroethane-d4 | 104       | 70-130        |
| 4-Bromofluorobenzene  | 101       | 70-130        |

Client Sample ID: Taylor North 1

Lab ID#: 0910315-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

|              |         |                     |                    |
|--------------|---------|---------------------|--------------------|
| File Name:   | y102222 | Date of Collection: | 10/9/09 5:50:00 AM |
| Dil. Factor: | 7.27    | Date of Analysis:   | 10/23/09 12:52 AM  |

| Compound                         | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|----------------------------------|-------------------|---------------|--------------------|----------------|
| Freon 12                         | 3.6               | 40            | 18                 | 200            |
| Freon 114                        | 3.6               | Not Detected  | 25                 | Not Detected   |
| Chloromethane                    | 14                | Not Detected  | 30                 | Not Detected   |
| Vinyl Chloride                   | 3.6               | Not Detected  | 9.3                | Not Detected   |
| 1,3-Butadiene                    | 3.6               | Not Detected  | 8.0                | Not Detected   |
| Bromomethane                     | 3.6               | Not Detected  | 14                 | Not Detected   |
| Chloroethane                     | 3.6               | Not Detected  | 9.6                | Not Detected   |
| Freon 11                         | 3.6               | 5.2           | 20                 | 29             |
| Ethanol                          | 14                | Not Detected  | 27                 | Not Detected   |
| Freon 113                        | 3.6               | Not Detected  | 28                 | Not Detected   |
| 1,1-Dichloroethene               | 3.6               | Not Detected  | 14                 | Not Detected   |
| Acetone                          | 14                | Not Detected  | 34                 | Not Detected   |
| 2-Propanol                       | 14                | Not Detected  | 36                 | Not Detected   |
| Carbon Disulfide                 | 3.6               | Not Detected  | 11                 | Not Detected   |
| 3-Chloropropene                  | 14                | Not Detected  | 46                 | Not Detected   |
| Methylene Chloride               | 3.6               | Not Detected  | 13                 | Not Detected   |
| Methyl tert-butyl ether          | 3.6               | Not Detected  | 13                 | Not Detected   |
| trans-1,2-Dichloroethene         | 3.6               | Not Detected  | 14                 | Not Detected   |
| Hexane                           | 3.6               | Not Detected  | 13                 | Not Detected   |
| 1,1-Dichloroethane               | 3.6               | Not Detected  | 15                 | Not Detected   |
| 2-Butanone (Methyl Ethyl Ketone) | 3.6               | Not Detected  | 11                 | Not Detected   |
| cis-1,2-Dichloroethene           | 3.6               | Not Detected  | 14                 | Not Detected   |
| Tetrahydrofuran                  | 3.6               | Not Detected  | 11                 | Not Detected   |
| Chloroform                       | 3.6               | 3.7           | 18                 | 18             |
| 1,1,1-Trichloroethane            | 3.6               | 6.0           | 20                 | 33             |
| Cyclohexane                      | 3.6               | Not Detected  | 12                 | Not Detected   |
| Carbon Tetrachloride             | 3.6               | Not Detected  | 23                 | Not Detected   |
| 2,2,4-Trimethylpentane           | 3.6               | Not Detected  | 17                 | Not Detected   |
| Benzene                          | 3.6               | Not Detected  | 12                 | Not Detected   |
| 1,2-Dichloroethane               | 3.6               | Not Detected  | 15                 | Not Detected   |
| Heptane                          | 3.6               | Not Detected  | 15                 | Not Detected   |
| Trichloroethene                  | 3.6               | 710           | 20                 | 3800           |
| 1,2-Dichloropropane              | 3.6               | Not Detected  | 17                 | Not Detected   |
| 1,4-Dioxane                      | 14                | Not Detected  | 52                 | Not Detected   |
| Bromodichloromethane             | 3.6               | Not Detected  | 24                 | Not Detected   |
| cis-1,3-Dichloropropene          | 3.6               | Not Detected  | 16                 | Not Detected   |
| 4-Methyl-2-pentanone             | 3.6               | Not Detected  | 15                 | Not Detected   |
| Toluene                          | 3.6               | 3.8           | 14                 | 14             |
| trans-1,3-Dichloropropene        | 3.6               | Not Detected  | 16                 | Not Detected   |



Client Sample ID: Taylor North 1

Lab ID#: 0910315-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

|              |         |                     |                    |
|--------------|---------|---------------------|--------------------|
| File Name:   | y102222 | Date of Collection: | 10/9/09 5:50:00 AM |
| Dil. Factor: | 7.27    | Date of Analysis:   | 10/23/09 12:52 AM  |

| Compound                  | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---------------------------|-------------------|---------------|--------------------|----------------|
| 1,1,2-Trichloroethane     | 3.6               | Not Detected  | 20                 | Not Detected   |
| Tetrachloroethene         | 3.6               | 300           | 25                 | 2000           |
| 2-Hexanone                | 14                | Not Detected  | 60                 | Not Detected   |
| Dibromochloromethane      | 3.6               | Not Detected  | 31                 | Not Detected   |
| 1,2-Dibromoethane (EDB)   | 3.6               | Not Detected  | 28                 | Not Detected   |
| Chlorobenzene             | 3.6               | Not Detected  | 17                 | Not Detected   |
| Ethyl Benzene             | 3.6               | Not Detected  | 16                 | Not Detected   |
| m,p-Xylene                | 3.6               | 5.0           | 16                 | 22             |
| o-Xylene                  | 3.6               | Not Detected  | 16                 | Not Detected   |
| Styrene                   | 3.6               | Not Detected  | 15                 | Not Detected   |
| Bromoform                 | 3.6               | Not Detected  | 38                 | Not Detected   |
| Cumene                    | 3.6               | Not Detected  | 18                 | Not Detected   |
| 1,1,2,2-Tetrachloroethane | 3.6               | Not Detected  | 25                 | Not Detected   |
| Propylbenzene             | 3.6               | Not Detected  | 18                 | Not Detected   |
| 4-Ethyltoluene            | 3.6               | Not Detected  | 18                 | Not Detected   |
| 1,3,5-Trimethylbenzene    | 3.6               | Not Detected  | 18                 | Not Detected   |
| 1,2,4-Trimethylbenzene    | 3.6               | Not Detected  | 18                 | Not Detected   |
| 1,3-Dichlorobenzene       | 3.6               | Not Detected  | 22                 | Not Detected   |
| 1,4-Dichlorobenzene       | 3.6               | Not Detected  | 22                 | Not Detected   |
| alpha-Chlorotoluene       | 3.6               | Not Detected  | 19                 | Not Detected   |
| 1,2-Dichlorobenzene       | 3.6               | Not Detected  | 22                 | Not Detected   |
| 1,2,4-Trichlorobenzene    | 14                | Not Detected  | 110                | Not Detected   |
| Hexachlorobutadiene       | 14                | Not Detected  | 160                | Not Detected   |

Container Type: 1 Liter Summa Canister

| Surrogates            | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| Toluene-d8            | 99        | 70-130        |
| 1,2-Dichloroethane-d4 | 102       | 70-130        |
| 4-Bromofluorobenzene  | 98        | 70-130        |

Client Sample ID: Taylor North 1 Lab Duplicate

Lab ID#: 0910315-07AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

|              |         |                     |                    |
|--------------|---------|---------------------|--------------------|
| File Name:   | y102223 | Date of Collection: | 10/9/09 5:50:00 AM |
| Dil. Factor: | 7.27    | Date of Analysis:   | 10/23/09 07:15 AM  |

| Compound                         | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|----------------------------------|-------------------|---------------|--------------------|----------------|
| Freon 12                         | 3.6               | 45            | 18                 | 220            |
| Freon 114                        | 3.6               | Not Detected  | 25                 | Not Detected   |
| Chloromethane                    | 14                | Not Detected  | 30                 | Not Detected   |
| Vinyl Chloride                   | 3.6               | Not Detected  | 9.3                | Not Detected   |
| 1,3-Butadiene                    | 3.6               | Not Detected  | 8.0                | Not Detected   |
| Bromomethane                     | 3.6               | Not Detected  | 14                 | Not Detected   |
| Chloroethane                     | 3.6               | Not Detected  | 9.6                | Not Detected   |
| Freon 11                         | 3.6               | 5.5           | 20                 | 31             |
| Ethanol                          | 14                | Not Detected  | 27                 | Not Detected   |
| Freon 113                        | 3.6               | Not Detected  | 28                 | Not Detected   |
| 1,1-Dichloroethene               | 3.6               | Not Detected  | 14                 | Not Detected   |
| Acetone                          | 14                | Not Detected  | 34                 | Not Detected   |
| 2-Propanol                       | 14                | Not Detected  | 36                 | Not Detected   |
| Carbon Disulfide                 | 3.6               | Not Detected  | 11                 | Not Detected   |
| 3-Chloropropene                  | 14                | Not Detected  | 46                 | Not Detected   |
| Methylene Chloride               | 3.6               | Not Detected  | 13                 | Not Detected   |
| Methyl tert-butyl ether          | 3.6               | Not Detected  | 13                 | Not Detected   |
| trans-1,2-Dichloroethene         | 3.6               | Not Detected  | 14                 | Not Detected   |
| Hexane                           | 3.6               | Not Detected  | 13                 | Not Detected   |
| 1,1-Dichloroethane               | 3.6               | Not Detected  | 15                 | Not Detected   |
| 2-Butanone (Methyl Ethyl Ketone) | 3.6               | Not Detected  | 11                 | Not Detected   |
| cis-1,2-Dichloroethene           | 3.6               | Not Detected  | 14                 | Not Detected   |
| Tetrahydrofuran                  | 3.6               | Not Detected  | 11                 | Not Detected   |
| Chloroform                       | 3.6               | 3.6           | 18                 | 18             |
| 1,1,1-Trichloroethane            | 3.6               | 5.7           | 20                 | 31             |
| Cyclohexane                      | 3.6               | Not Detected  | 12                 | Not Detected   |
| Carbon Tetrachloride             | 3.6               | Not Detected  | 23                 | Not Detected   |
| 2,2,4-Trimethylpentane           | 3.6               | Not Detected  | 17                 | Not Detected   |
| Benzene                          | 3.6               | Not Detected  | 12                 | Not Detected   |
| 1,2-Dichloroethane               | 3.6               | Not Detected  | 15                 | Not Detected   |
| Heptane                          | 3.6               | Not Detected  | 15                 | Not Detected   |
| Trichloroethene                  | 3.6               | 720           | 20                 | 3900           |
| 1,2-Dichloropropane              | 3.6               | Not Detected  | 17                 | Not Detected   |
| 1,4-Dioxane                      | 14                | Not Detected  | 52                 | Not Detected   |
| Bromodichloromethane             | 3.6               | Not Detected  | 24                 | Not Detected   |
| cis-1,3-Dichloropropene          | 3.6               | Not Detected  | 16                 | Not Detected   |
| 4-Methyl-2-pentanone             | 3.6               | Not Detected  | 15                 | Not Detected   |
| Toluene                          | 3.6               | 3.8           | 14                 | 14             |
| trans-1,3-Dichloropropene        | 3.6               | Not Detected  | 16                 | Not Detected   |

Client Sample ID: Taylor North 1 Lab Duplicate

Lab ID#: 0910315-07AA

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

|                     |                |   |
|---------------------|----------------|---|
| <b>File Name:</b>   | <b>y102223</b> | <b>Date of Collection:</b> 10/9/09 5:50:00 AM |
| <b>Dil. Factor:</b> | <b>7.27</b>    | <b>Date of Analysis:</b> 10/23/09 07:15 AM    |

| Compound                  | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---------------------------|-------------------|---------------|--------------------|----------------|
| 1,1,2-Trichloroethane     | 3.6               | Not Detected  | 20                 | Not Detected   |
| Tetrachloroethene         | 3.6               | 320           | 25                 | 2200           |
| 2-Hexanone                | 14                | Not Detected  | 60                 | Not Detected   |
| Dibromochloromethane      | 3.6               | Not Detected  | 31                 | Not Detected   |
| 1,2-Dibromoethane (EDB)   | 3.6               | Not Detected  | 28                 | Not Detected   |
| Chlorobenzene             | 3.6               | Not Detected  | 17                 | Not Detected   |
| Ethyl Benzene             | 3.6               | Not Detected  | 16                 | Not Detected   |
| m,p-Xylene                | 3.6               | 5.0           | 16                 | 22             |
| o-Xylene                  | 3.6               | Not Detected  | 16                 | Not Detected   |
| Styrene                   | 3.6               | Not Detected  | 15                 | Not Detected   |
| Bromoform                 | 3.6               | Not Detected  | 38                 | Not Detected   |
| Cumene                    | 3.6               | Not Detected  | 18                 | Not Detected   |
| 1,1,2,2-Tetrachloroethane | 3.6               | Not Detected  | 25                 | Not Detected   |
| Propylbenzene             | 3.6               | Not Detected  | 18                 | Not Detected   |
| 4-Ethyltoluene            | 3.6               | Not Detected  | 18                 | Not Detected   |
| 1,3,5-Trimethylbenzene    | 3.6               | Not Detected  | 18                 | Not Detected   |
| 1,2,4-Trimethylbenzene    | 3.6               | Not Detected  | 18                 | Not Detected   |
| 1,3-Dichlorobenzene       | 3.6               | Not Detected  | 22                 | Not Detected   |
| 1,4-Dichlorobenzene       | 3.6               | Not Detected  | 22                 | Not Detected   |
| alpha-Chlorotoluene       | 3.6               | Not Detected  | 19                 | Not Detected   |
| 1,2-Dichlorobenzene       | 3.6               | Not Detected  | 22                 | Not Detected   |
| 1,2,4-Trichlorobenzene    | 14                | Not Detected  | 110                | Not Detected   |
| Hexachlorobutadiene       | 14                | Not Detected  | 160                | Not Detected   |

**Container Type: 1 Liter Summa Canister**

| Surrogates            | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| Toluene-d8            | 98        | 70-130        |
| 1,2-Dichloroethane-d4 | 99        | 70-130        |
| 4-Bromofluorobenzene  | 98        | 70-130        |

Client Sample ID: Lab Blank

Lab ID#: 0910315-08A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

|                     |                |  |
|---------------------|----------------|--|
| <b>File Name:</b>   | <b>x101808</b> | <b>Date of Collection: NA</b>              |
| <b>Dil. Factor:</b> | <b>1.00</b>    | <b>Date of Analysis: 10/18/09 12:29 PM</b> |

| <b>Compound</b>                  | <b>Rpt. Limit<br/>(ppbv)</b> | <b>Amount<br/>(ppbv)</b> | <b>Rpt. Limit<br/>(ug/m3)</b> | <b>Amount<br/>(ug/m3)</b> |
|----------------------------------|------------------------------|--------------------------|-------------------------------|---------------------------|
| Freon 12                         | 0.50                         | Not Detected             | 2.5                           | Not Detected              |
| Freon 114                        | 0.50                         | Not Detected             | 3.5                           | Not Detected              |
| Chloromethane                    | 2.0                          | Not Detected             | 4.1                           | Not Detected              |
| Vinyl Chloride                   | 0.50                         | Not Detected             | 1.3                           | Not Detected              |
| 1,3-Butadiene                    | 0.50                         | Not Detected             | 1.1                           | Not Detected              |
| Bromomethane                     | 0.50                         | Not Detected             | 1.9                           | Not Detected              |
| Chloroethane                     | 0.50                         | Not Detected             | 1.3                           | Not Detected              |
| Freon 11                         | 0.50                         | Not Detected             | 2.8                           | Not Detected              |
| Ethanol                          | 2.0                          | Not Detected             | 3.8                           | Not Detected              |
| Freon 113                        | 0.50                         | Not Detected             | 3.8                           | Not Detected              |
| 1,1-Dichloroethene               | 0.50                         | Not Detected             | 2.0                           | Not Detected              |
| Acetone                          | 2.0                          | Not Detected             | 4.8                           | Not Detected              |
| 2-Propanol                       | 2.0                          | Not Detected             | 4.9                           | Not Detected              |
| Carbon Disulfide                 | 0.50                         | Not Detected             | 1.6                           | Not Detected              |
| 3-Chloropropene                  | 2.0                          | Not Detected             | 6.3                           | Not Detected              |
| Methylene Chloride               | 0.50                         | Not Detected             | 1.7                           | Not Detected              |
| Methyl tert-butyl ether          | 0.50                         | Not Detected             | 1.8                           | Not Detected              |
| trans-1,2-Dichloroethene         | 0.50                         | Not Detected             | 2.0                           | Not Detected              |
| Hexane                           | 0.50                         | Not Detected             | 1.8                           | Not Detected              |
| 1,1-Dichloroethane               | 0.50                         | Not Detected             | 2.0                           | Not Detected              |
| 2-Butanone (Methyl Ethyl Ketone) | 0.50                         | Not Detected             | 1.5                           | Not Detected              |
| cis-1,2-Dichloroethene           | 0.50                         | Not Detected             | 2.0                           | Not Detected              |
| Tetrahydrofuran                  | 0.50                         | Not Detected             | 1.5                           | Not Detected              |
| Chloroform                       | 0.50                         | Not Detected             | 2.4                           | Not Detected              |
| 1,1,1-Trichloroethane            | 0.50                         | Not Detected             | 2.7                           | Not Detected              |
| Cyclohexane                      | 0.50                         | Not Detected             | 1.7                           | Not Detected              |
| Carbon Tetrachloride             | 0.50                         | Not Detected             | 3.1                           | Not Detected              |
| 2,2,4-Trimethylpentane           | 0.50                         | Not Detected             | 2.3                           | Not Detected              |
| Benzene                          | 0.50                         | Not Detected             | 1.6                           | Not Detected              |
| 1,2-Dichloroethane               | 0.50                         | Not Detected             | 2.0                           | Not Detected              |
| Heptane                          | 0.50                         | Not Detected             | 2.0                           | Not Detected              |
| Trichloroethene                  | 0.50                         | Not Detected             | 2.7                           | Not Detected              |
| 1,2-Dichloropropane              | 0.50                         | Not Detected             | 2.3                           | Not Detected              |
| 1,4-Dioxane                      | 2.0                          | Not Detected             | 7.2                           | Not Detected              |
| Bromodichloromethane             | 0.50                         | Not Detected             | 3.4                           | Not Detected              |
| cis-1,3-Dichloropropene          | 0.50                         | Not Detected             | 2.3                           | Not Detected              |
| 4-Methyl-2-pentanone             | 0.50                         | Not Detected             | 2.0                           | Not Detected              |
| Toluene                          | 0.50                         | Not Detected             | 1.9                           | Not Detected              |
| trans-1,3-Dichloropropene        | 0.50                         | Not Detected             | 2.3                           | Not Detected              |

Client Sample ID: Lab Blank

Lab ID#: 0910315-08A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

|                     |                |  |
|---------------------|----------------|--|
| <b>File Name:</b>   | <b>x101808</b> | <b>Date of Collection: NA</b>              |
| <b>Dil. Factor:</b> | <b>1.00</b>    | <b>Date of Analysis: 10/18/09 12:29 PM</b> |

| <b>Compound</b>           | <b>Rpt. Limit<br/>(ppbv)</b> | <b>Amount<br/>(ppbv)</b> | <b>Rpt. Limit<br/>(ug/m3)</b> | <b>Amount<br/>(ug/m3)</b> |
|---------------------------|------------------------------|--------------------------|-------------------------------|---------------------------|
| 1,1,2-Trichloroethane     | 0.50                         | Not Detected             | 2.7                           | Not Detected              |
| Tetrachloroethene         | 0.50                         | Not Detected             | 3.4                           | Not Detected              |
| 2-Hexanone                | 2.0                          | Not Detected             | 8.2                           | Not Detected              |
| Dibromochloromethane      | 0.50                         | Not Detected             | 4.2                           | Not Detected              |
| 1,2-Dibromoethane (EDB)   | 0.50                         | Not Detected             | 3.8                           | Not Detected              |
| Chlorobenzene             | 0.50                         | Not Detected             | 2.3                           | Not Detected              |
| Ethyl Benzene             | 0.50                         | Not Detected             | 2.2                           | Not Detected              |
| m,p-Xylene                | 0.50                         | Not Detected             | 2.2                           | Not Detected              |
| o-Xylene                  | 0.50                         | Not Detected             | 2.2                           | Not Detected              |
| Styrene                   | 0.50                         | Not Detected             | 2.1                           | Not Detected              |
| Bromoform                 | 0.50                         | Not Detected             | 5.2                           | Not Detected              |
| Cumene                    | 0.50                         | Not Detected             | 2.4                           | Not Detected              |
| 1,1,2,2-Tetrachloroethane | 0.50                         | Not Detected             | 3.4                           | Not Detected              |
| Propylbenzene             | 0.50                         | Not Detected             | 2.4                           | Not Detected              |
| 4-Ethyltoluene            | 0.50                         | Not Detected             | 2.4                           | Not Detected              |
| 1,3,5-Trimethylbenzene    | 0.50                         | Not Detected             | 2.4                           | Not Detected              |
| 1,2,4-Trimethylbenzene    | 0.50                         | Not Detected             | 2.4                           | Not Detected              |
| 1,3-Dichlorobenzene       | 0.50                         | Not Detected             | 3.0                           | Not Detected              |
| 1,4-Dichlorobenzene       | 0.50                         | Not Detected             | 3.0                           | Not Detected              |
| alpha-Chlorotoluene       | 0.50                         | Not Detected             | 2.6                           | Not Detected              |
| 1,2-Dichlorobenzene       | 0.50                         | Not Detected             | 3.0                           | Not Detected              |
| 1,2,4-Trichlorobenzene    | 2.0                          | Not Detected             | 15                            | Not Detected              |
| Hexachlorobutadiene       | 2.0                          | Not Detected             | 21                            | Not Detected              |

Container Type: NA - Not Applicable

| <b>Surrogates</b>     | <b>%Recovery</b> | <b>Method<br/>Limits</b> |
|-----------------------|------------------|--------------------------|
| Toluene-d8            | 96               | 70-130                   |
| 1,2-Dichloroethane-d4 | 79               | 70-130                   |
| 4-Bromofluorobenzene  | 96               | 70-130                   |

Client Sample ID: Lab Blank

Lab ID#: 0910315-08B

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

|                     |                |  |
|---------------------|----------------|--|
| <b>File Name:</b>   | <b>y102112</b> | <b>Date of Collection: NA</b>              |
| <b>Dil. Factor:</b> | <b>1.00</b>    | <b>Date of Analysis: 10/21/09 02:55 PM</b> |

| <b>Compound</b>                  | <b>Rpt. Limit<br/>(ppbv)</b> | <b>Amount<br/>(ppbv)</b> | <b>Rpt. Limit<br/>(ug/m3)</b> | <b>Amount<br/>(ug/m3)</b> |
|----------------------------------|------------------------------|--------------------------|-------------------------------|---------------------------|
| Freon 12                         | 0.50                         | Not Detected             | 2.5                           | Not Detected              |
| Freon 114                        | 0.50                         | Not Detected             | 3.5                           | Not Detected              |
| Chloromethane                    | 2.0                          | Not Detected             | 4.1                           | Not Detected              |
| Vinyl Chloride                   | 0.50                         | Not Detected             | 1.3                           | Not Detected              |
| 1,3-Butadiene                    | 0.50                         | Not Detected             | 1.1                           | Not Detected              |
| Bromomethane                     | 0.50                         | Not Detected             | 1.9                           | Not Detected              |
| Chloroethane                     | 0.50                         | Not Detected             | 1.3                           | Not Detected              |
| Freon 11                         | 0.50                         | Not Detected             | 2.8                           | Not Detected              |
| Ethanol                          | 2.0                          | Not Detected             | 3.8                           | Not Detected              |
| Freon 113                        | 0.50                         | Not Detected             | 3.8                           | Not Detected              |
| 1,1-Dichloroethene               | 0.50                         | Not Detected             | 2.0                           | Not Detected              |
| Acetone                          | 2.0                          | Not Detected             | 4.8                           | Not Detected              |
| 2-Propanol                       | 2.0                          | Not Detected             | 4.9                           | Not Detected              |
| Carbon Disulfide                 | 0.50                         | Not Detected             | 1.6                           | Not Detected              |
| 3-Chloropropene                  | 2.0                          | Not Detected             | 6.3                           | Not Detected              |
| Methylene Chloride               | 0.50                         | Not Detected             | 1.7                           | Not Detected              |
| Methyl tert-butyl ether          | 0.50                         | Not Detected             | 1.8                           | Not Detected              |
| trans-1,2-Dichloroethene         | 0.50                         | Not Detected             | 2.0                           | Not Detected              |
| Hexane                           | 0.50                         | Not Detected             | 1.8                           | Not Detected              |
| 1,1-Dichloroethane               | 0.50                         | Not Detected             | 2.0                           | Not Detected              |
| 2-Butanone (Methyl Ethyl Ketone) | 0.50                         | Not Detected             | 1.5                           | Not Detected              |
| cis-1,2-Dichloroethene           | 0.50                         | Not Detected             | 2.0                           | Not Detected              |
| Tetrahydrofuran                  | 0.50                         | Not Detected             | 1.5                           | Not Detected              |
| Chloroform                       | 0.50                         | Not Detected             | 2.4                           | Not Detected              |
| 1,1,1-Trichloroethane            | 0.50                         | Not Detected             | 2.7                           | Not Detected              |
| Cyclohexane                      | 0.50                         | Not Detected             | 1.7                           | Not Detected              |
| Carbon Tetrachloride             | 0.50                         | Not Detected             | 3.1                           | Not Detected              |
| 2,2,4-Trimethylpentane           | 0.50                         | Not Detected             | 2.3                           | Not Detected              |
| Benzene                          | 0.50                         | Not Detected             | 1.6                           | Not Detected              |
| 1,2-Dichloroethane               | 0.50                         | Not Detected             | 2.0                           | Not Detected              |
| Heptane                          | 0.50                         | Not Detected             | 2.0                           | Not Detected              |
| Trichloroethene                  | 0.50                         | Not Detected             | 2.7                           | Not Detected              |
| 1,2-Dichloropropane              | 0.50                         | Not Detected             | 2.3                           | Not Detected              |
| 1,4-Dioxane                      | 2.0                          | Not Detected             | 7.2                           | Not Detected              |
| Bromodichloromethane             | 0.50                         | Not Detected             | 3.4                           | Not Detected              |
| cis-1,3-Dichloropropene          | 0.50                         | Not Detected             | 2.3                           | Not Detected              |
| 4-Methyl-2-pentanone             | 0.50                         | Not Detected             | 2.0                           | Not Detected              |
| Toluene                          | 0.50                         | Not Detected             | 1.9                           | Not Detected              |
| trans-1,3-Dichloropropene        | 0.50                         | Not Detected             | 2.3                           | Not Detected              |

Client Sample ID: Lab Blank

Lab ID#: 0910315-08B

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

|                     |                |  |
|---------------------|----------------|--|
| <b>File Name:</b>   | <b>y102112</b> | <b>Date of Collection: NA</b>              |
| <b>Dil. Factor:</b> | <b>1.00</b>    | <b>Date of Analysis: 10/21/09 02:55 PM</b> |

| <b>Compound</b>           | <b>Rpt. Limit (ppbv)</b> | <b>Amount (ppbv)</b> | <b>Rpt. Limit (ug/m3)</b> | <b>Amount (ug/m3)</b> |
|---------------------------|--------------------------|----------------------|---------------------------|-----------------------|
| 1,1,2-Trichloroethane     | 0.50                     | Not Detected         | 2.7                       | Not Detected          |
| Tetrachloroethene         | 0.50                     | Not Detected         | 3.4                       | Not Detected          |
| 2-Hexanone                | 2.0                      | Not Detected         | 8.2                       | Not Detected          |
| Dibromochloromethane      | 0.50                     | Not Detected         | 4.2                       | Not Detected          |
| 1,2-Dibromoethane (EDB)   | 0.50                     | Not Detected         | 3.8                       | Not Detected          |
| Chlorobenzene             | 0.50                     | Not Detected         | 2.3                       | Not Detected          |
| Ethyl Benzene             | 0.50                     | Not Detected         | 2.2                       | Not Detected          |
| m,p-Xylene                | 0.50                     | Not Detected         | 2.2                       | Not Detected          |
| o-Xylene                  | 0.50                     | Not Detected         | 2.2                       | Not Detected          |
| Styrene                   | 0.50                     | Not Detected         | 2.1                       | Not Detected          |
| Bromoform                 | 0.50                     | Not Detected         | 5.2                       | Not Detected          |
| Cumene                    | 0.50                     | Not Detected         | 2.4                       | Not Detected          |
| 1,1,2,2-Tetrachloroethane | 0.50                     | Not Detected         | 3.4                       | Not Detected          |
| Propylbenzene             | 0.50                     | Not Detected         | 2.4                       | Not Detected          |
| 4-Ethyltoluene            | 0.50                     | Not Detected         | 2.4                       | Not Detected          |
| 1,3,5-Trimethylbenzene    | 0.50                     | Not Detected         | 2.4                       | Not Detected          |
| 1,2,4-Trimethylbenzene    | 0.50                     | Not Detected         | 2.4                       | Not Detected          |
| 1,3-Dichlorobenzene       | 0.50                     | Not Detected         | 3.0                       | Not Detected          |
| 1,4-Dichlorobenzene       | 0.50                     | Not Detected         | 3.0                       | Not Detected          |
| alpha-Chlorotoluene       | 0.50                     | Not Detected         | 2.6                       | Not Detected          |
| 1,2-Dichlorobenzene       | 0.50                     | Not Detected         | 3.0                       | Not Detected          |
| 1,2,4-Trichlorobenzene    | 2.0                      | Not Detected         | 15                        | Not Detected          |
| Hexachlorobutadiene       | 2.0                      | Not Detected         | 21                        | Not Detected          |

Container Type: NA - Not Applicable

| <b>Surrogates</b>     | <b>%Recovery</b> | <b>Method Limits</b> |
|-----------------------|------------------|----------------------|
| Toluene-d8            | 97               | 70-130               |
| 1,2-Dichloroethane-d4 | 106              | 70-130               |
| 4-Bromofluorobenzene  | 96               | 70-130               |

Client Sample ID: Lab Blank

Lab ID#: 0910315-08C

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

|                     |                |  |
|---------------------|----------------|--|
| <b>File Name:</b>   | <b>y102219</b> | <b>Date of Collection: NA</b>              |
| <b>Dil. Factor:</b> | <b>1.00</b>    | <b>Date of Analysis: 10/22/09 10:53 PM</b> |

| <b>Compound</b>                  | <b>Rpt. Limit<br/>(ppbv)</b> | <b>Amount<br/>(ppbv)</b> | <b>Rpt. Limit<br/>(ug/m3)</b> | <b>Amount<br/>(ug/m3)</b> |
|----------------------------------|------------------------------|--------------------------|-------------------------------|---------------------------|
| Freon 12                         | 0.50                         | Not Detected             | 2.5                           | Not Detected              |
| Freon 114                        | 0.50                         | Not Detected             | 3.5                           | Not Detected              |
| Chloromethane                    | 2.0                          | Not Detected             | 4.1                           | Not Detected              |
| Vinyl Chloride                   | 0.50                         | Not Detected             | 1.3                           | Not Detected              |
| 1,3-Butadiene                    | 0.50                         | Not Detected             | 1.1                           | Not Detected              |
| Bromomethane                     | 0.50                         | Not Detected             | 1.9                           | Not Detected              |
| Chloroethane                     | 0.50                         | Not Detected             | 1.3                           | Not Detected              |
| Freon 11                         | 0.50                         | Not Detected             | 2.8                           | Not Detected              |
| Ethanol                          | 2.0                          | Not Detected             | 3.8                           | Not Detected              |
| Freon 113                        | 0.50                         | Not Detected             | 3.8                           | Not Detected              |
| 1,1-Dichloroethene               | 0.50                         | Not Detected             | 2.0                           | Not Detected              |
| Acetone                          | 2.0                          | Not Detected             | 4.8                           | Not Detected              |
| 2-Propanol                       | 2.0                          | Not Detected             | 4.9                           | Not Detected              |
| Carbon Disulfide                 | 0.50                         | Not Detected             | 1.6                           | Not Detected              |
| 3-Chloropropene                  | 2.0                          | Not Detected             | 6.3                           | Not Detected              |
| Methylene Chloride               | 0.50                         | Not Detected             | 1.7                           | Not Detected              |
| Methyl tert-butyl ether          | 0.50                         | Not Detected             | 1.8                           | Not Detected              |
| trans-1,2-Dichloroethene         | 0.50                         | Not Detected             | 2.0                           | Not Detected              |
| Hexane                           | 0.50                         | Not Detected             | 1.8                           | Not Detected              |
| 1,1-Dichloroethane               | 0.50                         | Not Detected             | 2.0                           | Not Detected              |
| 2-Butanone (Methyl Ethyl Ketone) | 0.50                         | Not Detected             | 1.5                           | Not Detected              |
| cis-1,2-Dichloroethene           | 0.50                         | Not Detected             | 2.0                           | Not Detected              |
| Tetrahydrofuran                  | 0.50                         | Not Detected             | 1.5                           | Not Detected              |
| Chloroform                       | 0.50                         | Not Detected             | 2.4                           | Not Detected              |
| 1,1,1-Trichloroethane            | 0.50                         | Not Detected             | 2.7                           | Not Detected              |
| Cyclohexane                      | 0.50                         | Not Detected             | 1.7                           | Not Detected              |
| Carbon Tetrachloride             | 0.50                         | Not Detected             | 3.1                           | Not Detected              |
| 2,2,4-Trimethylpentane           | 0.50                         | Not Detected             | 2.3                           | Not Detected              |
| Benzene                          | 0.50                         | Not Detected             | 1.6                           | Not Detected              |
| 1,2-Dichloroethane               | 0.50                         | Not Detected             | 2.0                           | Not Detected              |
| Heptane                          | 0.50                         | Not Detected             | 2.0                           | Not Detected              |
| Trichloroethene                  | 0.50                         | Not Detected             | 2.7                           | Not Detected              |
| 1,2-Dichloropropane              | 0.50                         | Not Detected             | 2.3                           | Not Detected              |
| 1,4-Dioxane                      | 2.0                          | Not Detected             | 7.2                           | Not Detected              |
| Bromodichloromethane             | 0.50                         | Not Detected             | 3.4                           | Not Detected              |
| cis-1,3-Dichloropropene          | 0.50                         | Not Detected             | 2.3                           | Not Detected              |
| 4-Methyl-2-pentanone             | 0.50                         | Not Detected             | 2.0                           | Not Detected              |
| Toluene                          | 0.50                         | Not Detected             | 1.9                           | Not Detected              |
| trans-1,3-Dichloropropene        | 0.50                         | Not Detected             | 2.3                           | Not Detected              |



Client Sample ID: Lab Blank

Lab ID#: 0910315-08C

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

|                     |                |  |
|---------------------|----------------|--|
| <b>File Name:</b>   | <b>y102219</b> | <b>Date of Collection: NA</b>              |
| <b>Dil. Factor:</b> | <b>1.00</b>    | <b>Date of Analysis: 10/22/09 10:53 PM</b> |

| Compound                  | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---------------------------|-------------------|---------------|--------------------|----------------|
| 1,1,2-Trichloroethane     | 0.50              | Not Detected  | 2.7                | Not Detected   |
| Tetrachloroethene         | 0.50              | Not Detected  | 3.4                | Not Detected   |
| 2-Hexanone                | 2.0               | Not Detected  | 8.2                | Not Detected   |
| Dibromochloromethane      | 0.50              | Not Detected  | 4.2                | Not Detected   |
| 1,2-Dibromoethane (EDB)   | 0.50              | Not Detected  | 3.8                | Not Detected   |
| Chlorobenzene             | 0.50              | Not Detected  | 2.3                | Not Detected   |
| Ethyl Benzene             | 0.50              | Not Detected  | 2.2                | Not Detected   |
| m,p-Xylene                | 0.50              | Not Detected  | 2.2                | Not Detected   |
| o-Xylene                  | 0.50              | Not Detected  | 2.2                | Not Detected   |
| Styrene                   | 0.50              | Not Detected  | 2.1                | Not Detected   |
| Bromoform                 | 0.50              | Not Detected  | 5.2                | Not Detected   |
| Cumene                    | 0.50              | Not Detected  | 2.4                | Not Detected   |
| 1,1,2,2-Tetrachloroethane | 0.50              | Not Detected  | 3.4                | Not Detected   |
| Propylbenzene             | 0.50              | Not Detected  | 2.4                | Not Detected   |
| 4-Ethyltoluene            | 0.50              | Not Detected  | 2.4                | Not Detected   |
| 1,3,5-Trimethylbenzene    | 0.50              | Not Detected  | 2.4                | Not Detected   |
| 1,2,4-Trimethylbenzene    | 0.50              | Not Detected  | 2.4                | Not Detected   |
| 1,3-Dichlorobenzene       | 0.50              | Not Detected  | 3.0                | Not Detected   |
| 1,4-Dichlorobenzene       | 0.50              | Not Detected  | 3.0                | Not Detected   |
| alpha-Chlorotoluene       | 0.50              | Not Detected  | 2.6                | Not Detected   |
| 1,2-Dichlorobenzene       | 0.50              | Not Detected  | 3.0                | Not Detected   |
| 1,2,4-Trichlorobenzene    | 2.0               | Not Detected  | 15                 | Not Detected   |
| Hexachlorobutadiene       | 2.0               | Not Detected  | 21                 | Not Detected   |

Container Type: NA - Not Applicable

| Surrogates            | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| Toluene-d8            | 98        | 70-130        |
| 1,2-Dichloroethane-d4 | 106       | 70-130        |
| 4-Bromofluorobenzene  | 106       | 70-130        |

Client Sample ID: CCV

Lab ID#: 0910315-09A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

|                     |                |  |
|---------------------|----------------|--|
| <b>File Name:</b>   | <b>x101802</b> | <b>Date of Collection: NA</b>              |
| <b>Dil. Factor:</b> | <b>1.00</b>    | <b>Date of Analysis: 10/18/09 07:49 AM</b> |

| <b>Compound</b>                  | <b>%Recovery</b> |
|----------------------------------|------------------|
| Freon 12                         | 112              |
| Freon 114                        | 114              |
| Chloromethane                    | 102              |
| Vinyl Chloride                   | 101              |
| 1,3-Butadiene                    | 102              |
| Bromomethane                     | 109              |
| Chloroethane                     | 100              |
| Freon 11                         | 100              |
| Ethanol                          | 85               |
| Freon 113                        | 104              |
| 1,1-Dichloroethene               | 93               |
| Acetone                          | 91               |
| 2-Propanol                       | 83               |
| Carbon Disulfide                 | 99               |
| 3-Chloropropene                  | 96               |
| Methylene Chloride               | 88               |
| Methyl tert-butyl ether          | 110              |
| trans-1,2-Dichloroethene         | 96               |
| Hexane                           | 93               |
| 1,1-Dichloroethane               | 92               |
| 2-Butanone (Methyl Ethyl Ketone) | 94               |
| cis-1,2-Dichloroethene           | 96               |
| Tetrahydrofuran                  | 88               |
| Chloroform                       | 92               |
| 1,1,1-Trichloroethane            | 98               |
| Cyclohexane                      | 100              |
| Carbon Tetrachloride             | 102              |
| 2,2,4-Trimethylpentane           | 92               |
| Benzene                          | 99               |
| 1,2-Dichloroethane               | 96               |
| Heptane                          | 102              |
| Trichloroethene                  | 100              |
| 1,2-Dichloropropane              | 99               |
| 1,4-Dioxane                      | 98               |
| Bromodichloromethane             | 98               |
| cis-1,3-Dichloropropene          | 101              |
| 4-Methyl-2-pentanone             | 101              |
| Toluene                          | 104              |
| trans-1,3-Dichloropropene        | 101              |

Client Sample ID: CCV

Lab ID#: 0910315-09A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

|                     |                |  |
|---------------------|----------------|--|
| <b>File Name:</b>   | <b>x101802</b> | <b>Date of Collection: NA</b>              |
| <b>Dil. Factor:</b> | <b>1.00</b>    | <b>Date of Analysis: 10/18/09 07:49 AM</b> |

| <b>Compound</b>           | <b>%Recovery</b> |
|---------------------------|------------------|
| 1,1,2-Trichloroethane     | 101              |
| Tetrachloroethene         | 109              |
| 2-Hexanone                | 92               |
| Dibromochloromethane      | 108              |
| 1,2-Dibromoethane (EDB)   | 102              |
| Chlorobenzene             | 105              |
| Ethyl Benzene             | 106              |
| m,p-Xylene                | 107              |
| o-Xylene                  | 108              |
| Styrene                   | 111              |
| Bromoform                 | 115              |
| Cumene                    | 104              |
| 1,1,2,2-Tetrachloroethane | 94               |
| Propylbenzene             | 100              |
| 4-Ethyltoluene            | 112              |
| 1,3,5-Trimethylbenzene    | 89               |
| 1,2,4-Trimethylbenzene    | 94               |
| 1,3-Dichlorobenzene       | 101              |
| 1,4-Dichlorobenzene       | 103              |
| alpha-Chlorotoluene       | 103              |
| 1,2-Dichlorobenzene       | 100              |
| 1,2,4-Trichlorobenzene    | 90               |
| Hexachlorobutadiene       | 90               |

**Container Type: NA - Not Applicable**

| <b>Surrogates</b>     | <b>%Recovery</b> | <b>Method Limits</b> |
|-----------------------|------------------|----------------------|
| Toluene-d8            | 102              | 70-130               |
| 1,2-Dichloroethane-d4 | 83               | 70-130               |
| 4-Bromofluorobenzene  | 105              | 70-130               |

Client Sample ID: CCV

Lab ID#: 0910315-09B

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

|                     |                |  |
|---------------------|----------------|--|
| <b>File Name:</b>   | <b>y102106</b> | <b>Date of Collection: NA</b>              |
| <b>Dil. Factor:</b> | <b>1.00</b>    | <b>Date of Analysis: 10/21/09 10:05 AM</b> |

| <b>Compound</b>                  | <b>%Recovery</b> |
|----------------------------------|------------------|
| Freon 12                         | 133 Q            |
| Freon 114                        | 118              |
| Chloromethane                    | 121              |
| Vinyl Chloride                   | 105              |
| 1,3-Butadiene                    | 119              |
| Bromomethane                     | 140 Q            |
| Chloroethane                     | 107              |
| Freon 11                         | 124              |
| Ethanol                          | 99               |
| Freon 113                        | 106              |
| 1,1-Dichloroethene               | 97               |
| Acetone                          | 103              |
| 2-Propanol                       | 99               |
| Carbon Disulfide                 | 106              |
| 3-Chloropropene                  | 115              |
| Methylene Chloride               | 106              |
| Methyl tert-butyl ether          | 100              |
| trans-1,2-Dichloroethene         | 100              |
| Hexane                           | 100              |
| 1,1-Dichloroethane               | 107              |
| 2-Butanone (Methyl Ethyl Ketone) | 105              |
| cis-1,2-Dichloroethene           | 100              |
| Tetrahydrofuran                  | 101              |
| Chloroform                       | 104              |
| 1,1,1-Trichloroethane            | 129              |
| Cyclohexane                      | 103              |
| Carbon Tetrachloride             | 116              |
| 2,2,4-Trimethylpentane           | 98               |
| Benzene                          | 101              |
| 1,2-Dichloroethane               | 109              |
| Heptane                          | 106              |
| Trichloroethene                  | 108              |
| 1,2-Dichloropropane              | 103              |
| 1,4-Dioxane                      | 94               |
| Bromodichloromethane             | 110              |
| cis-1,3-Dichloropropene          | 108              |
| 4-Methyl-2-pentanone             | 102              |
| Toluene                          | 106              |
| trans-1,3-Dichloropropene        | 122              |

Client Sample ID: CCV

Lab ID#: 0910315-09B

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

|                     |                |  |
|---------------------|----------------|--|
| <b>File Name:</b>   | <b>y102106</b> | <b>Date of Collection: NA</b>              |
| <b>Dil. Factor:</b> | <b>1.00</b>    | <b>Date of Analysis: 10/21/09 10:05 AM</b> |

| <b>Compound</b>           | <b>%Recovery</b> |
|---------------------------|------------------|
| 1,1,2-Trichloroethane     | 107              |
| Tetrachloroethene         | 102              |
| 2-Hexanone                | 95               |
| Dibromochloromethane      | 111              |
| 1,2-Dibromoethane (EDB)   | 105              |
| Chlorobenzene             | 101              |
| Ethyl Benzene             | 101              |
| m,p-Xylene                | 101              |
| o-Xylene                  | 103              |
| Styrene                   | 104              |
| Bromoform                 | 112              |
| Cumene                    | 102              |
| 1,1,1,2-Tetrachloroethane | 103              |
| Propylbenzene             | 106              |
| 4-Ethyltoluene            | 109              |
| 1,3,5-Trimethylbenzene    | 101              |
| 1,2,4-Trimethylbenzene    | 105              |
| 1,3-Dichlorobenzene       | 112              |
| 1,4-Dichlorobenzene       | 114              |
| alpha-Chlorotoluene       | 114              |
| 1,2-Dichlorobenzene       | 113              |
| 1,2,4-Trichlorobenzene    | 109              |
| Hexachlorobutadiene       | 112              |

Q = Exceeds Quality Control limits.

**Container Type: NA - Not Applicable**

| <b>Surrogates</b>     | <b>%Recovery</b> | <b>Method Limits</b> |
|-----------------------|------------------|----------------------|
| Toluene-d8            | 102              | 70-130               |
| 1,2-Dichloroethane-d4 | 105              | 70-130               |
| 4-Bromofluorobenzene  | 108              | 70-130               |

Client Sample ID: CCV

Lab ID#: 0910315-09C

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

|                     |                |  |
|---------------------|----------------|--|
| <b>File Name:</b>   | <b>y102217</b> | <b>Date of Collection: NA</b>              |
| <b>Dil. Factor:</b> | <b>1.00</b>    | <b>Date of Analysis: 10/22/09 09:23 PM</b> |

| <b>Compound</b>                  | <b>%Recovery</b> |
|----------------------------------|------------------|
| Freon 12                         | 124              |
| Freon 114                        | 108              |
| Chloromethane                    | 112              |
| Vinyl Chloride                   | 95               |
| 1,3-Butadiene                    | 108              |
| Bromomethane                     | 133 Q            |
| Chloroethane                     | 99               |
| Freon 11                         | 116              |
| Ethanol                          | 93               |
| Freon 113                        | 103              |
| 1,1-Dichloroethene               | 91               |
| Acetone                          | 99               |
| 2-Propanol                       | 95               |
| Carbon Disulfide                 | 102              |
| 3-Chloropropene                  | 110              |
| Methylene Chloride               | 100              |
| Methyl tert-butyl ether          | 99               |
| trans-1,2-Dichloroethene         | 96               |
| Hexane                           | 95               |
| 1,1-Dichloroethane               | 101              |
| 2-Butanone (Methyl Ethyl Ketone) | 99               |
| cis-1,2-Dichloroethene           | 94               |
| Tetrahydrofuran                  | 95               |
| Chloroform                       | 98               |
| 1,1,1-Trichloroethane            | 124              |
| Cyclohexane                      | 98               |
| Carbon Tetrachloride             | 110              |
| 2,2,4-Trimethylpentane           | 94               |
| Benzene                          | 97               |
| 1,2-Dichloroethane               | 103              |
| Heptane                          | 101              |
| Trichloroethene                  | 103              |
| 1,2-Dichloropropane              | 100              |
| 1,4-Dioxane                      | 90               |
| Bromodichloromethane             | 105              |
| cis-1,3-Dichloropropene          | 104              |
| 4-Methyl-2-pentanone             | 99               |
| Toluene                          | 102              |
| trans-1,3-Dichloropropene        | 116              |

Client Sample ID: CCV

Lab ID#: 0910315-09C

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

|                     |                |  |
|---------------------|----------------|--|
| <b>File Name:</b>   | <b>y102217</b> | <b>Date of Collection: NA</b>              |
| <b>Dil. Factor:</b> | <b>1.00</b>    | <b>Date of Analysis: 10/22/09 09:23 PM</b> |

| <b>Compound</b>           | <b>%Recovery</b> |
|---------------------------|------------------|
| 1,1,2-Trichloroethane     | 103              |
| Tetrachloroethene         | 101              |
| 2-Hexanone                | 94               |
| Dibromochloromethane      | 109              |
| 1,2-Dibromoethane (EDB)   | 102              |
| Chlorobenzene             | 97               |
| Ethyl Benzene             | 98               |
| m,p-Xylene                | 98               |
| o-Xylene                  | 99               |
| Styrene                   | 101              |
| Bromoform                 | 111              |
| Cumene                    | 99               |
| 1,1,2,2-Tetrachloroethane | 99               |
| Propylbenzene             | 101              |
| 4-Ethyltoluene            | 106              |
| 1,3,5-Trimethylbenzene    | 96               |
| 1,2,4-Trimethylbenzene    | 100              |
| 1,3-Dichlorobenzene       | 108              |
| 1,4-Dichlorobenzene       | 110              |
| alpha-Chlorotoluene       | 108              |
| 1,2-Dichlorobenzene       | 107              |
| 1,2,4-Trichlorobenzene    | 82               |
| Hexachlorobutadiene       | 90               |

Q = Exceeds Quality Control limits.

**Container Type: NA - Not Applicable**

| <b>Surrogates</b>     | <b>%Recovery</b> | <b>Method Limits</b> |
|-----------------------|------------------|----------------------|
| Toluene-d8            | 102              | 70-130               |
| 1,2-Dichloroethane-d4 | 103              | 70-130               |
| 4-Bromofluorobenzene  | 110              | 70-130               |

Client Sample ID: LCS

Lab ID#: 0910315-10A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

|                     |                |  |
|---------------------|----------------|--|
| <b>File Name:</b>   | <b>x101805</b> | <b>Date of Collection: NA</b>              |
| <b>Dil. Factor:</b> | <b>1.00</b>    | <b>Date of Analysis: 10/18/09 10:19 AM</b> |

| <b>Compound</b>                  | <b>%Recovery</b> |
|----------------------------------|------------------|
| Freon 12                         | 79               |
| Freon 114                        | 93               |
| Chloromethane                    | 84               |
| Vinyl Chloride                   | 85               |
| 1,3-Butadiene                    | 85               |
| Bromomethane                     | 98               |
| Chloroethane                     | 90               |
| Freon 11                         | 85               |
| Ethanol                          | 58 Q             |
| Freon 113                        | 108              |
| 1,1-Dichloroethene               | 90               |
| Acetone                          | 94               |
| 2-Propanol                       | 88               |
| Carbon Disulfide                 | 94               |
| 3-Chloropropene                  | 92               |
| Methylene Chloride               | 88               |
| Methyl tert-butyl ether          | 103              |
| trans-1,2-Dichloroethene         | 92               |
| Hexane                           | 96               |
| 1,1-Dichloroethane               | 91               |
| 2-Butanone (Methyl Ethyl Ketone) | 104              |
| cis-1,2-Dichloroethene           | 97               |
| Tetrahydrofuran                  | 90               |
| Chloroform                       | 89               |
| 1,1,1-Trichloroethane            | 91               |
| Cyclohexane                      | 98               |
| Carbon Tetrachloride             | 93               |
| 2,2,4-Trimethylpentane           | 92               |
| Benzene                          | 98               |
| 1,2-Dichloroethane               | 86               |
| Heptane                          | 103              |
| Trichloroethene                  | 97               |
| 1,2-Dichloropropane              | 96               |
| 1,4-Dioxane                      | 124              |
| Bromodichloromethane             | 93               |
| cis-1,3-Dichloropropene          | 99               |
| 4-Methyl-2-pentanone             | 118              |
| Toluene                          | 107              |
| trans-1,3-Dichloropropene        | 99               |



Client Sample ID: LCS

Lab ID#: 0910315-10A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

|                     |                |  |
|---------------------|----------------|--|
| <b>File Name:</b>   | <b>x101805</b> | <b>Date of Collection: NA</b>              |
| <b>Dil. Factor:</b> | <b>1.00</b>    | <b>Date of Analysis: 10/18/09 10:19 AM</b> |

| <b>Compound</b>           | <b>%Recovery</b> |
|---------------------------|------------------|
| 1,1,2-Trichloroethane     | 102              |
| Tetrachloroethene         | 113              |
| 2-Hexanone                | 126              |
| Dibromochloromethane      | 108              |
| 1,2-Dibromoethane (EDB)   | 97               |
| Chlorobenzene             | 102              |
| Ethyl Benzene             | 101              |
| m,p-Xylene                | 103              |
| o-Xylene                  | 102              |
| Styrene                   | 106              |
| Bromoform                 | 111              |
| Cumene                    | 101              |
| 1,1,2,2-Tetrachloroethane | 87               |
| Propylbenzene             | 96               |
| 4-Ethyltoluene            | 106              |
| 1,3,5-Trimethylbenzene    | 82               |
| 1,2,4-Trimethylbenzene    | 87               |
| 1,3-Dichlorobenzene       | 92               |
| 1,4-Dichlorobenzene       | 93               |
| alpha-Chlorotoluene       | 100              |
| 1,2-Dichlorobenzene       | 91               |
| 1,2,4-Trichlorobenzene    | 84               |
| Hexachlorobutadiene       | 80               |

Q = Exceeds Quality Control limits.

**Container Type: NA - Not Applicable**

| <b>Surrogates</b>     | <b>%Recovery</b> | <b>Method Limits</b> |
|-----------------------|------------------|----------------------|
| Toluene-d8            | 101              | 70-130               |
| 1,2-Dichloroethane-d4 | 76               | 70-130               |
| 4-Bromofluorobenzene  | 103              | 70-130               |

Client Sample ID: LCS

Lab ID#: 0910315-10B

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

|                     |                |  |
|---------------------|----------------|--|
| <b>File Name:</b>   | <b>y102107</b> | <b>Date of Collection: NA</b>              |
| <b>Dil. Factor:</b> | <b>1.00</b>    | <b>Date of Analysis: 10/21/09 10:46 AM</b> |

| <b>Compound</b>                  | <b>%Recovery</b> |
|----------------------------------|------------------|
| Freon 12                         | 107              |
| Freon 114                        | 95               |
| Chloromethane                    | 96               |
| Vinyl Chloride                   | 84               |
| 1,3-Butadiene                    | 90               |
| Bromomethane                     | 115              |
| Chloroethane                     | 86               |
| Freon 11                         | 102              |
| Ethanol                          | 66               |
| Freon 113                        | 99               |
| 1,1-Dichloroethene               | 90               |
| Acetone                          | 89               |
| 2-Propanol                       | 87               |
| Carbon Disulfide                 | 91               |
| 3-Chloropropene                  | 96               |
| Methylene Chloride               | 97               |
| Methyl tert-butyl ether          | 78               |
| trans-1,2-Dichloroethene         | 85               |
| Hexane                           | 84               |
| 1,1-Dichloroethane               | 93               |
| 2-Butanone (Methyl Ethyl Ketone) | 90               |
| cis-1,2-Dichloroethene           | 99               |
| Tetrahydrofuran                  | 86               |
| Chloroform                       | 90               |
| 1,1,1-Trichloroethane            | 110              |
| Cyclohexane                      | 87               |
| Carbon Tetrachloride             | 98               |
| 2,2,4-Trimethylpentane           | 83               |
| Benzene                          | 86               |
| 1,2-Dichloroethane               | 94               |
| Heptane                          | 91               |
| Trichloroethene                  | 91               |
| 1,2-Dichloropropane              | 87               |
| 1,4-Dioxane                      | 85               |
| Bromodichloromethane             | 93               |
| cis-1,3-Dichloropropene          | 90               |
| 4-Methyl-2-pentanone             | 91               |
| Toluene                          | 93               |
| trans-1,3-Dichloropropene        | 103              |

Client Sample ID: LCS

Lab ID#: 0910315-10B

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

|                     |                |  |
|---------------------|----------------|--|
| <b>File Name:</b>   | <b>y102107</b> | <b>Date of Collection: NA</b>              |
| <b>Dil. Factor:</b> | <b>1.00</b>    | <b>Date of Analysis: 10/21/09 10:46 AM</b> |

| <b>Compound</b>           | <b>%Recovery</b> |
|---------------------------|------------------|
| 1,1,2-Trichloroethane     | 90               |
| Tetrachloroethene         | 89               |
| 2-Hexanone                | 88               |
| Dibromochloromethane      | 95               |
| 1,2-Dibromoethane (EDB)   | 86               |
| Chlorobenzene             | 85               |
| Ethyl Benzene             | 84               |
| m,p-Xylene                | 84               |
| o-Xylene                  | 86               |
| Styrene                   | 82               |
| Bromoform                 | 94               |
| Cumene                    | 87               |
| 1,1,1,2-Tetrachloroethane | 84               |
| Propylbenzene             | 89               |
| 4-Ethyltoluene            | 91               |
| 1,3,5-Trimethylbenzene    | 82               |
| 1,2,4-Trimethylbenzene    | 86               |
| 1,3-Dichlorobenzene       | 94               |
| 1,4-Dichlorobenzene       | 94               |
| alpha-Chlorotoluene       | 97               |
| 1,2-Dichlorobenzene       | 93               |
| 1,2,4-Trichlorobenzene    | 93               |
| Hexachlorobutadiene       | 93               |

**Container Type: NA - Not Applicable**

| <b>Surrogates</b>     | <b>%Recovery</b> | <b>Method Limits</b> |
|-----------------------|------------------|----------------------|
| Toluene-d8            | 102              | 70-130               |
| 1,2-Dichloroethane-d4 | 106              | 70-130               |
| 4-Bromofluorobenzene  | 108              | 70-130               |

Client Sample ID: LCS

Lab ID#: 0910315-10C

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

|                     |                |  |
|---------------------|----------------|--|
| <b>File Name:</b>   | <b>y102216</b> | <b>Date of Collection: NA</b>              |
| <b>Dil. Factor:</b> | <b>1.00</b>    | <b>Date of Analysis: 10/22/09 07:55 PM</b> |

| <b>Compound</b>                  | <b>%Recovery</b> |
|----------------------------------|------------------|
| Freon 12                         | 99               |
| Freon 114                        | 88               |
| Chloromethane                    | 90               |
| Vinyl Chloride                   | 79               |
| 1,3-Butadiene                    | 86               |
| Bromomethane                     | 113              |
| Chloroethane                     | 82               |
| Freon 11                         | 93               |
| Ethanol                          | 60               |
| Freon 113                        | 92               |
| 1,1-Dichloroethene               | 82               |
| Acetone                          | 82               |
| 2-Propanol                       | 80               |
| Carbon Disulfide                 | 83               |
| 3-Chloropropene                  | 87               |
| Methylene Chloride               | 88               |
| Methyl tert-butyl ether          | 80               |
| trans-1,2-Dichloroethene         | 77               |
| Hexane                           | 76               |
| 1,1-Dichloroethane               | 83               |
| 2-Butanone (Methyl Ethyl Ketone) | 80               |
| cis-1,2-Dichloroethene           | 88               |
| Tetrahydrofuran                  | 78               |
| Chloroform                       | 79               |
| 1,1,1-Trichloroethane            | 98               |
| Cyclohexane                      | 79               |
| Carbon Tetrachloride             | 88               |
| 2,2,4-Trimethylpentane           | 75               |
| Benzene                          | 77               |
| 1,2-Dichloroethane               | 82               |
| Heptane                          | 81               |
| Trichloroethene                  | 81               |
| 1,2-Dichloropropane              | 78               |
| 1,4-Dioxane                      | 77               |
| Bromodichloromethane             | 83               |
| cis-1,3-Dichloropropene          | 81               |
| 4-Methyl-2-pentanone             | 83               |
| Toluene                          | 85               |
| trans-1,3-Dichloropropene        | 86               |

Client Sample ID: LCS

Lab ID#: 0910315-10C

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

|                     |                |  |
|---------------------|----------------|--|
| <b>File Name:</b>   | <b>y102216</b> | <b>Date of Collection: NA</b>              |
| <b>Dil. Factor:</b> | <b>1.00</b>    | <b>Date of Analysis: 10/22/09 07:55 PM</b> |

| <b>Compound</b>           | <b>%Recovery</b> |
|---------------------------|------------------|
| 1,1,2-Trichloroethane     | 78               |
| Tetrachloroethene         | 79               |
| 2-Hexanone                | 76               |
| Dibromochloromethane      | 82               |
| 1,2-Dibromoethane (EDB)   | 75               |
| Chlorobenzene             | 75               |
| Ethyl Benzene             | 74               |
| m,p-Xylene                | 74               |
| o-Xylene                  | 76               |
| Styrene                   | 73               |
| Bromoform                 | 86               |
| Cumene                    | 78               |
| 1,1,1,2-Tetrachloroethane | 76               |
| Propylbenzene             | 80               |
| 4-Ethyltoluene            | 81               |
| 1,3,5-Trimethylbenzene    | 74               |
| 1,2,4-Trimethylbenzene    | 77               |
| 1,3-Dichlorobenzene       | 84               |
| 1,4-Dichlorobenzene       | 85               |
| alpha-Chlorotoluene       | 86               |
| 1,2-Dichlorobenzene       | 84               |
| 1,2,4-Trichlorobenzene    | 64 Q             |
| Hexachlorobutadiene       | 68 Q             |

Q = Exceeds Quality Control limits.

**Container Type: NA - Not Applicable**

| <b>Surrogates</b>     | <b>%Recovery</b> | <b>Method Limits</b> |
|-----------------------|------------------|----------------------|
| Toluene-d8            | 103              | 70-130               |
| 1,2-Dichloroethane-d4 | 101              | 70-130               |
| 4-Bromofluorobenzene  | 110              | 70-130               |



**CHAIN-OF-CUSTODY RECORD**

**Sample Transportation Notice**

Requiring signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 457-4922

180 BLUE RAVINE ROAD, SUITE B  
FOLSOM, CA 95630-4719  
(916) 985-1000 FAX (916) 985-1020

Page 1 of 1

Project Manager: Larry Acamb  
 Collected by: (Print and Sign) Larry Acamb Email lacamb@aknet  
 Company Geophysics, Inc. City Andover State AK Zip 99516  
 Address 3120 Legay Dr. Phone 107-345-9576 Fax ---

Project Info:  
 P.O. # \_\_\_\_\_  
 Project # ARRC GW-1  
 Project Name ARRC GW-1

Lab Use Only  
 Pressurized by: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Preseurization Gas: \_\_\_\_\_  
 N<sub>2</sub> \_\_\_\_\_  
 He \_\_\_\_\_

Turn Around Time:  
 Normal  
 Rush  
 specify \_\_\_\_\_

| Lab I.D. | Field Sample I.D. (Location) | Can # | Date of Collection | Time of Collection | Analyses Requested | Initial # | Final # | Receipt | Final (ppb) |
|----------|------------------------------|-------|--------------------|--------------------|--------------------|-----------|---------|---------|-------------|
| 01A      | Karen's South                | 35622 | 10-9-09            | 11:00              | 70-15              | 30        | 5.0     |         |             |
| 02A      | Karen's Middle 1             | 34164 |                    | 1:00               |                    | 30        | 3.5     |         |             |
| 03A      | Karen's Middle 2             | 35653 |                    | 1:30               |                    | 30        | 3.00    |         |             |
| 04A      | Karen's North                | 12361 |                    | 2:30               |                    | 30        | 4.5     |         |             |
| 05A      | Taylor South                 | 34169 |                    | 3:30               |                    | 30        | 3.25    |         |             |
| 06A      | Taylor Middle                | 36533 |                    | 4:45               |                    | 30        | 30      |         |             |
| 07A      | Taylor North 1               | 33708 |                    | 5:50               |                    | 30        | 35      |         |             |
|          | Taylor North 2               | 33405 |                    | 6:15               |                    | 85        | 3.25    |         |             |
|          | not used                     |       |                    |                    |                    |           |         |         |             |

Received by: (signature) Monica Green Date/Time 10-10-09 10:10  
 Received by: (signature) Monica Green Date/Time 10-13-09 Vacuum Measurements all = off line  
 Received by: (signature) \_\_\_\_\_ Date/Time \_\_\_\_\_  
 Received by: (signature) \_\_\_\_\_ Date/Time \_\_\_\_\_

Notes:  
In = connected to manifold

Shipper Name: AK Net AirBill # \_\_\_\_\_  
 Temp (°C) NA Condition Good Custody Seats Intact? Yes No None Work Order # 0910315