

**DRAFT**

# **PERFORMANCE-BASED REMEDIATION Site SD032 Short-term Soil Vapor Extraction Test Evaluation Technical Memorandum**

**FEBRUARY 2015**

**BEALE AIR FORCE BASE, CALIFORNIA**

**Project No.: BAEY20127501**

**Contract No.: FA8903-09-D-8557**

**Task Order: 0003**



Submitted to:



Submitted by:



**CH2MHILL®**

**Beale Air Force Base, California**  
**Draft Site SD032 Short-term Soil Vapor Extraction Test Evaluation**  
**Technical Memorandum**  
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February 26, 2015

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Subject: Beale Air Force Base, California  
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Task Order: 0003  
**Concurrent Air Force and Regulatory Review**

Dear Mr. Leeson:

This letter documents the submittal of the *Draft Site SD032 Short-term Soil Vapor Extraction Test Evaluation Technical Memorandum* for Beale Air Force Base, California.

Copies of this document have been delivered to the individuals included on the attached distribution list.

Reviewer comments should be directed to me via electronic mail at [jwilburn@ch2m.com](mailto:jwilburn@ch2m.com) by March 30, 2015.

If you have any questions concerning this submittal, you can contact me at (916) 286-0248.

Sincerely,

CH2M HILL

A handwritten signature in blue ink that reads "D. Jay Wilburn".

D. Jay Wilburn  
Project Manager

Enclosures

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**Draft**

**Beale Air Force Base, California**

**Site SD032 Short-term Soil Vapor Extraction Test Evaluation  
Technical Memorandum**

**Sub-CLIN: 0009DP**

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**Prepared for  
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**Contract No.: FA8903-09-D-8557**

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<b>13. ABSTRACT (Maximum 200 words)</b> This technical memorandum provides the results of the short-term soil vapor extraction (SVE) test conducted between October 1, 2014, and January 21, 2015, at Site SD032, Beale Air Force Base (AFB or Base), California (Task Order 0003; Project No.: BAEY20127501; Contract No.: FA8903-09-D-8557).				
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# Site SD032 Short-term Soil Vapor Extraction Test Evaluation, Beale Air Force Base, California

PREPARED FOR: Air Force Civil Engineer Center  
PREPARED BY: CH2M HILL  
DATE: February 26, 2015  
PROJECT NUMBER: 456998.09.15.DP.03

## 1.0 Purpose

This technical memorandum provides the results of the short-term soil vapor extraction (SVE) test conducted between October 1, 2014, and January 21, 2015, at Site SD032, Beale Air Force Base (AFB or Base), California. The short-term SVE test was conducted in accordance with the *Site SD032 Short-term Soil Vapor Extraction Test Work Plan Technical Memorandum* (CH2M HILL, 2014a). The soil vapor sampling was conducted in accordance with the *Basewide Uniform Federal Policy Quality Assurance Project Plan* (Basewide UFP-QAPP) (CH2M HILL, 2012), which documents standard operating procedures (SOPs) and programmatic procedures that were used to accomplish this work. This work was performed by CH2M HILL under the Beale AFB Performance-based Remediation project, which has been authorized by Air Force Civil Engineer Center (AFCEC) Worldwide Environmental Restoration and Construction Contract FA8903-09-D-8557, Task Order 0003.

In their comments on the *Site SD032 Data Gap Investigation Summary Report* (CH2M HILL, 2014b), Central Valley Regional Water Quality Control Board (Central Valley Water Board) requested that the U.S. Air Force (Air Force) evaluate the feasibility of operating the former SVE system in the northern portion of Site SD032 to address trichloroethene (TCE) concentrations detected near paired vapor extraction (VE) wells VE-4 Shallow and VE-4 Deep (VE-4S/D). Central Valley Water Board requested that SVE be evaluated to address potential future impacts to groundwater within the Site SD032 investigation area. The Department of Toxic Substances Control (DTSC) provided similar comments, stating that further soil cleanup action at VE-4S/D is required. In response to regulatory agency concern, the Air Force conducted a short-term SVE test at VE wells VE-4S/D. The goal of this short-term SVE test was to provide evidence to the regulatory agencies that residual TCE at this location is diffusion-limited, relatively immobile, and not a threat to groundwater or other potential receptors. Vapor samples were collected to demonstrate that TCE concentrations decrease quickly with SVE and then become asymptotic.

## 2.0 Background

Site SD032 is located in the eastern portion of the flightline area along Arnold Avenue. The site includes facilities formerly used for aircraft maintenance and repair, and Building 1086. Additional former features at Site SD032 included 13 oil/water separators (OWSs), two vehicle wash pads, and an aircraft wash pad (Building 1072). The source of TCE near VE-4S was OWS G, which was located approximately 10 feet to the northeast of VE-4S. OWS G was excavated in 1999 under the Resource Conservation and Recovery Act of 1976 (RCRA), and further remediation of TCE was conducted under Environmental Restoration Program (ERP) Site SD032 (CH2M HILL, 2005).



VE wells VE-4S/D were installed in 1999 and connected to the Site 32 North SVE system in 2002. SVE continued at these wells until 2009. The *Site 32 North and South SVE Systems Shutdown Report* (CH2M HILL, 2010) recommended that the systems be permanently shut down even though rebound data showed that TCE concentrations in soil vapor at VE-4S remained above the shutdown criteria. TCE concentrations in VE-4D, a paired well screened below VE-4S, were not above the shutdown criteria at that time. The Central Valley Water Board approved shutdown of both SVE systems, and requested groundwater in partially submerged vapor well VE-4D be monitored to confirm TCE concentrations did not increase following SVE shutdown (CH2M HILL, 2010).

## 2.1 Summary of Data Gap Investigation Results and Evaluation

A data gap investigation was conducted in 2013 to collect sufficient data to evaluate site closure. The *Site SD032 Data Gap Investigation Summary Report* (CH2M HILL, 2014b) presented the results of this investigation and concluded that Site SD032 was suitable for unlimited use and unrestricted exposure (UU/UE), and closure under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) without further remediation. This conclusion was based on the fact that residual TCE mass is confined to one small area and does not represent a risk to human health (vapor intrusion or direct contact) or a threat to groundwater. A summary of the evidence supporting this conclusion is as follows:

- All potential sources of contamination at Site SD032 have been investigated. These potential sources include Building 1086, three wash pads, four underground storage tanks (USTs), 13 OWSs, and sections of the sanitary sewer line/industrial waste line (IWL). The sources determined to have leaked have been removed, including OWS G.
- Extensive SVE has occurred to address contamination at Site SD032, including the VE-4 area. During SVE operation from 1998 to 2009, an estimated 1,000 pounds of TCE was removed. Furthermore, operation of the Site 32 North and South SVE systems had reduced the concentrations of volatile organic compounds (VOCs) throughout Site SD032 to levels below those with potential to affect groundwater. No further remediation of vadose zone soil was proposed in the *Site 32 SVE Shutdown Report* (CH2M HILL, 2010), which was approved by the Central Valley Water Board.
- TCE is the only chemical of concern. Results of the data gap investigation showed that only three VOCs (TCE, 1,3-butadiene, and benzene) were detected at concentrations exceeding project screening levels in soil vapor and that TCE was the only significant exceedance. No VOCs were detected in soil at concentrations above risk-based project screening levels.
- The extent of TCE contamination is limited. TCE was detected at concentrations exceeding project screening levels in five soil vapor wells, with the maximum concentrations detected in VE-4S/D. Step-out boring 32C080SB was drilled adjacent to VE-4S/D to vertically delineate TCE contamination in this area. Soil vapor samples collected from 32C080SB showed TCE concentrations exceeded project screening levels between 15 and 50 feet below ground surface (bgs). TCE was not detected at concentrations above project screening levels in samples collected within the top 10 feet at boring 32C080SB.
- TCE in soil or soil vapor is not a threat to human health at Site SD032. Based on the results of the screening-level human health risk assessment (HHRA), the vapor intrusion exposure pathway for the future residential and industrial exposure scenarios is considered incomplete at each of the soil vapor sampling locations, except in the vicinity of VE-4/32C080SB. Vapor intrusion is considered potentially complete but not significant in the VE-4/32C080SB area based on the attenuation of TCE in the shallow vadose zone (i.e., 0 to 15 feet bgs). The estimated TCE vapor intrusion cancer risks and

noncancer hazards for both residential and industrial exposure scenarios are less than target levels in the shallow soil vapor samples.

- TCE-contaminated soil present near 32C0805B (VE-4S/D) is not a potential threat to groundwater. Groundwater modeling forecasts that vadose zone water infiltrating into the groundwater will result in an increase in groundwater TCE concentrations above the maximum contaminant level (MCL). The model prediction is overly conservative because it assumes no attenuation, nor any stratigraphic layering that could impede flow. TCE concentrations in groundwater samples from VE-4D collected from 2008 to 2014 confirm that TCE concentrations are decreasing since SVE was shut down. TCE has remained below the MCL in groundwater from VE-4D since August 2011 (five consecutive sampling events).

### 3.0 Short-term SVE Test Activities

A short-term SVE test at VE-4S/D was conducted in two phases. The purposes of Phase 1 were to assess the volume/mass of TCE remaining in the subsurface in proximity to VE-4S/D and to assess the blower requirements for Phase 2. The purposes of Phase 2 were to assess rebound, quantify mass diffusion rate, and attempt mass removal. Figure 1 shows the location of VE-4S/D, where the SVE test was conducted (figures are located at the end of this memorandum).

#### 3.1 SVE Off-gas Treatment

Throughout both phases, effluent from the SVE system was treated with two new 200-pound drums of vapor-phase granular activated carbon connected in series. As requested by the Feather River Air Quality Management District (FRAQMD), the SVE system was monitored under the existing Site SD032 general operating conditions, which were established in 2005. The FRAQMD operating requirements and how they were met during this short-term test include the following:

- Monthly field instrumentation readings taken of the stack exhaust vapors (readings were taken weekly)
- Quarterly field instrumentation reading of the vapor monitoring points (readings were taken at VE-4S and VE-4D at startup and shutdown of both phases and weekly during Phase 2)
- Quarterly sample for analytical work of the stack exhaust vapors (samples were collected from the primary and final effluents at the end of each phase and from the primary effluent midway through Phase 2)

The SVE system was in compliance with FRAQMD operating conditions throughout the test.

#### 3.2 Phase 1

Phase 1 consisted of an approximate 72-hour mass transfer test extracting soil vapor with a 1-horsepower (hp) blower from VE-4S only. SVE was applied only to VE-4S, but both VE-4S and VE-4D were monitored throughout the test. VE-4S is screened from 10 to 30 feet bgs, while VE-4D is screened from 40 to 75 feet bgs. However, as a result of rising groundwater at Beale AFB, the VE-4D well screen is currently submerged below approximately 60 feet bgs, resulting in an effective vapor screen length of only 15 feet (5 feet above the water table is assumed to be inaccessible to SVE).

Extraction was initiated in VE-4S on October 1, 2014, at 11:46 a.m. and continued uninterrupted until shutdown on October 4 at 1:17 p.m., a total run time of 73.5 hours. Extraction flow rate, wellhead vacuum, and blower vacuum were continually recorded throughout the test with a data logger. The initial extraction rate was 30.0 standard cubic feet per minute (scfm) and after 2 hours of operation

had gradually dropped to 28.5 scfm, where it remained for the duration of the test. The applied wellhead vacuum remained at 38 inches of H<sub>2</sub>O (in. H<sub>2</sub>O) for the duration of this phase.

Vapor samples were collected from both VE-4S and VE-4D in 1-liter Summa canisters just after system startup and just before system shutdown. Samples were also collected in 1- and 3-liter Tedlar bags during each of the 4 days of continuous operation, along with rebound samples collected 3 days after shutdown. Tedlar bag samples were collected at the following approximate times:

- **Day 1**
  - VE-4S – baseline, 10 minutes, 30 minutes, 1 hour, 2 hours, 4 hours, and 6 hours after startup
  - VE-4D – baseline, 2 hours, and 6 hours after startup
- **Days 2 and 3**
  - VE-4S and VE-4D – three samples each at approximately 7:30 a.m., 11:30 a.m., and 3:30 p.m.
- **Day 4**
  - VE-4S and VE-4D – three samples each at approximately 7:30 a.m., 1:00 p.m. (just before shutdown), and 4:30 p.m. (3 hours after shutdown)
- **Day 7**
  - VE-4S and VE-4D – 1 rebound sample each at approximately 8:00 a.m.

The 1-liter Tedlar bags were sent to an offsite laboratory (Praxis Environmental Technologies, Inc. [Praxis]) and were analyzed for TCE and cis-1,2-dichloroethene (DCE) only by U.S. Environmental Protection Agency (EPA) Method 18-modified. The 3-liter Tedlar bags were also sent offsite to Praxis and analyzed for oxygen, carbon dioxide, and methane with a Thermo GasTech Model GTCO2. The 1- and 3-liter Tedlar bag samples were used for screening-level purposes only, to evaluate subsurface conditions, and the size of the blower required during Phase 2. The Summa canisters were sent to an offsite laboratory (Eurofins) and analyzed for VOCs by EPA Method TO-14A. Results of the Phase 1 test indicated that Phase 2 could be conducted with the same 1-hp blower. Following termination of Phase 1, both wells were capped and left dormant for 17 days until the start of Phase 2.

### 3.3 Phase 2

Phase 2 was originally planned to run for only 4 weeks, but was extended to 8 weeks when it was found that TCE concentrations had not reached asymptotic conditions at the end of 4 weeks. Phase 2 was conducted using the same SVE system that was used during Phase 1 with two exceptions: (1) an air/water separator was installed during Phase 2 to remove any condensation that might accumulate, and (2) no data logger for wellhead flow and vacuum data collection was used during Phase 2. Extraction during Phase 2 began on October 21, 2014, and ran uninterrupted until December 17 with only one brief shutdown. On December 12, 2014, field staff discovered that the system was offline because the electrical breaker had tripped, most likely caused by a storm the previous day. It was estimated to have been offline no more than 1 day.

Extraction under Phase 2 was applied to both VE-4S and VE-4D at starting flows of approximately 23 and 26 scfm, respectively. During the first few weeks, the flow at VE-4S decreased to between 19 and 20 scfm (at 33 to 34 in. H<sub>2</sub>O), while the flow at VE-4D remained fairly steady between 26 and 27 scfm (at 8 to 9 in. H<sub>2</sub>O). In an effort to increase flow from VE-4S, the flow at VE-4D was decreased to approximately 9 scfm (at 3.8 in. H<sub>2</sub>O) on November 13. As a result, the flow at VE-4S increased to almost 25 scfm (at 41.0 in. H<sub>2</sub>O). Over the next week, the flow rate at VE-4S again decreased slightly to approximately 23 scfm (the flow at VE-4D remained steady at approximately 9 scfm). VE-4D was

completely shut down on November 20 because TCE concentrations at this well had reached asymptotic conditions. This did not result in appreciable increase in flow at VE-4S, which remained under extraction at an average flow of 23 to 24 scfm (at 43 to 44 in. H<sub>2</sub>O) until the end of the test on December 17, 2014.

Vapor samples were collected and analyzed from both wells just after system startup, weekly throughout the extraction period, and just before system shutdown. These samples were collected in 1-liter Summa canisters and sent to an offsite laboratory (Eurofins) for analysis of VOCs by EPA Method TO-14A. In addition, samples were collected from both wells in 1-liter Tedlar bags during the first day of operation similar to the sampling conducted during the first day of Phase 1 (see Section 3.2). Tedlar bag samples were sent to an offsite laboratory (Praxis) and analyzed for TCE and DCE only by EPA Method 18-modified.

Photoionization detector (PID) readings were collected for field operational purposes at each wellhead and at the influent port of the carbon drums. PID readings were also collected at the primary and final effluent ports to monitor carbon breakthrough. PID readings were collected twice a day for the first week and once a day for the remaining weeks (weekdays only). Field measurements (differential pressure, temperature, and vacuum) were also collected at each wellhead at this same frequency and were used to calculate extraction flow rates.

Following termination of Phase 2, both wells were capped and left dormant until rebound sampling was conducted 4 weeks later on January 14, 2015. This rebound sampling effort followed the same 6-hour startup procedure as previously performed in VE-4S for Phase 1 and Phase 2. The initial extraction rate was 33 scfm, but dropped rapidly to an average of 30 scfm. Rebound sampling included the collection of a 1-liter Tedlar bag from each well before startup, several times during the 6-hour period, and just before shutdown. In addition, a 1-liter Summa canister was collected from each well before, or just after, startup and from VE-4S just before shutdown.

Because of differences between analytical methods that could not be resolved for the rebound sample results on January 14, another 1-liter Summa canister was collected from VE-4S on January 21, 2015, and analyzed by Method TO-14A.

## 4.0 SVE Test Results

Results of the Phase 1 and Phase 2 SVE tests are presented in the following sections. Additional details are presented in Attachment 1. A data quality evaluation of the certified-laboratory data analyzed by Method TO-14A is presented in Attachment 2 and a complete set of data is presented in Attachment 3.

### 4.1 Phase 1 Results

TCE concentrations detected in Phase 1 vapor samples collected with both Tedlar bags and Summa canisters are presented in Table 1 (tables are located at the end of this memorandum). Plots of these TCE concentrations in VE-4S and VE-4D as a function of the elapsed hours from the start of extraction are presented on Figures 2 and 3, respectively. Initial TCE concentrations detected in the Tedlar bag samples were 636 parts per million by volume (ppmv) (VE-4S) and 0.11 ppmv (VE-4D). Although the TCE concentration in VE-4S is an order of magnitude higher than any previous concentration detected at this well, TCE concentrations decreased rapidly during the first 24 hours of extraction (by approximately 80 percent). Concentrations continued to decrease at a slower rate throughout the next 2 days, reaching a final TCE concentration of 47 ppmv at the end of extraction. A vapor sample collected 3 hours later yielded a spike in TCE concentration (155 ppmv), indicative of early rebound. However, the sample collected 3 days after extraction ceased showed no such rebound, and had a TCE concentration of only 9.1 ppmv.

As shown in Table 1 and on Figure 3, TCE concentrations at VE-4D initially increased and then decreased during the first 24 hours, followed by a steady increase during the subsequent 2 days. Unlike VE-4S,

there was no evidence of an early rebound at VE-4D (the TCE concentration 3 hours after extraction was terminated remained unchanged at 1.6 ppmv). However, rebound was evident in the sample collected 3 days later, which showed that TCE concentrations had increased to almost 9 ppmv.

Although the data collected with Tedlar bags are considered screening-level data because they were analyzed by EPA Method 18-modified, these data correlate well with data from the Summa canister samples analyzed by TO-14A. As shown in Table 1, the TCE concentrations in the VE-4S samples collected by both methods are very similar when one compares samples collected at similar times. For example, TCE concentrations in startup samples collected with Summa canisters (530 and 430 ppmv) are within 10 percent of those detected in samples collected with Tedlar bags during the similar time frame (583 and 459 ppmv).

## 4.2 Phase 2 Results

The first 6 hours of vapor sampling conducted under Phase 2 were performed in an identical manner and on a similar schedule as that performed during the Phase 1 startup (i.e., one Summa canister sample from each well near startup and multiple Tedlar bag samples throughout the first 6 hours of extraction). Following this period, sampling was performed solely with Summa canisters, collected once a week from each well. In addition, PID readings and field measurements (differential pressure, temperature, and vacuum) were collected on a nearly daily basis to evaluate the progress of extraction.

Table 2 presents the recorded PID readings and field measurements, along with the calculated flow rates for each well. As shown in Table 2, the flow rate at VE-4D was decreased on November 13 and extraction was shut off on November 21. Both changes were made in an attempt to increase flow at VE-4S. The only other significant change in flow rate occurred near the end of the test, when the system experienced an unscheduled shutdown (see Section 3.3). Average vacuum and flow readings for each of the five time periods are presented in Table 3.

TCE concentrations detected in Phase 2 vapor samples collected with both Tedlar bags and Summa canisters are presented in Table 4. Plots of these TCE concentrations in VE-4S and VE-4D as a function of the elapsed days from the start of extraction are presented on Figures 4 and 5, respectively. Initial TCE concentrations detected in the Tedlar bag samples were 327 ppmv (VE-4S) and 2.7 ppmv (VE-4D). The TCE concentration in VE-4S represents a substantial rebound from the 47 ppmv detected at shutdown of the Phase 1 test, but is only about half of the initial concentration detected at the beginning of Phase 1 (636 ppmv). Data from VE-4D show a much smaller rebound (1.6 to 2.7 ppmv) over the same period.

Similar to Phase 1, TCE concentrations at VE-4S decreased rapidly during the first 6 hours of extraction to a value of 68 ppmv, nearly an 80 percent reduction. After approximately 1 week of continuous operation, the TCE concentration had decreased to 16 ppmv, which represents a reduction of another 75 percent. After the first week, TCE concentrations continued to decrease but at a much slower rate. Figure 4, which plots concentrations in VE-4S on a log-time scale, illustrates the rapid initial decay associated with sweeping vapors from the permeable soils, followed by a second, slower decay associated with mass transfer limitations. These two trends are described in more detail in Attachment 1.

As shown in Table 4 and on Figure 5, the TCE concentration at VE-4D increased slightly during the first 6 hours of extraction to a peak of 4.1 ppmv. The TCE concentration then decreased steadily over the next 5 weeks of extraction, and then rebounded slightly after a final drop when extraction was terminated.

Results of the rebound sampling conducted on January 14, 2015, are presented in Table 5. As previously discussed, this rebound sampling effort followed the same 6-hour startup procedure as previously performed in VE-4S for direct comparison with the Phase 1 and Phase 2 startups. However, the results for well VE-4S from Summa canister samples submitted to a certified laboratory are significantly lower than those from Tedlar bag samples analyzed with a calibrated gas chromatograph. This discrepancy was

unexpected because Summa and Tedlar sampling results in Phase 1 and Phase 2 had shown good correlation between the two sampling/analysis methods. Because of this discrepancy, an additional rebound sample was collected from VE-4S a week later on January 21. No additional rebound sample was collected from the deep well, VE-4D, because both methods showed very low TCE concentrations at this well (0.0032 ppmv for the Summa and non-detect for the Tedlars). The TCE concentration for VE-4S collected on January 21 was 6.9 ppmv, which indicates a rebound from the TCE concentration of 2.2 ppmv that was detected at the end of Phase 2.

### 4.3 TCE Mass Removed

The mass of TCE extracted during each phase of the SVE test was estimated using the extraction rates, durations of extraction, and TCE vapor concentrations measured during each phase. The total mass extracted for each phase is presented in Table 6, and the cumulative mass extracted over time is plotted on Figure 6. As shown in Table 6, an estimated 12.62 pounds of TCE were removed from VE-4S (5.36 pounds during Phase 1, 7.16 pounds during Phase 2, and 0.1 pound during the rebound test). An additional 0.58 pound was removed from VE-4D during Phase 2. Details on the calculation of mass extracted during the SVE test, along with the equation used, are presented in Section 3 of Attachment 1.

At the end of the 3-day extraction in Phase 1, the trend in the cumulative mass extracted from VE-4S was clearly increasing and contributed to the decision to implement the longer-term Phase 2 extraction. The initial extraction rate in VE-4S during Phase 2 was lower than in Phase 1 and the lesser rate is evident on Figure 6. After the flow rate was increased, over time, the mass extraction rate from VE-4S approached an asymptote: at the end of the Phase 2 extraction period, the TCE mass extraction rate was only 0.03 pound per day. The mass extraction rate in VE-4D was initially low and approached an asymptote at a very low rate, less than 0.01 pound per day when extraction was terminated.

### 4.4 Mass Transfer Rate

The mass transfer rate from the immobile phase to the mobile phase was estimated by measuring the change in soil vapor concentration in the mobile phase during rebound periods. There were three rebound periods over which mass transfer rates can be estimated:

- October 4 to October 21 – SVE shut down between Phase 1 and Phase 2
- December 17 to January 15 – SVE shut down following Phase 2
- January 15 to 21 – Final rebound sample following 6 hours of SVE on January 15

The following equation is used to calculate the mass transfer rate.

$$\text{Mass Transfer Rate (lb/d)} = ((C_2 - C_1) / 1,000 \times MW / R / (T + 273.15) \times P) \times 28.32 / 10^6 \times 2.2 \times V / t$$

Where:

- $C_{1,2}$  = Initial ( $C_1$ ) and Final ( $C_2$ ) concentrations (ppmv)
- $R$  = Universal Gas Constant = 0.08206 L × atm/(mol × K)
- $MW$  = Molecular weight of TCE = 131.4 g/mol
- $P$  = Pressure (assumed 1 atm)
- $t$  = Duration (days)
- $T$  = Soil vapor temperature = 20 degrees Celsius (°C)
- $V$  = Contaminated soil volume × mobile fraction × porosity of mobile fraction  
= 73,207 cubic feet (ft<sup>3</sup>) × 0.4 × 0.4 = 11,713 ft<sup>3</sup>

The resulting estimates of mass flux into the vapor phase, in pounds per day, are provided in Table 7. The mass transfer rates range from 0.066 pound per day to 0.003 pound per day. There are two

important conclusions that can be made from these values. The transfer rates are generally low, supporting the conceptual model that the residual mass is diffusion-limited (relatively immobile). Further, the transfer rates decreased sharply after Phase 1, so that the final removal rate was 5 to 15 percent of the initial removal rate. This confirms that the majority of mass removal occurred early in the test, and that the remaining mass in the ground is strongly diffusion-limited.

## 5.0 Evaluation of Results

This section evaluates the data collected from this short-term SVE test and provides conclusions regarding the migration to groundwater exposure pathway and the vapor intrusion exposure pathway.

### 5.1 Threat to Groundwater

The contribution of TCE to the groundwater was modeled using a time-dependent HYDRUS-1D model, and mass loading inputs derived from the soil vapor results. This model allowed the input of a stratified soil column, so the stratigraphy logged in the data gap boring 32C080SB, located approximately 5 feet from VE-4S, was generalized for input. The vadose zone transport to, and the advective solute transport within, the groundwater were then calculated over a 100-year period, with no accounting for natural attenuation processes. This methodology and the full set of inputs are described in Appendix E of the *Site SD032 Data Gap Investigation Summary Report* (CH2M HILL, 2014b).

In the conclusions of this appendix (p. E-6):

*“Modeling results forecast a maximum increase in groundwater TCE concentrations to 8.5 µg/L within the first 10 years, followed by a slow decline in concentrations until the end of the 100-year simulation period.”*

These conclusions were reached before this short-term SVE test was performed. The total TCE mass removed by SVE during the short-term SVE test was 13.2 pounds, and the residual TCE mass near VE-4S is estimated to be 0.8 pound. This means there was an estimated residual TCE mass of 14 pounds prior to the SVE test and that extraction during the test removed approximately 94 percent of the remaining mass. If the HYDRUS-1D model were to be run again, the outcome would likely be smaller, in proportion to the reduction of the source mass term.

Potential groundwater impact is also modeled using the Soil Vapor Extraction Endstate Tool (SVEET), which was published by the Pacific Northwest National Laboratory and distributed by the U.S. Department of Energy in February 2013 (Truex et al., 2013). This tool uses a simplified, one-dimensional conceptual framework to predict a groundwater concentration. Attachment 4 contains the input sheet that illustrates this framework and identifies the input parameters.

The input to the model requests that the soil vapor concentration be provided, as well as the lengths and distances associated with the zone of contamination, the depth bgs, the depth to groundwater, and the distance to a compliance well. The soil and environmental parameters requested include the moisture content, temperature, and the Darcy velocity of the groundwater. The input parameters assumed for this evaluation are presented in Attachment 4.

The results of this analysis predict that the remaining vapor concentrations in the extraction zone of VE-4S would result in a concentration of TCE of 2 micrograms per liter (µg/L) at a compliance well located within 33 feet downgradient. The concentration of TCE in the latest groundwater sample from VE-4D was 1.7 µg/L (July 22, 2014). Therefore, the SVEET prediction more closely matches the empirical data than the more conservative, prior HYDRUS-1D model prediction (8.5 µg/L). Notably, if the HYDRUS-1D model result were reduced by the ratio of post- and prior-SVE residual TCE mass (0.8/2.7), it would predict a maximum TCE concentration of 2.5 µg/L.

Two lines of evidence based on empirical data also support the conceptual model that the residual mass remaining in soil at VE-4S is not a threat to groundwater. The first line of empirical evidence is the low TCE concentrations detected in groundwater samples collected from VE-4D. The bottom 15 feet of vapor well VE-4D, which is screened from 40 to 75 feet bgs, is submerged, and groundwater samples have been collected from this well and analyzed for VOCs since as early as 2006. Seven groundwater samples were collected from the bottom of the screen at VE-4D (74 feet bgs) between 2006 and 2014, and one groundwater sample was collected near the water table (62 feet bgs) in 2013. TCE concentrations in the first two samples collected slightly exceeded the MCL (maximum detection of 6.71 µg/L), while all subsequent concentrations have shown a decreasing trend and have been well below the MCL, ranging from 1.2 to 3.81 µg/L. The most recent TCE concentration detected in groundwater at VE-4D was 1.7 µg/L (July 2014). These data indicate that TCE is not migrating to groundwater from the overlying vadose zone.

The second line of empirical evidence is the decrease in soil vapor concentrations between VE-4S and VE-4D. The initial soil vapor samples from Summa canisters contained TCE concentrations of 530 ppmv (VE-4S) and 0.029 ppmv (VE-4D). This is a four order of magnitude decrease. Similarly, the TCE concentrations from the rebound Summa canister samples collected on January 14 showed a two-order-of-magnitude difference between VE-4S and VE-4D. This decrease in concentration with depth supports the conceptual model that TCE is not a threat to groundwater.

The *Site 32 North and South SVE Systems Shutdown Report* (CH2M HILL, 2010) recommended the SVE system be permanently shut down and recommended no further remediation of vadose zone soil at Site SD032. The Central Valley Water Board concurred with this recommendation in a comment letter for this report dated November 19, 2010. The TCE concentration in VE-4S from 2008 (used in the *Site 32 North and South SVE Systems Shutdown Report*) was 4.8 ppmv. The final rebound concentration from this short-term SVE test is 6.9 ppmv. Therefore, the TCE concentration is back within the range where the Central Valley Water Board previously concurred that no further remediation of vadose zone soils was required.

## 5.2 Vapor Intrusion

The vapor intrusion pathway is potentially complete because of the presence of residual contamination 20 to 30 feet bgs. However, as discussed in the screening-level risk assessment conducted as part of the *Site SD032 Data Gap Investigation Summary Report* (CH2M HILL, 2014b), the risks from the shallow soil vapor samples (< 15 feet bgs) do not present a risk for current industrial exposure scenarios based on the attenuation of TCE in proximity to the VE-4/32C080SB monitoring location. This attenuation is consistent with the site conceptual model that the residual TCE is bound in a low permeability zone from 18 to 29 feet bgs. Also, as noted in Section 4, the vapor intrusion source strength is small and diffusion-limited and unlikely to present a vapor intrusion risk for future residential or industrial exposure scenarios.

The screening-level risk assessment was conducted to provide updated information regarding potential risks from the direct contact soil exposure pathway and the vapor intrusion exposure pathway after completion of historical remedial actions near areas of previously high levels of contamination. Soil vapor samples from soil boring 32C080SB located adjacent to VE-4S, in the core of the TCE contamination, were used in this risk assessment. The shallow soil vapor TCE concentrations ranged from 0.46 J to 41 parts per billion by volume (ppbv), which indicated TCE at depth was not migrating to the surface at levels that represent a vapor intrusion risk (i.e., the excess lifetime cancer risk estimate is less than the point-of-departure target risk level of  $1 \times 10^{-6}$  and the noncancer hazard index is less than 1). The estimated TCE vapor intrusion cancer risks and noncancer hazards for both residential and industrial exposure scenarios are less than target levels in the shallow soil vapor samples.



## 6.0 Summary and Conclusion

VE-4 is located within the flightline and is surrounded by nose docks and a taxiway. It is located between two former OWSs, which were the suspected source of TCE contamination in the vadose zone and have been removed. Extensive SVE has occurred to address contamination at Site SD032, including the VE-4 area. During its operation from 1998 to 2009, the Site 32 North and South SVE systems reduced the concentrations of VOCs throughout Site SD032 to levels below those with potential to affect groundwater. No further remediation of vadose zone soil was proposed in the *Site 32 SVE Shutdown Report* (CH2M HILL, 2010), which was approved by the Central Valley Water Board.

A data gap investigation was conducted in 2013 to further characterize the nature and extent of contamination that remained in soil vapor at Site SD032 and to collect sufficient data to evaluate site closure. The results of the investigation showed that although TCE remained at concentrations above residential screening levels in the VE-4 area, the residual TCE mass was small and did not represent a risk to groundwater or human health (vapor intrusion or direct contact). This conclusion is based on multiple lines of evidence, including empirical data that show TCE does not exceed residential screening levels in the top 10 feet of soil and does not exceed the MCL in groundwater. Based on this evidence, Site SD032 was determined to be suitable for UU/UE and was recommended for closure without further remediation in the *Site SD032 Data Gap Investigation Summary Report* (CH2M HILL, 2014b).

However, the Central Valley Water Board and DTSC requested that additional evaluation of the TCE contamination at VE-4 be performed. In response to this request, a short-term SVE test was conducted at VE-4S/D to gather additional evidence to show that the residual TCE is not a threat to groundwater or vapor intrusion. The short-term SVE test described in the previous sections confirmed the following:

- Residual mass of TCE is small (0.8 pound).
- Approximately 99.8 percent of the TCE mass has been removed (original 1999 estimate of 500 pounds).
- Contaminated area is small (~28-foot radius around VE-4S and total soil volume of approximately 2,700 cubic yards).
- Residual TCE mass is diffusion-limited (final mass transfer rate of 0.003 pound per day).

The following lines of evidence support a conclusion that TCE is not a threat to groundwater:

- TCE concentrations in groundwater samples collected from VE-4D are below the MCL and decreasing (1.7 µg/L in a sample from July 2014).
- SVEET predicts a groundwater TCE concentration of 2 µg/L.
- TCE concentrations in soil vapor decrease as much as four orders of magnitude from VE-4S to VE-4D, which indicates TCE is not migrating to groundwater.

The following lines of evidence support a conclusion that TCE is not a vapor intrusion threat:

- TCE concentrations in shallow soil vapor samples from 32C080SB (< 15 feet bgs) are below risk-based screening levels.
- The source volume and mass are small.
- Mass transfer rates are low (diffusion-limited source in clay at depth).

In conclusion, the results of the short-term SVE test confirm the findings of the data gap investigation, which concluded that although a low mass of TCE remains in a small volume of soil near VE-4S, the TCE does not represent a threat to indoor air or groundwater. Thus, no further action for TCE in soil is necessary and Site SD032 is suitable for UU/UE.

## 7.0 Works Cited

CH2M HILL. 2014a. *Site SD032 Short-term Soil Vapor Extraction Test Work Plan Technical Memorandum*. Prepared for Beale Air Force Base, California. Revised Final. December.

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U.S. Environmental Protection Agency (EPA). 2013. *User's Guide for Regional Screening Levels*. [http://www.epa.gov/reg3hwmd/risk/human/rb-concentration\\_table/usersguide.htm](http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/usersguide.htm). November.

U.S. Environmental Protection Agency (EPA). 2012. *Regional Screening Levels*. (Formerly PRGs). <http://www.epa.gov/region9/superfund/prg/index.html>. November.



**TABLE 1**

Results of Phase 1 Vapor Sample Analyses during Extraction  
 Site SD032 Short-term SVE Test Evaluation, Beale Air Force Base, California

Well	Date	Time	TCE (ppmv)		Notes
			Tedlar	Summa	
VE-4S	10/1/2014	11:48	636		Extraction at VE-4S started at 11:46.
		11:57	583		
		12:08		530/430	Normal and field duplicate samples.
		12:26	459		
		12:52	397		
		14:03	314		
		15:55	264		
		18:02	235		
10/2/2014	08:24	08:24	138		
		12:40	121		
		15:35	117		
10/3/2014	07:38	07:38	82		
		11:35	70		
		15:40	63		
10/4/2014	07:35	07:35	51		
		12:18		44	
		13:16	47		Extraction at VE-4S ceased at 13:17.
		16:25	155		Collected approximately 3 hours after extraction ceased.
10/7/2014	08:48	08:48	9.1		Collected approximately 3 days after extraction ceased.
VE-4D	10/1/2014	10:59	0.11		Collected prior to extraction at VE-4S.
		11:05		0.029	Collected prior to extraction at VE-4S.
		14:00	1.3		
		17:58	0.76		
10/2/2014	08:21	08:21	0.38		
		12:33	0.29		
		15:30	0.38		
10/3/2014	07:30	07:30	0.93		
		11:30	0.92		
		15:35	1.0		
10/4/2014	07:27	07:27	1.5		
		12:27		0.47	
		13:06	1.6		
		16:15	1.6		Collected approximately 3 hours after extraction ceased at VE-4S.
10/7/2014	08:31	08:31	8.6		Collected approximately 3 days after extraction ceased at VE-4S.

**Notes:**

ppmv = part(s) per million by volume  
 TCE = trichloroethene

**TABLE 2**

PID Readings and System Parameters Collected during Phase 2 Extraction  
*Site SD032 Short-term SVE Test Evaluation, Beale Air Force Base, California*

Date	Time	System		VE-4S				VE-4D				Comment
		PID Reading (ppm)	Temp (°F)	Vacuum (in. H <sub>2</sub> O)	Differential Pressure (in. H <sub>2</sub> O)	PID Reading (ppm)	Flow (scfm)	Vacuum (in. H <sub>2</sub> O)	Differential Pressure (in. H <sub>2</sub> O)	PID Reading (ppm)	Flow (scfm)	
10/21/2014	15:07	---	71	28.0	0.65	---	23.4	7.20	5.0	---	26.1	Extraction at VE-4S/D started at 10:05.
10/22/2014	7:05	44.4	69	31.3	---	---	---	8.32	---	---	---	
	17:06	44.6	---	---	---	---	---	---	---	---	---	
10/23/2014	7:10	32.5	---	31.4	---	---	---	8.47	---	---	---	
	15:30	27.1	---	---	---	---	---	---	---	---	---	
10/24/2014	8:15	24.8	70	31.2	---	---	---	8.41	---	---	---	
	14:05	24.1	---	---	---	---	---	---	---	---	---	
10/27/2014	12:05	15.6	70	31.3	---	---	---	8.47	---	---	---	
10/28/2014	11:55	14.3	71	31.5	---	---	---	8.43	---	---	---	
10/29/2014	12:00	12.2	71	31.2	---	11.1	---	8.64	---	2.6	---	
10/30/2014	12:30	11.6	70	31.7	---	9.6	---	8.46	---	2.2	---	
10/31/2014	12:04	10.8	70	31.5	---	6.9	---	8.47	---	2.7	---	
11/4/2014	16:00	8.6	70	32.9	0.44	6.3	19.2	8.31	5.08	3.8	26.3	
11/5/2014	12:30	8.6	71	33.0	0.38	6.1	17.8	8.29	5.12	4.1	26.4	
11/6/2014	16:35	7.2	70	33.2	0.49	4.2	20.2	8.29	5.24	3.2	26.8	
11/7/2014	8:00	6.4	68	33.7	0.52	4.7	20.9	8.46	5.96	2.6	28.6	
11/10/2014	16:00	7.1	70	33.1	0.48	3.8	20.0	8.21	5.21	3.0	26.7	
11/11/2014	7:30	7.5	70	33.3	0.49	7.8	20.2	8.09	5.46	1.1	27.3	
11/12/2014	9:52	7.6	70	34.1	0.45	2.7	19.4	9.01	5.49	6.1	27.4	

**TABLE 2**

PID Readings and System Parameters Collected during Phase 2 Extraction  
 Site SD032 Short-term SVE Test Evaluation, Beale Air Force Base, California

Date	Time	System		VE-4S				VE-4D				Comment
		PID Reading (ppm)	Temp (°F)	Vacuum (in. H <sub>2</sub> O)	Differential Pressure (in. H <sub>2</sub> O)	PID Reading (ppm)	Flow (scfm)	Vacuum (in. H <sub>2</sub> O)	Differential Pressure (in. H <sub>2</sub> O)	PID Reading (ppm)	Flow (scfm)	
11/13/2014	9:25	---	71	33.5	0.50	---	20.4	8.30	5.70	---	27.9	Flow decreased at VE-4D at 9:30 to increase extraction from VE-4S.
	16:00	11.6	71	41.0	0.75	7.6	24.7	3.78	0.60	2.7	9.1	
11/14/2014	6:30	10.2	70	42.1	0.69	6.8	23.7	3.98	0.63	2.1	9.3	
11/17/2014	12:00	10.2	70	41.9	0.70	6.7	23.9	3.72	0.61	2.0	9.2	
11/18/2014	16:00	9.7	69	41.7	0.68	6.2	23.6	3.74	0.60	2.1	9.1	
11/19/2014	15:10	5.7	69	41.9	0.63	5.8	22.7	3.82	0.59	1.8	9.0	
11/20/2014	16:00	6.2	68	41.9	0.64	5.9	22.9	3.72	0.62	1.0	9.3	
11/21/2014	12:05	10.4	70	43.7	0.72	10.4	24.2					VE-4D shut down at 12:05 for remainder of test.
11/24/2014	12:30	10.1	69	44.1	0.65	10.1	23.0					
11/25/2014	12:59	10.0	68	44.0	0.64	10.0	22.8					
11/26/2014	8:00	10.0	69	44.0	0.60	10.0	22.1					
12/1/2014	15:05	7.6	68	43.7	0.65	7.6	23.0					
12/2/2014	6:00	7.3	68	43.6	0.66	7.3	23.2					
12/3/2014	12:00	7.4	68	43.6	0.68	7.4	23.5					
12/4/2014	15:30	7.1	69	43.5	0.67	7.1	23.3					
12/5/2014	14:30	6.7	69	43.6	0.70	6.7	23.9					
12/8/2014	16:50	5.2	68	43.8	0.66	5.2	23.2					
12/9/2014	16:15	5.3	69	43.7	0.69	5.3	23.7					
12/12/2014	11:30	5.7	68	43.8	0.67	5.7	23.4					Circuit breaker had tripped since last visit (most likely occurred on 12/11 during storm).

**TABLE 2**

PID Readings and System Parameters Collected during Phase 2 Extraction  
*Site SD032 Short-term SVE Test Evaluation, Beale Air Force Base, California*

Date	Time	System		VE-4S				VE-4D				Comment
		PID Reading (ppm)	Temp (°F)	Vacuum (in. H <sub>2</sub> O)	Differential Pressure (in. H <sub>2</sub> O)	PID Reading (ppm)	Flow (scfm)	Vacuum (in. H <sub>2</sub> O)	Differential Pressure (in. H <sub>2</sub> O)	PID Reading (ppm)	Flow (scfm)	
12/15/2014	16:00	6.0	68	43.7	0.68	6.0	23.5					
12/16/2014	17:00	6.1	68	43.8	0.70	6.1	23.9					
12/17/2014	14:30	5.9	68	43.7	0.69	5.9	23.7					

## Notes:

--- = reading not collected

°F = degrees Fahrenheit

in. H<sub>2</sub>O = inches of water

PID = photoionization detector

ppm = part(s) per million

scfm = standard cubic feet per minute

## Flow Equation:

$$\text{Flow} = 128.8 \times K \times (D^2) \times \text{SQRT}((P_D \times (14.696 - V/12/2.31)) / ((T+460) \times \text{SGs}))$$

where: Flow Coefficient (K)                      Pipe Diameter (P<sub>D</sub>)

VE-4S            0.556 (Omega FPT-6100)            1.59 inches (inside diameter of Schedule 40, 1.5-inch nominal pipe)

VE-4D            0.52 (Dwyer 1-inch pitot tube)            1.029 inches (inside diameter of Schedule 40, 1-inch nominal pipe)

T = temperature (°F)

V = vacuum (inches of water)

P<sub>D</sub> = differential pressure from pitot tube (inches of water)

**TABLE 3**

Average Flows and Vacuums during Phase 2 Extraction

Site SD032 Short-term SVE Test Evaluation, Beale Air Force Base, California

Dates	Duration (days)	VE-4S		VE-4D	
		Vacuum (in. H <sub>2</sub> O)	Flow (scfm)	Vacuum (in. H <sub>2</sub> O)	Flow (scfm)
October 21 to November 13	23	33.3	19.5	8.40	27.1
November 13 to November 21	8	41.8	23.6	3.80	9.2
November 21 to December 11	20	43.8	23.4	---	0
December 11 to December 12	1	---	0	---	0
December 12 to December 17	5	43.8	23.7	---	0

Notes:

--- = reading not collected

in. H<sub>2</sub>O = inches of water

scfm = standard cubic feet per minute



**TABLE 4**

Results of Phase 2 Vapor Sample Analyses during Extraction  
 Site SD032 Short-term SVE Test Evaluation, Beale Air Force Base, California

Well	Date	Time	TCE (ppmv)		Notes
			Tedlar	Summa	
VE-4S	10/21/2014	9:34	327		Collected prior to extraction at VE-4S/D, which started at 10:05.
		10:08	264		
		10:15		130	
		10:16	169		
		10:35	124		
		12:28	89		
		13:30	84		
		15:15	68		
	10/29/2014	12:30		16	
	11/4/2014	15:50		14	
	11/11/2014	7:42		11	
	11/19/2014	15:37		6.2	Flow increased on November 13.
	11/25/2014	13:11		0.51	Flow increased on November 21.
12/2/2014	6:15		3.7		
12/17/2014	15:00		2.7		
VE-4D	10/21/2014	9:20	2.7	4.8	Collected prior to extraction at VE-4S/D, which started at 10:05.
		12:40	3.0		
		13:28	3.6		
		15:10	4.1		
	10/29/2014	12:40		2.2	
	11/4/2014	16:00		1.1	
	11/11/2014	7:46		0.65	
	11/19/2014	15:40		0.61	Flow decreased on November 13.
	11/25/2014	13:37		0.24	Flow terminated on November 21.
	12/2/2014	6:20		0.28	
	12/17/2014	15:07		0.43	

## Notes:

ppmv = part(s) per million by volume

TCE = trichloroethene

**TABLE 5**

Results of Phase 2 Vapor Sample Analyses during Rebound  
 Site SD032 Short-term SVE Test Evaluation, Beale Air Force Base, California

Well	Date	Time	TCE (ppmv)		Notes
			Tedlar	Summa	
VE-4S	1/14/2015	9:39	36		Collected prior to extraction at VE-4S.
		9:54	18	0.56	
		9:56	20		
		10:03	24		
		11:11	26		
		12:10	27		
		14:06	27		
		16:00	26		
	16:03	25	2.2		
	1/21/2015	14:18		6.9	Collected 1 week after 6-hour extraction.
VE-4D	1/14/2015	9:34	ND	0.0032	Collected prior to extraction at VE-4S.
		11:09	ND		
		12:08	ND		
		14:04	ND		
		15:55	ND		

## Notes:

ND = analyte not detected

ppmv = part(s) per million by volume

TCE = trichloroethene

**TABLE 6**

Calculated TCE Masses Extracted during SVE Testing  
*Site SD032 Short-term SVE Test Evaluation, Beale Air Force Base, California*

Phase	Duration (days)	Mass Removed (pounds)	
		VE-4S	VE-4D
Phase 1 Extraction	3	5.36	--
Phase 2 Extraction	57	7.16	0.58
Rebound Extraction	0.25	0.10	--
<b>Total Mass</b>		<b>12.62</b>	<b>0.58</b>

Notes:

ppmv = part(s) per million by volume  
scfm = standard cubic feet per minute

**TABLE 7**

Calculated TCE Mass Transfer Rates

*Site SD032 Short-term SVE Test Evaluation, Beale Air Force Base, California*

Rebound Period <sup>a</sup>	TCE Concentration (ppmv)		Duration (t)	Mass Transfer Rate (lb/day)
	Initial (C <sub>1</sub> )	Final (C <sub>2</sub> )		
1	44	130	17	0.020
1 <sup>b</sup>	47	327	17	0.066
2	2.7	36	29	0.005
3	2.2	6.9	6	0.003

<sup>a</sup> The rebound periods correspond to the rebound periods listed in Section 4.4.<sup>b</sup> TCE concentrations are from Tedlar bag samples. All other TCE concentrations are from Summa canister samples.

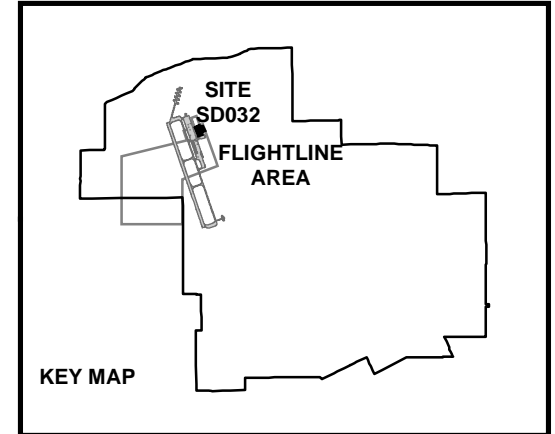
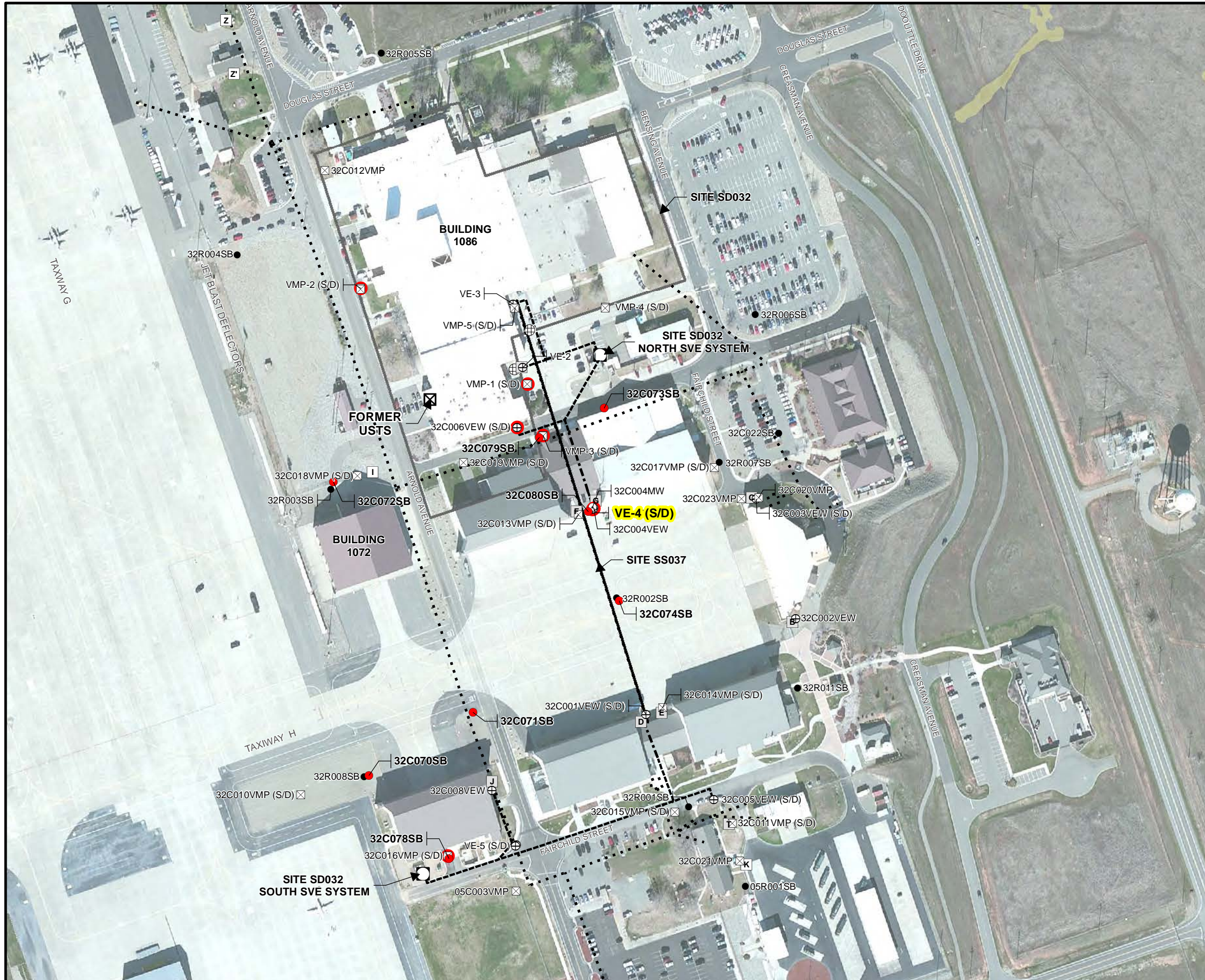
Notes:

See Section 4.4 for discussion of calculations and inputs.

lb/day = pound(s) per day

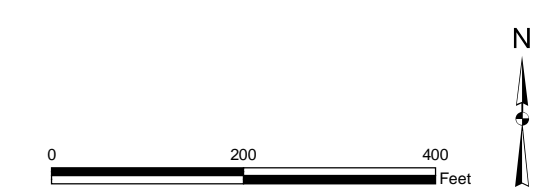
**Figures**

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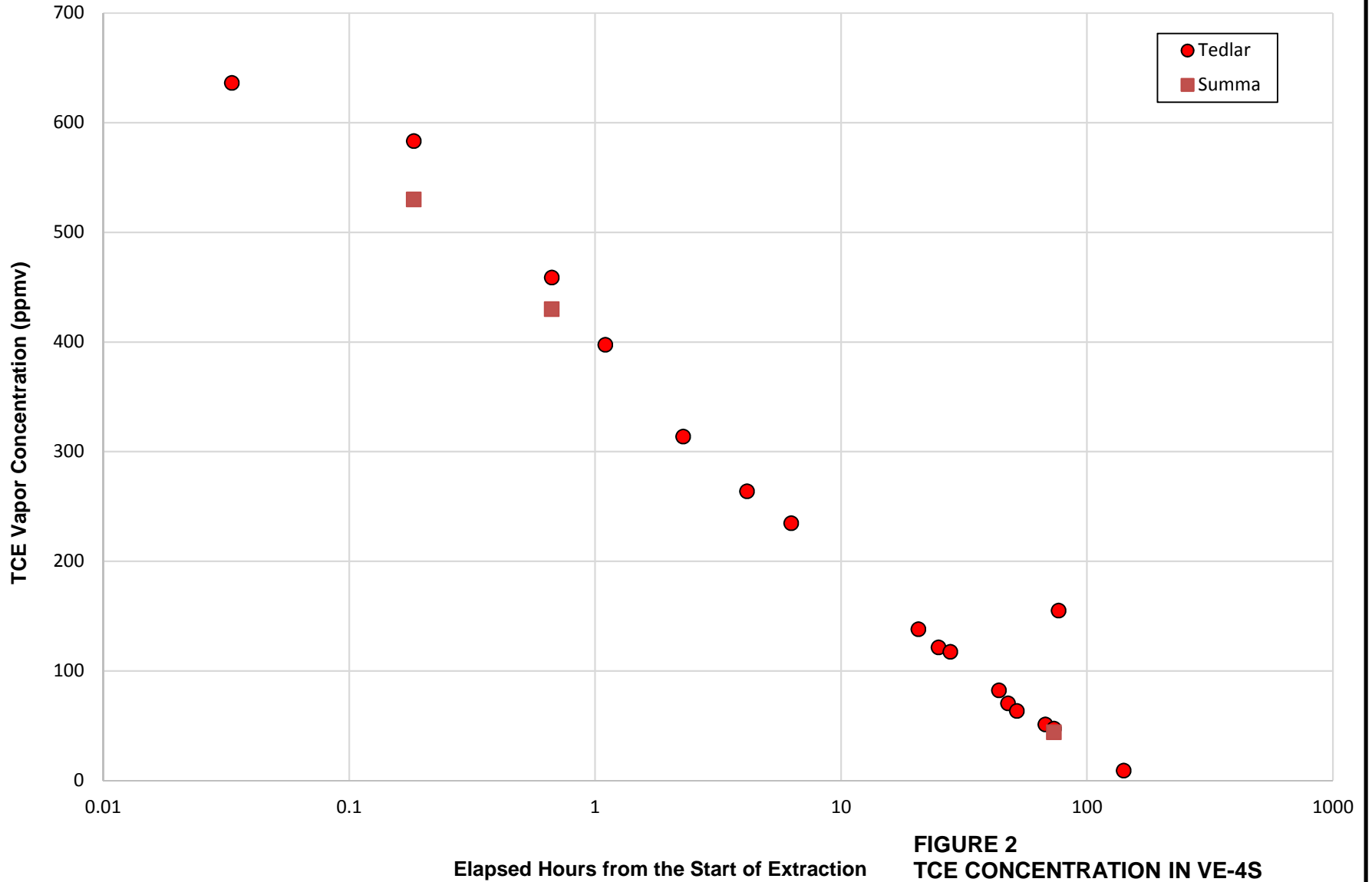


- LEGEND**
- 2013 SOIL BORING/SOIL VAPOR SAMPLING LOCATION
  - 2013 SOIL VAPOR SAMPLING LOCATION
  - ⊠ SOIL VAPOR MONITORING POINT
  - ⊕ SOIL VAPOR EXTRACTION WELL
  - SOIL SAMPLING LOCATION
  - GROUNDWATER MONITORING WELL
  - ⊞ BLOWER
  - ⊞ OIL/WATER SEPARATOR (IN USE)
  - ⊞ OIL/WATER SEPARATOR (REMOVED/CLOSED IN PLACE)
  - ⊕ WASH RACK
  - ⊠ UNDERGROUND STORAGE TANK LOCATION
  - ABOVEGROUND CONVEYANCE
  - BELOWGROUND CONVEYANCE
  - ... SANITARY SEWER/IWL CONVEYANCE
  - SITE INVESTIGATION BOUNDARY
  - BASE BOUNDARY
  - STREAMS
  - VERNAL POOL OR SEASONAL WETLAND

**NOTE:**  
 VERNAL POOL AND SEASONAL WETLAND MAP LAYERS WERE OBTAINED FROM BEALE AIR FORCE BASE AND ARE BASED ON U.S. ARMY CORPS OF ENGINEERS LABS LIDAR WETLANDS DELINEATION (SPRING 2009).

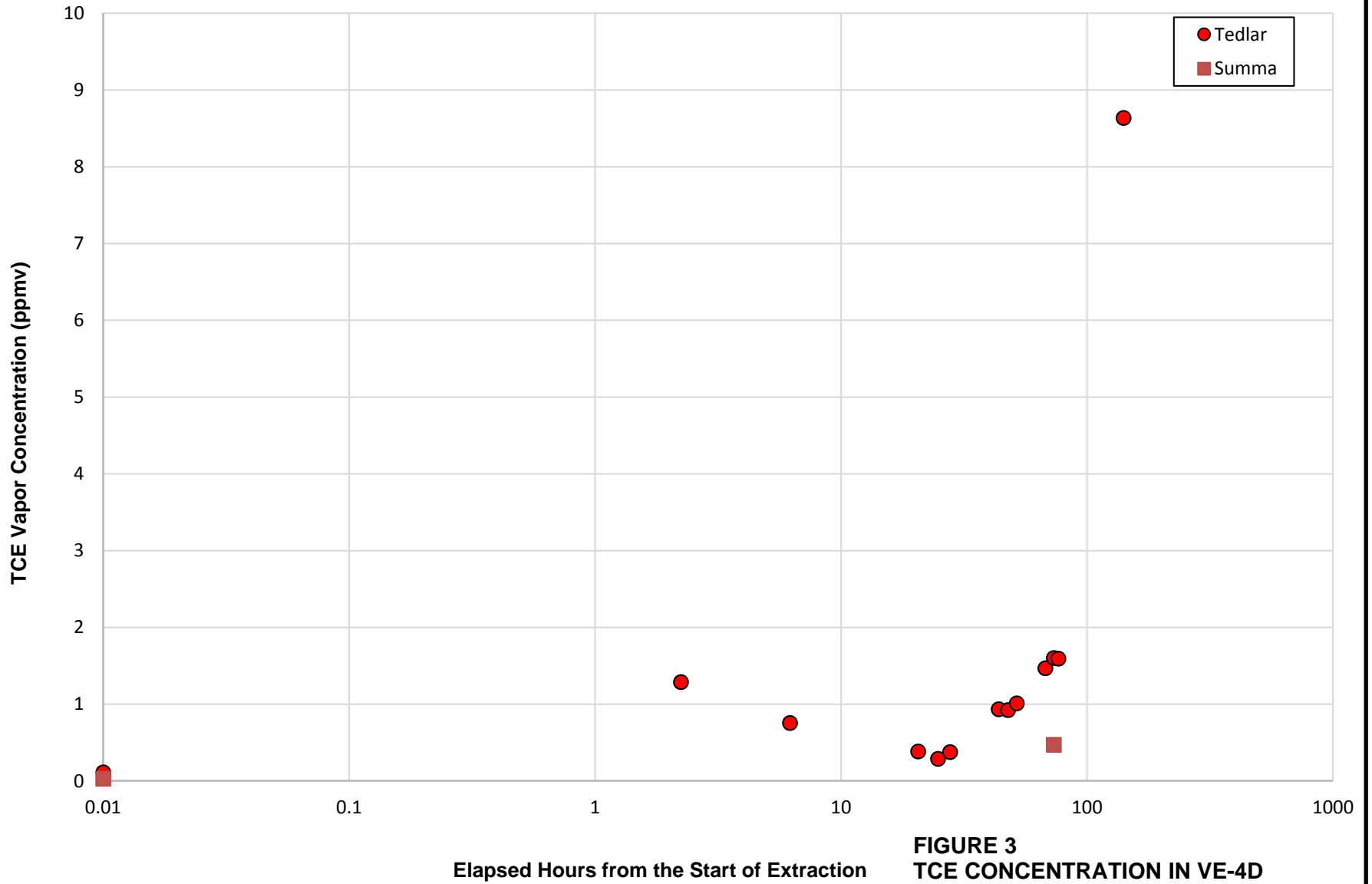


**FIGURE 1**  
**SITE SD032 FEATURES AND SAMPLE LOCATIONS**  
 SITE SD032 SHORT-TERM SVE TEST EVALUATION  
 BEALE AIR FORCE BASE, CALIFORNIA



**FIGURE 2**  
**TCE CONCENTRATION IN VE-4S**  
**DURING PHASE 1**

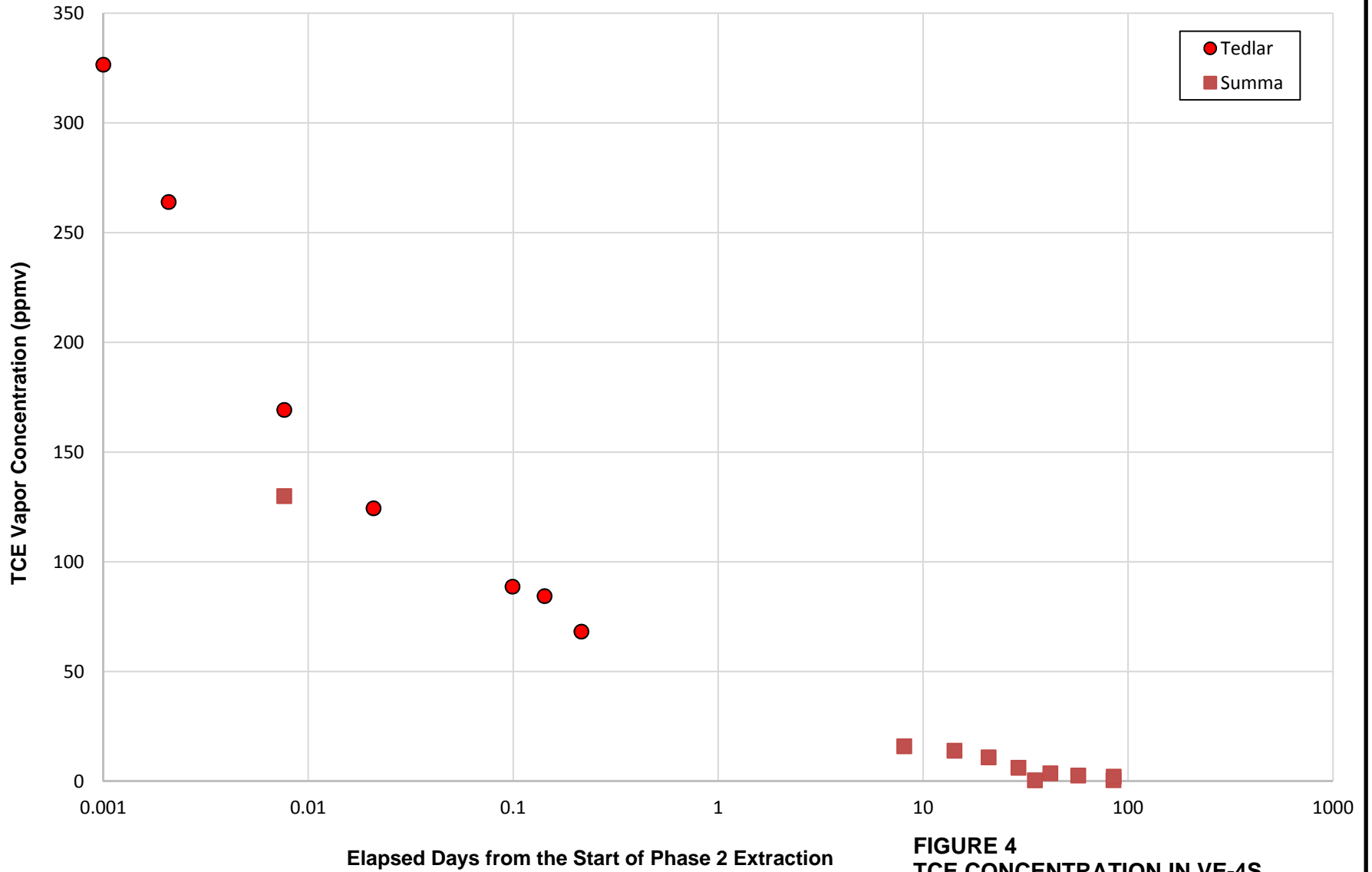
SITE SD032 SHORT-TERM SVE TEST EVALUATION  
 BEALE AIR FORCE BASE, CALIFORNIA



**FIGURE 3**  
**TCE CONCENTRATION IN VE-4D**  
**DURING PHASE 1**

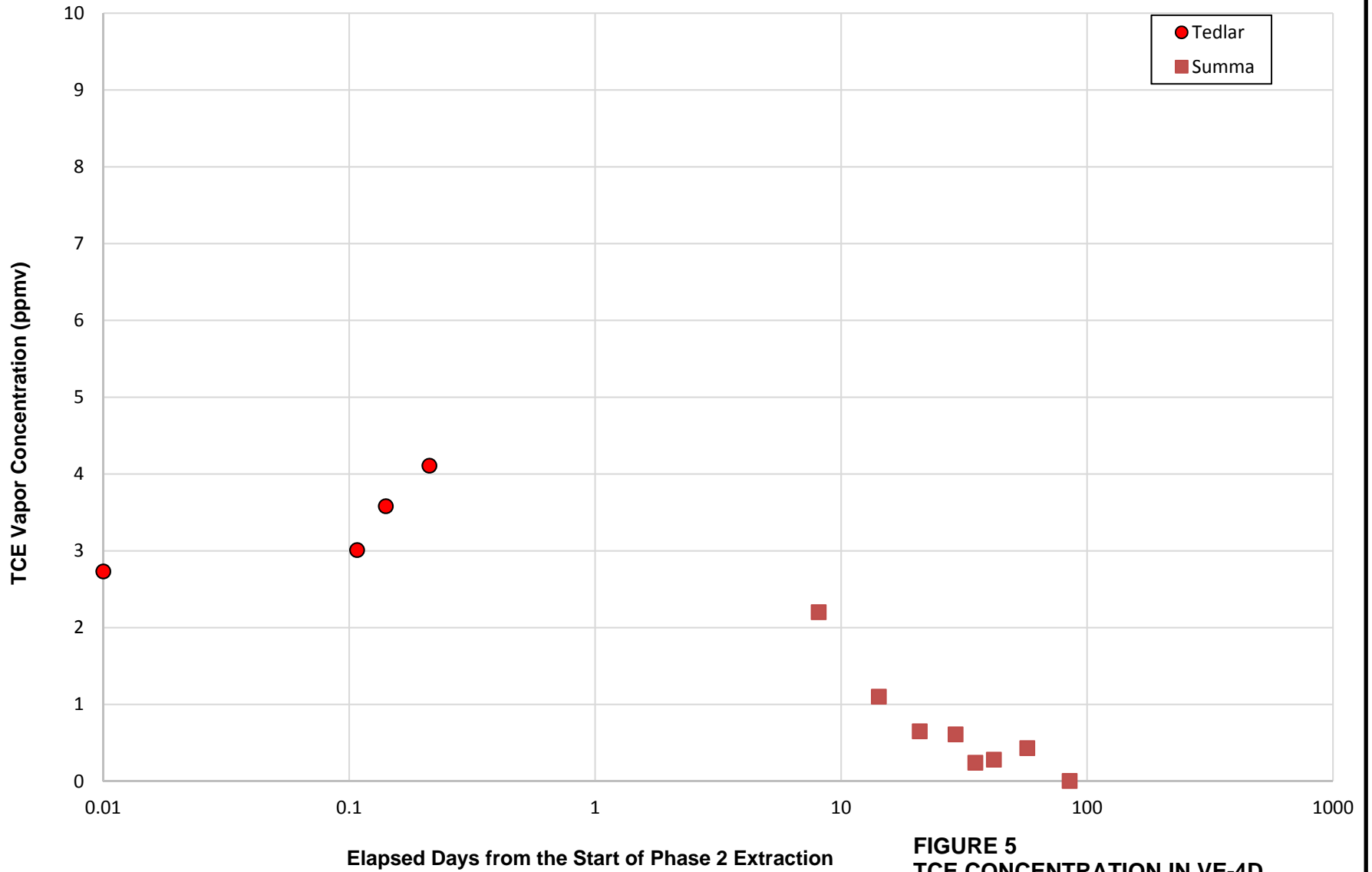
SITE SD032 SHORT-TERM SVE TEST EVALUATION  
 BEALE AIR FORCE BASE, CALIFORNIA





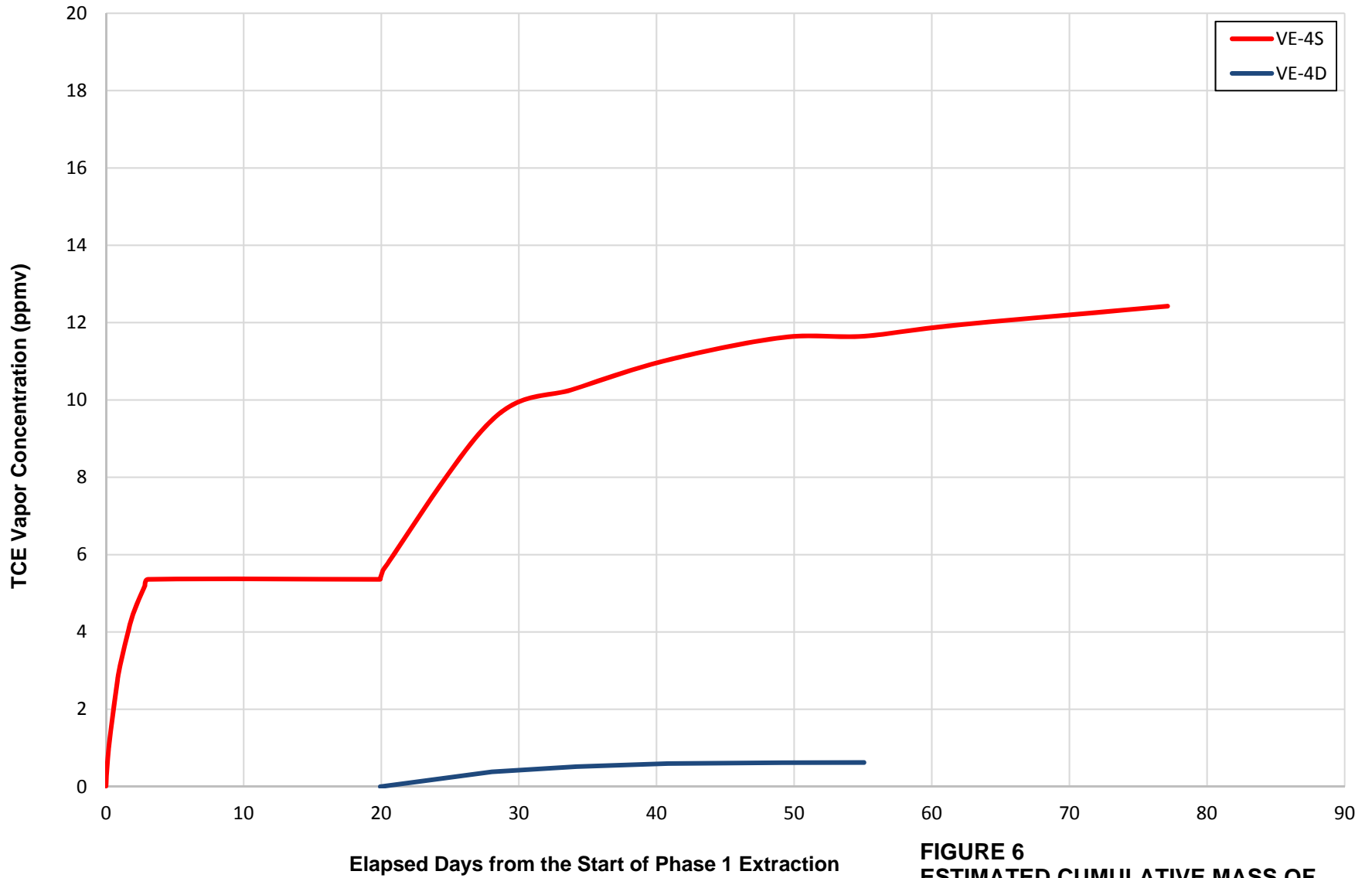
**FIGURE 4**  
**TCE CONCENTRATION IN VE-4S**  
**DURING PHASE 2**

SITE SD032 SHORT-TERM SVE TEST EVALUATION  
BEALE AIR FORCE BASE, CALIFORNIA



**FIGURE 5**  
**TCE CONCENTRATION IN VE-4D**  
**DURING PHASE 2**

SITE SD032 SHORT-TERM SVE TEST EVALUATION  
 BEALE AIR FORCE BASE, CALIFORNIA



**FIGURE 6**  
**ESTIMATED CUMULATIVE MASS OF**  
**TCE EXTRACTED**

SITE SD032 SHORT-TERM SVE TEST EVALUATION  
BEALE AIR FORCE BASE, CALIFORNIA

**Attachment 1**  
**Vadose Zone Mass Transfer Testing, Site 32**  
**(Praxis, 2015)**

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**PRAXIS**

ENVIRONMENTAL TECHNOLOGIES, INC.

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**Final**

**VADOSE ZONE MASS TRANSFER TESTING  
SITE 32  
Beale AFB, California**

*February, 2015*

*Prepared for:*

CH2M Hill  
Sacramento, California

*Prepared by:*

PRAXIS Environmental Technologies, Inc.  
1440 Rollins Road  
Burlingame, California 94010

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## **Vadose Zone Mass Transfer Testing Site 32, Beale AFB, California**

This technical memorandum describes the effort and results of vadose zone mass transfer tests at Site 32 on Beale AFB, CA. The testing was performed in four phases:

- Soil vapor extraction from 1-Oct-14 to 4-Oct-14 (Phase I extraction)
- Rebound from 4-Oct-14 to 21-Oct-14
- Soil vapor extraction from 21-Oct-14 to 17-Dec-14 (Phase II extraction)
- Rebound from 17-Dec-14 to 21-Jan-15

The rebound following the Phase II extraction included a 6-hour extraction on 14-Jan-15 at well VE4s with the collection and analyses of a series of vapor samples.

### **1. Phase I Mass Transfer Test**

#### ***1.1 Phase I Field Effort***

During Phase I, soil vapor extraction (SVE) was applied in well VE4s accompanied by monitoring in well VE4d. Well VE4s is screened from 10 to 30 feet below ground surface (ft bgs) and adjacent well VE4d is screened from 40 to 75 ft bgs. Extraction was initiated in VE4s on 1-Oct-14 at 11:46 am with a one horsepower blower powered by a nearby single phase, 120V outlet. Extraction continued uninterrupted until shutdown on 4-Oct-14 at 13:17, a total run time of 73.5 hours. Extracted vapors were routed through a pair of 200-pound drums of activated carbon connected in series. Vapor samples were collected and analyzed from both wells before extraction was initiated, throughout the extraction period, and after extraction was terminated.

Flow and vacuum monitoring during the extraction was performed both automatically and manually. The initial extraction rate was 30.0 scfm. The data reveal an initial transient of several hours as the extraction rate decreased to a steady average of 28.5 scfm with an applied vacuum of 38 inH<sub>2</sub>O where it remained for the duration of the Phase I test. Similarly the transient vacuum response in VE-4d rose to a steady value of 0.5 inH<sub>2</sub>O.

#### ***1.2 Phase I Vapor Sampling***

Samples of extracted vapor from VE-4s and vapors from the deeper VE-4d were collected by Praxis in 1- and 3-liter Tedlars bags with a Teflon-lined sampling pump with a flowrate of approximately 16 liters per minute. The approximate schedule of initial sampling, with zero time as the start of extraction, was:

- VE4s (extraction): Baseline, 10 minutes, 30 minutes, 1 hour, 2 hours, 4 hours, and 6 hours
- VE4d (monitor): Baseline, 2 hours, and 6 hours

For baseline sampling of VE4s and sampling of VE4d, the sampling pump was used to purge the wells of at least three well volumes (i.e., at least ten minutes at a flow rate of 16 liters per minute). At the conclusion of the sampling during the first 6 hours of extraction, Praxis left the system operating unattended and returned to its laboratory to analyze the ten 1-liter vapor samples with a calibrated HP 6890 gas chromatograph (GC). Duplicate three-liter Tedlar bags



were analyzed with a Thermo GasTech GTCO2 for oxygen, carbon dioxide and methane. All Tedlar bag samples were analyzed within 24 hours of collection. CH2M Hill collected Summa canister samples for analysis by a California-certified laboratory. Results of the GC analyses for TCE vapor concentration as well as cis-1,2-DCE are provided in Table 1-1 along with measures of carbon dioxide, oxygen, and methane.

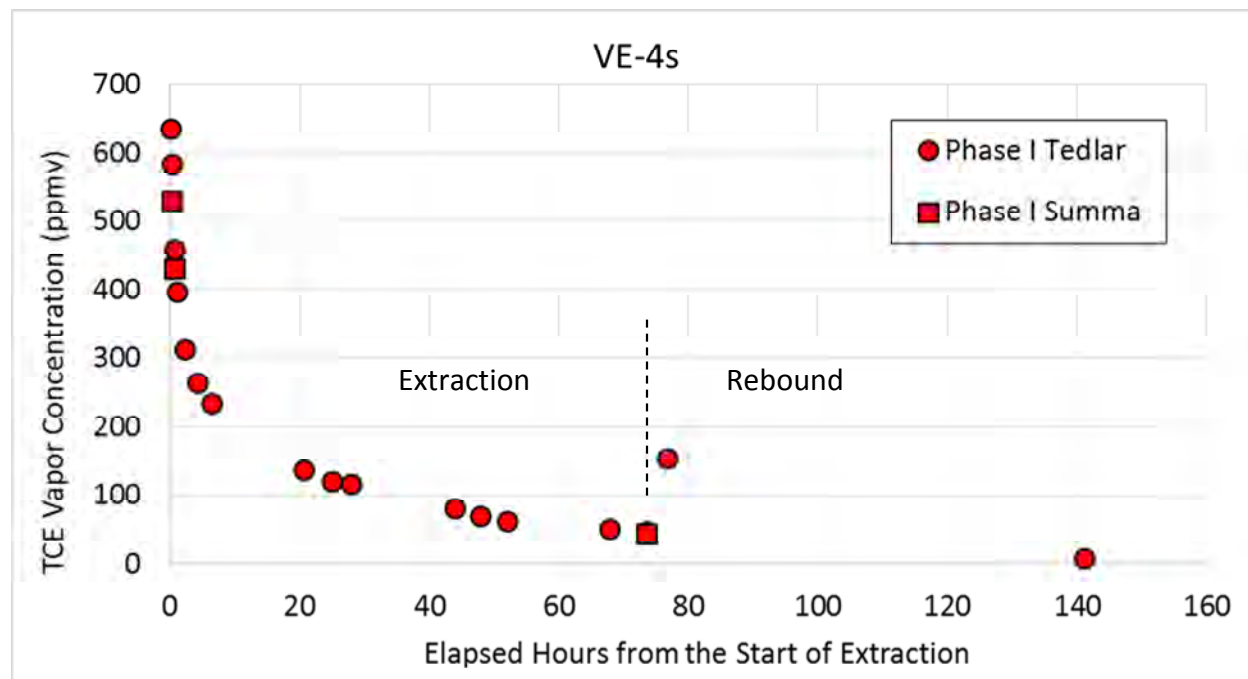
**Table 1-1. Results of Phase I GC Vapor Sample (Tedlar) Analyses**

Date	Time	Location	TCE (ppmv)	cis-1,2-DCE (ppmv)	Methane (ppmv)	O2 (%)	CO2 (%)
10/1/2014	10:59	VE-4d	0.11	0.04	5	20.6	0.0
10/1/2014	11:48	VE-4s	636	33	24	20.1	0.4
10/1/2014	11:57	VE-4s	583	30	19	20.0	0.4
10/1/2014	12:26	VE-4s	459	25	20	20.0	0.4
10/1/2014	12:52	VE-4s	397	22	34	20.0	0.4
10/1/2014	14:00	VE-4d	1.3	0.0	5	20.5	0.0
10/1/2014	14:03	VE-4s	314	17	71	19.8	0.4
10/1/2014	15:55	VE-4s	264	15	96	20.0	0.4
10/1/2014	17:58	VE-4d	0.76	0.0	1	20.4	0.0
10/1/2014	18:02	VE-4s	235	14	96	19.9	0.4
10/1/2014	17:48	Field Blank	0.0	0.0	1	20.7	0.0
10/2/2014	8:21	VE-4d	0.38	0.0	1.1	20.2	0.1
10/2/2014	8:24	VE-4s	138	11.0	23.4	19.6	0.5
10/2/2014	12:33	VE-4d	0.29	3.4	1.0	20.0	0.1
10/2/2014	12:40	VE-4s	121	10.2	22.0	19.6	0.5
10/2/2014	15:35	VE-4s	117	9.4	21.3	19.4	0.5
10/2/2014	15:30	VE-4d	0.38	1.4	1.0	19.9	0.1
10/2/2014	15:45	Field Blank	0.0	0.0	1.0	20.3	0.1
10/3/2014	7:38	VE-4s	82	7.4	16	19.8	0.4
10/3/2014	7:30	VE-4d	0.93	0.20	0.97	20.2	0.0
10/3/2014	11:35	VE-4s	70	6.5	13.1	19.8	0.4
10/3/2014	11:30	VE-4d	0.92	0.11	0.88	20.1	0.0
10/3/2014	15:19	Field Blank	0.0	0.0	0.88	20.3	0.0
10/3/2014	15:35	VE-4d	1.0	0.040	0.93	20.2	0.0
10/3/2014	15:40	VE-4s	63	5.6	11	19.9	0.4
10/4/2014	7:35	VE-4s	51	4.8	6.9	20.0	0.4
10/4/2014	7:27	VE-4d	1.5	0.04	0.88	20.2	0.0
10/4/2014	13:16	VE-4s	47	4.4	5.4	19.7	0.4
10/4/2014	13:06	VE-4d	1.6	0.07	0.97	20.3	0.0
10/4/2014	12:36	Field Blank	0.0	0.0	1.0	20.3	0.0
10/4/2014	16:15	VE-4d	1.6	0.05	0.88	20.2	0.1
10/4/2014	16:25	VE-4s	155	13	36	19.6	0.5
10/7/2014	8:31	VE-4d	8.6	0.99	0.97	20.1	0.1
10/7/2014	8:48	VE-4s	9.1	1.1	0.69	19.5	0.5
10/7/2014	8:48	VE-4s dup	9.1	1.2	0.88	-	-

On the second and third days after starting extraction, vapor samples were collected from both VE4s and VE4d by CH2M Hill personnel at three times during the day (e.g., 7 a.m., 11 a.m., 3 p.m.). The samples were collected using the identical equipment and procedure from the first day of sampling. The Tedlar bags from the second day were shipped overnight to Praxis' laboratory in Burlingame, CA for GC analyses within 30 hours of collection. The samples collected on the third day were held for Praxis' return on the fourth day to shut down the extraction.

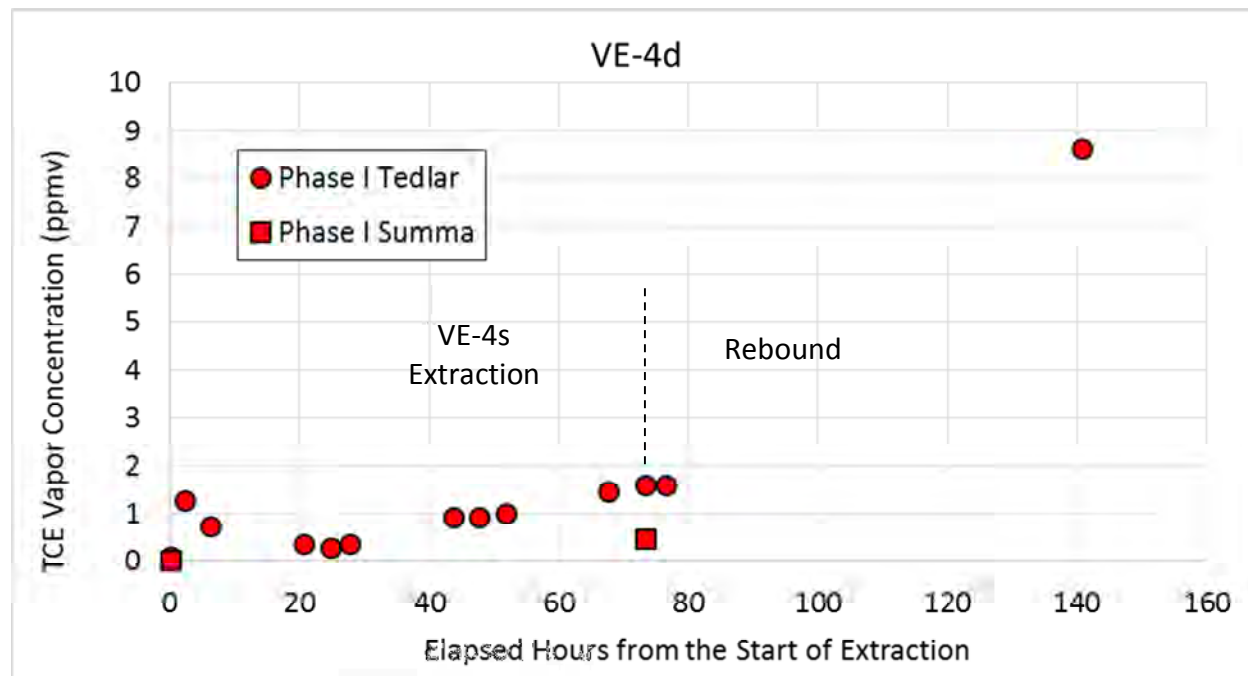
On the fourth day, Praxis personnel returned to Site 32 and collected vapor samples, terminated extraction, demobilized equipment, and collected one round of early rebound data (~3 hours after terminating extraction). The samples were transported to Praxis' laboratory for analysis along with the samples from the third day. One additional set of samples were collected by CH2M Hill personnel 3 days after terminating extraction. These samples were collected with the identical equipment and procedures as previous samples and were shipped overnight to Praxis' laboratory for GC analysis. Results of GC analyses from the Phase I extraction are provided in Table 1-1.

A plot of the TCE vapor concentration in VE-4s as a function of the elapsed hours from the start of extraction is provided in Figure 1-1. The extraction was terminated after 73.5 hours as indicated in Figure 1-1. A vapor sample collected 3 hours later yielded a spike in concentration that was not observed in the sample collected 3 days later (hour = 141). Both rebound samples were collected after a three casing volume purge.



**Figure 1-1. Phase I TCE Vapor Concentrations in Extraction Well VE-4s**

A plot of the TCE vapor concentration in VE-4d as a function of the elapsed hours from the start of extraction in VE-4s is provided in Figure 1-2. After the first 24 hours of extraction, the concentration is observed to increase through the end of the extraction test. Three days after the extraction was terminated the TCE concentration had increased to almost 9 ppmV.



**Figure 1-2. Phase I TCE Vapor Concentrations in Monitoring Well VE-4d**

CH2M Hill collected duplicate vapor samples in laboratory-supplied Summa canisters for analysis of VOCs using U.S. EPA Method TO-15 at a certified laboratory. Such samples were collected just after the startup of extraction and then repeated at the end of the extraction period.

## 2. Phase II Mass Transfer Test

### 2.1 Phase II Field Effort

After the 3 days of extraction during Phase I, the wells were capped and left dormant. This rebound period was maintained for 17 days until the start of Phase II. For Phase II, SVE was initiated in both wells VE4s and VE4d on 21-Oct-14 with a one horsepower regenerative blower. The wells were operated with a slightly higher flow from the deeper VE4d until 13-Nov-14 when the deep well flow was turned down. The average flows and applied wellhead vacuums during these periods are indicated in Table 2-1. On 21-Nov-14, the flow from VE4d was terminated but no discernable increase in flow was observed in VE4s. Extraction continued in VE4s with one brief power interruption on ~11-Dec-14 (estimated to be 24 hours) until shutdown on 17-Dec-14, a total run time of 57 days. Compared to the extraction during Phase I, the higher vacuum applied to well VE4s during Phase II (43.8 inH<sub>2</sub>O compared to 28.5 inH<sub>2</sub>O) yielded a lower extraction rate (23.4 scfm compared to 28.5 scfm).

**Table 2-1. Average Flows and Wellhead Readings during Phase II Extraction**

Dates	Duration (days)	Well VE4s		Well VE4d	
		Vacuum (inH2O)	Flow (scfm)	Vacuum (inH2O)	Flow (scfm)
21-Oct-14 to 13-Nov	23	33.3	19.5	8.4	27.1
13-Nov to 21-Nov	8	41.8	23.6	3.8	9.2
21-Nov to 11-Dec	20	43.8	23.4	-	0
11-Dec to 12-Dec	1	-	0	-	0
12-Dec to 17-Dec-14	5	43.8	23.7	-	0

The field measures for the applied vacuum and extraction rate are provided in Table 2-2. The extraction flows were calculated with the following manufacturer-supplied formula used to calculate the rates from the field readings of applied vacuum, pitot tube differential pressure and vapor temperature,

$$Flow (scfm) = 128.8 K D_i^2 \sqrt{\frac{P \Delta P}{(T + 460) S_s}}$$

With the notation,

$\Delta P$  = Differential pressure in the pitot tube expressed in inches of water column (inH2O)

K = Flow coefficient (0.52 for 1-inch pitot; 0.556 for 1.5-inch pitot)

D = Inside diameter of line size in inches (1.029 for 1-inch pitot; 1.59 for 1.5-inch pitot)

P = Static Line pressure in psia (= 14.696 – Vacuum inH20 / 27.7)

T = Temperature in degrees Fahrenheit (plus 460° Rankine)

S<sub>s</sub> = Specific Gravity at 60°F (= 1 for air)

The average flows shown in Table 2-1 are time-weighted averages of the extraction rates provided in Table 2-2.

**Table 2-2. Wellhead Readings and Calculated Flows during Phase II Extraction**

Date	Temperature (°F)	VE4s			VE4d		
		Vacuum (inH2O)	1.5" Pitot (inH2O)	Flow (scfm)	Vacuum (inH2O)	1" Pitot (inH2O)	Flow (scfm)
10/21/2014	71	28.0	0.70	23.4	7.2	5.00	26.1
11/4/2014	70	32.9	0.44	19.2	8.31	5.08	26.3
11/5/2014	71	33	0.38	17.8	8.29	5.12	26.4
11/5/2014	71	33	0.38	17.8	8.29	5.12	26.4
11/6/2014	70	33.2	0.49	20.2	8.29	5.24	26.8
11/7/2014	68	33.7	0.52	20.9	8.46	5.96	28.6
11/10/2014	70	33.1	0.48	20.0	8.21	5.21	26.7
11/11/2014	70	33.3	0.49	20.2	8.09	5.46	27.3
11/12/2014	70	34.1	0.45	19.4	9.01	5.49	27.4
11/13/2014	71	33.5	0.50	20.4	8.3	5.70	27.9
11/13/2014	71	41	0.75	24.7	3.78	0.60	9.1
11/14/20014	70	42.1	0.69	23.7	4.0	0.63	9.3
11/17/2014	70	41.9	0.70	23.9	3.72	0.61	9.2
11/18/2014	69	41.7	0.68	23.6	3.74	0.60	9.1
11/19/2014	69	41.9	0.63	22.7	3.82	0.59	9.0
11/20/2014	68	41.9	0.64	22.9	3.72	0.62	9.3
11/21/2014	70	43.7	0.72	24.2	-	-	0
11/24/2014	69	44.1	0.65	23.0	-	-	0
11/25/2014	68	44	0.64	22.8	-	-	0
11/26/2014	69	44	0.60	22.1	-	-	0
12/1/2014	68	43.7	0.65	23.0	-	-	0
12/2/2014	68	43.6	0.66	23.2	-	-	0
12/3/2014	68	43.6	0.68	23.5	-	-	0
12/4/2014	69	43.5	0.67	23.3	-	-	0
12/5/2014	69	43.6	0.70	23.9	-	-	0
12/8/2014	68	43.8	0.66	23.2	-	-	0
12/9/2014	69	43.7	0.69	23.7	-	-	0
12/12/2014	68	43.8	0.67	23.4	-	-	0
12/15/2014	68	43.7	0.68	23.5	-	-	0
12/16/2014	68	43.8	0.70	23.9	-	-	0
12/17/2014	68	43.7	0.69	23.7	-	-	0

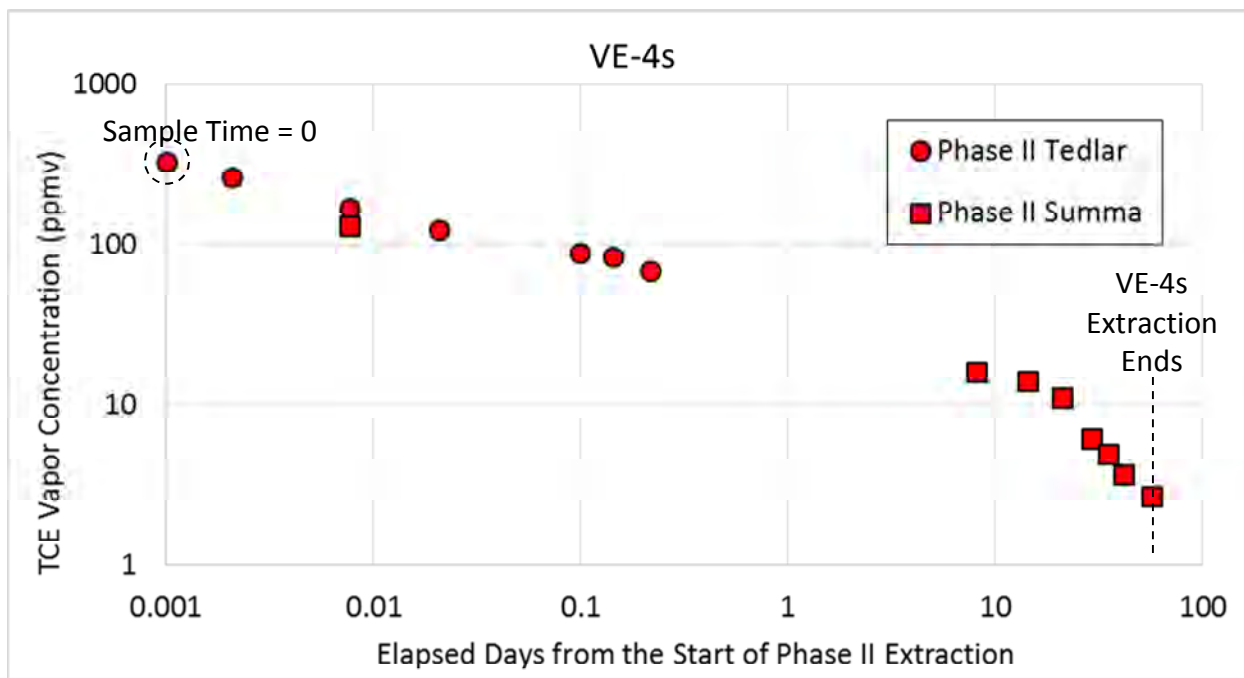
## 2.2 Phase II Vapor Sampling

The first 6 hours of vapor sampling in wells VE4s and VE4d was performed by Praxis in an identical manner and on a similar schedule as performed during the Phase I startup. After this period, sampling was performed solely with Summa canisters and certified laboratory analyses. The measured TCE vapor concentrations are summarized in Table 2-3.

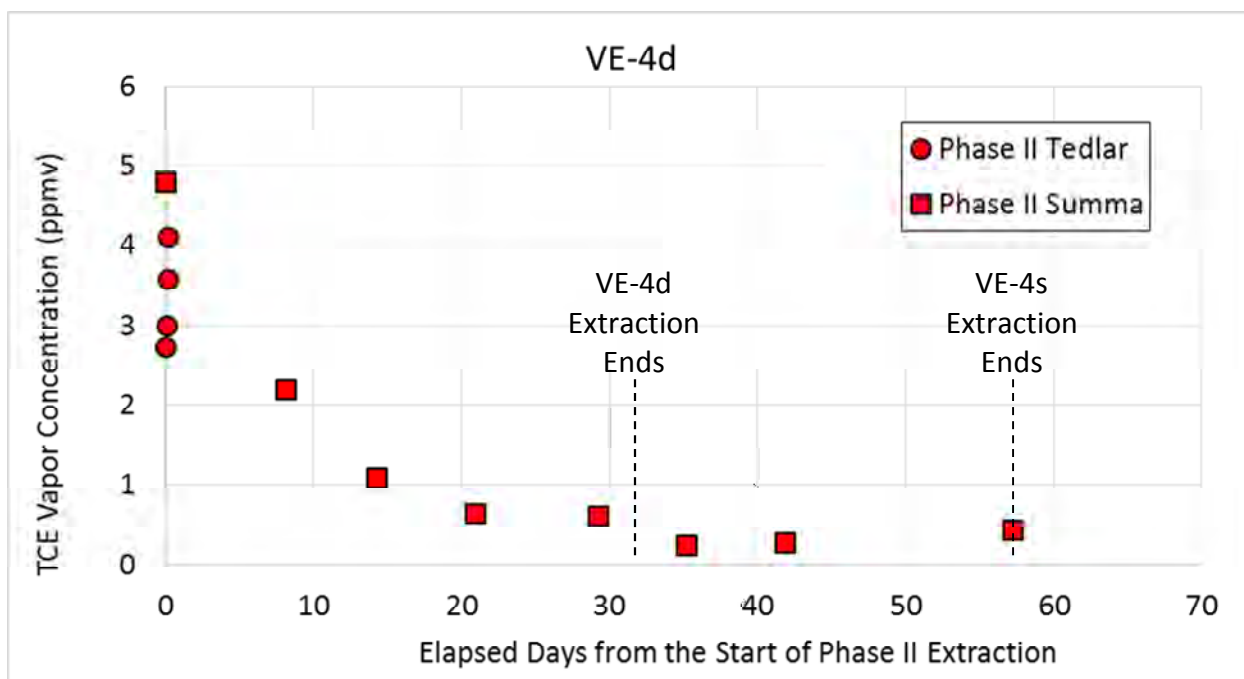
**Table 2-3. Results of Phase II Vapor Sample Analyses during Extraction**

Date	Time	Location	TCE Tedlar (ppmv)	TCE Summa (ppmv)	Notes
10/21/2014	9:34	VE4s	326.6		Collected before extraction
10/21/2014	10:08	VE4s	264.0		
10/21/2014	10:16	VE4s	169.3	130	
10/21/2014	10:35	VE4s	124.5		
10/21/2014	12:28	VE4s	88.7		
10/21/2014	13:30	VE4s	84.4		
10/21/2014	15:15	VE4s	68.3		
10/29/2014	12:30	VE4s		16	
11/4/2014	15:50	VE4s		14	
11/11/2014	7:42	VE4s		11	
11/19/2014	15:37	VE4s		6.2	Flow increased on 13-Nov
11/25/2014	13:11	VE4s		0.51	Flow increased on 21-Nov
12/2/2014	6:15	VE4s		3.7	
12/17/2014	15:00	VE4s		2.7	
10/21/2014	9:20	VE4d	2.7	4.8	Collected before extraction
10/21/2014	12:40	VE4d	3.0		
10/21/2014	13:28	VE4d	3.6		
10/21/2014	15:10	VE4d	4.1		
10/29/2014	12:40	VE4d		2.2	
11/4/2014	16:00	VE4d		1.1	
11/11/2014	7:46	VE4d		0.65	
11/19/2014	15:40	VE4d		0.61	Flow decreased on 13-Nov
11/25/2014	13:37	VE4d		0.24	Flow terminated on 21-Nov
12/2/2014	6:20	VE4d		0.28	
12/17/2014	15:07	VE4d		0.43	

A plot of the TCE vapor concentration in VE4s as a function of the elapsed days from the start of extraction during Phase II is provided in Figure 2-1. The concentration is plotted on a log-log scale to illustrate the rapid initial decay associated with sweeping vapors from the permeable soils followed by a second, slower decay associated with mass transfer limitations. These two trends are described in more detail in the next section.



**Figure 2-1. Phase II TCE Vapor Concentrations in Well VE4s**



**Figure 2-2. Phase II TCE Vapor Concentrations in Well VE4d**

A plot of the TCE vapor concentrations in VE4d as a function of the elapsed days from the start of Phase II extraction is provided in Figure 2-2 using the data from Table 2-3. During the first 6 hours of extraction, the concentration is increases slightly to a peak of 4.1 ppmV that corresponds well with a 10-minute composite Summa sample collected at the start of the

extraction. The TCE concentration decreased during extraction in VE-4d and then rebounded slightly after a drop when extraction was terminated.

After the extraction in well VE-4s was terminated on 17-Dec-14, the wells were capped and left dormant until rebound vapor sampling on 14-Jan-15. This rebound sampling effort followed the same 6-hour startup procedure as previously performed in well VE-4s for direct comparison with the Phase I and II startups. The initial extraction rate was 33 scfm and dropped rapidly to an average of 30 scfm with a wellhead vacuum of 40 inH<sub>2</sub>O. This flow was similar to Phase I and higher than Phase II suggesting the permeability to vapor flow increased after the end of Phase II and before the rebound sampling to conditions similar to those of Phase I. The results of vapor analyses for TCE in the rebound samples are summarized in Table 2-4.

**Table 2-4. Results of Phase II Vapor Sample Analyses during Rebound**

Date	Time	Location	TCE Tedlar (ppmv)	TCE Summa (ppmv)	Notes
1/14/2015	9:39	VE4s	36.1		Collected before extraction
1/14/2015	9:54	VE4s	18.3	0.56	
1/14/2015	9:56	VE4s	19.5		
1/14/2015	10:03	VE4s	23.6		
1/14/2015	11:11	VE4s	26.1		
1/14/2015	12:10	VE4s	27.0		
1/14/2015	14:06	VE4s	26.6		
1/14/2015	16:00	VE4s	26.2		
1/14/2015	16:03	VE4s	25.3	2.2	
1/21/2015	14:18	VE4s		6.9	
1/14/2015	9:34	VE4d	nd	0.0032	Collected before extraction in VE-4s
1/14/2015	11:09	VE4d	nd		
1/14/2015	12:08	VE4d	nd		
1/14/2015	14:04	VE4d	nd		
1/14/2015	15:55	VE4d	nd		

The results for well VE-4s from Summa canister samples submitted to a certified laboratory are significantly lower than those from Tedlar bag samples analyzed with a calibrated gas chromatograph. A third Summa canister sample was collected 1 week later (21-Jan-15) and yielded a TCE concentration of 6.9 ppmV. A comparison of Summa and Tedlar sampling results in Phases I and II yielded good agreement such that no further discussion is attempted to explain the difference in the rebound samples. In well VE-4d, all Tedlar bag samples were non-detect and the Summa canister sample yielded a very low value.



### 3. Data Interpretation

#### 3.1 TCE Mass Removed

The calculated cumulative mass of TCE extracted during each phase of the mass transfer testing was estimated with the average extraction rates, durations of extraction, and TCE vapor concentrations provided in Sections 1 and 2. The results are listed in Table 3-1 and plotted in Figure 3-1. The calculation data for wells VE4s and VE4d are provided in Tables 3-2, 3-3, and 3-4.

**Table 3-1. Calculated TCE Masses Extracted during the Mass Transfer Testing**

Phase	Duration (days)	Well VE-4s (pounds)	Well VE-4d (pounds)
Phase I Extract	3	5.36	-
Phase II Extract	57	7.17	0.58
Rebound Extract	0.25	0.10	-
<b>Total Mass</b>		<b>12.63</b>	<b>0.58</b>

**Table 3-2. Calculation Data for TCE Mass Extracted from VE4s**

Date	Time	TCE (ppmv)	Flow (scfm)	Elapsed (days)	Period Mass (lbs)	Cumulative Mass (lbs)
10/1/2014	11:46	636	28.8	0.00	0.0	0.00
10/1/2014	11:57	583	28.8	0.01	0.1	0.07
10/1/2014	12:26	459	28.8	0.03	0.2	0.22
10/1/2014	12:52	397	28.8	0.05	0.1	0.33
10/1/2014	14:03	314	28.8	0.10	0.3	0.58
10/1/2014	15:55	264	28.8	0.17	0.3	0.90
10/1/2014	18:02	235	28.8	0.26	0.3	1.22
10/2/2014	8:24	138	28.8	0.86	1.6	2.81
10/2/2014	12:40	121	28.8	1.04	0.3	3.14
10/2/2014	15:35	117	28.8	1.16	0.2	3.35
10/3/2014	7:38	82	28.8	1.83	1.0	4.31
10/3/2014	11:35	70	28.8	1.99	0.2	4.49
10/3/2014	15:40	63	28.8	2.16	0.2	4.65
10/4/2014	7:35	51	28.8	2.83	0.5	5.19
10/4/2014	13:16	47	28.8	3.06	0.2	5.36
10/21/2014	10:08	264.0	19.5	19.93	0.01	5.37
10/21/2014	10:16	169.3	19.5	19.94	0.01	5.38
10/21/2014	10:35	124.5	19.5	19.95	0.02	5.40
10/21/2014	12:28	88.7	19.5	20.03	0.1	5.48
10/21/2014	13:30	84.4	19.5	20.07	0.04	5.51

**Table 3-2. Calculation Data for TCE Mass Extracted from VE4s**

Date	Time	TCE (ppmv)	Flow (scfm)	Elapsed (days)	Period Mass (lbs)	Cumulative Mass (lbs)
10/21/2014	15:15	68.3	19.5	20.15	0.1	5.57
10/29/2014	12:30	16.0	19.5	28.03	3.2	8.79
11/4/2014	15:50	14.0	19.5	34.17	0.9	9.68
11/11/2014	7:46	11.0	19.5	40.83	0.8	10.49
11/19/2014	15:10	6.2	23.6	49.14	0.7	11.24
11/25/2014	13:11	4.95	23.4	55.06	0.4	11.62
12/2/2014	6:15	3.7	23.4	61.77	0.3	11.96
12/17/2014	15:00	2.7	23.7	77.13	0.6	12.53

**Table 3-3. Calculation Data for TCE Mass Extracted from VE4d**

Date	Time	TCE (ppmv)	Flow (scfm)	Elapsed (days)	Period Mass (lbs)	Cumulative Mass (lbs)
10/21/2014	10:05	2.7	27.1	0.00	0.0	0.00
10/21/2014	12:40	3.0	27.1	0.11	0.00	0.00
10/21/2014	13:28	3.6	27.1	0.14	0.00	0.01
10/21/2014	15:10	4.1	27.1	0.21	0.00	0.01
10/29/2014	12:40	2.2	27.1	8.11	0.34	0.34
11/4/2014	16:00	1.1	27.1	14.25	0.14	0.48
11/11/2014	7:42	0.65	27.1	20.90	0.08	0.56
11/13/2014	9:30	0.65	9.2	22.98	0.00	0.56
11/19/2014	15:10	0.61	9.2	29.21	0.02	0.58
11/21/2014	12:05	0.61	9.2	31.08	0.00	0.58

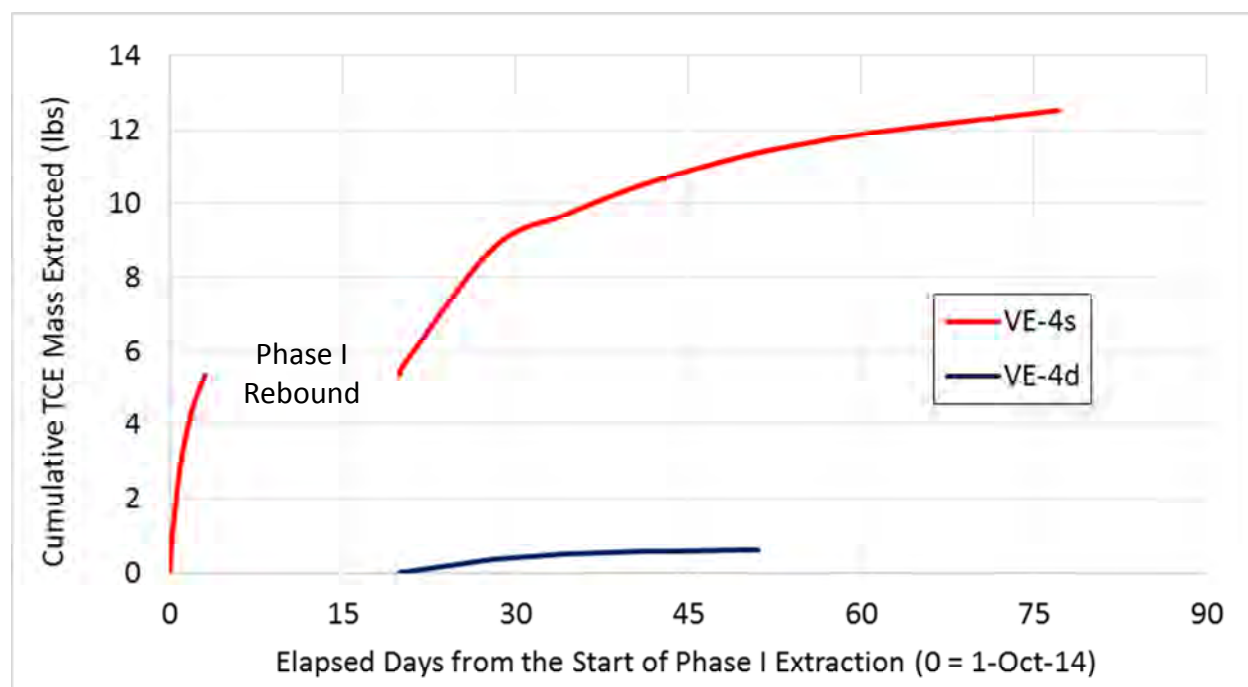
**Table 3-4. Calculation Data for TCE Mass Extracted from VE4s during Rebound**

Date	Time	TCE (ppmv)	Flow (scfm)	Elapsed (days)	Period Mass (lbs)	Cumulative Mass (lbs)
1/14/2015	9:39	36.1	0.00	0.00	0.00	0.00
1/14/2015	9:54	18.3	33.2	0.01	0.00	0.00
1/14/2015	9:56	19.5	33.2	0.01	0.00	0.00
1/14/2015	10:03	23.6	32.6	0.02	0.00	0.00
1/14/2015	11:11	26.1	30.0	0.07	0.02	0.02
1/14/2015	12:10	27.0	30.0	0.11	0.02	0.04
1/14/2015	14:06	26.6	29.3	0.19	0.03	0.07
1/14/2015	16:01	25.3	28.7	0.27	0.03	0.10

The mass extracted during each period was calculated from,

$$Mass (lbs) = Days \times 24 \times 60 \times Flow (scfm) \times Conc (ppmv) \times 5.53 \left( \frac{mg}{ppmV m^3} \right) \times \left( \frac{2.205}{10^6 35.31} \right)$$

At the end of the 3-day extraction in Phase I, the trend in the cumulative mass extracted from VE-4s was clearly increasing and led to the decision to implement the longer-term Phase II extraction. The initial extraction rate in VE-4s during Phase II was lower than Phase I and the lesser rate is evident in Figure 3-1. After the rate was increased and over time, the mass extraction rate from VE-4s approached an asymptote. At the end of the Phase II extraction period, the TCE mass extraction rate was only 0.03 pounds per day. The mass extraction rate in VE-4d was initially low and approached an asymptote at a very low rate, less than 0.01 pounds per day when extraction was terminated.

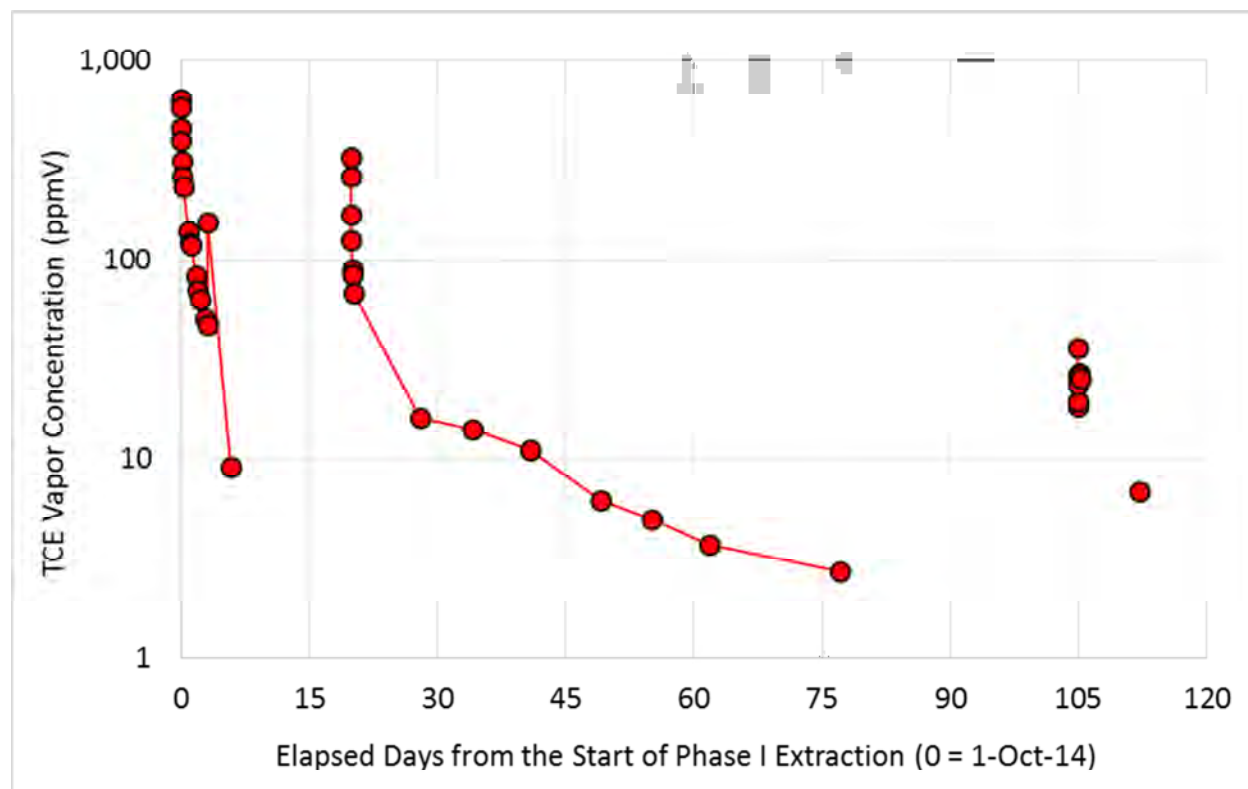


**Figure 3-1. Estimated Cumulative Mass of TCE Extracted**

### 3.2 Concentration and Mass Extraction Trend Analysis for VE-4s

SVE was not conducted at VE4s between June 2009 and October 1, 2014. It is assumed this long period of dormancy before starting the mass transfer testing allowed the site to re-equilibrate fully to ambient conditions. The measured vapor concentrations of TCE in well VE-4s are plotted in Figure 3-2. Only the higher concentration was used if simultaneous Summa and Tedlar data were available. Comparing the peak TCE concentration and decay during Phase I extraction with that in Phase II reveals a rebound in concentration between the two phases and a decreased peak value. This behavior is repeated between the Phase II extraction and the 6-hour sampling event for rebound. In addition, the longer period of extraction in Phase II yielded a much lower peak TCE concentration for rebound that was more than an order-of-magnitude less than the

Phase I peak. These observed trends display the classic decay and rebound expected from the operation of soil vapor extraction when a significant fraction of the TCE mass is removed from the soils. To analyze this classic scenario, a two-region model of SVE developed by Praxis Environmental Technologies and published as Appendix F of the US Army Corps of Engineers SVE and Bioventing Engineers Manual is available. [Reference: *U.S. Army Corps of Engineers, 2002. Engineering and Design: Soil Vapor Extraction and Bioventing. EM 1110-1-4001*]. The vapor concentration data illustrated in Figure 3-2 and the cumulative mass extracted illustrated in Figure 3-1 at VE-4s were used to calibrate the two-region model.



**Figure 3-2. Measures of TCE Vapor Concentration in Well VE-4s**

The two-region model of SVE provides an estimate for the residual mass, quantifies mass transfer constraints, and evaluates possible future extraction strategies. The two-region (mobile-immobile) soil model describing SVE and the underlying assumptions are presented in Attachment A of this report. In short, the model volume-averages vapor concentrations over the contaminated soil volume (conceptualized as partially mobile and partially immobile) and is based on an overall mass balance. The following parameters are assumed measured or otherwise available and employed as input data by the model:

- $h$  (m), depth interval of the contaminated soil volume
- $T$  (K), soil temperature
- $H$  ( $\text{kPa m}^3 / \text{mol}$ ), Henry's constant
- $K_{d,m}$  (L/kg), the distribution coefficient in mobile region
- $K_{d,i}$  (L/kg), distribution coefficient in the immobile region
- $D_c$  ( $\text{m}^2/\text{day}$ ), pure component free air diffusion coefficient for TCE

- $\phi_m$ , porosity of mobile region
- $\phi_i$ , porosity of immobile region
- $\rho_m$  (g/cm<sup>3</sup>), solid density of soil grains in mobile region
- $\rho_i$  (g/cm<sup>3</sup>), solid density of soil grains in immobile region
- $S_m$ , water saturation in the mobile zone
- $S_i$ , water saturation in the immobile zone
- $Q$  (scfm), total soil vapor extraction rate, allowed to be a step-wise transient

The model is calibrated by varying the following parameters until finding the best match (minimum error) with field measures of extracted vapor concentration and cumulative mass removed:

- $C_{0,m}$  (mg/m<sup>3</sup>), initial vapor concentration in the mobile zone
- $C_{0,i}$  (mg/m<sup>3</sup>), initial vapor concentration in the immobile zone
- $A$  (m<sup>2</sup>), equivalent area of soil contamination
- $f$ , fraction of the contaminated volume that is characterized as mobile
- $\alpha$  (day<sup>-1</sup>), bulk mass transfer coefficient between mobile/immobile zones

In general, if the site has been dormant, the initial mobile and immobile zone concentrations are in equilibrium and are approximated by the early extraction concentration. The area of soil contamination with the depth interval represents the total soil volume used in the volume averaging. The mass transfer constraints for contaminant removal are lumped (averaged) into a bulk mass transfer coefficient,  $\alpha$ . When molecular diffusion alone from fine-grained soils (immobile soils) provides the constraint, the bulk mass transfer coefficient,  $\alpha$ , is roughly related to diffusion by:

$$\alpha \approx \frac{D_c \phi_i^{4/3} (1 - S_i)^{10/3} \pi^2}{R_i L_i^2}$$

$L_i$  is the characteristic path length for vapor diffusion and  $R_i$  is the vapor retardation coefficient for TCE in the immobile region. The inclusion of the porosity and water saturation in this coefficient represents the tortuosity for diffusion through the soil. The characteristic length is most often correlated with the half-thickness of fine-grained layers such as clays.

Calibration of the model is achieved by finding best fits of the model parameters to the concentration and mass extraction data. Fitting is performed by varying the soil volume, fraction of mobile soil, and mass transfer coefficient in a downhill simplex optimization routine. The fit to the TCE vapor concentrations measured during the mass transfer testing in VE-4s is shown in Figure 3-3. The model fit to the extracted mass of TCE and the estimated residual mass of TCE remaining in the soil is plotted in Figure 3-4. The specified soil properties and the resulting best-fit model parameters are listed in Table 3-5.

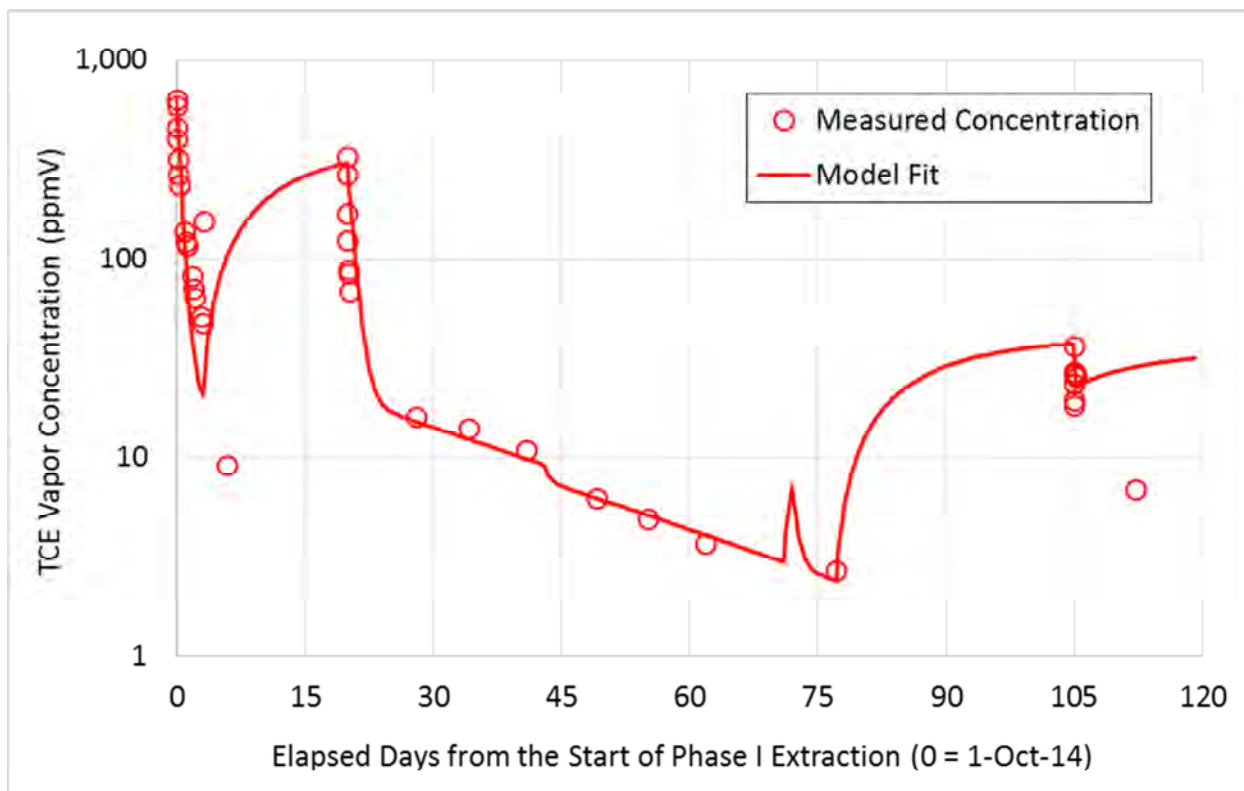


Figure 3-3. Model Fit to TCE Vapor Concentrations in Well VE4s

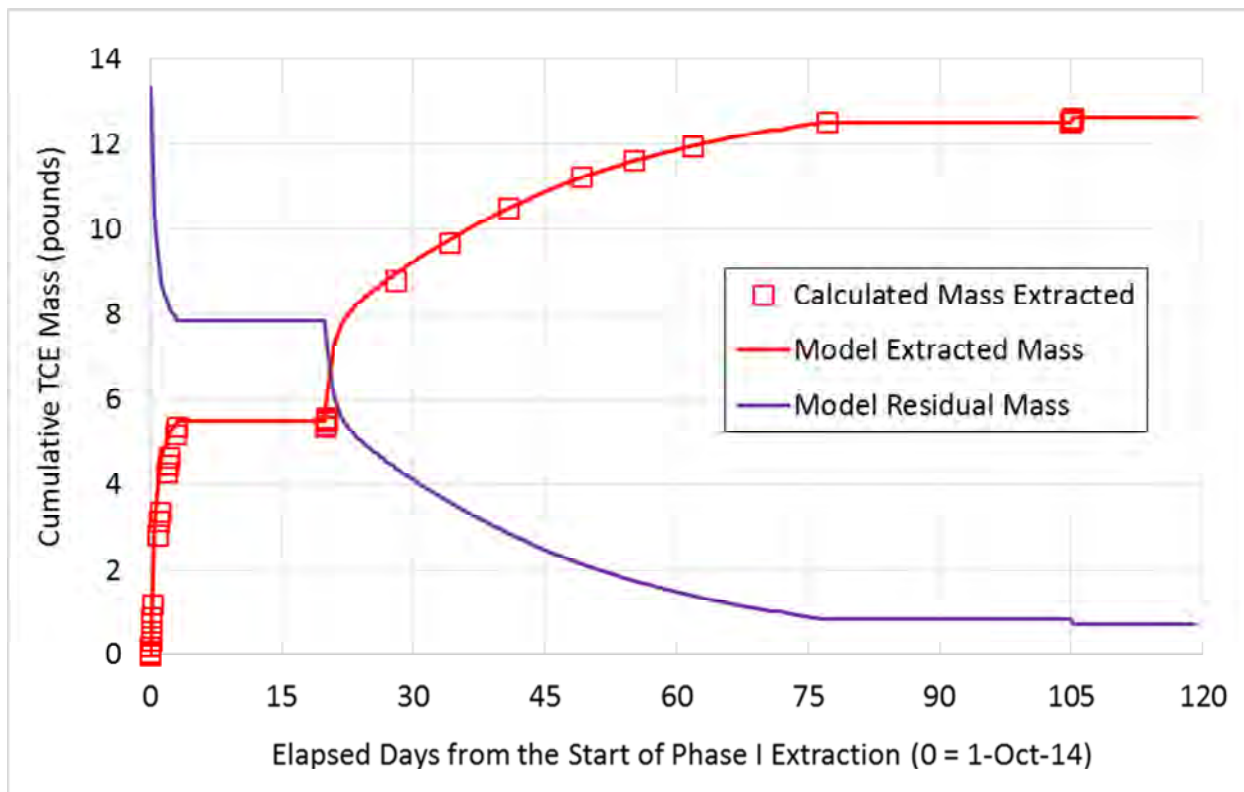


Figure 3-4. Model Fit to TCE Mass Extracted from Well VE4s

**Table 3-5. Parameters for Two-Region Modeling of TCE Extraction from VE4s**

Property	Units*	VE4s
Measured or Assumed Soil Properties		
Porosity, mobile	nd	0.40
Porosity, immobile	nd	0.40
Water Saturation, mobile (vol/vol)	nd	0.25
Water Saturation, immobile (vol/vol)	nd	0.40
Fraction of organic carbon in soil solids ( $f_{oc}$ )	nd	0.0004
$K_d$ , mobile	L/kg	0.05
$K_d$ , immobile	L/kg	0.05
Temperature	°C	20
Initial Vapor Concentration, mobile	ppmV	636
Initial Vapor Concentration, immobile	ppmV	636
TCE Properties		
Henry's Constant	nd	0.38
Octanol-Water Partition Coefficient	nd	200
Diffusion Coefficient in Air	m <sup>2</sup> /day	0.68
Model Best-Fit Parameters		
Effective Volume of Contaminated Soil	m <sup>3</sup>	2,073
Fraction of Soil Characterized as Mobile	nd	0.40
Fraction of Soil Characterized as Immobile	nd	0.60
Bulk Mass Transfer Coefficient	1/day	0.128

\* nd = dimensionless

Average initial TCE vapor concentrations in both zones were assumed to be in equilibrium at 636 ppmV over a total soil volume of 2,073 m<sup>3</sup> (2,700 cubic yards) yielding an initial total mass estimate of 13.4 pounds of TCE in the vadose zone at the start of the mass transfer test. The model fit yielded 40% for the fraction of the vadose zone characterized as mobile leaving 60% as immobile. Hence, the initial mass of TCE in the mobile soils was 5.0 pounds and 8.4 pounds in the immobile soils. In total, the mass transfer testing removed about 12.6 pounds of TCE leaving an estimate of 0.8 pounds for the residual TCE mass. During the 3 days of extraction in Phase I, just over 5 pounds of TCE were extracted and correspond roughly to the initial mass in the mobile soils suggesting Phase I provided a single flush of the mobile soil pore volume.

The characteristic volume of contaminated soil was calculated to be 2,700 yd<sup>3</sup>. If the vadose zone thickness is assumed equal to the VE-4s screen length of 20 feet, the effective area was 3,660 ft<sup>2</sup> with a corresponding circular radius of 34 feet. Using the depth from the ground surface to 30 feet, yields a circular radius of 28 feet. This calculated effective area is much smaller than the original source zone for Site 32 North but consistent with a small residual hot spot.

The bulk mass transfer coefficient of 0.128 day<sup>-1</sup> is associated with a characteristic diffusion path length of 0.91 feet. Vapor retardation coefficients in the mobile and immobile zones were calculated to be 2.6 and 3.6, respectively.

#### **4. Summary of Model Results**

- Estimated initial mass of TCE within the influence of extraction at VE-4s is 13.4 pounds
- Estimated mass of TCE extracted from VE-4s is 12.6 pounds
- 3 days of extraction in Phase I removed 40% of the original TCE mass
- 57 days of extraction in Phase II removed 54% of the original TCE mass
- 6% of the original TCE mass remains.
- Estimated residual mass of TCE proximate to VE-4s is 0.8 pounds
- At the end of Phase II extraction, the TCE mass removal rate was 0.03 pounds per day and continuing to decline.
- Maximum theoretical vapor concentration near VE-4s after mass extraction is 35 ppmV down from the initial concentration of 635 ppmV, a 95% reduction.

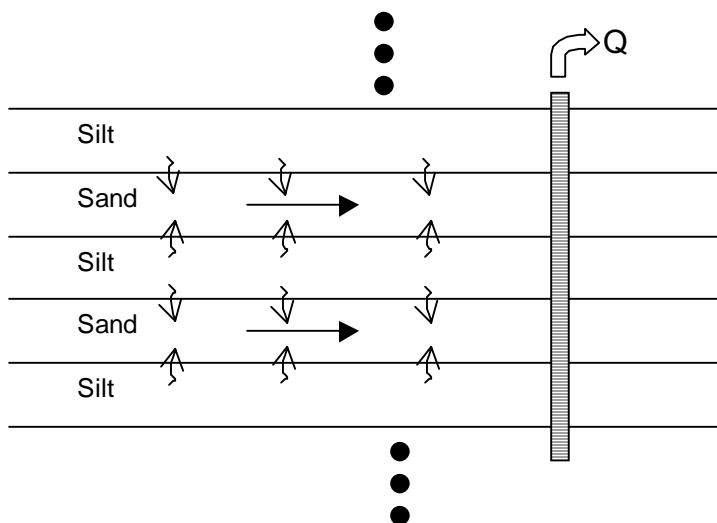


**Attachment A**  
**SVE Concentration Trend Analysis Model**

## DESCRIPTION OF TWO-REGION SVE MODEL

### Background

Historical vapor concentration data along with the extraction flow history provide a long-term, consistent data set describing the performance of an SVE system. This appendix describes a two-region model of SVE independently developed and applied by Praxis Environmental Technologies over the last decade (Stewart, 1999) to evaluate SVE performance using historical data and then to forecast future performance. The model is based on a simple mass balance within a contaminated volume. An estimate for this volume results from a fit of historical extraction data. In addition, the model can be used to estimate the residual mass at a site, quantify mass transfer constraints, and evaluate various extraction strategies. The model conceptualizes the soils of a site as either mobile (vapors flow during SVE) or immobile (vapors are stagnant during SVE). For example, a sand interval may be designated mobile while an adjacent clay is termed immobile. As described in the discussion to follow, all of the mobile soil properties and concentrations are averaged (i.e., lumped) together, all of the immobile soil properties and concentrations are averaged together, and an averaged characteristic mass transfer coefficient is assumed for the transfer of contaminant between the two soil types. Generally, multiple soil layers of various soil types exist at a site. The two-region model approach lumps all the soils into either mobile or immobile zones. The conceptual model is illustrated in Figure 1. The removal of contaminants in the mobile zone is realized instantaneously throughout the volume. The mechanisms of removal include pumping and biodegradation.



**Figure 1. Conceptual Domain for SVE Modeling**

Similar models have been developed in the academic literature for predicting contaminant behavior in column studies (e.g., Brusseau, 1994) but are used infrequently in SVE field practice except for trend analysis without quantification of in situ parameters. This type of model has been used widely to evaluate disequilibrium on the pore scale (Griffioen et al., 1998). The mathematical foundations and underlying assumptions can be found in numerous texts (e.g., Lochak and Meunier, 1988). As described below, during SVE the model can be related to the

soil properties, contaminant properties, contaminated volume, extraction history and mass transfer between the mobile and immobile soils on the field scale rather than the pore scale. The basic simplifying assumptions in the model are (1) soils are categorized as permeable to air flow (mobile) or not (immobile) and (2) the flushing rate of the mobile zone by clean air is rapid enough to justify averaging the contaminant concentration over the entire contaminated volume. When these assumptions are valid, the two-region approach can yield results as accurate as sophisticated numerical models. This equivalence in accuracy is achieved because the data available regarding a site is usually limited and is not sufficient to take advantage of the complexity of numerical models. This lack of data results in large uncertainties. The two-region model is much simpler to implement and therefore more cost effective to employ. Also, parametric studies with the two-region model are straightforward and rapid.

### **Contaminant Partitioning**

In the simplest view, contaminants within the soil are partitioned among three phases if a nonaqueous phase liquid (NAPL) is not present: adsorbed to the solid matrix, dissolved in the pore water, and volatilized in the soil gas. A contaminant exists as a separate NAPL only if the total mass exceeds the solubility limits of the contaminant in the other three phases. The thermodynamic equilibrium relationships describing the partitioning among the three phases are:

$$\text{Air-Water:} \quad C_v = \frac{C_w H'}{\bar{R}T} = C_w H \quad (1)$$

$$\text{Water-Soil:} \quad C_s = C_w K_d \quad (2)$$

where  $C_v$  is the mass of contaminant per unit volume of the soil gas,  $C_w$  is the mass of contaminant per unit mass of pore water, and  $C_s$  is the mass of contaminant adsorbed to a unit mass of the solid matrix. Partitioning between the vapor and solid phases is generally small and is neglected here. The other parameters in (1) and (2) are:

$$H' = \text{Henry's law constant between water and air } \left( \frac{\text{kPa m}^3}{\text{mol}} \right)$$

$$K_d = \text{distribution coefficient between water and solid } \left( \frac{\text{L}}{\text{kg}} \right)$$

$$\bar{R} = \text{ideal gas constant } \left( 0.008314 \frac{\text{kPa m}^3}{\text{molK}} \right)$$

$$T = \text{absolute temperature of the system (K)}$$

$$H = \frac{H'}{\bar{R}T} = \text{dimensionless Henry's constant at system temperature}$$

H' is a laboratory measured property for each contaminant and is available in many reference texts. The use of Henry's law partitioning is based on the assumption that the compounds of concern are sparingly soluble in the water. This approach is not valid for compounds miscible with water. The distribution coefficient for each contaminant in each soil type can be estimated by the following empirical relationship:

$$K_d = 0.6 f_{oc} K_{ow} \quad (3)$$

where:

$f_{oc}$  = fraction of organic carbon in the soil solids

$K_{ow}$  = octanol-water partition coefficient of the contaminant (available in reference texts)

The total contaminant mass in a specified soil volume is equal to the sum of the mass adsorbed, the mass dissolved in pore water, and the mass volatilized:

$$\begin{aligned} m_j &= [(1-\phi_j)\rho_{s,j}C_{s,j} + \phi_j S_j C_{w,j} + \phi_j(1-S_j)C_{v,j}]f_j V \\ m_j &= C_{w,j} [(1-\phi_j)\rho_{s,j}K_{d,j} + \phi_j S_j + \phi_j(1-S_j)H]f_j V \\ m_j &= C_{v,j}\phi_j(1-S_j)f_j V \left[ 1 + \frac{(1-\phi_j)\rho_{s,j}K_{d,j} + \phi_j S_j}{H\phi_j(1-S_j)} \right] = C_{v,j}R_j\phi_j(1-S_j)f_j V \end{aligned} \quad (4)$$

where j refers to either the mobile (m) or immobile (i) region in the treatment zone. The parameters are defined by:

$m_j$  = total mass of contaminant in region j

$V$  = total volume of soil (mobile + immobile)

$f_j$  = fraction of the treatment volume occupied by region j ( $f_m + f_i = 1$ )

$\phi_j$  = porosity of the soil in region j

$S_j$  = water saturation in region j

$\rho_{s,j}$  = density of the solid matrix in region j

$R_j$  = vapor phase retardation factor =  $1 + \frac{(1-\phi_j)\rho_{s,j}K_{d,j} + \phi_j S_j}{H\phi_j(1-S_j)}$

$R_j$  is the vapor phase retardation factor for contaminant transport and is analogous to the well-known retardation factor for contaminant transport in the liquid phase.

## **Two-Region SVE Model Formulation**

Removal of contaminants from the vadose zone during SVE occurs by two major mechanisms. The first is by extracting the soil gases from the mobile regions and the second is degradation of the contaminants. In the derivation below, the treatment zone is assumed to consist of a mobile (m) region and an immobile (i) region. As the concentration is reduced in the mobile region, contaminants diffuse from the immobile region into the mobile region. From a simple mass balance, the change in mass in the mobile region by these three mechanisms is described by:

$$\frac{dm_m}{dt} = -C_{v,m}Q - C_{v,m} \frac{\gamma_m S_m \phi_m}{H} f_m V - \frac{dm_i}{dt} \quad (5)$$

In the immobile region, no advection occurs and the change in mass consists of degradation and transfer with the mobile zone. These processes are described mathematically as:

$$\frac{dm_i}{dt} = -C_{v,i} \frac{\gamma_i S_i \phi_i}{H} f_i V + \alpha F \phi_i (1 - S_i) f_i V (C_{v,m} - C_{v,i}) \quad (6)$$

where:

- Q = volumetric extraction rate of soil gases
- t = time
- $\gamma_j$  = degradation decay constant in region j
- $\alpha$  = first order mass transfer coefficient between regions m and i
- F = flow configuration factor (interfacial area multiplied by contact time)

The first term in equation (5) represents the removal by pumping and the second term accounts for in situ degradation. The degradation is assumed to occur in the aqueous phase only. The third term accounts for mass transfer from the immobile regions into the mobile regions. The first term in equation (6) represents degradation in the pore water of the immobile region. The second term couples the diffusion from the immobile region to the contaminant concentration in the mobile region. The diffusion occurs only in the vapor phase in the model, although equation (6) can be formulated to include liquid diffusion if the water saturation is high in the immobile region. The retardation in the immobile region is included in the mass transfer coefficient. The mass transfer term also includes a flow configuration factor. This factor accounts for well and screen placement in relation to the contaminated volume. The mass transfer is highly dependent on the extraction well configuration because the flow over the interfacial area between the mobile and immobile zones depends on the flow configuration. For example, a well placed on the periphery of a contaminated volume would extract a great deal of dilution air versus a well placed in the center of the volume. If multiple wells operate simultaneously, stagnation zones between extraction wells are expected to have a very low effective mass transfer because vapors emanating from the immobile zone are not effectively swept away hindering further transfer. For example, two extraction wells within a source area remove less mass than either operated alone at the same total extraction rate because of the limited mass transfer in the stagnation zone created between them. In general, at a multi-well site, the flow factor must be determined

empirically by operating under various extraction scenarios. For a single extraction well the factor is effectively one since it appears as a multiplier to the mass transfer coefficient and no variation in the location of extraction is possible.

Estimates for the degradation decay constant in each region are calculated from:

$$\gamma_j = \frac{\ln(2)}{t_{1/2}} \quad (7)$$

where  $t_{1/2}$  represents the biodegradation half-life of a compound in the soil. From a consideration of linear diffusion in an immobile region, the mass transfer coefficient can be initially estimated with:

$$\alpha = \frac{D(1-S_i)^{10/3} f_i^{4/3}}{R_i a^2} \quad (8)$$

where  $D$  is the vapor phase diffusion coefficient of the contaminant in air and  $a$  is the half-length over which diffusion occurs (half the thickness of the average immobile region if linear).

Equations (5) and (6) represent two, coupled first order ordinary differential equations for the mass in the mobile and immobile regions. If the extraction rate  $Q$  is constant, all coefficients in (5) and (6) are constant and the solution is straightforward to obtain given an initial concentration in each region. Solving the equations in terms of the vapor concentrations by utilizing equation (4) and designating the initial average vapor contaminant concentration in each region as  $C_{v,mo}$  and  $C_{v,io}$  at some initial time  $t_0$  yields:

$$C_{v,m} = \Theta_1 e^{\gamma_1(t-t_0)} + \Theta_2 e^{\gamma_2(t-t_0)} \quad (9)$$

$$C_{v,i} = \Theta_1 \omega_1 e^{\gamma_1(t-t_0)} + \Theta_2 \omega_2 e^{\gamma_2(t-t_0)} \quad (10)$$

where:

$$\Theta_1 = \frac{C_{v,io} - \omega_2 C_{v,mo}}{\omega_1 - \omega_2}$$

$$\Theta_2 = \frac{C_{v,io} - \omega_1 C_{v,mo}}{\omega_1 - \omega_2}$$

$$\omega_1 = \frac{R_m \gamma_1 + \Theta + \alpha F \Phi}{\Phi(\Gamma_i + \alpha F)}$$

$$\omega_2 = \frac{R_m \gamma_2 + \Theta + \alpha F \Phi}{\Phi(\Gamma_i + \alpha F)}$$

$$\Theta = \frac{Q}{\phi_m(1-S_m)f_m V} + \Gamma_m$$

$$\Phi = \frac{\phi_i(1-S_i)f_i}{\phi_m(1-S_m)f_m}$$

$$\Gamma_j = \frac{\gamma_j S_j}{H(1-S_j)}$$

$$r_1 = \frac{-b + \sqrt{b^2 - 4R_m R_i \Theta(\alpha F + \Gamma_i)}}{2R_m R_i}$$

$$r_2 = \frac{-b - \sqrt{b^2 - 4R_m R_i \Theta(\alpha F + \Gamma_i)}}{2R_m R_i}$$

$$b = R_m (\alpha F + \Gamma_i) + R_i (\Theta + \Phi \alpha F)$$

Equations (9) and (10) are simple to use for calculating contaminant extraction rates, cleanup times, etc. The mobile zone concentration is equal to the extracted concentration by definition. The equations are simple to use for a parametric study of the input variables or for history-matching. History-matching yields a calibration of the input parameters which then generates estimates for the residual mass and cleanup times. The solution slightly under predicts early extraction rates (because of averaging the initial contaminant distribution) but can be very accurate over longer periods when mass transfer constraints (i.e., diffusion) dominates. This mass transfer determines the ultimate cleanup time.

### **Additional Discussion**

In most practical cases, a variable extraction rate is employed because of the diffusion limitations. Equations (5) and (6) can be readily solved for the variable extraction rate, though not in the simple form of equations (9) and (10). If the time variation of Q is a smooth function, equations (5) and (6) can be solved using a straightforward numerical ODE solver. However, if the variation of Q can be described by a series of step functions as is the usual case, then an analytical solution may be obtained. The steady flow solution is used to describe the extraction rate during each period and when a step change occurs, the ending concentrations are used as the initial condition for the next extraction period. As an example consider a three step variation in Q describing an initial period of extraction, shutting off the extraction, followed by a resumption in the extraction at a different rate:

$$\begin{aligned} Q &= Q_1 \text{ for } 0 < t \leq t_1 \\ Q &= 0 \text{ for } t_1 < t \leq t_2 \\ Q &= Q_2 \text{ for } t > t_2 \end{aligned}$$

This situation commonly occurs in practice and represents a rebound test.

Additional complexities can be included in the model if warranted by additional data. For instance, if a NAPL is identified or partitioning calculations suggest its presence, a second mass transfer constraint can be added to account for the mass transfer during NAPL evaporation. Similarly, off gassing from groundwater can be included if volatilization of contaminants from groundwater is significant.

In the early days of SVE, sites were often described solely by the initial convective exponential decay ignoring a determination of the longer transient associated with the diffusive component. Neglecting the contribution of the immobile zone resulted in vastly underestimating the time to reach a specified cleanup goal and the total mass of contaminant at the site.

For most sites, the two-region model is first run using measured soil properties (e.g., moisture content, porosity, etc.), contaminant properties, and the extraction history. Parameters which are varied to obtain a best fit to the extraction concentration history are usually:

1. Total Volume of Contaminated Soil;
2. Fractions of the Contaminated Volume Classified as either Mobile or Immobile;
3. Initial Concentration in the Immobile Soil; and
4. Mass Transfer Coefficient between Mobile and Immobile Zones.

The results of the history matching are then the four parameters listed above and the total mass in the soil which is calculated from these parameters.

### **References**

Brusseu, M.L., "Evaluation of Simple Methods for Estimating Contaminant Removal by Flushing," *Ground Water*, Vol. 34, No. 1, pp. 19-22, 1996.

Griffioen, J.W., D.A. Barry, and J.-Y. Parlange, "Interpretation of Two-region Model Parameters," *Water Resources Research*, Vol. 34, No. 3, pp. 373-384, 1998.

Lochak, P. and C. Meunier, *Multiphase Averaging for Classical Systems with Applications to Adiabatic Theorems*, Springer-Verlag, 349 pp., 1988.

Stewart, L.D., "Analytical Modeling of Contaminant Vapor Extraction from Heterogeneous Soils," Manuscript prepared for submission to *Water Resources Research*, 1999.



**Attachment 2**  
**Data Quality Evaluation**

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# Data Quality Evaluation

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Samples were collected and analyzed in support of the Site SD032 Soil Vapor Extraction Test Results Report at Beale Air Force Base (AFB or Base). All analytical data from the Beale AFB event were evaluated as described in the *Basewide Uniform Federal Policy Quality Assurance Project Plan* (Basewide UFP-QAPP) (CH2M HILL, 2012). This Data Quality Evaluation report summarizes the results of the quality assurance/quality control (QA/QC) activities prescribed in the Basewide UFP-QAPP and provides a complete data usability assessment. The Basewide UFP-QAPP identifies the method-specific QC requirements for each analytical parameter and matrix and defines a plan to test that the correct sampling, analytical, and data reduction procedures are followed by using audits and data validation.

This report is intended as a general data quality assessment designed to summarize data issues.

## Analytical Data

A total of 29 soil vapor samples and three soil vapor field duplicates (FDs) were collected from October 1, 2014, through January 21, 2015. Samples were analyzed by Air Toxics Ltd. (ATX) in Folsom, California. The laboratory divided the samples into 14 sample delivery groups (SDGs). One method was used to analyze the environmental samples. Samples were collected and shipped by overnight carrier to the laboratory for analysis. Samples were analyzed for the following analytes/method:

- Volatile organic compounds by Method TO-14

Each SDG was evaluated by CH2M HILL chemists for data quality. Analytical performance was initially assessed on an SDG basis or an analytical batch basis. Several SDGs may be associated with the same laboratory QC samples. The association of laboratory QC samples and environmental samples from the same analytical batches is determined by the laboratory lot control number. The assessment of data included a review of the following:

- Chain-of-custody documentation
- Holding-time compliance
- Required QC samples at the specified frequencies
- Method blanks
- Laboratory control spiking samples
- Surrogate spike recoveries for organic analyses
- Analytical spike data
- Initial and continuing calibration information and other method-specific criteria as defined by the Basewide UFP-QAPP (CH2M HILL, 2012)

Field samples were also reviewed to ascertain field compliance and data quality issues. This included a review of FDs.

Data flags were assigned according to the QC acceptance limits defined in the Basewide UFP-QAPP (CH2M HILL, 2012). The data validation flags for each SDG are summarized in each data quality validation report. These flags, and the reason for each flag, are entered into the electronic database and are available to data users. Multiple flags can routinely be applied to a specific sample method/matrix/analyte combination, but there will be only one final flag. As discussed below, a final flag is applied to the data on the basis of the flags entered into the database and is the most conservative of the applied validation flags. The final flag also includes matrix and blank sample impacts.

Data flags can be separated into the following two categories to be used in estimating both contractor and analytical completeness:

- Flags caused by laboratory deviation from requirements in the Basewide UFP-QAPP (CH2M HILL, 2012)
- Flags applied because of the nature of the sample matrix or method limitations

The database keeps track of the type of protocol violation, and contractual and analytical completeness during data validation.

The data flags are those listed in the Basewide UFP-QAPP (CH2M HILL, 2012) and are defined as follows:

- **J** = Analyte was detected; the quantitation was estimated because of discrepancies in meeting certain analyte-specific QC criteria.
- **UJ** = Analyte was not detected; however, the quantitation was estimated because of discrepancies in meeting certain analyte-specific QC criteria.
- **R** = Data were rejected because of deficiencies in meeting QC criteria.
- **U** = Analyte was analyzed for but not detected, or was qualified as not detected because of blank contamination.
- **=** = A database flag with no QC implications. A flag is not applied. This is a placeholder for replacing invalid lab flags in which the results do not require flagging.
- **None** = A database flag with no QC implications. A flag is not applied. This is a placeholder for calculating QC criteria issues that do not require flagging.
- **Exclude** = A database flag with no QC implications. When multiple data points have been reported, such as dilutions or re-extractions, the data that best match Basewide UFP-QAPP QC requirements (CH2M HILL, 2012) are presented to the data users and the remainders are marked with this flag.

## Findings

The overall summaries of the data validation findings are contained in Tables 1 through 8 and summarized in the following method sections:

- **Table 1: Overall Flagging Summary.** Presents the number of occurrences for each data validation reason by method.
- **Table 2: Results Between the RL and MDL – Qualified Data.** Presents the results that are estimated because the result is between the reporting limit (RL) (limit of quantitation [LOQ]) and the method detection limit (MDL).
- **Table 3: Blank Contamination – Qualified Data.** Presents the data qualified because of blank contamination.
- **Table 4: Calibration Criteria – Qualified Data.** Presents the data qualified because of calibration criteria exceedances.
- **Table 5: Laboratory Control Sample – Qualified Data.** Presents the data qualified because of laboratory control sample criteria exceedances.
- **Table 6: Site Completeness by Analyte – Qualified Data.** Presents the percent completeness by method, analyte, and matrix.

- **Table 7: Sample Summary by Chain of Custody – Data Summary.** Presents the sample identifications, sample dates, and SDGs sorted by chain-of-custody number.
- **Table 8: Sample Chronology – Data Summary.** Presents the sample identifications, methods, sample dates, received dates, extraction dates, and analysis dates sorted by SDG number.

## Overall Flagging Summary

The frequency of field and laboratory QC samples and the associated control criteria are specified in the Basewide UFP-QAPP (CH2M HILL, 2012). These control criteria were used to evaluate the laboratory data. In the following method-specific discussions, only the criteria exceedances that impact data qualification are discussed. Any laboratory flags that were applied to the data that were not consistent with the data flags listed in the Basewide UFP-QAPP were marked as invalid and replaced with the appropriate data flag (e.g., “J,” “U,” or “=”). The number of flagged data is compared to the total number of results to give a percentage of flagged data for each QC criteria (see Overall Assessment section).

### Low-level Detects

Sample results between the MDL and the RL (LOQ) have been flagged “J” and are represented in Table 2. The qualified results represent values determined at levels where the true value of the measured chemical could not be quantified with a high degree of confidence. The laboratory met the Basewide UFP-QAPP’s specified RLs (LOQs) (CH2M HILL, 2012). All data flagged for low-level imprecision were the result of the sample concentrations and not laboratory related. The data user should consider these qualified results as estimates when making project decisions.

### Method TO-14 (Volatile Organic Compounds)

**Blanks.** Table 3 lists specific field samples and their associated lab blank criteria exceedances. A total of 35 soil vapor sample detected concentrations were less than five times the blank concentrations. The associated results were flagged “U.”

**Calibration.** Table 4 lists the specific field samples and their associated calibration criteria exceedance. A total of 15 soil vapor sample concentrations were affected by calibration exceedances. The associated nondetected results were flagged “UJ.”

**Laboratory Control Samples.** Table 5 lists the specific field samples and their associated LCS criteria exceedances. The LCS was not spiked for one compound that affected 34 soil vapor concentrations. LCS recoveries outside the acceptance limits affected 64 soil vapor sample concentrations. The associated detected results were flagged “J.” The associated non-detected results were flagged “UJ.”

## General Comments

### Re-extraction and Reanalysis

The laboratory is required to report all reanalysis results to CH2M HILL. Reanalysis is routinely performed to verify surrogate recoveries and internal standard recoveries, analyze dilutions, analyze re-extracted samples, perform confirmation analyses, and analyze laboratory duplicates. When multiple results for any analyte are reported, the best value (that which meets the Basewide UFP-QAPP [CH2M HILL, 2012] specifications most closely) is chosen for the data users during the data validation process. Basewide UFP-QAPP-specified criteria are used to choose this value. Data are marked as “exclude” only when the Basewide UFP-QAPP dictates that a better value is available. For example,

when a sample is run and one of 50 analytes in a method exceeds the calibration range, 49 results are taken from the original analytical run, and one result is marked “exclude.” Upon dilution, one result is taken from the dilution, and 49 are marked as “exclude.” After this process, all 50 analytes are presented in the project database for use by the project team with a result that is not marked as “exclude.” Re-extraction and reanalysis are not further discussed unless they represent a data quality issue not related to routine reasons presented in this paragraph.

## Overall Assessment

Completeness is calculated and reported for each method, matrix, and analyte combination as outlined in the Basewide UFP-QAPP (CH2M HILL, 2012). The number of valid (not qualified with an “R” flag) results divided by the number of possible individual analyte results, expressed as a percentage, determines the completeness of the data set. The data are 100 percent complete. A summary of the completeness calculations can be found in Table 6.

Out of approximately 2,080 normal and FD data points, 35 results (approximately 1.7 percent) were qualified as not detected because of associated blank contamination; eight detected results and 65 non-detected results (approximately 3.5 percent) were qualified as estimated concentrations because of QC exceedances. These numbers indicate that the quality of the analytical program and laboratory are sufficient to meet the project data quality objectives.

Evaluation of 100 percent of the chemical data was performed by using the Basewide UFP-QAPP (CH2M HILL, 2012) as a guide for data quality evaluation. No systematic protocol errors were identified on the basis of the QA program setup or during the monitoring of the field or laboratory efforts.

## Data Management

Beale AFB sampling activity logs and laboratory analytical data are maintained in a project database and/or in project files, where appropriate. Data were collected and stored in a manner consistent with the requirements of the Environmental Resources Program Information Management System (ERPIMS) data loading requirements, *ERPIMS 2012 Data Loading Handbook, v 6.0* (Air Force Civil Engineer Center, 2012). The data collected are sufficient but not limited to those required for the ERPIMS submission.

## Field Data

Following are components of the field data:

- Daily field progress reports
- Field worksheets
- Daily field notebooks
- Groundwater sample collection logs
- Chain-of-custody reports

## Laboratory Data

Following are components of the laboratory data:

- Laboratory data packages grouped by SDG
- Corrective action reports
- Laboratory MDL studies
- Internal data evaluation reports for all data

Laboratory data were received in both hardcopy and in electronic comma-delimited American Standard Code for Information Interchange format. The receipt of both data types was logged into the sample tracking program to determine completeness and contractor turnaround time compliance.

All data quality evaluation is done using a semiautomated data validation program that uses laboratory hardcopy and electronic data simultaneously. All validation flags and discoveries are entered into the project database and are linked directly to each individual data point. This process validates hardcopy data and electronic data simultaneously. All ERPIMS submittals are created from this validated database.

All data quality evaluation reports are generated from the electronic database. Final validation flags for global issues, such as matrix interference, are applied after the initial data validation. These flags are also added to the electronic database and annotated as global flags.

The data management system was designed to maintain the usability and integrity of the data through a series of procedures and QC checks that began at the field site and carried through to the generation of data for the user. These data included both the chemical data and field operation information. Both the chemical data and the field data were handled in the relational database according to the guidelines established in the Basewide UFP-QAPP (CH2M HILL, 2012) and in *Data Management Compendium* (CH2M HILL, 2007).

The laboratory hardcopy report original and electronic data are stored in the project files and project local area network hard drive areas in the CH2M HILL office in Redding, California. The original field data forms are stored in the CH2M HILL office in Sacramento, California. Laboratories are required to archive the analytical data as outlined in the Basewide UFP-QAPP (CH2M HILL, 2012).

## Works Cited

Air Force Civil Engineer Center. 2012. *ERPIMS 2012 Data Loading Handbook, v 6.0*. March.

CH2M HILL. 2012. *Basewide Uniform Federal Policy Quality Assurance Project Plan*. Prepared for Beale Air Force Base, California. Final. December.

CH2M HILL. 2007. *Data Management Compendium*. December.

TABLE 1  
Overall Flagging Summary

Method	Matrix	Validation Reason	Qualifier*	Qualifier Type	Number of Affected Analytes
TO-14	AIR				
	Category = Blank	Laboratory blank contamination less than the Reporting Limit	U	Protocol	35
	Category = Calibration	Continuing Calibration Verification recovery less than Lower Control Limit	UJ	Protocol	5
	Category = Calibration	Initial calibration Relative Percent Difference exceeded	UJ	Protocol	8
	Category = Calibration	Initial Calibration Verification Standard Percent Difference criteria exceeded	UJ	Protocol	2
	Category = LaboratoryControlSample	Laboratory Control Sample recovery greater than upper control limit	J	Protocol	9
	Category = LaboratoryControlSample	Laboratory Control Sample recovery less than Lower Control Limit	UJ	Protocol	23
			J	Protocol	2
	Category = LaboratoryControlSample	No Laboratory Control Sample in the analytical batch	UJ	Other	32

\* The most severe flag for each analyte becomes the final validation flag.

**Qualifier Description:**

J = The analyte was detected, the quantitation was estimated due to discrepancies in meeting certain analyte-specific quality control criteria.

U = The analyte was analyzed for, but not detected or was qualified as not detected due to blank contamination.

UJ = The analyte was not detected; however, the result was estimated due to discrepancies in meeting certain analyte-specific quality control criteria.

**Qualifier Type:**

Protocol = Flagging due to contractor/laboratory protocol violations.

Other = Flagging due to sample, matrix, or field issues not related to Quality Assurance Project Plan (QAPP) or Sampling and Analysis Plan (SAP) protocol.

TABLE 2

Results Between the RL and MDL – Qualified Data

Method	Matrix	Analyte	Sample ID	Result	Low-level Detects Final Qualifier*	Criteria
TO-14	AIR	<b>1,1,2,2-Tetrachloroethane</b>	VE-4D_SV75E01	0.15 PPBV	J	<RL
		<b>1,1-Dichloroethane</b>	VE-4D_SV75E07	0.39 PPBV	J	<RL
			VE-4D_SV75E09	0.17 PPBV	J	<RL
			VE-4D_SV75E10	0.19 PPBV	J	<RL
		<b>1,1-Dichloroethene</b>	FINALEFF_E10	2.9 PPBV	J	<RL
			VE-4D_SV75E08	0.56 PPBV	J	<RL
			VE-4S_SV30E07	6.4 PPBV	J	<RL
			VE-4S_SV30E08	1 PPBV	J	<RL
		<b>1,2,4-Trimethylbenzene</b>	FINALEFF_E02	1.3 PPBV	U	<RL
			FINALEFF_E10	1.4 PPBV	U	<RL
			VE-4D_SV75E01	0.23 PPBV	J	<RL
			VE-4D_SV75E09	0.33 PPBV	J	<RL
			VE-4D_SV75E11	0.13 PPBV	U	<RL
			VE-4D_SV75E11FD	0.16 PPBV	U	<RL
			VE-4S_SV30E02	27 PPBV	J	<RL
		<b>1,2-Dichlorobenzene</b>	VE-4D_SV75E01	0.12 PPBV	J	<RL
			VE-4S_SV30E02	25 PPBV	J	<RL
		<b>1,2-Dichloroethane</b>	VE-4D_SV75E01	0.38 PPBV	J	<RL
		<b>1,2-Dichloropropane</b>	VE-4D_SV75E01	0.56 PPBV	J	<RL
			VE-4D_SV75E07	0.57 PPBV	J	<RL
			VE-4D_SV75E09	0.85 PPBV	J	<RL
			VE-4S_SV30E07	5.4 PPBV	J	<RL
			VE-4S_SV30E09	5.6 PPBV	J	<RL
			VE-4S_SV30E10	1.9 PPBV	J	<RL
			VE-4S_SV30E11A	0.42 PPBV	U	<RL
			VE-4S_SV30E11B	1.9 PPBV	U	<RL



TABLE 2

Results Between the RL and MDL – Qualified Data

Method	Matrix	Analyte	Sample ID	Result	Low-level Detects Final Qualifier*	Criteria
		<b>1,3,5-Trimethylbenzene</b>				
			FINALEFF_E02	0.36 PPBV	U	<RL
			PRIMEFF_E02	0.54 PPBV	U	<RL
		<b>1,3-Dichlorobenzene</b>				
			VE-4D_SV75E01	0.14 PPBV	J	<RL
			VE-4D_SV75E07	0.38 PPBV	J	<RL
			VE-4D_SV75E09	0.13 PPBV	J	<RL
			VE-4S_SV30E02	39 PPBV	J	<RL
			VE-4S_SV30E07	2.8 PPBV	J	<RL
			VE-4S_SV30E09	1.2 PPBV	J	<RL
		<b>1,4-Dichlorobenzene</b>				
			VE-4D_SV75E01	0.22 PPBV	J	<RL
		<b>2,2,4-TRIMETHYLPENTANE</b>				
			FINALEFF_E10	0.6 PPBV	J	<RL
			VE-4D_SV75E01	0.57 PPBV	J	<RL
			VE-4D_SV75E07	0.29 PPBV	J	<RL
			VE-4D_SV75E08	0.16 PPBV	J	<RL
			VE-4D_SV75E09	0.17 PPBV	J	<RL
			VE-4D_SV75E11FD	0.32 PPBV	J	<RL
		<b>2-Butanone</b>				
			FINALEFF_E02	2.5 PPBV	J	<RL
			PRIMEFF_E02	2.5 PPBV	J	<RL
			VE-4D_SV75E05	5.1 PPBV	J	<RL
			VE-4D_SV75E07	8.9 PPBV	J	<RL
			VE-4D_SV75E08	2.2 PPBV	J	<RL
			VE-4D_SV75E10	3.4 PPBV	J	<RL
			VE-4S_SV30E08	6.2 PPBV	J	<RL
			VE-4S_SV30E09	15 PPBV	J	<RL
		<b>2-Hexanone</b>				
			VE-4D_SV75E07	1.6 PPBV	J	<RL
			VE-4D_SV75E09	1.2 PPBV	J	<RL
		<b>2-PROPANOL</b>				
			PRIMEFF_E02	1 PPBV	J	<RL
			PRIMEFF_E03	1 PPBV	U	<RL

TABLE 2

Results Between the RL and MDL – Qualified Data

Method	Matrix	Analyte	Sample ID	Result	Low-level Detects Final Qualifier*	Criteria
			VE-4D_SV75E01	3 PPBV	J	<RL
			VE-4D_SV75E02	1.8 PPBV	J	<RL
			VE-4D_SV75E04	4 PPBV	J	<RL
			VE-4D_SV75E05	2.7 PPBV	U	<RL
			VE-4D_SV75E07	2.3 PPBV	J	<RL
			VE-4D_SV75E09	1.8 PPBV	J	<RL
			VE-4D_SV75E10	1.2 PPBV	J	<RL
			VE-4D_SV75E11	1.8 PPBV	J	<RL
			VE-4D_SV75E11FD	1.7 PPBV	J	<RL
			VE-4S_SV30E03	260 PPBV	U	<RL
			VE-4S_SV30E04	24 PPBV	J	<RL
			VE-4S_SV30E06FD	24 PPBV	U	<RL
			VE-4S_SV30E11B	10 PPBV	J	<RL
		<b>4-ETHYLTOLUENE</b>				
			FINALEFF_E02	1 PPBV	J	<RL
			PRIMEFF_E02	1 PPBV	J	<RL
		<b>4-Methyl-2-pentanone</b>				
			VE-4D_SV75E07	1.2 PPBV	J	<RL
			VE-4S_SV30E02	120 PPBV	J	<RL
		<b>Acetone</b>				
			FINALEFF_E10	16 PPBV	J	<RL
			PRIMEFF_E03	5.3 PPBV	J	<RL
			VE-4D_SV75E02	11 PPBV	J	<RL
			VE-4D_SV75E03	26 PPBV	J	<RL
			VE-4D_SV75E04	15 PPBV	J	<RL
			VE-4D_SV75E05	22 PPBV	J	<RL
			VE-4D_SV75E11	5.9 PPBV	J	<RL
			VE-4D_SV75E11FD	6 PPBV	J	<RL
			VE-4S_SV30E04	50 PPBV	J	<RL
			VE-4S_SV30E05	41 PPBV	J	<RL
			VE-4S_SV30E06FD	43 PPBV	J	<RL
			VE-4S_SV30E09	38 PPBV	J	<RL
			VE-4S_SV30E11A	5.5 PPBV	J	<RL
		<b>Benzene</b>				

TABLE 2

Results Between the RL and MDL – Qualified Data

Method	Matrix	Analyte	Sample ID	Result	Low-level Detects Final Qualifier*	Criteria
			VE-4D_SV75E01	0.48 PPBV	J	<RL
			VE-4D_SV75E02	0.32 PPBV	J	<RL
			VE-4D_SV75E05	1.1 PPBV	J	<RL
			VE-4D_SV75E07	1.4 PPBV	J	<RL
			VE-4D_SV75E08	0.59 PPBV	J	<RL
			VE-4D_SV75E09	0.69 PPBV	J	<RL
			VE-4D_SV75E11FD	0.38 PPBV	J	<RL
			VE-4S_SV30E08	0.94 PPBV	J	<RL
		<b>Bromodichloromethane</b>				
			VE-4D_SV75E01	0.14 PPBV	J	<RL
			VE-4D_SV75E07	0.37 PPBV	J	<RL
			VE-4D_SV75E09	0.21 PPBV	J	<RL
			VE-4D_SV75E10	0.3 PPBV	J	<RL
			VE-4D_SV75E11	0.16 PPBV	U	<RL
		<b>Carbon disulfide</b>				
			FINALEFF_E02	0.72 PPBV	U	<RL
			FINALEFF_E10	4.6 PPBV	U	<RL
			PRIMEFF_E02	0.62 PPBV	U	<RL
			PRIMEFF_E03	0.61 PPBV	U	<RL
			VE-4D_SV75E02	1.9 PPBV	U	<RL
			VE-4D_SV75E03	4.2 PPBV	U	<RL
			VE-4D_SV75E04	2.2 PPBV	U	<RL
			VE-4D_SV75E05	1.2 PPBV	U	<RL
			VE-4D_SV75E07	4.1 PPBV	J	<RL
			VE-4D_SV75E08	1.3 PPBV	J	<RL
			VE-4D_SV75E09	1.4 PPBV	J	<RL
			VE-4S_SV30E02	290 PPBV	U	<RL
			VE-4S_SV30E03	150 PPBV	U	<RL
			VE-4S_SV30E04	13 PPBV	U	<RL
			VE-4S_SV30E05	16 PPBV	U	<RL
			VE-4S_SV30E06FD	32 PPBV	U	<RL
		<b>Carbon tetrachloride</b>				
			VE-4S_SV30E01	640 PPBV	J	<RL
			VE-4S_SV30E02	46 PPBV	U	<RL

TABLE 2

Results Between the RL and MDL – Qualified Data

Method	Matrix	Analyte	Sample ID	Result	Low-level Detects Final Qualifier*	Criteria
		<b>Chlorobenzene</b>				
			VE-4S_SV30E01	620 PPBV	J	<RL
			VE-4S_SV30E01FD	260 PPBV	J	<RL
			VE-4S_SV30E05	9.5 PPBV	J	<RL
			VE-4S_SV30E06FD	8.3 PPBV	J	<RL
			VE-4S_SV30E07	5.5 PPBV	J	<RL
			VE-4S_SV30E09	2.5 PPBV	J	<RL
			VE-4S_SV30E10	2.1 PPBV	J	<RL
		<b>Chloroethane</b>				
			VE-4D_SV75E07	2.2 PPBV	J	<RL
		<b>Chloroform</b>				
			FINALEFF_E10	3.2 PPBV	J	<RL
			PRIMEFF_E03	0.32 PPBV	J	<RL
			PRIMEFF_E10	6.5 PPBV	J	<RL
			VE-4D_SV75E04	2.9 PPBV	J	<RL
			VE-4D_SV75E05	2.3 PPBV	J	<RL
			VE-4D_SV75E08	1.1 PPBV	J	<RL
			VE-4S_SV30E07	3.8 PPBV	J	<RL
			VE-4S_SV30E08	1.2 PPBV	J	<RL
			VE-4S_SV30E09	2.8 PPBV	J	<RL
			VE-4S_SV30E10	3.2 PPBV	J	<RL
			VE-4S_SV30E11B	2.6 PPBV	U	<RL
		<b>cis-1,2-Dichloroethene</b>				
			FINALEFF_E10	3.2 PPBV	J	<RL
			PRIMEFF_E10	4.4 PPBV	J	<RL
			VE-4D_SV75E07	1.5 PPBV	J	<RL
			VE-4D_SV75E08	0.71 PPBV	J	<RL
			VE-4D_SV75E09	0.6 PPBV	J	<RL
			VE-4D_SV75E10	0.84 PPBV	J	<RL
			VE-4D_SV75E11	0.74 PPBV	J	<RL
			VE-4S_SV30E08	0.98 PPBV	J	<RL
		<b>CYCLOHEXANE</b>				
			VE-4D_SV75E01	0.82 PPBV	J	<RL
			VE-4D_SV75E11FD	0.72 PPBV	J	<RL

TABLE 2

Results Between the RL and MDL – Qualified Data

Method	Matrix	Analyte	Sample ID	Result	Low-level Detects Final Qualifier*	Criteria
		<b>Dichlorodifluoromethane</b>				
			PRIMEFF_E02	0.68 PPBV	J	<RL
			PRIMEFF_E03	0.56 PPBV	J	<RL
			VE-4D_SV75E01	0.43 PPBV	J	<RL
			VE-4D_SV75E02	0.54 PPBV	J	<RL
			VE-4D_SV75E07	1.1 PPBV	J	<RL
			VE-4D_SV75E08	0.81 PPBV	J	<RL
			VE-4D_SV75E09	0.85 PPBV	J	<RL
			VE-4D_SV75E10	0.77 PPBV	J	<RL
			VE-4D_SV75E11	0.58 PPBV	J	<RL
			VE-4D_SV75E11FD	0.53 PPBV	J	<RL
			VE-4S_SV30E08	2.2 PPBV	J	<RL
			VE-4S_SV30E09	3.9 PPBV	J	<RL
			VE-4S_SV30E11A	0.93 PPBV	J	<RL
		<b>ETHANOL</b>				
			FINALEFF_E10	6.4 PPBV	J	<RL
			VE-4D_SV75E05	7.4 PPBV	J	<RL
			VE-4D_SV75E07	6.4 PPBV	J	<RL
			VE-4D_SV75E11	5 PPBV	J	<RL
			VE-4D_SV75E11FD	3.3 PPBV	J	<RL
			VE-4S_SV30E09	21 PPBV	J	<RL
			VE-4S_SV30E10	22 PPBV	J	<RL
		<b>Ethylbenzene</b>				
			FINALEFF_E10	0.9 PPBV	J	<RL
			VE-4D_SV75E01	0.44 PPBV	J	<RL
			VE-4D_SV75E08	0.19 PPBV	J	<RL
			VE-4D_SV75E09	0.32 PPBV	J	<RL
			VE-4D_SV75E11FD	0.21 PPBV	J	<RL
			VE-4S_SV30E08	0.35 PPBV	J	<RL
		<b>HEPTANE</b>				
			VE-4D_SV75E01	0.53 PPBV	J	<RL
			VE-4D_SV75E07	2 PPBV	J	<RL
			VE-4D_SV75E08	0.81 PPBV	J	<RL
			VE-4D_SV75E10	0.49 PPBV	J	<RL

TABLE 2  
Results Between the RL and MDL – Qualified Data

Method	Matrix	Analyte	Sample ID	Result	Low-level Detects Final Qualifier*	Criteria
			VE-4D_SV75E11FD	0.8 PPBV	J	<RL
			VE-4S_SV30E08	2.3 PPBV	J	<RL
		<b>Hexachloro-1,3-butadiene</b>				
			VE-4D_SV75E01	0.92 PPBV	J	<RL
		<b>m,p-Xylene</b>				
			FINALEFF_E02	1 PPBV	J	<RL
			FINALEFF_E10	3.9 PPBV	J	<RL
			PRIMEFF_E02	1.1 PPBV	J	<RL
			VE-4D_SV75E01	0.81 PPBV	J	<RL
			VE-4D_SV75E02	0.46 PPBV	J	<RL
			VE-4D_SV75E07	0.59 PPBV	U	<RL
			VE-4D_SV75E08	0.36 PPBV	U	<RL
			VE-4D_SV75E09	0.71 PPBV	J	<RL
			VE-4D_SV75E11	0.18 PPBV	J	<RL
			VE-4D_SV75E11FD	0.21 PPBV	J	<RL
			VE-4S_SV30E02	35 PPBV	U	<RL
			VE-4S_SV30E04	8.7 PPBV	J	<RL
			VE-4S_SV30E07	3.6 PPBV	U	<RL
			VE-4S_SV30E08	0.76 PPBV	U	<RL
		<b>Methyl tert-butyl ether</b>				
			VE-4D_SV75E07	0.66 PPBV	J	<RL
		<b>Methylene chloride</b>				
			VE-4D_SV75E10	1.3 PPBV	J	<RL
		<b>Naphthalene</b>				
			FINALEFF_E02	0.67 PPBV	J	<RL
			PRIMEFF_E02	0.88 PPBV	J	<RL
			VE-4D_SV75E09	1.4 PPBV	J	<RL
			VE-4D_SV75E11	1.4 PPBV	J	<RL
		<b>n-hexane (C6)</b>				
			FINALEFF_E02	0.37 PPBV	J	<RL
			VE-4D_SV75E02	0.33 PPBV	J	<RL
			VE-4D_SV75E08	0.48 PPBV	J	<RL
			VE-4D_SV75E11FD	0.95 PPBV	J	<RL
			VE-4S_SV30E08	0.72 PPBV	J	<RL

TABLE 2

Results Between the RL and MDL – Qualified Data

Method	Matrix	Analyte	Sample ID	Result	Low-level Detects Final Qualifier*	Criteria
		<b>n-Propylbenzene</b>				
			FINALEFF_E02	0.23 PPBV	U	<RL
		<b>o-Xylene</b>				
			FINALEFF_E02	0.63 PPBV	J	<RL
			FINALEFF_E10	1.4 PPBV	J	<RL
			PRIMEFF_E02	0.58 PPBV	J	<RL
			VE-4D_SV75E01	0.32 PPBV	J	<RL
			VE-4D_SV75E09	0.43 PPBV	J	<RL
		<b>Styrene</b>				
			VE-4D_SV75E01	0.44 PPBV	J	<RL
		<b>Tetrachloroethene</b>				
			FINALEFF_E02	0.35 PPBV	J	<RL
			VE-4D_SV75E01	0.31 PPBV	J	<RL
			VE-4D_SV75E02	0.42 PPBV	J	<RL
			VE-4D_SV75E04	2 PPBV	J	<RL
			VE-4D_SV75E05	1.9 PPBV	J	<RL
			VE-4D_SV75E07	2 PPBV	J	<RL
			VE-4S_SV30E02	200 PPBV	J	<RL
			VE-4S_SV30E10	5.4 PPBV	J	<RL
		<b>TETRAHYDROFURAN</b>				
			FINALEFF_E02	1.1 PPBV	J	<RL
			FINALEFF_E10	3.8 PPBV	J	<RL
			VE-4D_SV75E01	0.38 PPBV	J	<RL
			VE-4D_SV75E11	0.51 PPBV	J	<RL
			VE-4D_SV75E11FD	0.66 PPBV	J	<RL
		<b>Toluene</b>				
			FINALEFF_E10	0.92 PPBV	J	<RL
			VE-4D_SV75E02	0.53 PPBV	J	<RL
			VE-4D_SV75E07	0.78 PPBV	J	<RL
			VE-4D_SV75E08	0.81 PPBV	J	<RL
			VE-4D_SV75E09	0.82 PPBV	J	<RL
			VE-4D_SV75E11	0.37 PPBV	J	<RL
			VE-4D_SV75E11FD	0.33 PPBV	J	<RL
			VE-4S_SV30E02	56 PPBV	J	<RL

TABLE 2

Results Between the RL and MDL – Qualified Data

Method	Matrix	Analyte	Sample ID	Result	Low-level Detects Final Qualifier*	Criteria
			VE-4S_SV30E04	23 PPBV	J	<RL
			VE-4S_SV30E05	9.2 PPBV	J	<RL
			VE-4S_SV30E06FD	7.2 PPBV	J	<RL
			VE-4S_SV30E07	7.6 PPBV	J	<RL
			VE-4S_SV30E08	1.6 PPBV	J	<RL
			VE-4S_SV30E11A	0.52 PPBV	J	<RL
		<b>Trichloroethene</b>				
			FINALEFF_E02	1.3 PPBV	J	<RL
			PRIMEFF_E02	0.98 PPBV	J	<RL
		<b>Trichlorofluoromethane</b>				
			PRIMEFF_E10	4 PPBV	J	<RL
			VE-4D_SV75E01	0.36 PPBV	J	<RL
			VE-4D_SV75E02	0.41 PPBV	J	<RL
			VE-4D_SV75E04	4.2 PPBV	J	<RL
			VE-4D_SV75E11	0.21 PPBV	J	<RL
			VE-4D_SV75E11FD	0.27 PPBV	J	<RL
			VE-4S_SV30E07	3.3 PPBV	J	<RL
			VE-4S_SV30E08	1.6 PPBV	J	<RL
			VE-4S_SV30E09	1.4 PPBV	J	<RL
			VE-4S_SV30E10	2.5 PPBV	J	<RL
			VE-4S_SV30E11A	0.32 PPBV	J	<RL
			VE-4S_SV30E11B	1.8 PPBV	J	<RL
		<b>Trichlorotrifluoroethane</b>				
			FINALEFF_E10	4.5 PPBV	J	<RL
			PRIMEFF_E10	4.8 PPBV	J	<RL
			VE-4D_SV75E01	0.31 PPBV	J	<RL
			VE-4D_SV75E05	2.8 PPBV	J	<RL
			VE-4D_SV75E08	0.72 PPBV	J	<RL
			VE-4D_SV75E09	0.69 PPBV	J	<RL
			VE-4D_SV75E10	0.51 PPBV	J	<RL
			VE-4S_SV30E07	7.1 PPBV	J	<RL
			VE-4S_SV30E09	6.9 PPBV	J	<RL
			VE-4S_SV30E10	8.6 PPBV	J	<RL
			VE-4S_SV30E11A	0.76 PPBV	J	<RL



TABLE 2  
Results Between the RL and MDL – Qualified Data

Method	Matrix	Analyte	Sample ID	Result	Low-level Detects Final Qualifier*	Criteria
		Vinyl chloride	VE-4S_SV30E11B	6.3 PPBV	J	<RL
			VE-4S_SV30E12	11 PPBV	J	<RL
			VE-4D_SV75E09	0.46 PPBV	J	<RL
			VE-4S_SV30E09	5.1 PPBV	J	<RL

UG/L = micrograms per liter

\* The most severe flag for each analyte becomes the final validation flag.

**Qualifier Description:**

J = The analyte was detected, the quantitation was estimated due to discrepancies in meeting certain analyte-specific quality control criteria.

U = The analyte was analyzed for, but not detected or was qualified as not detected due to blank contamination.

**Criteria:**

<RL = Result less than the Reporting Limit (RL)

TABLE 3  
Blank Contamination – Qualified Data

Method	Matrix	Analyte / Sample ID	Result	Blank Contamination Qualifier*	Criteria	Comments
TO-14	AIR	<b>1,2,4-Trimethylbenzene</b>				
		FINALEFF_E02	1.3 PPBV	U	LB<RL	blank target = 0.27PPBV
		FINALEFF_E10	1.4 PPBV	U	LB<RL	blank target = 0.13PPBV
		PRIMEFF_E02	1.7 PPBV	U	LB<RL	blank target = 0.27PPBV
		VE-4D_SV75E11	0.13 PPBV	U	LB<RL	blank target = 0.084PPBV
		VE-4D_SV75E11FD	0.16 PPBV	U	LB<RL	blank target = 0.084PPBV
TO-14	AIR	<b>1,2-Dichloropropane</b>				
		VE-4S_SV30E11A	0.42 PPBV	U	LB<RL	blank target = 0.098PPBV
		VE-4S_SV30E11B	1.9 PPBV	U	LB<RL	blank target = 0.098PPBV
TO-14	AIR	<b>1,3,5-Trimethylbenzene</b>				
		FINALEFF_E02	0.36 PPBV	U	LB<RL	blank target = 0.13PPBV
		PRIMEFF_E02	0.54 PPBV	U	LB<RL	blank target = 0.13PPBV
TO-14	AIR	<b>2-PROPANOL</b>				
		PRIMEFF_E03	1 PPBV	U	LB<RL	blank target = 0.27PPBV
		VE-4D_SV75E05	2.7 PPBV	U	LB<RL	blank target = 0.28PPBV
		VE-4S_SV30E03	260 PPBV	U	LB<RL	blank target = 0.26PPBV
		VE-4S_SV30E06FD	24 PPBV	U	LB<RL	blank target = 0.27PPBV
TO-14	AIR	<b>Bromodichloromethane</b>				
		VE-4D_SV75E11	0.16 PPBV	U	LB<RL	blank target = 0.086PPBV
TO-14	AIR	<b>Carbon disulfide</b>				
		FINALEFF_E02	0.72 PPBV	U	LB<RL	blank target = 0.22PPBV
		FINALEFF_E10	4.6 PPBV	U	LB<RL	blank target = 0.5PPBV
		PRIMEFF_E02	0.62 PPBV	U	LB<RL	blank target = 0.22PPBV
		PRIMEFF_E03	0.61 PPBV	U	LB<RL	blank target = 0.24PPBV
		VE-4D_SV75E02	1.9 PPBV	U	LB<RL	blank target = 0.22PPBV
		VE-4D_SV75E03	4.2 PPBV	U	LB<RL	blank target = 0.18PPBV
		VE-4D_SV75E04	2.2 PPBV	U	LB<RL	blank target = 0.14PPBV
		VE-4D_SV75E05	1.2 PPBV	U	LB<RL	blank target = 0.21PPBV
		VE-4S_SV30E02	290 PPBV	U	LB<RL	blank target = 0.54PPBV
		VE-4S_SV30E03	150 PPBV	U	LB<RL	blank target = 0.18PPBV
		VE-4S_SV30E04	13 PPBV	U	LB<RL	blank target = 0.14PPBV
		VE-4S_SV30E05	16 PPBV	U	LB<RL	blank target = 0.21PPBV
		VE-4S_SV30E06FD	32 PPBV	U	LB<RL	blank target = 0.24PPBV

TABLE 3  
Blank Contamination – Qualified Data

Method	Matrix	Analyte / Sample ID	Result	Blank Contamination Qualifier*	Criteria	Comments
TO-14	AIR	<b>Carbon tetrachloride</b>				
		VE-4S_SV30E02	46 PPBV	U	LB<RL	blank target = 0.081PPBV
TO-14	AIR	<b>Chloroform</b>				
		VE-4S_SV30E11B	2.6 PPBV	U	LB<RL	blank target = 0.084PPBV
TO-14	AIR	<b>m,p-Xylene</b>				
		VE-4D_SV75E07	0.59 PPBV	U	LB<RL	blank target = 0.073PPBV
		VE-4D_SV75E08	0.36 PPBV	U	LB<RL	blank target = 0.073PPBV
		VE-4S_SV30E02	35 PPBV	U	LB<RL	blank target = 0.064PPBV
		VE-4S_SV30E07	3.6 PPBV	U	LB<RL	blank target = 0.073PPBV
		VE-4S_SV30E08	0.76 PPBV	U	LB<RL	blank target = 0.073PPBV
TO-14	AIR	<b>n-Propylbenzene</b>				
		FINALEFF_E02	0.23 PPBV	U	LB<RL	blank target = 0.076PPBV

Blank target = concentration of field or laboratory blank.

\* The most severe flag for each analyte becomes the final validation flag.

**Qualifier Description:**

U = The analyte was analyzed for, but not detected or was qualified as not detected due to blank contamination.

**Criteria:**

LB<RL = Laboratory blank contamination less than the Reporting Limit

TABLE 4  
Calibration Criteria – Qualified Data

Method	Matrix	Analyte	Sample ID	Result	Calibration Qualifier*	Criteria
TO-14	AIR	<b>1,2,4-Trichlorobenzene</b>	VE-4D_SV75E05	8.6 PPBV	UJ	CCV<LCL
			VE-4S_SV30E01	2100 PPBV	UJ	IC%RSD
			VE-4S_SV30E01FD	1100 PPBV	UJ	IC%RSD
			VE-4S_SV30E05	100 PPBV	UJ	CCV<LCL
TO-14	AIR	<b>1,2,4-Trimethylbenzene</b>	PRIMEFF_E03	0.79 PPBV	UJ	IC%RSD
			VE-4D_SV75E05	2.3 PPBV	UJ	IC%RSD
			VE-4D_SV75E06	1.3 PPBV	UJ	IC%RSD
			VE-4S_SV30E05	29 PPBV	UJ	IC%RSD
			VE-4S_SV30E06	28 PPBV	UJ	IC%RSD
			VE-4S_SV30E06FD	27 PPBV	UJ	IC%RSD
TO-14	AIR	<b>ALPHA-CHLOROTOLUENE</b>	VE-4D_SV75E09	0.9 PPBV	UJ	ICVS%D
			VE-4S_SV30E09	9.1 PPBV	UJ	ICVS%D
TO-14	AIR	<b>ETHANOL</b>	VE-4S_SV30E02	470 PPBV	UJ	CCV<LCL
TO-14	AIR	<b>Hexachloro-1,3-butadiene</b>	VE-4D_SV75E05	8.6 PPBV	UJ	CCV<LCL
			VE-4S_SV30E05	100 PPBV	UJ	CCV<LCL

\* The most severe flag for each analyte becomes the final validation flag.

**Qualifier Description:**

UJ = The analyte was not detected; however, the result was estimated due to discrepancies in meeting certain analyte-specific quality control criteria.

**Criteria:**

- CCV<LCL = Continuing Calibration Verification recovery less than Lower Control Limit
- IC%RSD = Initial calibration Relative Percent Difference exceeded
- ICVS%D = Initial Calibration Verification Standard Percent Difference criteria exceeded

TABLE 5

## Laboratory Control Sample – Qualified Data

Method	Matrix	Sample ID / QAQC Type	Analyte	Result	LCS Qualifier*	LCS Recovery	Criteria
TO-14	AIR		<b>2-Hexanone</b>				
		VE-4S_SV30E01 / N		1400 PPBV	UJ	%R = 64 LCL=70 UCL=130	LCS<LCL
		VE-4S_SV30E01FD / FD		680 PPBV	UJ	%R = 64 LCL=70 UCL=130	LCS<LCL
TO-14	AIR		<b>2-PROPANOL</b>				
		VE-4D_SV75E11 / N		1.8 PPBV	J	%R = 131 LCL=70 UCL=130	LCS>UCL
		VE-4D_SV75E11FD / FD		1.7 PPBV	J	%R = 131 LCL=70 UCL=130	LCS>UCL
		VE-4S_SV30E11B / N		10 PPBV	J	%R = 131 LCL=70 UCL=130	LCS>UCL
TO-14	AIR		<b>Acetone</b>				
		FINALEFF_E02 / N		15 PPBV	J	%R = 133 LCL=70 UCL=130	LCS>UCL
		FINALEFF_E02 / N		15 PPBV	J	%R = 134 LCL=70 UCL=130	LCS>UCL
		PRIMEFF_E02 / N		16 PPBV	J	%R = 133 LCL=70 UCL=130	LCS>UCL
		PRIMEFF_E02 / N		16 PPBV	J	%R = 134 LCL=70 UCL=130	LCS>UCL
		VE-4D_SV75E02 / N		11 PPBV	J	%R = 134 LCL=70 UCL=130	LCS>UCL
		VE-4D_SV75E02 / N		11 PPBV	J	%R = 133 LCL=70 UCL=130	LCS>UCL
TO-14	AIR		<b>Chloromethane</b>				
		VE-4D_SV75E09 / N		2.3 PPBV	UJ	%R = 65 LCL=70 UCL=130	LCS<LCL
		VE-4S_SV30E09 / N		23 PPBV	UJ	%R = 65 LCL=70 UCL=130	LCS<LCL
TO-14	AIR		<b>Isopropyl Ether</b>				
		FINALEFF_E02 / N		0.41 PPBV	UJ	NoLCS	NoLCS
		FINALEFF_E10 / N		3.6 PPBV	UJ	NoLCS	NoLCS
		PRIMEFF_E02 / N		0.4 PPBV	UJ	NoLCS	NoLCS
		PRIMEFF_E03 / N		0.4 PPBV	UJ	NoLCS	NoLCS
		PRIMEFF_E10 / N		7.5 PPBV	UJ	NoLCS	NoLCS
		VE-4D_SV75E01 / N		0.83 PPBV	UJ	NoLCS	NoLCS
		VE-4D_SV75E02 / N		0.38 PPBV	UJ	NoLCS	NoLCS
		VE-4D_SV75E03 / N		4.1 PPBV	UJ	NoLCS	NoLCS
		VE-4D_SV75E04 / N		2.7 PPBV	UJ	NoLCS	NoLCS
		VE-4D_SV75E05 / N		1.2 PPBV	UJ	NoLCS	NoLCS
		VE-4D_SV75E06 / N		0.68 PPBV	UJ	NoLCS	NoLCS
		VE-4D_SV75E07 / N		1.8 PPBV	UJ	NoLCS	NoLCS
		VE-4D_SV75E08 / N		0.93 PPBV	UJ	NoLCS	NoLCS
		VE-4D_SV75E09 / N		0.94 PPBV	UJ	NoLCS	NoLCS

TABLE 5

## Laboratory Control Sample – Qualified Data

Method	Matrix	Sample ID / QAQC Type	Analyte	Result	LCS Qualifier*	LCS Recovery	Criteria
		VE-4D_SV75E10 / N		0.92 PPBV	UJ	NoLCS	NoLCS
		VE-4D_SV75E11 / N		0.95 PPBV	UJ	NoLCS	NoLCS
		VE-4D_SV75E11FD / FD		0.89 PPBV	UJ	NoLCS	NoLCS
		VE-4S_SV30E01 / N		460 PPBV	UJ	NoLCS	NoLCS
		VE-4S_SV30E01FD / FD		230 PPBV	UJ	NoLCS	NoLCS
		VE-4S_SV30E02 / N		190 PPBV	UJ	NoLCS	NoLCS
		VE-4S_SV30E03 / N		150 PPBV	UJ	NoLCS	NoLCS
		VE-4S_SV30E04 / N		16 PPBV	UJ	NoLCS	NoLCS
		VE-4S_SV30E05 / N		14 PPBV	UJ	NoLCS	NoLCS
		VE-4S_SV30E06 / N		14 PPBV	UJ	NoLCS	NoLCS
		VE-4S_SV30E06FD / FD		14 PPBV	UJ	NoLCS	NoLCS
		VE-4S_SV30E07 / N		18 PPBV	UJ	NoLCS	NoLCS
		VE-4S_SV30E08 / N		1.7 PPBV	UJ	NoLCS	NoLCS
		VE-4S_SV30E09 / N		9.6 PPBV	UJ	NoLCS	NoLCS
		VE-4S_SV30E10 / N		7.4 PPBV	UJ	NoLCS	NoLCS
		VE-4S_SV30E11A / N		1.8 PPBV	UJ	NoLCS	NoLCS
		VE-4S_SV30E11B / N		7.3 PPBV	UJ	NoLCS	NoLCS
		VE-4S_SV30E12 / N		97 PPBV	UJ	NoLCS	NoLCS
TO-14	AIR		<b>Naphthalene</b>				
		FINALEFF_E02 / N		0.67 PPBV	J	%R = 64 LCL=70 UCL=130	LCS<LCL
		FINALEFF_E10 / N		8.8 PPBV	UJ	%R = 58 LCL=70 UCL=130	LCS<LCL
		FINALEFF_E10 / N		8.8 PPBV	UJ	%R = 66 LCL=70 UCL=130	LCS<LCL
		PRIMEFF_E02 / N		0.88 PPBV	J	%R = 64 LCL=70 UCL=130	LCS<LCL
		PRIMEFF_E03 / N		2.9 PPBV	UJ	%R = 69 LCL=70 UCL=130	LCS<LCL
		PRIMEFF_E10 / N		18 PPBV	UJ	%R = 58 LCL=70 UCL=130	LCS<LCL
		PRIMEFF_E10 / N		18 PPBV	UJ	%R = 66 LCL=70 UCL=130	LCS<LCL
		VE-4D_SV75E02 / N		2.8 PPBV	UJ	%R = 64 LCL=70 UCL=130	LCS<LCL
		VE-4D_SV75E05 / N		8.6 PPBV	UJ	%R = 61 LCL=70 UCL=130	LCS<LCL
		VE-4D_SV75E06 / N		4.9 PPBV	UJ	%R = 69 LCL=70 UCL=130	LCS<LCL
		VE-4D_SV75E10 / N		2.2 PPBV	UJ	%R = 66 LCL=70 UCL=130	LCS<LCL
		VE-4D_SV75E10 / N		2.2 PPBV	UJ	%R = 58 LCL=70 UCL=130	LCS<LCL
		VE-4S_SV30E05 / N		100 PPBV	UJ	%R = 61 LCL=70 UCL=130	LCS<LCL
		VE-4S_SV30E06 / N		100 PPBV	UJ	%R = 69 LCL=70 UCL=130	LCS<LCL
		VE-4S_SV30E06FD / FD		99 PPBV	UJ	%R = 69 LCL=70 UCL=130	LCS<LCL

TABLE 5  
Laboratory Control Sample – Qualified Data

Method	Matrix	Sample ID / QAQC Type	Analyte	Result	LCS Qualifier*	LCS Recovery			Criteria
TO-14	AIR	VE-4S_SV30E10 / N	Vinyl acetate	18 PPBV	UJ	%R = 58	LCL=70	UCL=130	LCS<LCL
		VE-4S_SV30E10 / N		18 PPBV	UJ	%R = 66	LCL=70	UCL=130	LCS<LCL
		VE-4S_SV30E12 / N		97 PPBV	UJ	%R = 64	LCL=70	UCL=130	LCS<LCL
		VE-4S_SV30E12 / N		97 PPBV	UJ	%R = 67	LCL=70	UCL=130	LCS<LCL
		VE-4S_SV30E01 / N		1500 PPBV	UJ	%R = 68	LCL=70	UCL=130	LCS<LCL
		VE-4S_SV30E01FD / FD		760 PPBV	UJ	%R = 68	LCL=70	UCL=130	LCS<LCL

\* The most severe flag for each analyte becomes the final validation flag.

**QAQC Type**

N = Normal Environmental Sample

FD = Field Duplicate

**Qualifier Description:**

J = The analyte was detected, the quantitation was estimated due to discrepancies in meeting certain analyte-specific quality control criteria.

UJ = The analyte was not detected; however, the result was estimated due to discrepancies in meeting certain analyte-specific quality control criteria.

**Criteria:**

LCS<LCL = Laboratory Control Sample recovery less than Lower Control Limit

LCS>UCL = Laboratory Control Sample recovery greater than upper control limit

NoLCS = No Laboratory Control Sample in the analytical batch

TABLE 6  
Site Completeness by Analyte – Qualified Data

Method	Analyte	Units	Analyses	Number of Occurrences						Contractor R Flags	Total R Flags	Contractor Percent Completeness	Overall Percent Completeness
				Detects	Non- detects	Blank Flags	J Flags	M Flags					
TO-14	1,1,1-Trichloroethane	PPBV	32		32							100	100
TO-14	1,1,1,2-Tetrachloroethane	PPBV	32	1	31		1					100	100
TO-14	1,1,2-Trichloroethane	PPBV	32		32							100	100
TO-14	1,1-Dichloroethane	PPBV	32	3	29		3					100	100
TO-14	1,1-Dichloroethene	PPBV	32	4	28		4					100	100
TO-14	1,2,4-Trichlorobenzene	PPBV	32		32		4					100	100
TO-14	1,2,4-Trimethylbenzene	PPBV	32	3	29		9					100	100
TO-14	1,2-Dibromoethane	PPBV	32		32							100	100
TO-14	1,2-Dichloro-1,1,2,2-tetrafluoroethane	PPBV	32		32							100	100
TO-14	1,2-Dichlorobenzene	PPBV	32	2	30		2					100	100
TO-14	1,2-Dichloroethane	PPBV	32	1	31		1					100	100
TO-14	1,2-Dichloropropane	PPBV	32	6	26		6					100	100
TO-14	1,3,5-Trimethylbenzene	PPBV	32		32							100	100
TO-14	1,3-BUTADIENE	PPBV	32		32							100	100
TO-14	1,3-Dichlorobenzene	PPBV	32	6	26		6					100	100
TO-14	1,4-Dichlorobenzene	PPBV	32	4	28		1					100	100
TO-14	1,4-Dioxane	PPBV	32		32							100	100
TO-14	2,2,4-TRIMETHYLPENTANE	PPBV	32	6	26		6					100	100
TO-14	2-Butanone	PPBV	32	11	21		8					100	100
TO-14	2-Hexanone	PPBV	32	2	30		4					100	100
TO-14	2-PROPANOL	PPBV	32	13	19		11					100	100
TO-14	3-CHLOROPROPENE	PPBV	32		32							100	100
TO-14	4-ETHYLTOLUENE	PPBV	32	2	30		2					100	100
TO-14	4-Methyl-2-pentanone	PPBV	32	4	28		2					100	100
TO-14	Acetone	PPBV	32	22	10		15					100	100
TO-14	ALPHA-CHLOROTOLUENE	PPBV	32		32		2					100	100
TO-14	Benzene	PPBV	32	8	24		8					100	100
TO-14	Bromodichloromethane	PPBV	32	4	28		4					100	100
TO-14	Bromoform	PPBV	32		32							100	100



TABLE 6  
Site Completeness by Analyte – Qualified Data

Method	Analyte	Units	Number of Occurrences						Contractor R Flags	Total R Flags	Contractor Percent Completeness	Overall Percent Completeness
			Analyses	Detects	Non- detects	Blank Flags	J Flags	M Flags				
TO-14	Bromomethane	PPBV	32		32						100	100
TO-14	Carbon disulfide	PPBV	32	3	29			3			100	100
TO-14	Carbon tetrachloride	PPBV	32	1	31			1			100	100
TO-14	Chlorobenzene	PPBV	32	7	25			7			100	100
TO-14	Chloroethane	PPBV	32	1	31			1			100	100
TO-14	Chloroform	PPBV	32	14	18			10			100	100
TO-14	Chloromethane	PPBV	32		32			2			100	100
TO-14	cis-1,2-Dichloroethene	PPBV	64	36	28			8			100	100
TO-14	cis-1,3-Dichloropropene	PPBV	32		32						100	100
TO-14	CYCLOHEXANE	PPBV	32	2	30			2			100	100
TO-14	Dibromochloromethane	PPBV	32		32						100	100
TO-14	Dichlorodifluoromethane	PPBV	32	13	19			13			100	100
TO-14	ETHANOL	PPBV	32	17	15			8			100	100
TO-14	Ethylbenzene	PPBV	32	6	26			6			100	100
TO-14	HEPTANE	PPBV	32	7	25			6			100	100
TO-14	Hexachloro-1,3-butadiene	PPBV	32	1	31			3			100	100
TO-14	Isopropyl Ether	PPBV	32		32			32			100	100
TO-14	Isopropylbenzene	PPBV	32		32						100	100
TO-14	m,p-Xylene	PPBV	32	9	23			9			100	100
TO-14	Methyl tert-butyl ether	PPBV	30	1	29			1			100	100
TO-14	Methylene chloride	PPBV	32	1	31			1			100	100
TO-14	Naphthalene	PPBV	32	4	28			16			100	100
TO-14	n-hexane (C6)	PPBV	32	6	26			5			100	100
TO-14	n-Propylbenzene	PPBV	32		32						100	100
TO-14	o-Xylene	PPBV	32	5	27			5			100	100
TO-14	Styrene	PPBV	32	1	31			1			100	100
TO-14	Tetrachloroethene	PPBV	32	10	22			8			100	100
TO-14	TETRAHYDROFURAN	PPBV	32	9	23			5			100	100
TO-14	Toluene	PPBV	32	17	15			14			100	100

TABLE 6  
 Site Completeness by Analyte – Qualified Data

Method	Analyte	Units	Number of Occurrences							Contractor R Flags	Total R Flags	Contractor Percent Completeness	Overall Percent Completeness
			Analyses	Detects	Non- detects	Blank Flags	J Flags	M Flags					
TO-14	trans-1,3-Dichloropropene	PPBV	32		32							100	100
TO-14	Trichloroethene	PPBV	32	32				2				100	100
TO-14	Trichlorofluoromethane	PPBV	32	20	12			12				100	100
TO-14	Trichlorotrifluoroethane	PPBV	32	16	16			13				100	100
TO-14	Vinyl acetate	PPBV	32		32			2				100	100
TO-14	Vinyl chloride	PPBV	32	3	29			2				100	100

TABLE 7

## Sample Summary by Chain of Custody – Data Summary

CoC Number	Sample Date	Matrix	Sample ID / QAQC Type	SDG	Laboratory
ATX013	21-Oct-14	AIR	VE-4D_SV75E03 / N	1410327	ATOX
			VE-4S_SV30E03 / N	1410327	ATOX
ATX014	29-Oct-14	AIR	VE-4D_SV75E04 / N	1410492	ATOX
			VE-4S_SV30E04 / N	1410492	ATOX
ATX015	04-Nov-14	AIR	VE-4D_SV75E05 / N	1411075	ATOX
			VE-4S_SV30E05 / N	1411075	ATOX
ATX028	11-Nov-14	AIR	PRIMEFF_E03 / N	1411179A	ATOX
			VE-4D_SV75E06 / N	1411179B	ATOX
			VE-4S_SV30E06 / N	1411179B	ATOX
			VE-4S_SV30E06FD / FD	1411179A	ATOX
ATX062	17-Dec-14	AIR	FINALEFF_E10 / N	1412307	ATOX
			PRIMEFF_E10 / N	1412307	ATOX
			VE-4D_SV75E10 / N	1412307	ATOX
			VE-4S_SV30E10 / N	1412307	ATOX
ATX082	19-Nov-14	AIR	VE-4D_SV75E07 / N	1411390	ATOX
			VE-4S_SV30E07 / N	1411390	ATOX
ATX095	25-Nov-14	AIR	VE-4D_SV75E08 / N	1411444	ATOX
			VE-4S_SV30E08 / N	1411444	ATOX
ATX099	01-Oct-14	AIR	VE-4D_SV75E01 / N	1410038	ATOX
			VE-4S_SV30E01 / N	1410038	ATOX
			VE-4S_SV30E01FD / FD	1410038	ATOX

TABLE 7

## Sample Summary by Chain of Custody – Data Summary

CoC Number	Sample Date	Matrix	Sample ID / QAQC Type	SDG	Laboratory
ATX100	04-Oct-14	AIR	FINALEFF_E02 / N	1410099	ATOX
			PRIMEFF_E02 / N	1410099	ATOX
			VE-4D_SV75E02 / N	1410099	ATOX
			VE-4S_SV30E02 / N	1410099	ATOX
ATX103	02-Dec-14	AIR	VE-4D_SV75E09 / N	1412043	ATOX
			VE-4S_SV30E09 / N	1412043	ATOX
ATX108	14-Jan-15	AIR	VE-4D_SV75E11 / N	1501173A	ATOX
			VE-4D_SV75E11FD / FD	1501173B	ATOX
			VE-4S_SV30E11A / N	1501173A	ATOX
			VE-4S_SV30E11B / N	1501173A	ATOX
ATX109	21-Jan-15	AIR	VE-4S_SV30E12 / N	1501246	ATOX

**QAQC Type**

N = normal environmental sample  
 FD = field duplicate  
 MS = matrix spike  
 SD = spike duplicate  
 TB = trip blank  
 EB = equipment blank  
 AB = ambient blank  
 FB = field blank

TABLE 8  
Sample Chronology – Data Summary

Laboratory	SDG	Sample ID	Method	Sample Date	Receive Date	Extract Date	Analysis Date	
ATOX	1410038	VE-4D_SV75E01	TO-14	10/1/2014	10/2/2014		10/7/2014	
		VE-4S_SV30E01	TO-14	10/1/2014	10/2/2014		10/8/2014	
		VE-4S_SV30E01FD	TO-14	10/1/2014	10/2/2014		10/8/2014	
	1410099	FINALEFF_E02	TO-14	10/4/2014	10/7/2014		10/10/2014	
		PRIMEFF_E02	TO-14	10/4/2014	10/7/2014		10/10/2014	
		VE-4D_SV75E02	TO-14	10/4/2014	10/7/2014		10/10/2014	
	1410327	VE-4S_SV30E02	TO-14	10/4/2014	10/7/2014		10/13/2014	
		VE-4D_SV75E03	TO-14	10/21/2014	10/22/2014		10/24/2014	
	1410492	VE-4S_SV30E03	TO-14	10/21/2014	10/22/2014		10/24/2014	
		VE-4D_SV75E04	TO-14	10/29/2014	10/30/2014		10/31/2014	
	1411075	VE-4S_SV30E04	TO-14	10/29/2014	10/30/2014		10/31/2014	
		VE-4D_SV75E05	TO-14	11/4/2014	11/6/2014		11/12/2014	
	1411179A	VE-4S_SV30E05	TO-14	11/4/2014	11/6/2014		11/12/2014	
		PRIMEFF_E03	TO-14	11/11/2014	11/12/2014		11/17/2014	
	1411179B	VE-4S_SV30E06FD	TO-14	11/11/2014	11/12/2014		11/17/2014	
		VE-4D_SV75E06	TO-14	11/11/2014	11/12/2014		11/17/2014	
	1411390	VE-4S_SV30E06	TO-14	11/11/2014	11/12/2014		11/17/2014	
		VE-4D_SV75E07	TO-14	11/19/2014	11/24/2014		12/2/2014	
	1411444	VE-4S_SV30E07	TO-14	11/19/2014	11/24/2014		12/2/2014	
		VE-4D_SV75E08	TO-14	11/25/2014	11/26/2014		12/2/2014	
	1412043	VE-4S_SV30E08	TO-14	11/25/2014	11/26/2014		12/2/2014	
		VE-4D_SV75E09	TO-14	12/2/2014	12/3/2014		12/6/2014	
	1412307	VE-4S_SV30E09	TO-14	12/2/2014	12/3/2014		12/6/2014	
		FINALEFF_E10	TO-14	12/17/2014	12/19/2014		12/26/2014	
	1501173A	PRIMEFF_E10	TO-14	12/17/2014	12/19/2014		12/26/2014	
		VE-4D_SV75E10	TO-14	12/17/2014	12/19/2014		12/26/2014	
		VE-4S_SV30E10	TO-14	12/17/2014	12/19/2014		12/26/2014	
	1501173B	VE-4D_SV75E11	TO-14	1/14/2015	1/16/2015		1/19/2015	
		VE-4S_SV30E11A	TO-14	1/14/2015	1/16/2015		1/19/2015	
		VE-4S_SV30E11B	TO-14	1/14/2015	1/16/2015		1/19/2015	
		1501173B	VE-4D_SV75E11FD	TO-14	1/14/2015	1/16/2015		1/19/2015
		1501246	VE-4S_SV30E12	TO-14	1/21/2015	1/22/2015		1/23/2015

**Attachment 3**  
**Raw Data**

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**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	01-Oct-14	VE-4D_SV75E01	1,1,1-TRICHLOROETHANE	0.79	U	0.15	0.79	1.1	ppbv	71-55-6
TO-14	Air	01-Oct-14	VE-4D_SV75E01	1,1,2,2-TETRACHLOROETHANE	0.15	J	0.15	0.79	1.1	ppbv	79-34-5
TO-14	Air	01-Oct-14	VE-4D_SV75E01	1,1,2-TRICHLOROETHANE	0.79	U	0.21	0.79	1.1	ppbv	79-00-5
TO-14	Air	01-Oct-14	VE-4D_SV75E01	1,1-DICHLOROETHANE	0.79	U	0.14	0.79	1.1	ppbv	75-34-3
TO-14	Air	01-Oct-14	VE-4D_SV75E01	1,1-DICHLOROETHENE	0.79	U	0.25	0.79	1.1	ppbv	75-35-4
TO-14	Air	01-Oct-14	VE-4D_SV75E01	1,2,4-TRICHLOROBENZENE	2	U	0.74	2	4.5	ppbv	120-82-1
TO-14	Air	01-Oct-14	VE-4D_SV75E01	1,2,4-TRIMETHYLBENZENE	0.23	J	0.11	0.79	1.1	ppbv	95-63-6
TO-14	Air	01-Oct-14	VE-4D_SV75E01	1,2-DIBROMOETHANE (EDB)	0.79	U	0.17	0.79	1.1	ppbv	106-93-4
TO-14	Air	01-Oct-14	VE-4D_SV75E01	1,2-DICHLOROBENZENE	0.12	J	0.088	0.79	1.1	ppbv	95-50-1
TO-14	Air	01-Oct-14	VE-4D_SV75E01	1,2-DICHLOROETHANE	0.38	J	0.13	0.79	1.1	ppbv	107-06-2
TO-14	Air	01-Oct-14	VE-4D_SV75E01	1,2-DICHLOROPROPANE	0.56	J	0.16	0.79	1.1	ppbv	78-87-5
TO-14	Air	01-Oct-14	VE-4D_SV75E01	1,3,5-TRIMETHYLBENZENE	0.79	U	0.14	0.79	1.1	ppbv	108-67-8
TO-14	Air	01-Oct-14	VE-4D_SV75E01	1,3-BUTADIENE	0.79	U	0.38	0.79	1.1	ppbv	106-99-0
TO-14	Air	01-Oct-14	VE-4D_SV75E01	1,3-DICHLOROBENZENE	0.14	J	0.098	0.79	1.1	ppbv	541-73-1
TO-14	Air	01-Oct-14	VE-4D_SV75E01	1,4-DICHLOROBENZENE	0.22	J	0.22	0.79	1.1	ppbv	106-46-7
TO-14	Air	01-Oct-14	VE-4D_SV75E01	1,4-DIOXANE	2	U	1.1	2	4.5	ppbv	123-91-1
TO-14	Air	01-Oct-14	VE-4D_SV75E01	2,2,4-TRIMETHYLPENTANE	0.57	J	0.13	0.79	1.1	ppbv	540-84-1
TO-14	Air	01-Oct-14	VE-4D_SV75E01	2-BUTANONE (METHYL ETHYL KETONE)	5.5		1	2	4.5	ppbv	78-93-3
TO-14	Air	01-Oct-14	VE-4D_SV75E01	2-HEXANONE	2	U	0.71	2	4.5	ppbv	591-78-6
TO-14	Air	01-Oct-14	VE-4D_SV75E01	2-PROPANOL	3	J	1	2	4.5	ppbv	67-63-0
TO-14	Air	01-Oct-14	VE-4D_SV75E01	3-CHLOROPROPENE	2	U	1	2	4.5	ppbv	107-05-1
TO-14	Air	01-Oct-14	VE-4D_SV75E01	4-ETHYLTOLUENE	0.79	U	0.2	0.79	1.1	ppbv	622-96-8
TO-14	Air	01-Oct-14	VE-4D_SV75E01	4-METHYL-2-PENTANONE	1.9		0.48	0.79	1.1	ppbv	108-10-1
TO-14	Air	01-Oct-14	VE-4D_SV75E01	ACETONE	21		2.2	2.2	11	ppbv	67-64-1
TO-14	Air	01-Oct-14	VE-4D_SV75E01	ALPHA-CHLOROTOLUENE	0.79	U	0.17	0.79	1.1	ppbv	100-44-7
TO-14	Air	01-Oct-14	VE-4D_SV75E01	BENZENE	0.48	J	0.32	0.79	1.1	ppbv	71-43-2
TO-14	Air	01-Oct-14	VE-4D_SV75E01	BROMODICHLOROMETHANE	0.14	J	0.14	0.79	1.1	ppbv	75-27-4
TO-14	Air	01-Oct-14	VE-4D_SV75E01	BROMOFORM	0.79	U	0.19	0.79	1.1	ppbv	75-25-2
TO-14	Air	01-Oct-14	VE-4D_SV75E01	BROMOMETHANE	2	U	0.68	2	11	ppbv	74-83-9

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	01-Oct-14	VE-4D_SV75E01	CARBON DISULFIDE	2	U	0.97	2	4.5	ppbv	75-15-0
TO-14	Air	01-Oct-14	VE-4D_SV75E01	CARBON TETRACHLORIDE	0.79	U	0.14	0.79	1.1	ppbv	56-23-5
TO-14	Air	01-Oct-14	VE-4D_SV75E01	CHLOROBENZENE	0.79	U	0.2	0.79	1.1	ppbv	108-90-7
TO-14	Air	01-Oct-14	VE-4D_SV75E01	CHLOROETHANE	2	U	0.92	2	4.5	ppbv	75-00-3
TO-14	Air	01-Oct-14	VE-4D_SV75E01	CHLOROFORM	0.79	U	0.16	0.79	1.1	ppbv	67-66-3
TO-14	Air	01-Oct-14	VE-4D_SV75E01	CHLOROMETHANE	2	U	1.5	2	4.5	ppbv	74-87-3
TO-14	Air	01-Oct-14	VE-4D_SV75E01	CIS-1,2-DICHLOROETHENE	3.2		0.36	0.79	1.1	ppbv	156-59-2
TO-14	Air	01-Oct-14	VE-4D_SV75E01	CIS-1,3-DICHLOROPROPENE	0.79	U	0.29	0.79	1.1	ppbv	10061-01-5
TO-14	Air	01-Oct-14	VE-4D_SV75E01	CUMENE	0.79	U	0.19	0.79	1.1	ppbv	98-82-8
TO-14	Air	01-Oct-14	VE-4D_SV75E01	CYCLOHEXANE	0.82	J	0.24	0.79	1.1	ppbv	110-82-7
TO-14	Air	01-Oct-14	VE-4D_SV75E01	DIBROMOCHLOROMETHANE	0.79	U	0.18	0.79	1.1	ppbv	124-48-1
TO-14	Air	01-Oct-14	VE-4D_SV75E01	ETHANOL	8		1.4	2	4.5	ppbv	64-17-5
TO-14	Air	01-Oct-14	VE-4D_SV75E01	ETHYL BENZENE	0.44	J	0.16	0.79	1.1	ppbv	100-41-4
TO-14	Air	01-Oct-14	VE-4D_SV75E01	FREON 11	0.36	J	0.12	0.79	1.1	ppbv	75-69-4
TO-14	Air	01-Oct-14	VE-4D_SV75E01	FREON 113	0.31	J	0.22	0.79	1.1	ppbv	76-13-1
TO-14	Air	01-Oct-14	VE-4D_SV75E01	FREON 114	0.79	U	0.07	0.79	1.1	ppbv	76-14-2
TO-14	Air	01-Oct-14	VE-4D_SV75E01	FREON 12	0.43	J	0.12	0.79	1.1	ppbv	75-71-8
TO-14	Air	01-Oct-14	VE-4D_SV75E01	HEPTANE	0.53	J	0.32	0.79	1.1	ppbv	142-82-5
TO-14	Air	01-Oct-14	VE-4D_SV75E01	HEXACHLOROBUTADIENE	0.92	J	0.82	2	4.5	ppbv	87-68-3
TO-14	Air	01-Oct-14	VE-4D_SV75E01	HEXANE	14		0.3	0.79	1.1	ppbv	110-54-3
TO-14	Air	01-Oct-14	VE-4D_SV75E01	ISOPROPYL ETHER	0.83	UJ	0.83		4.5	ppbv	108-20-3
TO-14	Air	01-Oct-14	VE-4D_SV75E01	M,P-XYLENE	0.81	J	0.14	0.79	1.1	ppbv	108-38-3/1
TO-14	Air	01-Oct-14	VE-4D_SV75E01	METHYL TERT-BUTYL ETHER	0.79	U	0.28	0.79	1.1	ppbv	1634-04-4
TO-14	Air	01-Oct-14	VE-4D_SV75E01	METHYLENE CHLORIDE	2	U	1.1	2	11	ppbv	75-09-2
TO-14	Air	01-Oct-14	VE-4D_SV75E01	NAPHTHALENE	2	U	0.18	2	4.5	ppbv	91-20-3
TO-14	Air	01-Oct-14	VE-4D_SV75E01	O-XYLENE	0.32	J	0.19	0.79	1.1	ppbv	95-47-6
TO-14	Air	01-Oct-14	VE-4D_SV75E01	PROPYLBENZENE	0.79	U	0.16	0.79	1.1	ppbv	103-65-1
TO-14	Air	01-Oct-14	VE-4D_SV75E01	STYRENE	0.44	J	0.2	0.79	1.1	ppbv	100-42-5
TO-14	Air	01-Oct-14	VE-4D_SV75E01	TETRACHLOROETHENE	0.31	J	0.24	0.79	1.1	ppbv	127-18-4



**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	01-Oct-14	VE-4D_SV75E01	TETRAHYDROFURAN	0.38	J	0.25	0.79	1.1	ppbv	109-99-9
TO-14	Air	01-Oct-14	VE-4D_SV75E01	TOLUENE	14		0.2	0.79	1.1	ppbv	108-88-3
TO-14	Air	01-Oct-14	VE-4D_SV75E01	TRANS-1,2-DICHLOROETHENE	0.79	U	0.28	0.79	1.1	ppbv	156-60-5
TO-14	Air	01-Oct-14	VE-4D_SV75E01	TRANS-1,3-DICHLOROPROPENE	0.79	U	0.27	0.79	1.1	ppbv	10061-02-6
TO-14	Air	01-Oct-14	VE-4D_SV75E01	TRICHLOROETHENE	29		0.3	0.79	1.1	ppbv	79-01-6
TO-14	Air	01-Oct-14	VE-4D_SV75E01	VINYL ACETATE	2	U	0.97	2	4.5	ppbv	108-05-4
TO-14	Air	01-Oct-14	VE-4D_SV75E01	VINYL CHLORIDE	0.79	U	0.3	0.79	1.1	ppbv	75-01-4
TO-14	Air	01-Oct-14	VE-4S_SV30E01	1,1,1-TRICHLOROETHANE	1,100	U	310	1,100	1,400	ppbv	71-55-6
TO-14	Air	01-Oct-14	VE-4S_SV30E01	1,1,2,2-TETRACHLOROETHANE	1,100	U	340	1,100	1,400	ppbv	79-34-5
TO-14	Air	01-Oct-14	VE-4S_SV30E01	1,1,2-TRICHLOROETHANE	1,100	U	270	1,100	1,400	ppbv	79-00-5
TO-14	Air	01-Oct-14	VE-4S_SV30E01	1,1-DICHLOROETHANE	1,100	U	280	1,100	1,400	ppbv	75-34-3
TO-14	Air	01-Oct-14	VE-4S_SV30E01	1,1-DICHLOROETHENE	1,100	U	500	1,100	1,400	ppbv	75-35-4
TO-14	Air	01-Oct-14	VE-4S_SV30E01	1,2,4-TRICHLOROBENZENE	2,100	UJ	2,100	2,100	5,400	ppbv	120-82-1
TO-14	Air	01-Oct-14	VE-4S_SV30E01	1,2,4-TRIMETHYLBENZENE	1,100	U	300	1,100	1,400	ppbv	95-63-6
TO-14	Air	01-Oct-14	VE-4S_SV30E01	1,2-DIBROMOETHANE (EDB)	1,100	U	280	1,100	1,400	ppbv	106-93-4
TO-14	Air	01-Oct-14	VE-4S_SV30E01	1,2-DICHLOROBENZENE	1,100	U	380	1,100	1,400	ppbv	95-50-1
TO-14	Air	01-Oct-14	VE-4S_SV30E01	1,2-DICHLOROETHANE	1,100	U	230	1,100	1,400	ppbv	107-06-2
TO-14	Air	01-Oct-14	VE-4S_SV30E01	1,2-DICHLOROPROPANE	1,100	U	390	1,100	1,400	ppbv	78-87-5
TO-14	Air	01-Oct-14	VE-4S_SV30E01	1,3,5-TRIMETHYLBENZENE	1,100	U	310	1,100	1,400	ppbv	108-67-8
TO-14	Air	01-Oct-14	VE-4S_SV30E01	1,3-BUTADIENE	1,100	U	450	1,100	1,400	ppbv	106-99-0
TO-14	Air	01-Oct-14	VE-4S_SV30E01	1,3-DICHLOROBENZENE	1,100	U	330	1,100	1,400	ppbv	541-73-1
TO-14	Air	01-Oct-14	VE-4S_SV30E01	1,4-DICHLOROBENZENE	1,100	U	570	1,100	1,400	ppbv	106-46-7
TO-14	Air	01-Oct-14	VE-4S_SV30E01	1,4-DIOXANE	1,400	U	740	1,400	5,400	ppbv	123-91-1
TO-14	Air	01-Oct-14	VE-4S_SV30E01	2,2,4-TRIMETHYLPENTANE	1,100	U	170	1,100	5,400	ppbv	540-84-1
TO-14	Air	01-Oct-14	VE-4S_SV30E01	2-BUTANONE (METHYL ETHYL KETONE)	1,400	U	1,100	1,400	5,400	ppbv	78-93-3
TO-14	Air	01-Oct-14	VE-4S_SV30E01	2-HEXANONE	1,400	UJ	880	1,400	5,400	ppbv	591-78-6
TO-14	Air	01-Oct-14	VE-4S_SV30E01	2-PROPANOL	1,400	U	630	1,400	5,400	ppbv	67-63-0
TO-14	Air	01-Oct-14	VE-4S_SV30E01	3-CHLOROPROPENE	1,400	U	1,400	1,400	5,400	ppbv	107-05-1
TO-14	Air	01-Oct-14	VE-4S_SV30E01	4-ETHYLTOLUENE	1,100	U	300	1,100	1,400	ppbv	622-96-8

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	01-Oct-14	VE-4S_SV30E01	4-METHYL-2-PENTANONE	1,100	U	670	1,100	1,400	ppbv	108-10-1
TO-14	Air	01-Oct-14	VE-4S_SV30E01	ACETONE	1,800	U	1,800	1,800	5,400	ppbv	67-64-1
TO-14	Air	01-Oct-14	VE-4S_SV30E01	ALPHA-CHLOROTOLUENE	1,100	U	230	1,100	1,400	ppbv	100-44-7
TO-14	Air	01-Oct-14	VE-4S_SV30E01	BENZENE	1,100	U	270	1,100	1,400	ppbv	71-43-2
TO-14	Air	01-Oct-14	VE-4S_SV30E01	BROMODICHLOROMETHANE	1,100	U	340	1,100	1,400	ppbv	75-27-4
TO-14	Air	01-Oct-14	VE-4S_SV30E01	BROMOFORM	1,100	U	340	1,100	1,400	ppbv	75-25-2
TO-14	Air	01-Oct-14	VE-4S_SV30E01	BROMOMETHANE	1,100	U	390	1,100	1,400	ppbv	74-83-9
TO-14	Air	01-Oct-14	VE-4S_SV30E01	CARBON DISULFIDE	1,100	U	300	1,100	1,400	ppbv	75-15-0
TO-14	Air	01-Oct-14	VE-4S_SV30E01	CARBON TETRACHLORIDE	640	J	220	1,100	1,400	ppbv	56-23-5
TO-14	Air	01-Oct-14	VE-4S_SV30E01	CHLOROBENZENE	620	J	64	1,100	1,400	ppbv	108-90-7
TO-14	Air	01-Oct-14	VE-4S_SV30E01	CHLOROETHANE	1,700	U	1,700	1,700	5,400	ppbv	75-00-3
TO-14	Air	01-Oct-14	VE-4S_SV30E01	CHLOROFORM	1,100	U	280	1,100	1,400	ppbv	67-66-3
TO-14	Air	01-Oct-14	VE-4S_SV30E01	CHLOROMETHANE	1,400	U	440	1,400	5,400	ppbv	74-87-3
TO-14	Air	01-Oct-14	VE-4S_SV30E01	CIS-1,2-DICHLOROETHENE	20,000		490	1,100	1,400	ppbv	156-59-2
TO-14	Air	01-Oct-14	VE-4S_SV30E01	CIS-1,3-DICHLOROPROPENE	1,100	U	180	1,100	1,400	ppbv	10061-01-5
TO-14	Air	01-Oct-14	VE-4S_SV30E01	CUMENE	1,100	U	220	1,100	1,400	ppbv	98-82-8
TO-14	Air	01-Oct-14	VE-4S_SV30E01	CYCLOHEXANE	1,100	U	340	1,100	1,400	ppbv	110-82-7
TO-14	Air	01-Oct-14	VE-4S_SV30E01	DIBROMOCHLOROMETHANE	1,100	U	260	1,100	1,400	ppbv	124-48-1
TO-14	Air	01-Oct-14	VE-4S_SV30E01	ETHANOL	1,800	U	1,800	1,800	14,000	ppbv	64-17-5
TO-14	Air	01-Oct-14	VE-4S_SV30E01	ETHYL BENZENE	1,100	U	360	1,100	1,400	ppbv	100-41-4
TO-14	Air	01-Oct-14	VE-4S_SV30E01	FREON 11	1,100	U	370	1,100	1,400	ppbv	75-69-4
TO-14	Air	01-Oct-14	VE-4S_SV30E01	FREON 113	1,100	U	390	1,100	1,400	ppbv	76-13-1
TO-14	Air	01-Oct-14	VE-4S_SV30E01	FREON 114	1,100	U	270	1,100	1,400	ppbv	76-14-2
TO-14	Air	01-Oct-14	VE-4S_SV30E01	FREON 12	1,100	U	260	1,100	1,400	ppbv	75-71-8
TO-14	Air	01-Oct-14	VE-4S_SV30E01	HEPTANE	1,100	U	300	1,100	5,400	ppbv	142-82-5
TO-14	Air	01-Oct-14	VE-4S_SV30E01	HEXACHLOROBUTADIENE	1,600	U	1,600	1,600	5,400	ppbv	87-68-3
TO-14	Air	01-Oct-14	VE-4S_SV30E01	HEXANE	1,100	U	290	1,100	5,400	ppbv	110-54-3
TO-14	Air	01-Oct-14	VE-4S_SV30E01	ISOPROPYL ETHER	460	UJ	460		5,400	ppbv	108-20-3
TO-14	Air	01-Oct-14	VE-4S_SV30E01	M,P-XYLENE	1,100	U	370	1,100	1,400	ppbv	108-38-3/1

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	01-Oct-14	VE-4S_SV30E01	METHYL TERT-BUTYL ETHER	1,100	U	480	1,100	1,100	ppbv	1634-04-4
TO-14	Air	01-Oct-14	VE-4S_SV30E01	METHYLENE CHLORIDE	1,100	U	580	1,100	1,400	ppbv	75-09-2
TO-14	Air	01-Oct-14	VE-4S_SV30E01	NAPHTHALENE	1,400	U	680	1,400	5,400	ppbv	91-20-3
TO-14	Air	01-Oct-14	VE-4S_SV30E01	O-XYLENE	1,100	U	230	1,100	1,400	ppbv	95-47-6
TO-14	Air	01-Oct-14	VE-4S_SV30E01	PROPYLBENZENE	1,100	U	150	1,100	1,400	ppbv	103-65-1
TO-14	Air	01-Oct-14	VE-4S_SV30E01	STYRENE	1,100	U	320	1,100	1,400	ppbv	100-42-5
TO-14	Air	01-Oct-14	VE-4S_SV30E01	TETRACHLOROETHENE	1,100	U	300	1,100	1,400	ppbv	127-18-4
TO-14	Air	01-Oct-14	VE-4S_SV30E01	TETRAHYDROFURAN	1,100	U	340	1,100	1,400	ppbv	109-99-9
TO-14	Air	01-Oct-14	VE-4S_SV30E01	TOLUENE	1,100	U	130	1,100	1,400	ppbv	108-88-3
TO-14	Air	01-Oct-14	VE-4S_SV30E01	TRANS-1,2-DICHLOROETHENE	1,100	U	540	1,100	1,400	ppbv	156-60-5
TO-14	Air	01-Oct-14	VE-4S_SV30E01	TRANS-1,3-DICHLOROPROPENE	1,100	U	350	1,100	1,400	ppbv	10061-02-6
TO-14	Air	01-Oct-14	VE-4S_SV30E01	TRICHLOROETHENE	530,000		570	1,100	1,400	ppbv	79-01-6
TO-14	Air	01-Oct-14	VE-4S_SV30E01	VINYL ACETATE	1500	UJ	1,500		5,400	ppbv	108-05-4
TO-14	Air	01-Oct-14	VE-4S_SV30E01	VINYL CHLORIDE	1,100	U	700	1,100	1,400	ppbv	75-01-4
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	1,1,1-TRICHLOROETHANE	540	U	160	540	680	ppbv	71-55-6
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	1,1,2,2-TETRACHLOROETHANE	540	U	170	540	680	ppbv	79-34-5
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	1,1,2-TRICHLOROETHANE	540	U	130	540	680	ppbv	79-00-5
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	1,1-DICHLOROETHANE	540	U	140	540	680	ppbv	75-34-3
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	1,1-DICHLOROETHENE	540	U	250	540	680	ppbv	75-35-4
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	1,2,4-TRICHLOROBENZENE	1,100	UJ	1,100	1,100	2,700	ppbv	120-82-1
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	1,2,4-TRIMETHYLBENZENE	540	U	150	540	680	ppbv	95-63-6
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	1,2-DIBROMOETHANE (EDB)	540	U	140	540	680	ppbv	106-93-4
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	1,2-DICHLOROBENZENE	540	U	190	540	680	ppbv	95-50-1
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	1,2-DICHLOROETHANE	540	U	110	540	680	ppbv	107-06-2
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	1,2-DICHLOROPROPANE	540	U	200	540	680	ppbv	78-87-5
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	1,3,5-TRIMETHYLBENZENE	540	U	160	540	680	ppbv	108-67-8
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	1,3-BUTADIENE	540	U	230	540	680	ppbv	106-99-0
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	1,3-DICHLOROBENZENE	540	U	170	540	680	ppbv	541-73-1
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	1,4-DICHLOROBENZENE	540	U	280	540	680	ppbv	106-46-7

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	1,4-DIOXANE	680	U	380	680	2,700	ppbv	123-91-1
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	2,2,4-TRIMETHYLPENTANE	540	U	86	540	2,700	ppbv	540-84-1
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	2-BUTANONE (METHYL ETHYL KETONE)	680	U	530	680	2,700	ppbv	78-93-3
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	2-HEXANONE	680	UJ	440	680	2,700	ppbv	591-78-6
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	2-PROPANOL	680	U	320	680	2,700	ppbv	67-63-0
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	3-CHLOROPROPENE	700	U	700	700	2,700	ppbv	107-05-1
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	4-ETHYLTOLUENE	540	U	150	540	680	ppbv	622-96-8
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	4-METHYL-2-PENTANONE	540	U	340	540	680	ppbv	108-10-1
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	ACETONE	890	U	890	890	2,700	ppbv	67-64-1
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	ALPHA-CHLOROTOLUENE	540	U	120	540	680	ppbv	100-44-7
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	BENZENE	540	U	140	540	680	ppbv	71-43-2
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	BROMODICHLOROMETHANE	540	U	170	540	680	ppbv	75-27-4
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	BROMOFORM	540	U	170	540	680	ppbv	75-25-2
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	BROMOMETHANE	540	U	200	540	680	ppbv	74-83-9
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	CARBON DISULFIDE	540	U	150	540	680	ppbv	75-15-0
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	CARBON TETRACHLORIDE	540	U	110	540	680	ppbv	56-23-5
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	CHLOROBENZENE	260	J	32	540	680	ppbv	108-90-7
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	CHLOROETHANE	860	U	860	860	2,700	ppbv	75-00-3
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	CHLOROFORM	540	U	140	540	680	ppbv	67-66-3
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	CHLOROMETHANE	680	U	220	680	2,700	ppbv	74-87-3
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	CIS-1,2-DICHLOROETHENE	17,000		250	540	680	ppbv	156-59-2
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	CIS-1,3-DICHLOROPROPENE	540	U	88	540	680	ppbv	10061-01-5
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	CUMENE	540	U	110	540	680	ppbv	98-82-8
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	CYCLOHEXANE	540	U	170	540	680	ppbv	110-82-7
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	DIBROMOCHLOROMETHANE	540	U	130	540	680	ppbv	124-48-1
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	ETHANOL	890	U	890	890	6,800	ppbv	64-17-5
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	ETHYL BENZENE	540	U	180	540	680	ppbv	100-41-4
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	FREON 11	540	U	190	540	680	ppbv	75-69-4
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	FREON 113	540	U	200	540	680	ppbv	76-13-1

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	FREON 114	540	U	130	540	680	ppbv	76-14-2
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	FREON 12	540	U	130	540	680	ppbv	75-71-8
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	HEPTANE	540	U	150	540	2,700	ppbv	142-82-5
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	HEXACHLOROBUTADIENE	820	U	820	820	2,700	ppbv	87-68-3
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	HEXANE	540	U	150	540	2,700	ppbv	110-54-3
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	ISOPROPYL ETHER	230	UJ	230		2,700	ppbv	108-20-3
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	M,P-XYLENE	540	U	190	540	680	ppbv	108-38-3/1
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	METHYL TERT-BUTYL ETHER	540	U	240	540	680	ppbv	1634-04-4
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	METHYLENE CHLORIDE	540	U	290	540	680	ppbv	75-09-2
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	NAPHTHALENE	680	U	340	680	2,700	ppbv	91-20-3
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	O-XYLENE	540	U	110	540	680	ppbv	95-47-6
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	PROPYLBENZENE	540	U	76	540	680	ppbv	103-65-1
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	STYRENE	540	U	160	540	680	ppbv	100-42-5
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	TETRACHLOROETHENE	540	U	150	540	680	ppbv	127-18-4
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	TETRAHYDROFURAN	540	U	170	540	680	ppbv	109-99-9
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	TOLUENE	540	U	66	540	680	ppbv	108-88-3
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	TRANS-1,2-DICHLOROETHENE	540	U	270	540	680	ppbv	156-60-5
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	TRANS-1,3-DICHLOROPROPENE	540	U	180	540	680	ppbv	10061-02-6
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	TRICHLOROETHENE	430,000		280	540	680	ppbv	79-01-6
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	VINYL ACETATE	760	UJ	760		2,700	ppbv	108-05-4
TO-14	Air	01-Oct-14	VE-4S_SV30E01FD	VINYL CHLORIDE	540	U	350	540	680	ppbv	75-01-4
TO-14	Air	04-Oct-14	FINALEFF_E02	1,1,1-TRICHLOROETHANE	0.82	U	0.29	0.82	1.4	ppbv	71-55-6
TO-14	Air	04-Oct-14	FINALEFF_E02	1,1,2,2-TETRACHLOROETHANE	0.82	U	0.26	0.82	1.4	ppbv	79-34-5
TO-14	Air	04-Oct-14	FINALEFF_E02	1,1,2-TRICHLOROETHANE	0.82	U	0.38	0.82	1.4	ppbv	79-00-5
TO-14	Air	04-Oct-14	FINALEFF_E02	1,1-DICHLOROETHANE	0.82	U	0.3	0.82	1.4	ppbv	75-34-3
TO-14	Air	04-Oct-14	FINALEFF_E02	1,1-DICHLOROETHENE	0.82	U	0.35	0.82	1.4	ppbv	75-35-4
TO-14	Air	04-Oct-14	FINALEFF_E02	1,2,4-TRICHLOROBENZENE	3	U	0.78	3	5.5	ppbv	120-82-1
TO-14	Air	04-Oct-14	FINALEFF_E02	1,2,4-TRIMETHYLBENZENE	1.3	U	0.32	0.82	1.4	ppbv	95-63-6
TO-14	Air	04-Oct-14	FINALEFF_E02	1,2-DIBROMOETHANE (EDB)	0.82	U	0.31	0.82	1.4	ppbv	106-93-4

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	04-Oct-14	FINALEFF_E02	1,2-DICHLOROBENZENE	0.82	U	0.28	0.82	1.4	ppbv	95-50-1
TO-14	Air	04-Oct-14	FINALEFF_E02	1,2-DICHLOROETHANE	0.82	U	0.45	0.82	1.4	ppbv	107-06-2
TO-14	Air	04-Oct-14	FINALEFF_E02	1,2-DICHLOROPROPANE	0.82	U	0.56	0.82	1.4	ppbv	78-87-5
TO-14	Air	04-Oct-14	FINALEFF_E02	1,3,5-TRIMETHYLBENZENE	0.36	U	0.21	0.82	1.4	ppbv	108-67-8
TO-14	Air	04-Oct-14	FINALEFF_E02	1,3-BUTADIENE	0.82	U	0.27	0.82	1.4	ppbv	106-99-0
TO-14	Air	04-Oct-14	FINALEFF_E02	1,3-DICHLOROBENZENE	0.82	U	0.22	0.82	1.4	ppbv	541-73-1
TO-14	Air	04-Oct-14	FINALEFF_E02	1,4-DICHLOROBENZENE	13		0.27	0.82	1.4	ppbv	106-46-7
TO-14	Air	04-Oct-14	FINALEFF_E02	1,4-DIOXANE	3	U	0.97	3	5.5	ppbv	123-91-1
TO-14	Air	04-Oct-14	FINALEFF_E02	2,2,4-TRIMETHYLPENTANE	0.82	U	0.11	0.82	1.4	ppbv	540-84-1
TO-14	Air	04-Oct-14	FINALEFF_E02	2-BUTANONE (METHYL ETHYL KETONE)	2.5	J	0.59	3	5.5	ppbv	78-93-3
TO-14	Air	04-Oct-14	FINALEFF_E02	2-HEXANONE	3	U	0.66	3	5.5	ppbv	591-78-6
TO-14	Air	04-Oct-14	FINALEFF_E02	2-PROPANOL	3	U	0.47	3	5.5	ppbv	67-63-0
TO-14	Air	04-Oct-14	FINALEFF_E02	3-CHLOROPROPENE	3	U	0.67	3	5.5	ppbv	107-05-1
TO-14	Air	04-Oct-14	FINALEFF_E02	4-ETHYLTOLUENE	1	J	0.29	0.82	1.4	ppbv	622-96-8
TO-14	Air	04-Oct-14	FINALEFF_E02	4-METHYL-2-PENTANONE	0.82	U	0.25	0.82	1.4	ppbv	108-10-1
TO-14	Air	04-Oct-14	FINALEFF_E02	ACETONE	15	J	0.92	3	14	ppbv	67-64-1
TO-14	Air	04-Oct-14	FINALEFF_E02	ALPHA-CHLOROTOLUENE	0.82	U	0.19	0.82	1.4	ppbv	100-44-7
TO-14	Air	04-Oct-14	FINALEFF_E02	BENZENE	0.82	U	0.31	0.82	1.4	ppbv	71-43-2
TO-14	Air	04-Oct-14	FINALEFF_E02	BROMODICHLOROMETHANE	0.82	U	0.33	0.82	1.4	ppbv	75-27-4
TO-14	Air	04-Oct-14	FINALEFF_E02	BROMOFORM	0.82	U	0.29	0.82	1.4	ppbv	75-25-2
TO-14	Air	04-Oct-14	FINALEFF_E02	BROMOMETHANE	0.88	U	0.88	0.88	14	ppbv	74-83-9
TO-14	Air	04-Oct-14	FINALEFF_E02	CARBON DISULFIDE	0.72	U	0.28	3	5.5	ppbv	75-15-0
TO-14	Air	04-Oct-14	FINALEFF_E02	CARBON TETRACHLORIDE	0.82	U	0.3	0.82	1.4	ppbv	56-23-5
TO-14	Air	04-Oct-14	FINALEFF_E02	CHLOROBENZENE	0.82	U	0.21	0.82	1.4	ppbv	108-90-7
TO-14	Air	04-Oct-14	FINALEFF_E02	CHLOROETHANE	3	U	0.57	3	5.5	ppbv	75-00-3
TO-14	Air	04-Oct-14	FINALEFF_E02	CHLOROFORM	0.82	U	0.3	0.82	1.4	ppbv	67-66-3
TO-14	Air	04-Oct-14	FINALEFF_E02	CHLOROMETHANE	3	U	0.89	3	5.5	ppbv	74-87-3
TO-14	Air	04-Oct-14	FINALEFF_E02	CIS-1,2-DICHLOROETHENE	0.82	U	0.26	0.82	1.4	ppbv	156-59-2
TO-14	Air	04-Oct-14	FINALEFF_E02	CIS-1,3-DICHLOROPROPENE	0.82	U	0.24	0.82	1.4	ppbv	10061-01-5

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	04-Oct-14	FINALEFF_E02	CUMENE	0.82	U	0.27	0.82	1.4	ppbv	98-82-8
TO-14	Air	04-Oct-14	FINALEFF_E02	CYCLOHEXANE	0.82	U	0.38	0.82	1.4	ppbv	110-82-7
TO-14	Air	04-Oct-14	FINALEFF_E02	DIBROMOCHLOROMETHANE	0.82	U	0.32	0.82	1.4	ppbv	124-48-1
TO-14	Air	04-Oct-14	FINALEFF_E02	ETHANOL	34		2.1	3	5.5	ppbv	64-17-5
TO-14	Air	04-Oct-14	FINALEFF_E02	ETHYL BENZENE	0.82	U	0.38	0.82	1.4	ppbv	100-41-4
TO-14	Air	04-Oct-14	FINALEFF_E02	FREON 11	0.82	U	0.36	0.82	1.4	ppbv	75-69-4
TO-14	Air	04-Oct-14	FINALEFF_E02	FREON 113	0.82	U	0.46	0.82	1.4	ppbv	76-13-1
TO-14	Air	04-Oct-14	FINALEFF_E02	FREON 114	0.82	U	0.46	0.82	1.4	ppbv	76-14-2
TO-14	Air	04-Oct-14	FINALEFF_E02	FREON 12	0.82	U	0.31	0.82	1.4	ppbv	75-71-8
TO-14	Air	04-Oct-14	FINALEFF_E02	HEPTANE	0.82	U	0.44	0.82	1.4	ppbv	142-82-5
TO-14	Air	04-Oct-14	FINALEFF_E02	HEXACHLOROBUTADIENE	3	U	0.94	3	5.5	ppbv	87-68-3
TO-14	Air	04-Oct-14	FINALEFF_E02	HEXANE	0.37	J	0.29	0.82	1.4	ppbv	110-54-3
TO-14	Air	04-Oct-14	FINALEFF_E02	ISOPROPYL ETHER	0.41	UJ	0.41		5.5	ppbv	108-20-3
TO-14	Air	04-Oct-14	FINALEFF_E02	M,P-XYLENE	1	J	0.19	0.82	1.4	ppbv	108-38-3/1
TO-14	Air	04-Oct-14	FINALEFF_E02	METHYL TERT-BUTYL ETHER	0.82	U	0.18	0.82	1.4	ppbv	1634-04-4
TO-14	Air	04-Oct-14	FINALEFF_E02	METHYLENE CHLORIDE	0.82	U	0.69	0.82	14	ppbv	75-09-2
TO-14	Air	04-Oct-14	FINALEFF_E02	NAPHTHALENE	0.67	J	0.11	3	5.5	ppbv	91-20-3
TO-14	Air	04-Oct-14	FINALEFF_E02	O-XYLENE	0.63	J	0.28	0.82	1.4	ppbv	95-47-6
TO-14	Air	04-Oct-14	FINALEFF_E02	PROPYLBENZENE	0.23	U	0.21	0.82	1.4	ppbv	103-65-1
TO-14	Air	04-Oct-14	FINALEFF_E02	STYRENE	0.82	U	0.36	0.82	1.4	ppbv	100-42-5
TO-14	Air	04-Oct-14	FINALEFF_E02	TETRACHLOROETHENE	0.35	J	0.29	0.82	1.4	ppbv	127-18-4
TO-14	Air	04-Oct-14	FINALEFF_E02	TETRAHYDROFURAN	1.1	J	0.23	0.82	1.4	ppbv	109-99-9
TO-14	Air	04-Oct-14	FINALEFF_E02	TOLUENE	3		0.2	0.82	1.4	ppbv	108-88-3
TO-14	Air	04-Oct-14	FINALEFF_E02	TRANS-1,2-DICHLOROETHENE	0.82	U	0.4	0.82	1.4	ppbv	156-60-5
TO-14	Air	04-Oct-14	FINALEFF_E02	TRANS-1,3-DICHLOROPROPENE	0.82	U	0.33	0.82	1.4	ppbv	10061-02-6
TO-14	Air	04-Oct-14	FINALEFF_E02	TRICHLOROETHENE	1.3	J	0.5	0.82	1.4	ppbv	79-01-6
TO-14	Air	04-Oct-14	FINALEFF_E02	VINYL ACETATE	3	U	1.4	3	5.5	ppbv	108-05-4
TO-14	Air	04-Oct-14	FINALEFF_E02	VINYL CHLORIDE	0.82	U	0.27	0.82	1.4	ppbv	75-01-4
TO-14	Air	04-Oct-14	PRIMEFF_E02	1,1,1-TRICHLOROETHANE	0.79	U	0.28	0.79	1.3	ppbv	71-55-6

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Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	04-Oct-14	PRIMEFF_E02	1,1,2,2-TETRACHLOROETHANE	0.79	U	0.25	0.79	1.3	ppbv	79-34-5
TO-14	Air	04-Oct-14	PRIMEFF_E02	1,1,2-TRICHLOROETHANE	0.79	U	0.37	0.79	1.3	ppbv	79-00-5
TO-14	Air	04-Oct-14	PRIMEFF_E02	1,1-DICHLOROETHANE	0.79	U	0.29	0.79	1.3	ppbv	75-34-3
TO-14	Air	04-Oct-14	PRIMEFF_E02	1,1-DICHLOROETHENE	0.79	U	0.34	0.79	1.3	ppbv	75-35-4
TO-14	Air	04-Oct-14	PRIMEFF_E02	1,2,4-TRICHLOROBENZENE	2.9	U	0.76	2.9	5.3	ppbv	120-82-1
TO-14	Air	04-Oct-14	PRIMEFF_E02	1,2,4-TRIMETHYLBENZENE	1.7	U	0.31	0.79	1.3	ppbv	95-63-6
TO-14	Air	04-Oct-14	PRIMEFF_E02	1,2-DIBROMOETHANE (EDB)	0.79	U	0.3	0.79	1.3	ppbv	106-93-4
TO-14	Air	04-Oct-14	PRIMEFF_E02	1,2-DICHLOROBENZENE	0.79	U	0.27	0.79	1.3	ppbv	95-50-1
TO-14	Air	04-Oct-14	PRIMEFF_E02	1,2-DICHLOROETHANE	0.79	U	0.44	0.79	1.3	ppbv	107-06-2
TO-14	Air	04-Oct-14	PRIMEFF_E02	1,2-DICHLOROPROPANE	0.79	U	0.54	0.79	1.3	ppbv	78-87-5
TO-14	Air	04-Oct-14	PRIMEFF_E02	1,3,5-TRIMETHYLBENZENE	0.54	U	0.2	0.79	1.3	ppbv	108-67-8
TO-14	Air	04-Oct-14	PRIMEFF_E02	1,3-BUTADIENE	0.79	U	0.26	0.79	1.3	ppbv	106-99-0
TO-14	Air	04-Oct-14	PRIMEFF_E02	1,3-DICHLOROBENZENE	0.79	U	0.21	0.79	1.3	ppbv	541-73-1
TO-14	Air	04-Oct-14	PRIMEFF_E02	1,4-DICHLOROBENZENE	13		0.26	0.79	1.3	ppbv	106-46-7
TO-14	Air	04-Oct-14	PRIMEFF_E02	1,4-DIOXANE	2.9	U	0.94	2.9	5.3	ppbv	123-91-1
TO-14	Air	04-Oct-14	PRIMEFF_E02	2,2,4-TRIMETHYLPENTANE	0.79	U	0.1	0.79	1.3	ppbv	540-84-1
TO-14	Air	04-Oct-14	PRIMEFF_E02	2-BUTANONE (METHYL ETHYL KETONE)	2.5	J	0.57	2.9	5.3	ppbv	78-93-3
TO-14	Air	04-Oct-14	PRIMEFF_E02	2-HEXANONE	2.9	U	0.63	2.9	5.3	ppbv	591-78-6
TO-14	Air	04-Oct-14	PRIMEFF_E02	2-PROPANOL	1	J	0.45	2.9	5.3	ppbv	67-63-0
TO-14	Air	04-Oct-14	PRIMEFF_E02	3-CHLOROPROPENE	2.9	U	0.65	2.9	5.3	ppbv	107-05-1
TO-14	Air	04-Oct-14	PRIMEFF_E02	4-ETHYLTOLUENE	1	J	0.28	0.79	1.3	ppbv	622-96-8
TO-14	Air	04-Oct-14	PRIMEFF_E02	4-METHYL-2-PENTANONE	0.79	U	0.24	0.79	1.3	ppbv	108-10-1
TO-14	Air	04-Oct-14	PRIMEFF_E02	ACETONE	16	J	0.89	2.9	13	ppbv	67-64-1
TO-14	Air	04-Oct-14	PRIMEFF_E02	ALPHA-CHLOROTOLUENE	0.79	U	0.18	0.79	1.3	ppbv	100-44-7
TO-14	Air	04-Oct-14	PRIMEFF_E02	BENZENE	0.79	U	0.3	0.79	1.3	ppbv	71-43-2
TO-14	Air	04-Oct-14	PRIMEFF_E02	BROMODICHLOROMETHANE	0.79	U	0.32	0.79	1.3	ppbv	75-27-4
TO-14	Air	04-Oct-14	PRIMEFF_E02	BROMOFORM	0.79	U	0.28	0.79	1.3	ppbv	75-25-2
TO-14	Air	04-Oct-14	PRIMEFF_E02	BROMOMETHANE	0.86	U	0.86	0.86	13	ppbv	74-83-9
TO-14	Air	04-Oct-14	PRIMEFF_E02	CARBON DISULFIDE	0.62	U	0.27	2.9	5.3	ppbv	75-15-0



**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	04-Oct-14	PRIMEFF_E02	CARBON TETRACHLORIDE	0.79	U	0.28	0.79	1.3	ppbv	56-23-5
TO-14	Air	04-Oct-14	PRIMEFF_E02	CHLOROBENZENE	0.79	U	0.21	0.79	1.3	ppbv	108-90-7
TO-14	Air	04-Oct-14	PRIMEFF_E02	CHLOROETHANE	2.9	U	0.55	2.9	5.3	ppbv	75-00-3
TO-14	Air	04-Oct-14	PRIMEFF_E02	CHLOROFORM	0.79	U	0.29	0.79	1.3	ppbv	67-66-3
TO-14	Air	04-Oct-14	PRIMEFF_E02	CHLOROMETHANE	2.9	U	0.86	2.9	5.3	ppbv	74-87-3
TO-14	Air	04-Oct-14	PRIMEFF_E02	CIS-1,2-DICHLOROETHENE	0.79	U	0.25	0.79	1.3	ppbv	156-59-2
TO-14	Air	04-Oct-14	PRIMEFF_E02	CIS-1,3-DICHLOROPROPENE	0.79	U	0.23	0.79	1.3	ppbv	10061-01-5
TO-14	Air	04-Oct-14	PRIMEFF_E02	CUMENE	0.79	U	0.26	0.79	1.3	ppbv	98-82-8
TO-14	Air	04-Oct-14	PRIMEFF_E02	CYCLOHEXANE	0.79	U	0.37	0.79	1.3	ppbv	110-82-7
TO-14	Air	04-Oct-14	PRIMEFF_E02	DIBROMOCHLOROMETHANE	0.79	U	0.31	0.79	1.3	ppbv	124-48-1
TO-14	Air	04-Oct-14	PRIMEFF_E02	ETHANOL	47		2	2.9	5.3	ppbv	64-17-5
TO-14	Air	04-Oct-14	PRIMEFF_E02	ETHYL BENZENE	0.79	U	0.37	0.79	1.3	ppbv	100-41-4
TO-14	Air	04-Oct-14	PRIMEFF_E02	FREON 11	0.79	U	0.35	0.79	1.3	ppbv	75-69-4
TO-14	Air	04-Oct-14	PRIMEFF_E02	FREON 113	0.79	U	0.45	0.79	1.3	ppbv	76-13-1
TO-14	Air	04-Oct-14	PRIMEFF_E02	FREON 114	0.79	U	0.45	0.79	1.3	ppbv	76-14-2
TO-14	Air	04-Oct-14	PRIMEFF_E02	FREON 12	0.68	J	0.3	0.79	1.3	ppbv	75-71-8
TO-14	Air	04-Oct-14	PRIMEFF_E02	HEPTANE	0.79	U	0.42	0.79	1.3	ppbv	142-82-5
TO-14	Air	04-Oct-14	PRIMEFF_E02	HEXACHLOROBUTADIENE	2.9	U	0.91	2.9	5.3	ppbv	87-68-3
TO-14	Air	04-Oct-14	PRIMEFF_E02	HEXANE	0.79	U	0.28	0.79	1.3	ppbv	110-54-3
TO-14	Air	04-Oct-14	PRIMEFF_E02	ISOPROPYL ETHER	0.4	UJ	0.4		5.3	ppbv	108-20-3
TO-14	Air	04-Oct-14	PRIMEFF_E02	M,P-XYLENE	1.1	J	0.18	0.79	1.3	ppbv	108-38-3/1
TO-14	Air	04-Oct-14	PRIMEFF_E02	METHYL TERT-BUTYL ETHER	0.79	U	0.18	0.79	1.3	ppbv	1634-04-4
TO-14	Air	04-Oct-14	PRIMEFF_E02	METHYLENE CHLORIDE	0.79	U	0.67	0.79	13	ppbv	75-09-2
TO-14	Air	04-Oct-14	PRIMEFF_E02	NAPHTHALENE	0.88	J	0.11	2.9	5.3	ppbv	91-20-3
TO-14	Air	04-Oct-14	PRIMEFF_E02	O-XYLENE	0.58	J	0.27	0.79	1.3	ppbv	95-47-6
TO-14	Air	04-Oct-14	PRIMEFF_E02	PROPYLBENZENE	0.79	U	0.2	0.79	1.3	ppbv	103-65-1
TO-14	Air	04-Oct-14	PRIMEFF_E02	STYRENE	0.79	U	0.34	0.79	1.3	ppbv	100-42-5
TO-14	Air	04-Oct-14	PRIMEFF_E02	TETRACHLOROETHENE	0.79	U	0.28	0.79	1.3	ppbv	127-18-4
TO-14	Air	04-Oct-14	PRIMEFF_E02	TETRAHYDROFURAN	0.79	U	0.22	0.79	1.3	ppbv	109-99-9

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	04-Oct-14	PRIMEFF_E02	TOLUENE	1.8		0.19	0.79	1.3	ppbv	108-88-3
TO-14	Air	04-Oct-14	PRIMEFF_E02	TRANS-1,2-DICHLOROETHENE	0.79	U	0.38	0.79	1.3	ppbv	156-60-5
TO-14	Air	04-Oct-14	PRIMEFF_E02	TRANS-1,3-DICHLOROPROPENE	0.79	U	0.32	0.79	1.3	ppbv	10061-02-6
TO-14	Air	04-Oct-14	PRIMEFF_E02	TRICHLOROETHENE	0.98	J	0.48	0.79	1.3	ppbv	79-01-6
TO-14	Air	04-Oct-14	PRIMEFF_E02	VINYL ACETATE	2.9	U	1.3	2.9	5.3	ppbv	108-05-4
TO-14	Air	04-Oct-14	PRIMEFF_E02	VINYL CHLORIDE	3.2		0.26	0.79	1.3	ppbv	75-01-4
TO-14	Air	04-Oct-14	VE-4D_SV75E02	1,1,1-TRICHLOROETHANE	0.76	U	0.27	0.76	1.3	ppbv	71-55-6
TO-14	Air	04-Oct-14	VE-4D_SV75E02	1,1,2,2-TETRACHLOROETHANE	0.76	U	0.24	0.76	1.3	ppbv	79-34-5
TO-14	Air	04-Oct-14	VE-4D_SV75E02	1,1,2-TRICHLOROETHANE	0.76	U	0.35	0.76	1.3	ppbv	79-00-5
TO-14	Air	04-Oct-14	VE-4D_SV75E02	1,1-DICHLOROETHANE	0.76	U	0.28	0.76	1.3	ppbv	75-34-3
TO-14	Air	04-Oct-14	VE-4D_SV75E02	1,1-DICHLOROETHENE	0.76	U	0.32	0.76	1.3	ppbv	75-35-4
TO-14	Air	04-Oct-14	VE-4D_SV75E02	1,2,4-TRICHLOROBENZENE	2.8	U	0.73	2.8	5.1	ppbv	120-82-1
TO-14	Air	04-Oct-14	VE-4D_SV75E02	1,2,4-TRIMETHYLBENZENE	0.76	U	0.3	0.76	1.3	ppbv	95-63-6
TO-14	Air	04-Oct-14	VE-4D_SV75E02	1,2-DIBROMOETHANE (EDB)	0.76	U	0.29	0.76	1.3	ppbv	106-93-4
TO-14	Air	04-Oct-14	VE-4D_SV75E02	1,2-DICHLOROBENZENE	0.76	U	0.26	0.76	1.3	ppbv	95-50-1
TO-14	Air	04-Oct-14	VE-4D_SV75E02	1,2-DICHLOROETHANE	0.76	U	0.42	0.76	1.3	ppbv	107-06-2
TO-14	Air	04-Oct-14	VE-4D_SV75E02	1,2-DICHLOROPROPANE	0.76	U	0.52	0.76	1.3	ppbv	78-87-5
TO-14	Air	04-Oct-14	VE-4D_SV75E02	1,3,5-TRIMETHYLBENZENE	0.76	U	0.2	0.76	1.3	ppbv	108-67-8
TO-14	Air	04-Oct-14	VE-4D_SV75E02	1,3-BUTADIENE	0.76	U	0.25	0.76	1.3	ppbv	106-99-0
TO-14	Air	04-Oct-14	VE-4D_SV75E02	1,3-DICHLOROBENZENE	0.76	U	0.2	0.76	1.3	ppbv	541-73-1
TO-14	Air	04-Oct-14	VE-4D_SV75E02	1,4-DICHLOROBENZENE	2.3		0.25	0.76	1.3	ppbv	106-46-7
TO-14	Air	04-Oct-14	VE-4D_SV75E02	1,4-DIOXANE	2.8	U	0.9	2.8	5.1	ppbv	123-91-1
TO-14	Air	04-Oct-14	VE-4D_SV75E02	2,2,4-TRIMETHYLPENTANE	0.76	U	0.099	0.76	1.3	ppbv	540-84-1
TO-14	Air	04-Oct-14	VE-4D_SV75E02	2-BUTANONE (METHYL ETHYL KETONE)	59		0.55	2.8	5.1	ppbv	78-93-3
TO-14	Air	04-Oct-14	VE-4D_SV75E02	2-HEXANONE	2.8	U	0.61	2.8	5.1	ppbv	591-78-6
TO-14	Air	04-Oct-14	VE-4D_SV75E02	2-PROPANOL	1.8	J	0.44	2.8	5.1	ppbv	67-63-0
TO-14	Air	04-Oct-14	VE-4D_SV75E02	3-CHLOROPROPENE	2.8	U	0.62	2.8	5.1	ppbv	107-05-1
TO-14	Air	04-Oct-14	VE-4D_SV75E02	4-ETHYLTOLUENE	0.76	U	0.27	0.76	1.3	ppbv	622-96-8
TO-14	Air	04-Oct-14	VE-4D_SV75E02	4-METHYL-2-PENTANONE	0.76	U	0.23	0.76	1.3	ppbv	108-10-1

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	04-Oct-14	VE-4D_SV75E02	ACETONE	11	J	0.86	2.8	13	ppbv	67-64-1
TO-14	Air	04-Oct-14	VE-4D_SV75E02	ALPHA-CHLOROTOLUENE	0.76	U	0.18	0.76	1.3	ppbv	100-44-7
TO-14	Air	04-Oct-14	VE-4D_SV75E02	BENZENE	0.32	J	0.29	0.76	1.3	ppbv	71-43-2
TO-14	Air	04-Oct-14	VE-4D_SV75E02	BROMODICHLOROMETHANE	0.76	U	0.3	0.76	1.3	ppbv	75-27-4
TO-14	Air	04-Oct-14	VE-4D_SV75E02	BROMOFORM	0.76	U	0.27	0.76	1.3	ppbv	75-25-2
TO-14	Air	04-Oct-14	VE-4D_SV75E02	BROMOMETHANE	0.82	U	0.82	0.82	13	ppbv	74-83-9
TO-14	Air	04-Oct-14	VE-4D_SV75E02	CARBON DISULFIDE	1.9	U	0.26	2.8	5.1	ppbv	75-15-0
TO-14	Air	04-Oct-14	VE-4D_SV75E02	CARBON TETRACHLORIDE	0.76	U	0.27	0.76	1.3	ppbv	56-23-5
TO-14	Air	04-Oct-14	VE-4D_SV75E02	CHLOROBENZENE	0.76	U	0.2	0.76	1.3	ppbv	108-90-7
TO-14	Air	04-Oct-14	VE-4D_SV75E02	CHLOROETHANE	2.8	U	0.53	2.8	5.1	ppbv	75-00-3
TO-14	Air	04-Oct-14	VE-4D_SV75E02	CHLOROFORM	0.76	U	0.28	0.76	1.3	ppbv	67-66-3
TO-14	Air	04-Oct-14	VE-4D_SV75E02	CHLOROMETHANE	2.8	U	0.82	2.8	5.1	ppbv	74-87-3
TO-14	Air	04-Oct-14	VE-4D_SV75E02	CIS-1,2-DICHLOROETHENE	12		0.24	0.76	1.3	ppbv	156-59-2
TO-14	Air	04-Oct-14	VE-4D_SV75E02	CIS-1,3-DICHLOROPROPENE	0.76	U	0.22	0.76	1.3	ppbv	10061-01-5
TO-14	Air	04-Oct-14	VE-4D_SV75E02	CUMENE	0.76	U	0.25	0.76	1.3	ppbv	98-82-8
TO-14	Air	04-Oct-14	VE-4D_SV75E02	CYCLOHEXANE	0.76	U	0.35	0.76	1.3	ppbv	110-82-7
TO-14	Air	04-Oct-14	VE-4D_SV75E02	DIBROMOCHLOROMETHANE	0.76	U	0.3	0.76	1.3	ppbv	124-48-1
TO-14	Air	04-Oct-14	VE-4D_SV75E02	ETHANOL	110		2	2.8	5.1	ppbv	64-17-5
TO-14	Air	04-Oct-14	VE-4D_SV75E02	ETHYL BENZENE	0.76	U	0.35	0.76	1.3	ppbv	100-41-4
TO-14	Air	04-Oct-14	VE-4D_SV75E02	FREON 11	0.41	J	0.33	0.76	1.3	ppbv	75-69-4
TO-14	Air	04-Oct-14	VE-4D_SV75E02	FREON 113	0.76	U	0.43	0.76	1.3	ppbv	76-13-1
TO-14	Air	04-Oct-14	VE-4D_SV75E02	FREON 114	0.76	U	0.43	0.76	1.3	ppbv	76-14-2
TO-14	Air	04-Oct-14	VE-4D_SV75E02	FREON 12	0.54	J	0.29	0.76	1.3	ppbv	75-71-8
TO-14	Air	04-Oct-14	VE-4D_SV75E02	HEPTANE	0.76	U	0.4	0.76	1.3	ppbv	142-82-5
TO-14	Air	04-Oct-14	VE-4D_SV75E02	HEXACHLOROBUTADIENE	2.8	U	0.88	2.8	5.1	ppbv	87-68-3
TO-14	Air	04-Oct-14	VE-4D_SV75E02	HEXANE	0.33	J	0.27	0.76	1.3	ppbv	110-54-3
TO-14	Air	04-Oct-14	VE-4D_SV75E02	ISOPROPYL ETHER	0.38	UJ	0.38		5.1	ppbv	108-20-3
TO-14	Air	04-Oct-14	VE-4D_SV75E02	M,P-XYLENE	0.46	J	0.18	0.76	1.3	ppbv	108-38-3/1
TO-14	Air	04-Oct-14	VE-4D_SV75E02	METHYL TERT-BUTYL ETHER	0.76	U	0.17	0.76	1.3	ppbv	1634-04-4

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	04-Oct-14	VE-4D_SV75E02	METHYLENE CHLORIDE	0.76	U	0.64	0.76	13	ppbv	75-09-2
TO-14	Air	04-Oct-14	VE-4D_SV75E02	NAPHTHALENE	2.8	UJ	0.1	2.8	5.1	ppbv	91-20-3
TO-14	Air	04-Oct-14	VE-4D_SV75E02	O-XYLENE	0.76	U	0.26	0.76	1.3	ppbv	95-47-6
TO-14	Air	04-Oct-14	VE-4D_SV75E02	PROPYLBENZENE	0.76	U	0.19	0.76	1.3	ppbv	103-65-1
TO-14	Air	04-Oct-14	VE-4D_SV75E02	STYRENE	0.76	U	0.33	0.76	1.3	ppbv	100-42-5
TO-14	Air	04-Oct-14	VE-4D_SV75E02	TETRACHLOROETHENE	0.42	J	0.27	0.76	1.3	ppbv	127-18-4
TO-14	Air	04-Oct-14	VE-4D_SV75E02	TETRAHYDROFURAN	40		0.22	0.76	1.3	ppbv	109-99-9
TO-14	Air	04-Oct-14	VE-4D_SV75E02	TOLUENE	0.53	J	0.18	0.76	1.3	ppbv	108-88-3
TO-14	Air	04-Oct-14	VE-4D_SV75E02	TRANS-1,2-DICHLOROETHENE	0.76	U	0.37	0.76	1.3	ppbv	156-60-5
TO-14	Air	04-Oct-14	VE-4D_SV75E02	TRANS-1,3-DICHLOROPROPENE	0.76	U	0.3	0.76	1.3	ppbv	10061-02-6
TO-14	Air	04-Oct-14	VE-4D_SV75E02	TRICHLOROETHENE	470		0.46	0.76	1.3	ppbv	79-01-6
TO-14	Air	04-Oct-14	VE-4D_SV75E02	VINYL ACETATE	2.8	U	1.3	2.8	5.1	ppbv	108-05-4
TO-14	Air	04-Oct-14	VE-4D_SV75E02	VINYL CHLORIDE	0.76	U	0.26	0.76	1.3	ppbv	75-01-4
TO-14	Air	04-Oct-14	VE-4S_SV30E02	1,1,1-TRICHLOROETHANE	180	U	35	180	260	ppbv	71-55-6
TO-14	Air	04-Oct-14	VE-4S_SV30E02	1,1,2,2-TETRACHLOROETHANE	180	U	35	180	260	ppbv	79-34-5
TO-14	Air	04-Oct-14	VE-4S_SV30E02	1,1,2-TRICHLOROETHANE	180	U	48	180	260	ppbv	79-00-5
TO-14	Air	04-Oct-14	VE-4S_SV30E02	1,1-DICHLOROETHANE	180	U	34	180	260	ppbv	75-34-3
TO-14	Air	04-Oct-14	VE-4S_SV30E02	1,1-DICHLOROETHENE	180	U	58	180	260	ppbv	75-35-4
TO-14	Air	04-Oct-14	VE-4S_SV30E02	1,2,4-TRICHLOROBENZENE	470	U	170	470	1,000	ppbv	120-82-1
TO-14	Air	04-Oct-14	VE-4S_SV30E02	1,2,4-TRIMETHYLBENZENE	27	J	25	180	260	ppbv	95-63-6
TO-14	Air	04-Oct-14	VE-4S_SV30E02	1,2-DIBROMOETHANE (EDB)	180	U	39	180	260	ppbv	106-93-4
TO-14	Air	04-Oct-14	VE-4S_SV30E02	1,2-DICHLOROBENZENE	25	J	20	180	260	ppbv	95-50-1
TO-14	Air	04-Oct-14	VE-4S_SV30E02	1,2-DICHLOROETHANE	180	U	31	180	260	ppbv	107-06-2
TO-14	Air	04-Oct-14	VE-4S_SV30E02	1,2-DICHLOROPROPANE	180	U	38	180	260	ppbv	78-87-5
TO-14	Air	04-Oct-14	VE-4S_SV30E02	1,3,5-TRIMETHYLBENZENE	180	U	32	180	260	ppbv	108-67-8
TO-14	Air	04-Oct-14	VE-4S_SV30E02	1,3-BUTADIENE	180	U	88	180	260	ppbv	106-99-0
TO-14	Air	04-Oct-14	VE-4S_SV30E02	1,3-DICHLOROBENZENE	39	J	23	180	260	ppbv	541-73-1
TO-14	Air	04-Oct-14	VE-4S_SV30E02	1,4-DICHLOROBENZENE	180	U	50	180	260	ppbv	106-46-7
TO-14	Air	04-Oct-14	VE-4S_SV30E02	1,4-DIOXANE	470	U	260	470	1,000	ppbv	123-91-1

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	04-Oct-14	VE-4S_SV30E02	2,2,4-TRIMETHYLPENTANE	180	U	30	180	260	ppbv	540-84-1
TO-14	Air	04-Oct-14	VE-4S_SV30E02	2-BUTANONE (METHYL ETHYL KETONE)	470	U	230	470	1,000	ppbv	78-93-3
TO-14	Air	04-Oct-14	VE-4S_SV30E02	2-HEXANONE	470	U	160	470	1,000	ppbv	591-78-6
TO-14	Air	04-Oct-14	VE-4S_SV30E02	2-PROPANOL	470	U	230	470	1,000	ppbv	67-63-0
TO-14	Air	04-Oct-14	VE-4S_SV30E02	3-CHLOROPROPENE	470	U	250	470	1,000	ppbv	107-05-1
TO-14	Air	04-Oct-14	VE-4S_SV30E02	4-ETHYLTOLUENE	180	U	46	180	260	ppbv	622-96-8
TO-14	Air	04-Oct-14	VE-4S_SV30E02	4-METHYL-2-PENTANONE	120	J	110	180	260	ppbv	108-10-1
TO-14	Air	04-Oct-14	VE-4S_SV30E02	ACETONE	520	U	520	520	2,600	ppbv	67-64-1
TO-14	Air	04-Oct-14	VE-4S_SV30E02	ALPHA-CHLOROTOLUENE	180	U	40	180	260	ppbv	100-44-7
TO-14	Air	04-Oct-14	VE-4S_SV30E02	BENZENE	180	U	74	180	260	ppbv	71-43-2
TO-14	Air	04-Oct-14	VE-4S_SV30E02	BROMODICHLOROMETHANE	180	U	32	180	260	ppbv	75-27-4
TO-14	Air	04-Oct-14	VE-4S_SV30E02	BROMOFORM	180	U	45	180	260	ppbv	75-25-2
TO-14	Air	04-Oct-14	VE-4S_SV30E02	BROMOMETHANE	470	U	160	470	2,600	ppbv	74-83-9
TO-14	Air	04-Oct-14	VE-4S_SV30E02	CARBON DISULFIDE	290	U	230	470	1,000	ppbv	75-15-0
TO-14	Air	04-Oct-14	VE-4S_SV30E02	CARBON TETRACHLORIDE	46	U	32	180	260	ppbv	56-23-5
TO-14	Air	04-Oct-14	VE-4S_SV30E02	CHLOROBENZENE	180	U	47	180	260	ppbv	108-90-7
TO-14	Air	04-Oct-14	VE-4S_SV30E02	CHLOROETHANE	470	U	210	470	1,000	ppbv	75-00-3
TO-14	Air	04-Oct-14	VE-4S_SV30E02	CHLOROFORM	180	U	37	180	260	ppbv	67-66-3
TO-14	Air	04-Oct-14	VE-4S_SV30E02	CHLOROMETHANE	470	U	340	470	1,000	ppbv	74-87-3
TO-14	Air	04-Oct-14	VE-4S_SV30E02	CIS-1,2-DICHLOROETHENE	3,900		84	180	260	ppbv	156-59-2
TO-14	Air	04-Oct-14	VE-4S_SV30E02	CIS-1,3-DICHLOROPROPENE	180	U	68	180	260	ppbv	10061-01-5
TO-14	Air	04-Oct-14	VE-4S_SV30E02	CUMENE	180	U	43	180	260	ppbv	98-82-8
TO-14	Air	04-Oct-14	VE-4S_SV30E02	CYCLOHEXANE	180	U	56	180	260	ppbv	110-82-7
TO-14	Air	04-Oct-14	VE-4S_SV30E02	DIBROMOCHLOROMETHANE	180	U	43	180	260	ppbv	124-48-1
TO-14	Air	04-Oct-14	VE-4S_SV30E02	ETHANOL	470	UJ	330	470	1,000	ppbv	64-17-5
TO-14	Air	04-Oct-14	VE-4S_SV30E02	ETHYL BENZENE	180	U	38	180	260	ppbv	100-41-4
TO-14	Air	04-Oct-14	VE-4S_SV30E02	FREON 11	180	U	27	180	260	ppbv	75-69-4
TO-14	Air	04-Oct-14	VE-4S_SV30E02	FREON 113	180	U	51	180	260	ppbv	76-13-1
TO-14	Air	04-Oct-14	VE-4S_SV30E02	FREON 114	180	U	16	180	260	ppbv	76-14-2

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	04-Oct-14	VE-4S_SV30E02	FREON 12	180	U	28	180	260	ppbv	75-71-8
TO-14	Air	04-Oct-14	VE-4S_SV30E02	HEPTANE	180	U	76	180	260	ppbv	142-82-5
TO-14	Air	04-Oct-14	VE-4S_SV30E02	HEXACHLOROBUTADIENE	470	U	190	470	1,000	ppbv	87-68-3
TO-14	Air	04-Oct-14	VE-4S_SV30E02	HEXANE	180	U	70	180	260	ppbv	110-54-3
TO-14	Air	04-Oct-14	VE-4S_SV30E02	ISOPROPYL ETHER	190	UJ	190		1,000	ppbv	108-20-3
TO-14	Air	04-Oct-14	VE-4S_SV30E02	M,P-XYLENE	35	U	32	180	260	ppbv	108-38-3/1
TO-14	Air	04-Oct-14	VE-4S_SV30E02	METHYL TERT-BUTYL ETHER	180	U	66	180	260	ppbv	1634-04-4
TO-14	Air	04-Oct-14	VE-4S_SV30E02	METHYLENE CHLORIDE	470	U	250	470	2,600	ppbv	75-09-2
TO-14	Air	04-Oct-14	VE-4S_SV30E02	NAPHTHALENE	470	U	42	470	1,000	ppbv	91-20-3
TO-14	Air	04-Oct-14	VE-4S_SV30E02	O-XYLENE	180	U	44	180	260	ppbv	95-47-6
TO-14	Air	04-Oct-14	VE-4S_SV30E02	PROPYLBENZENE	180	U	38	180	260	ppbv	103-65-1
TO-14	Air	04-Oct-14	VE-4S_SV30E02	STYRENE	180	U	47	180	260	ppbv	100-42-5
TO-14	Air	04-Oct-14	VE-4S_SV30E02	TETRACHLOROETHENE	200	J	56	180	260	ppbv	127-18-4
TO-14	Air	04-Oct-14	VE-4S_SV30E02	TETRAHYDROFURAN	180	U	58	180	260	ppbv	109-99-9
TO-14	Air	04-Oct-14	VE-4S_SV30E02	TOLUENE	56	J	46	180	260	ppbv	108-88-3
TO-14	Air	04-Oct-14	VE-4S_SV30E02	TRANS-1,2-DICHLOROETHENE	180	U	65	180	260	ppbv	156-60-5
TO-14	Air	04-Oct-14	VE-4S_SV30E02	TRANS-1,3-DICHLOROPROPENE	180	U	62	180	260	ppbv	10061-02-6
TO-14	Air	04-Oct-14	VE-4S_SV30E02	TRICHLOROETHENE	44,000		70	180	260	ppbv	79-01-6
TO-14	Air	04-Oct-14	VE-4S_SV30E02	VINYL ACETATE	470	U	230	470	1,000	ppbv	108-05-4
TO-14	Air	04-Oct-14	VE-4S_SV30E02	VINYL CHLORIDE	180	U	69	180	260	ppbv	75-01-4
TO-14	Air	21-Oct-14	VE-4D_SV75E03	1,1,1-TRICHLOROETHANE	8.2	U	2.9	8.2	14	ppbv	71-55-6
TO-14	Air	21-Oct-14	VE-4D_SV75E03	1,1,2,2-TETRACHLOROETHANE	8.2	U	2.6	8.2	14	ppbv	79-34-5
TO-14	Air	21-Oct-14	VE-4D_SV75E03	1,1,2-TRICHLOROETHANE	8.2	U	3.8	8.2	14	ppbv	79-00-5
TO-14	Air	21-Oct-14	VE-4D_SV75E03	1,1-DICHLOROETHANE	8.2	U	3	8.2	14	ppbv	75-34-3
TO-14	Air	21-Oct-14	VE-4D_SV75E03	1,1-DICHLOROETHENE	8.2	U	3.4	8.2	14	ppbv	75-35-4
TO-14	Air	21-Oct-14	VE-4D_SV75E03	1,2,4-TRICHLOROBENZENE	30	U	7.8	30	54	ppbv	120-82-1
TO-14	Air	21-Oct-14	VE-4D_SV75E03	1,2,4-TRIMETHYLBENZENE	8.2	U	3.2	8.2	14	ppbv	95-63-6
TO-14	Air	21-Oct-14	VE-4D_SV75E03	1,2-DIBROMOETHANE (EDB)	8.2	U	3.1	8.2	14	ppbv	106-93-4
TO-14	Air	21-Oct-14	VE-4D_SV75E03	1,2-DICHLOROBENZENE	8.2	U	2.8	8.2	14	ppbv	95-50-1

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	21-Oct-14	VE-4D_SV75E03	1,2-DICHLOROETHANE	8.2	U	4.5	8.2	14	ppbv	107-06-2
TO-14	Air	21-Oct-14	VE-4D_SV75E03	1,2-DICHLOROPROPANE	8.2	U	5.6	8.2	14	ppbv	78-87-5
TO-14	Air	21-Oct-14	VE-4D_SV75E03	1,3,5-TRIMETHYLBENZENE	8.2	U	2.1	8.2	14	ppbv	108-67-8
TO-14	Air	21-Oct-14	VE-4D_SV75E03	1,3-BUTADIENE	8.2	U	2.7	8.2	14	ppbv	106-99-0
TO-14	Air	21-Oct-14	VE-4D_SV75E03	1,3-DICHLOROBENZENE	8.2	U	2.2	8.2	14	ppbv	541-73-1
TO-14	Air	21-Oct-14	VE-4D_SV75E03	1,4-DICHLOROBENZENE	8.2	U	2.7	8.2	14	ppbv	106-46-7
TO-14	Air	21-Oct-14	VE-4D_SV75E03	1,4-DIOXANE	30	U	9.7	30	54	ppbv	123-91-1
TO-14	Air	21-Oct-14	VE-4D_SV75E03	2,2,4-TRIMETHYLPENTANE	8.2	U	1	8.2	14	ppbv	540-84-1
TO-14	Air	21-Oct-14	VE-4D_SV75E03	2-BUTANONE (METHYL ETHYL KETONE)	30	U	5.9	30	54	ppbv	78-93-3
TO-14	Air	21-Oct-14	VE-4D_SV75E03	2-HEXANONE	30	U	6.5	30	54	ppbv	591-78-6
TO-14	Air	21-Oct-14	VE-4D_SV75E03	2-PROPANOL	30	U	4.7	30	54	ppbv	67-63-0
TO-14	Air	21-Oct-14	VE-4D_SV75E03	3-CHLOROPROPENE	30	U	6.7	30	54	ppbv	107-05-1
TO-14	Air	21-Oct-14	VE-4D_SV75E03	4-ETHYLTOLUENE	8.2	U	2.8	8.2	14	ppbv	622-96-8
TO-14	Air	21-Oct-14	VE-4D_SV75E03	4-METHYL-2-PENTANONE	8.2	U	2.4	8.2	14	ppbv	108-10-1
TO-14	Air	21-Oct-14	VE-4D_SV75E03	ACETONE	26	J	9.2	30	140	ppbv	67-64-1
TO-14	Air	21-Oct-14	VE-4D_SV75E03	ALPHA-CHLOROTOLUENE	8.2	U	1.9	8.2	14	ppbv	100-44-7
TO-14	Air	21-Oct-14	VE-4D_SV75E03	BENZENE	8.2	U	3.1	8.2	14	ppbv	71-43-2
TO-14	Air	21-Oct-14	VE-4D_SV75E03	BROMODICHLOROMETHANE	8.2	U	3.3	8.2	14	ppbv	75-27-4
TO-14	Air	21-Oct-14	VE-4D_SV75E03	BROMOFORM	8.2	U	2.9	8.2	14	ppbv	75-25-2
TO-14	Air	21-Oct-14	VE-4D_SV75E03	BROMOMETHANE	8.8	U	8.8	8.8	140	ppbv	74-83-9
TO-14	Air	21-Oct-14	VE-4D_SV75E03	CARBON DISULFIDE	4.2	U	2.8	30	54	ppbv	75-15-0
TO-14	Air	21-Oct-14	VE-4D_SV75E03	CARBON TETRACHLORIDE	8.2	U	2.9	8.2	14	ppbv	56-23-5
TO-14	Air	21-Oct-14	VE-4D_SV75E03	CHLOROBENZENE	8.2	U	2.1	8.2	14	ppbv	108-90-7
TO-14	Air	21-Oct-14	VE-4D_SV75E03	CHLOROETHANE	30	U	5.7	30	54	ppbv	75-00-3
TO-14	Air	21-Oct-14	VE-4D_SV75E03	CHLOROFORM	8.2	U	3	8.2	14	ppbv	67-66-3
TO-14	Air	21-Oct-14	VE-4D_SV75E03	CHLOROMETHANE	30	U	8.8	30	54	ppbv	74-87-3
TO-14	Air	21-Oct-14	VE-4D_SV75E03	CIS-1,2-DICHLOROETHENE	180		2.6	8.2	14	ppbv	156-59-2
TO-14	Air	21-Oct-14	VE-4D_SV75E03	CIS-1,3-DICHLOROPROPENE	8.2	U	2.4	8.2	14	ppbv	10061-01-5
TO-14	Air	21-Oct-14	VE-4D_SV75E03	CUMENE	8.2	U	2.7	8.2	14	ppbv	98-82-8

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	21-Oct-14	VE-4D_SV75E03	CYCLOHEXANE	8.2	U	3.8	8.2	14	ppbv	110-82-7
TO-14	Air	21-Oct-14	VE-4D_SV75E03	DIBROMOCHLOROMETHANE	8.2	U	3.2	8.2	14	ppbv	124-48-1
TO-14	Air	21-Oct-14	VE-4D_SV75E03	ETHANOL	30	U	21	30	54	ppbv	64-17-5
TO-14	Air	21-Oct-14	VE-4D_SV75E03	ETHYL BENZENE	8.2	U	3.8	8.2	14	ppbv	100-41-4
TO-14	Air	21-Oct-14	VE-4D_SV75E03	FREON 11	8.2	U	3.6	8.2	14	ppbv	75-69-4
TO-14	Air	21-Oct-14	VE-4D_SV75E03	FREON 113	8.2	U	4.6	8.2	14	ppbv	76-13-1
TO-14	Air	21-Oct-14	VE-4D_SV75E03	FREON 114	8.2	U	4.6	8.2	14	ppbv	76-14-2
TO-14	Air	21-Oct-14	VE-4D_SV75E03	FREON 12	8.2	U	3.1	8.2	14	ppbv	75-71-8
TO-14	Air	21-Oct-14	VE-4D_SV75E03	HEPTANE	8.2	U	4.3	8.2	14	ppbv	142-82-5
TO-14	Air	21-Oct-14	VE-4D_SV75E03	HEXACHLOROBUTADIENE	30	U	9.4	30	54	ppbv	87-68-3
TO-14	Air	21-Oct-14	VE-4D_SV75E03	HEXANE	8.2	U	2.9	8.2	14	ppbv	110-54-3
TO-14	Air	21-Oct-14	VE-4D_SV75E03	ISOPROPYL ETHER	4.1	UJ	4.1		54	ppbv	108-20-3
TO-14	Air	21-Oct-14	VE-4D_SV75E03	M,P-XYLENE	8.2	U	1.9	8.2	14	ppbv	108-38-3/1
TO-14	Air	21-Oct-14	VE-4D_SV75E03	METHYL TERT-BUTYL ETHER	8.2	U	1.8	8.2	14	ppbv	1634-04-4
TO-14	Air	21-Oct-14	VE-4D_SV75E03	METHYLENE CHLORIDE	8.2	U	6.9	8.2	140	ppbv	75-09-2
TO-14	Air	21-Oct-14	VE-4D_SV75E03	NAPHTHALENE	30	U	1.1	30	54	ppbv	91-20-3
TO-14	Air	21-Oct-14	VE-4D_SV75E03	O-XYLENE	8.2	U	2.8	8.2	14	ppbv	95-47-6
TO-14	Air	21-Oct-14	VE-4D_SV75E03	PROPYLBENZENE	8.2	U	2	8.2	14	ppbv	103-65-1
TO-14	Air	21-Oct-14	VE-4D_SV75E03	STYRENE	8.2	U	3.5	8.2	14	ppbv	100-42-5
TO-14	Air	21-Oct-14	VE-4D_SV75E03	TETRACHLOROETHENE	8.2	U	2.9	8.2	14	ppbv	127-18-4
TO-14	Air	21-Oct-14	VE-4D_SV75E03	TETRAHYDROFURAN	8.2	U	2.3	8.2	14	ppbv	109-99-9
TO-14	Air	21-Oct-14	VE-4D_SV75E03	TOLUENE	8.2	U	2	8.2	14	ppbv	108-88-3
TO-14	Air	21-Oct-14	VE-4D_SV75E03	TRANS-1,2-DICHLOROETHENE	8.2	U	3.9	8.2	14	ppbv	156-60-5
TO-14	Air	21-Oct-14	VE-4D_SV75E03	TRANS-1,3-DICHLOROPROPENE	8.2	U	3.2	8.2	14	ppbv	10061-02-6
TO-14	Air	21-Oct-14	VE-4D_SV75E03	TRICHLOROETHENE	4,800		5	8.2	14	ppbv	79-01-6
TO-14	Air	21-Oct-14	VE-4D_SV75E03	VINYL ACETATE	30	U	14	30	54	ppbv	108-05-4
TO-14	Air	21-Oct-14	VE-4D_SV75E03	VINYL CHLORIDE	8.2	U	2.7	8.2	14	ppbv	75-01-4
TO-14	Air	21-Oct-14	VE-4S_SV30E03	1,1,1-TRICHLOROETHANE	310	U	110	310	510	ppbv	71-55-6
TO-14	Air	21-Oct-14	VE-4S_SV30E03	1,1,2,2-TETRACHLOROETHANE	310	U	98	310	510	ppbv	79-34-5



**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	21-Oct-14	VE-4S_SV30E03	1,1,2-TRICHLOROETHANE	310	U	140	310	510	ppbv	79-00-5
TO-14	Air	21-Oct-14	VE-4S_SV30E03	1,1-DICHLOROETHANE	310	U	110	310	510	ppbv	75-34-3
TO-14	Air	21-Oct-14	VE-4S_SV30E03	1,1-DICHLOROETHENE	310	U	130	310	510	ppbv	75-35-4
TO-14	Air	21-Oct-14	VE-4S_SV30E03	1,2,4-TRICHLOROBENZENE	1,100	U	290	1,100	2,000	ppbv	120-82-1
TO-14	Air	21-Oct-14	VE-4S_SV30E03	1,2,4-TRIMETHYLBENZENE	310	U	120	310	510	ppbv	95-63-6
TO-14	Air	21-Oct-14	VE-4S_SV30E03	1,2-DIBROMOETHANE (EDB)	310	U	120	310	510	ppbv	106-93-4
TO-14	Air	21-Oct-14	VE-4S_SV30E03	1,2-DICHLOROBENZENE	310	U	100	310	510	ppbv	95-50-1
TO-14	Air	21-Oct-14	VE-4S_SV30E03	1,2-DICHLOROETHANE	310	U	170	310	510	ppbv	107-06-2
TO-14	Air	21-Oct-14	VE-4S_SV30E03	1,2-DICHLOROPROPANE	310	U	210	310	510	ppbv	78-87-5
TO-14	Air	21-Oct-14	VE-4S_SV30E03	1,3,5-TRIMETHYLBENZENE	310	U	79	310	510	ppbv	108-67-8
TO-14	Air	21-Oct-14	VE-4S_SV30E03	1,3-BUTADIENE	310	U	100	310	510	ppbv	106-99-0
TO-14	Air	21-Oct-14	VE-4S_SV30E03	1,3-DICHLOROBENZENE	310	U	82	310	510	ppbv	541-73-1
TO-14	Air	21-Oct-14	VE-4S_SV30E03	1,4-DICHLOROBENZENE	310	U	100	310	510	ppbv	106-46-7
TO-14	Air	21-Oct-14	VE-4S_SV30E03	1,4-DIOXANE	1,100	U	360	1,100	2,000	ppbv	123-91-1
TO-14	Air	21-Oct-14	VE-4S_SV30E03	2,2,4-TRIMETHYLPENTANE	310	U	40	310	510	ppbv	540-84-1
TO-14	Air	21-Oct-14	VE-4S_SV30E03	2-BUTANONE (METHYL ETHYL KETONE)	1,100	U	220	1,100	2,000	ppbv	78-93-3
TO-14	Air	21-Oct-14	VE-4S_SV30E03	2-HEXANONE	1,100	U	240	1,100	2,000	ppbv	591-78-6
TO-14	Air	21-Oct-14	VE-4S_SV30E03	2-PROPANOL	260	U	180	1,100	2,000	ppbv	67-63-0
TO-14	Air	21-Oct-14	VE-4S_SV30E03	3-CHLOROPROPENE	1,100	U	250	1,100	2,000	ppbv	107-05-1
TO-14	Air	21-Oct-14	VE-4S_SV30E03	4-ETHYLTOLUENE	310	U	110	310	510	ppbv	622-96-8
TO-14	Air	21-Oct-14	VE-4S_SV30E03	4-METHYL-2-PENTANONE	310	U	92	310	510	ppbv	108-10-1
TO-14	Air	21-Oct-14	VE-4S_SV30E03	ACETONE	1,100	U	340	1,100	5,100	ppbv	67-64-1
TO-14	Air	21-Oct-14	VE-4S_SV30E03	ALPHA-CHLOROTOLUENE	310	U	72	310	510	ppbv	100-44-7
TO-14	Air	21-Oct-14	VE-4S_SV30E03	BENZENE	310	U	120	310	510	ppbv	71-43-2
TO-14	Air	21-Oct-14	VE-4S_SV30E03	BROMODICHLOROMETHANE	310	U	120	310	510	ppbv	75-27-4
TO-14	Air	21-Oct-14	VE-4S_SV30E03	BROMOFORM	310	U	110	310	510	ppbv	75-25-2
TO-14	Air	21-Oct-14	VE-4S_SV30E03	BROMOMETHANE	330	U	330	330	5,100	ppbv	74-83-9
TO-14	Air	21-Oct-14	VE-4S_SV30E03	CARBON DISULFIDE	150	U	100	1,100	2,000	ppbv	75-15-0
TO-14	Air	21-Oct-14	VE-4S_SV30E03	CARBON TETRACHLORIDE	310	U	110	310	510	ppbv	56-23-5

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	21-Oct-14	VE-4S_SV30E03	CHLOROBENZENE	310	U	80	310	510	ppbv	108-90-7
TO-14	Air	21-Oct-14	VE-4S_SV30E03	CHLOROETHANE	1,100	U	210	1,100	2,000	ppbv	75-00-3
TO-14	Air	21-Oct-14	VE-4S_SV30E03	CHLOROFORM	310	U	110	310	510	ppbv	67-66-3
TO-14	Air	21-Oct-14	VE-4S_SV30E03	CHLOROMETHANE	1100	U	330	1,100	2,000	ppbv	74-87-3
TO-14	Air	21-Oct-14	VE-4S_SV30E03	CIS-1,2-DICHLOROETHENE	10,000		98	310	510	ppbv	156-59-2
TO-14	Air	21-Oct-14	VE-4S_SV30E03	CIS-1,3-DICHLOROPROPENE	310	U	89	310	510	ppbv	10061-01-5
TO-14	Air	21-Oct-14	VE-4S_SV30E03	CUMENE	310	U	100	310	510	ppbv	98-82-8
TO-14	Air	21-Oct-14	VE-4S_SV30E03	CYCLOHEXANE	310	U	140	310	510	ppbv	110-82-7
TO-14	Air	21-Oct-14	VE-4S_SV30E03	DIBROMOCHLOROMETHANE	310	U	120	310	510	ppbv	124-48-1
TO-14	Air	21-Oct-14	VE-4S_SV30E03	ETHANOL	1,100	U	780	1,100	2,000	ppbv	64-17-5
TO-14	Air	21-Oct-14	VE-4S_SV30E03	ETHYL BENZENE	310	U	140	310	510	ppbv	100-41-4
TO-14	Air	21-Oct-14	VE-4S_SV30E03	FREON 11	310	U	130	310	510	ppbv	75-69-4
TO-14	Air	21-Oct-14	VE-4S_SV30E03	FREON 113	310	U	170	310	510	ppbv	76-13-1
TO-14	Air	21-Oct-14	VE-4S_SV30E03	FREON 114	310	U	170	310	510	ppbv	76-14-2
TO-14	Air	21-Oct-14	VE-4S_SV30E03	FREON 12	310	U	120	310	510	ppbv	75-71-8
TO-14	Air	21-Oct-14	VE-4S_SV30E03	HEPTANE	310	U	160	310	510	ppbv	142-82-5
TO-14	Air	21-Oct-14	VE-4S_SV30E03	HEXACHLOROBUTADIENE	1,100	U	350	1,100	2,000	ppbv	87-68-3
TO-14	Air	21-Oct-14	VE-4S_SV30E03	HEXANE	310	U	110	310	510	ppbv	110-54-3
TO-14	Air	21-Oct-14	VE-4S_SV30E03	ISOPROPYL ETHER	150	UJ	150		2,000	ppbv	108-20-3
TO-14	Air	21-Oct-14	VE-4S_SV30E03	M,P-XYLENE	310	U	70	310	510	ppbv	108-38-3/1
TO-14	Air	21-Oct-14	VE-4S_SV30E03	METHYL TERT-BUTYL ETHER	310	U	69	310	510	ppbv	1634-04-4
TO-14	Air	21-Oct-14	VE-4S_SV30E03	METHYLENE CHLORIDE	310	U	260	310	5,100	ppbv	75-09-2
TO-14	Air	21-Oct-14	VE-4S_SV30E03	NAPHTHALENE	1,100	U	42	1,100	2,000	ppbv	91-20-3
TO-14	Air	21-Oct-14	VE-4S_SV30E03	O-XYLENE	310	U	100	310	510	ppbv	95-47-6
TO-14	Air	21-Oct-14	VE-4S_SV30E03	PROPYLBENZENE	310	U	77	310	510	ppbv	103-65-1
TO-14	Air	21-Oct-14	VE-4S_SV30E03	STYRENE	310	U	130	310	510	ppbv	100-42-5
TO-14	Air	21-Oct-14	VE-4S_SV30E03	TETRACHLOROETHENE	310	U	110	310	510	ppbv	127-18-4
TO-14	Air	21-Oct-14	VE-4S_SV30E03	TETRAHYDROFURAN	310	U	87	310	510	ppbv	109-99-9
TO-14	Air	21-Oct-14	VE-4S_SV30E03	TOLUENE	310	U	74	310	510	ppbv	108-88-3

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	21-Oct-14	VE-4S_SV30E03	TRANS-1,2-DICHLOROETHENE	310	U	150	310	510	ppbv	156-60-5
TO-14	Air	21-Oct-14	VE-4S_SV30E03	TRANS-1,3-DICHLOROPROPENE	310	U	120	310	510	ppbv	10061-02-6
TO-14	Air	21-Oct-14	VE-4S_SV30E03	TRICHLOROETHENE	130,000		180	310	510	ppbv	79-01-6
TO-14	Air	21-Oct-14	VE-4S_SV30E03	VINYL ACETATE	1,100	U	520	1,100	2,000	ppbv	108-05-4
TO-14	Air	21-Oct-14	VE-4S_SV30E03	VINYL CHLORIDE	310	U	100	310	510	ppbv	75-01-4
TO-14	Air	29-Oct-14	VE-4D_SV75E04	1,1,1-TRICHLOROETHANE	5.4	U	1.9	5.4	9	ppbv	71-55-6
TO-14	Air	29-Oct-14	VE-4D_SV75E04	1,1,2,2-TETRACHLOROETHANE	5.4	U	1.7	5.4	9	ppbv	79-34-5
TO-14	Air	29-Oct-14	VE-4D_SV75E04	1,1,2-TRICHLOROETHANE	5.4	U	2.5	5.4	9	ppbv	79-00-5
TO-14	Air	29-Oct-14	VE-4D_SV75E04	1,1-DICHLOROETHANE	5.4	U	2	5.4	9	ppbv	75-34-3
TO-14	Air	29-Oct-14	VE-4D_SV75E04	1,1-DICHLOROETHENE	5.4	U	2.3	5.4	9	ppbv	75-35-4
TO-14	Air	29-Oct-14	VE-4D_SV75E04	1,2,4-TRICHLOROBENZENE	20	U	5.1	20	36	ppbv	120-82-1
TO-14	Air	29-Oct-14	VE-4D_SV75E04	1,2,4-TRIMETHYLBENZENE	5.4	U	2.1	5.4	9	ppbv	95-63-6
TO-14	Air	29-Oct-14	VE-4D_SV75E04	1,2-DIBROMOETHANE (EDB)	5.4	U	2	5.4	9	ppbv	106-93-4
TO-14	Air	29-Oct-14	VE-4D_SV75E04	1,2-DICHLOROBENZENE	5.4	U	1.8	5.4	9	ppbv	95-50-1
TO-14	Air	29-Oct-14	VE-4D_SV75E04	1,2-DICHLOROETHANE	5.4	U	3	5.4	9	ppbv	107-06-2
TO-14	Air	29-Oct-14	VE-4D_SV75E04	1,2-DICHLOROPROPANE	5.4	U	3.7	5.4	9	ppbv	78-87-5
TO-14	Air	29-Oct-14	VE-4D_SV75E04	1,3,5-TRIMETHYLBENZENE	5.4	U	1.4	5.4	9	ppbv	108-67-8
TO-14	Air	29-Oct-14	VE-4D_SV75E04	1,3-BUTADIENE	5.4	U	1.8	5.4	9	ppbv	106-99-0
TO-14	Air	29-Oct-14	VE-4D_SV75E04	1,3-DICHLOROBENZENE	5.4	U	1.4	5.4	9	ppbv	541-73-1
TO-14	Air	29-Oct-14	VE-4D_SV75E04	1,4-DICHLOROBENZENE	5.4	U	1.8	5.4	9	ppbv	106-46-7
TO-14	Air	29-Oct-14	VE-4D_SV75E04	1,4-DIOXANE	20	U	6.4	20	36	ppbv	123-91-1
TO-14	Air	29-Oct-14	VE-4D_SV75E04	2,2,4-TRIMETHYLPENTANE	5.4	U	0.7	5.4	9	ppbv	540-84-1
TO-14	Air	29-Oct-14	VE-4D_SV75E04	2-BUTANONE (METHYL ETHYL KETONE)	20	U	3.9	20	36	ppbv	78-93-3
TO-14	Air	29-Oct-14	VE-4D_SV75E04	2-HEXANONE	20	U	4.3	20	36	ppbv	591-78-6
TO-14	Air	29-Oct-14	VE-4D_SV75E04	2-PROPANOL	4	J	3.1	20	36	ppbv	67-63-0
TO-14	Air	29-Oct-14	VE-4D_SV75E04	3-CHLOROPROPENE	20	U	4.4	20	36	ppbv	107-05-1
TO-14	Air	29-Oct-14	VE-4D_SV75E04	4-ETHYLTOLUENE	5.4	U	1.9	5.4	9	ppbv	622-96-8
TO-14	Air	29-Oct-14	VE-4D_SV75E04	4-METHYL-2-PENTANONE	5.4	U	1.6	5.4	9	ppbv	108-10-1
TO-14	Air	29-Oct-14	VE-4D_SV75E04	ACETONE	15	J	6	20	90	ppbv	67-64-1

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	29-Oct-14	VE-4D_SV75E04	ALPHA-CHLOROTOLUENE	5.4	U	1.2	5.4	9	ppbv	100-44-7
TO-14	Air	29-Oct-14	VE-4D_SV75E04	BENZENE	5.4	U	2	5.4	9	ppbv	71-43-2
TO-14	Air	29-Oct-14	VE-4D_SV75E04	BROMODICHLOROMETHANE	5.4	U	2.2	5.4	9	ppbv	75-27-4
TO-14	Air	29-Oct-14	VE-4D_SV75E04	BROMOFORM	5.4	U	1.9	5.4	9	ppbv	75-25-2
TO-14	Air	29-Oct-14	VE-4D_SV75E04	BROMOMETHANE	5.8	U	5.8	5.8	90	ppbv	74-83-9
TO-14	Air	29-Oct-14	VE-4D_SV75E04	CARBON DISULFIDE	2.2	U	1.8	20	36	ppbv	75-15-0
TO-14	Air	29-Oct-14	VE-4D_SV75E04	CARBON TETRACHLORIDE	5.4	U	1.9	5.4	9	ppbv	56-23-5
TO-14	Air	29-Oct-14	VE-4D_SV75E04	CHLOROBENZENE	5.4	U	1.4	5.4	9	ppbv	108-90-7
TO-14	Air	29-Oct-14	VE-4D_SV75E04	CHLOROETHANE	20	U	3.8	20	36	ppbv	75-00-3
TO-14	Air	29-Oct-14	VE-4D_SV75E04	CHLOROFORM	2.9	J	2	5.4	9	ppbv	67-66-3
TO-14	Air	29-Oct-14	VE-4D_SV75E04	CHLOROMETHANE	20	U	5.8	20	36	ppbv	74-87-3
TO-14	Air	29-Oct-14	VE-4D_SV75E04	CIS-1,2-DICHLOROETHENE	130		1.7	5.4	9	ppbv	156-59-2
TO-14	Air	29-Oct-14	VE-4D_SV75E04	CIS-1,3-DICHLOROPROPENE	5.4	U	1.6	5.4	9	ppbv	10061-01-5
TO-14	Air	29-Oct-14	VE-4D_SV75E04	CUMENE	5.4	U	1.8	5.4	9	ppbv	98-82-8
TO-14	Air	29-Oct-14	VE-4D_SV75E04	CYCLOHEXANE	5.4	U	2.5	5.4	9	ppbv	110-82-7
TO-14	Air	29-Oct-14	VE-4D_SV75E04	DIBROMOCHLOROMETHANE	5.4	U	2.1	5.4	9	ppbv	124-48-1
TO-14	Air	29-Oct-14	VE-4D_SV75E04	ETHANOL	20	U	14	20	36	ppbv	64-17-5
TO-14	Air	29-Oct-14	VE-4D_SV75E04	ETHYL BENZENE	5.4	U	2.5	5.4	9	ppbv	100-41-4
TO-14	Air	29-Oct-14	VE-4D_SV75E04	FREON 11	4.2	J	2.4	5.4	9	ppbv	75-69-4
TO-14	Air	29-Oct-14	VE-4D_SV75E04	FREON 113	5.4	U	3	5.4	9	ppbv	76-13-1
TO-14	Air	29-Oct-14	VE-4D_SV75E04	FREON 114	5.4	U	3	5.4	9	ppbv	76-14-2
TO-14	Air	29-Oct-14	VE-4D_SV75E04	FREON 12	5.4	U	2	5.4	9	ppbv	75-71-8
TO-14	Air	29-Oct-14	VE-4D_SV75E04	HEPTANE	5.4	U	2.8	5.4	9	ppbv	142-82-5
TO-14	Air	29-Oct-14	VE-4D_SV75E04	HEXACHLOROBUTADIENE	20	U	6.2	20	36	ppbv	87-68-3
TO-14	Air	29-Oct-14	VE-4D_SV75E04	HEXANE	5.4	U	1.9	5.4	9	ppbv	110-54-3
TO-14	Air	29-Oct-14	VE-4D_SV75E04	ISOPROPYL ETHER	2.7	UJ	2.7		36	ppbv	108-20-3
TO-14	Air	29-Oct-14	VE-4D_SV75E04	M,P-XYLENE	5.4	U	1.2	5.4	9	ppbv	108-38-3/1
TO-14	Air	29-Oct-14	VE-4D_SV75E04	METHYL TERT-BUTYL ETHER	5.4	U	1.2	5.4	9	ppbv	1634-04-4
TO-14	Air	29-Oct-14	VE-4D_SV75E04	METHYLENE CHLORIDE	5.4	U	4.5	5.4	90	ppbv	75-09-2

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	29-Oct-14	VE-4D_SV75E04	NAPHTHALENE	20	U	0.73	20	36	ppbv	91-20-3
TO-14	Air	29-Oct-14	VE-4D_SV75E04	O-XYLENE	5.4	U	1.8	5.4	9	ppbv	95-47-6
TO-14	Air	29-Oct-14	VE-4D_SV75E04	PROPYLBENZENE	5.4	U	1.4	5.4	9	ppbv	103-65-1
TO-14	Air	29-Oct-14	VE-4D_SV75E04	STYRENE	5.4	U	2.3	5.4	9	ppbv	100-42-5
TO-14	Air	29-Oct-14	VE-4D_SV75E04	TETRACHLOROETHENE	2	J	1.9	5.4	9	ppbv	127-18-4
TO-14	Air	29-Oct-14	VE-4D_SV75E04	TETRAHYDROFURAN	5.4	U	1.5	5.4	9	ppbv	109-99-9
TO-14	Air	29-Oct-14	VE-4D_SV75E04	TOLUENE	5.4	U	1.3	5.4	9	ppbv	108-88-3
TO-14	Air	29-Oct-14	VE-4D_SV75E04	TRANS-1,2-DICHLOROETHENE	5.4	U	2.6	5.4	9	ppbv	156-60-5
TO-14	Air	29-Oct-14	VE-4D_SV75E04	TRANS-1,3-DICHLOROPROPENE	5.4	U	2.1	5.4	9	ppbv	10061-02-6
TO-14	Air	29-Oct-14	VE-4D_SV75E04	TRICHLOROETHENE	2,200		3.3	5.4	9	ppbv	79-01-6
TO-14	Air	29-Oct-14	VE-4D_SV75E04	VINYL ACETATE	20	U	9	20	36	ppbv	108-05-4
TO-14	Air	29-Oct-14	VE-4D_SV75E04	VINYL CHLORIDE	5.4	U	1.8	5.4	9	ppbv	75-01-4
TO-14	Air	29-Oct-14	VE-4S_SV30E04	1,1,1-TRICHLOROETHANE	32	U	11	32	52	ppbv	71-55-6
TO-14	Air	29-Oct-14	VE-4S_SV30E04	1,1,2,2-TETRACHLOROETHANE	32	U	10	32	52	ppbv	79-34-5
TO-14	Air	29-Oct-14	VE-4S_SV30E04	1,1,2-TRICHLOROETHANE	32	U	14	32	52	ppbv	79-00-5
TO-14	Air	29-Oct-14	VE-4S_SV30E04	1,1-DICHLOROETHANE	32	U	12	32	52	ppbv	75-34-3
TO-14	Air	29-Oct-14	VE-4S_SV30E04	1,1-DICHLOROETHENE	32	U	13	32	52	ppbv	75-35-4
TO-14	Air	29-Oct-14	VE-4S_SV30E04	1,2,4-TRICHLOROBENZENE	120	U	30	120	210	ppbv	120-82-1
TO-14	Air	29-Oct-14	VE-4S_SV30E04	1,2,4-TRIMETHYLBENZENE	32	U	12	32	52	ppbv	95-63-6
TO-14	Air	29-Oct-14	VE-4S_SV30E04	1,2-DIBROMOETHANE (EDB)	32	U	12	32	52	ppbv	106-93-4
TO-14	Air	29-Oct-14	VE-4S_SV30E04	1,2-DICHLOROBENZENE	32	U	11	32	52	ppbv	95-50-1
TO-14	Air	29-Oct-14	VE-4S_SV30E04	1,2-DICHLOROETHANE	32	U	17	32	52	ppbv	107-06-2
TO-14	Air	29-Oct-14	VE-4S_SV30E04	1,2-DICHLOROPROPANE	32	U	22	32	52	ppbv	78-87-5
TO-14	Air	29-Oct-14	VE-4S_SV30E04	1,3,5-TRIMETHYLBENZENE	32	U	8.1	32	52	ppbv	108-67-8
TO-14	Air	29-Oct-14	VE-4S_SV30E04	1,3-BUTADIENE	32	U	10	32	52	ppbv	106-99-0
TO-14	Air	29-Oct-14	VE-4S_SV30E04	1,3-DICHLOROBENZENE	32	U	8.4	32	52	ppbv	541-73-1
TO-14	Air	29-Oct-14	VE-4S_SV30E04	1,4-DICHLOROBENZENE	32	U	10	32	52	ppbv	106-46-7
TO-14	Air	29-Oct-14	VE-4S_SV30E04	1,4-DIOXANE	120	U	37	120	210	ppbv	123-91-1
TO-14	Air	29-Oct-14	VE-4S_SV30E04	2,2,4-TRIMETHYLPENTANE	32	U	4.1	32	52	ppbv	540-84-1

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	29-Oct-14	VE-4S_SV30E04	2-BUTANONE (METHYL ETHYL KETONE)	120	U	23	120	210	ppbv	78-93-3
TO-14	Air	29-Oct-14	VE-4S_SV30E04	2-HEXANONE	120	U	25	120	210	ppbv	591-78-6
TO-14	Air	29-Oct-14	VE-4S_SV30E04	2-PROPANOL	24	J	18	120	210	ppbv	67-63-0
TO-14	Air	29-Oct-14	VE-4S_SV30E04	3-CHLOROPROPENE	120	U	26	120	210	ppbv	107-05-1
TO-14	Air	29-Oct-14	VE-4S_SV30E04	4-ETHYLTOLUENE	32	U	11	32	52	ppbv	622-96-8
TO-14	Air	29-Oct-14	VE-4S_SV30E04	4-METHYL-2-PENTANONE	32	U	9.5	32	52	ppbv	108-10-1
TO-14	Air	29-Oct-14	VE-4S_SV30E04	ACETONE	50	J	35	120	520	ppbv	67-64-1
TO-14	Air	29-Oct-14	VE-4S_SV30E04	ALPHA-CHLOROTOLUENE	32	U	7.4	32	52	ppbv	100-44-7
TO-14	Air	29-Oct-14	VE-4S_SV30E04	BENZENE	32	U	12	32	52	ppbv	71-43-2
TO-14	Air	29-Oct-14	VE-4S_SV30E04	BROMODICHLOROMETHANE	32	U	13	32	52	ppbv	75-27-4
TO-14	Air	29-Oct-14	VE-4S_SV30E04	BROMOFORM	32	U	11	32	52	ppbv	75-25-2
TO-14	Air	29-Oct-14	VE-4S_SV30E04	BROMOMETHANE	34	U	34	34	520	ppbv	74-83-9
TO-14	Air	29-Oct-14	VE-4S_SV30E04	CARBON DISULFIDE	13	U	11	120	210	ppbv	75-15-0
TO-14	Air	29-Oct-14	VE-4S_SV30E04	CARBON TETRACHLORIDE	32	U	11	32	52	ppbv	56-23-5
TO-14	Air	29-Oct-14	VE-4S_SV30E04	CHLOROBENZENE	32	U	8.2	32	52	ppbv	108-90-7
TO-14	Air	29-Oct-14	VE-4S_SV30E04	CHLOROETHANE	120	U	22	120	210	ppbv	75-00-3
TO-14	Air	29-Oct-14	VE-4S_SV30E04	CHLOROFORM	32	U	12	32	52	ppbv	67-66-3
TO-14	Air	29-Oct-14	VE-4S_SV30E04	CHLOROMETHANE	120	U	34	120	210	ppbv	74-87-3
TO-14	Air	29-Oct-14	VE-4S_SV30E04	CIS-1,2-DICHLOROETHENE	1,800		10	32	52	ppbv	156-59-2
TO-14	Air	29-Oct-14	VE-4S_SV30E04	CIS-1,3-DICHLOROPROPENE	32	U	9.2	32	52	ppbv	10061-01-5
TO-14	Air	29-Oct-14	VE-4S_SV30E04	CUMENE	32	U	10	32	52	ppbv	98-82-8
TO-14	Air	29-Oct-14	VE-4S_SV30E04	CYCLOHEXANE	32	U	14	32	52	ppbv	110-82-7
TO-14	Air	29-Oct-14	VE-4S_SV30E04	DIBROMOCHLOROMETHANE	32	U	12	32	52	ppbv	124-48-1
TO-14	Air	29-Oct-14	VE-4S_SV30E04	ETHANOL	120	U	81	120	210	ppbv	64-17-5
TO-14	Air	29-Oct-14	VE-4S_SV30E04	ETHYL BENZENE	32	U	14	32	52	ppbv	100-41-4
TO-14	Air	29-Oct-14	VE-4S_SV30E04	FREON 11	32	U	14	32	52	ppbv	75-69-4
TO-14	Air	29-Oct-14	VE-4S_SV30E04	FREON 113	32	U	18	32	52	ppbv	76-13-1
TO-14	Air	29-Oct-14	VE-4S_SV30E04	FREON 114	32	U	18	32	52	ppbv	76-14-2
TO-14	Air	29-Oct-14	VE-4S_SV30E04	FREON 12	32	U	12	32	52	ppbv	75-71-8

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	29-Oct-14	VE-4S_SV30E04	HEPTANE	32	U	17	32	52	ppbv	142-82-5
TO-14	Air	29-Oct-14	VE-4S_SV30E04	HEXACHLOROBUTADIENE	120	U	36	120	210	ppbv	87-68-3
TO-14	Air	29-Oct-14	VE-4S_SV30E04	HEXANE	32	U	11	32	52	ppbv	110-54-3
TO-14	Air	29-Oct-14	VE-4S_SV30E04	ISOPROPYL ETHER	16	UJ	16		210	ppbv	108-20-3
TO-14	Air	29-Oct-14	VE-4S_SV30E04	M,P-XYLENE	8.7	J	7.2	32	52	ppbv	108-38-3/1
TO-14	Air	29-Oct-14	VE-4S_SV30E04	METHYL TERT-BUTYL ETHER	32	U	7.1	32	52	ppbv	1634-04-4
TO-14	Air	29-Oct-14	VE-4S_SV30E04	METHYLENE CHLORIDE	32	U	27	32	520	ppbv	75-09-2
TO-14	Air	29-Oct-14	VE-4S_SV30E04	NAPHTHALENE	120	U	4.3	120	210	ppbv	91-20-3
TO-14	Air	29-Oct-14	VE-4S_SV30E04	O-XYLENE	32	U	11	32	52	ppbv	95-47-6
TO-14	Air	29-Oct-14	VE-4S_SV30E04	PROPYLBENZENE	32	U	7.9	32	52	ppbv	103-65-1
TO-14	Air	29-Oct-14	VE-4S_SV30E04	STYRENE	32	U	14	32	52	ppbv	100-42-5
TO-14	Air	29-Oct-14	VE-4S_SV30E04	TETRACHLOROETHENE	32	U	11	32	52	ppbv	127-18-4
TO-14	Air	29-Oct-14	VE-4S_SV30E04	TETRAHYDROFURAN	32	U	9	32	52	ppbv	109-99-9
TO-14	Air	29-Oct-14	VE-4S_SV30E04	TOLUENE	23	J	7.6	32	52	ppbv	108-88-3
TO-14	Air	29-Oct-14	VE-4S_SV30E04	TRANS-1,2-DICHLOROETHENE	32	U	15	32	52	ppbv	156-60-5
TO-14	Air	29-Oct-14	VE-4S_SV30E04	TRANS-1,3-DICHLOROPROPENE	32	U	12	32	52	ppbv	10061-02-6
TO-14	Air	29-Oct-14	VE-4S_SV30E04	TRICHLOROETHENE	16,000		19	32	52	ppbv	79-01-6
TO-14	Air	29-Oct-14	VE-4S_SV30E04	VINYL ACETATE	120	U	53	120	210	ppbv	108-05-4
TO-14	Air	29-Oct-14	VE-4S_SV30E04	VINYL CHLORIDE	32	U	10	32	52	ppbv	75-01-4
TO-14	Air	04-Nov-14	VE-4D_SV75E05	1,1,1-TRICHLOROETHANE	2.3	U	0.84	2.3	3.9	ppbv	71-55-6
TO-14	Air	04-Nov-14	VE-4D_SV75E05	1,1,2,2-TETRACHLOROETHANE	2.3	U	0.76	2.3	3.9	ppbv	79-34-5
TO-14	Air	04-Nov-14	VE-4D_SV75E05	1,1,2-TRICHLOROETHANE	2.3	U	1.1	2.3	3.9	ppbv	79-00-5
TO-14	Air	04-Nov-14	VE-4D_SV75E05	1,1-DICHLOROETHANE	2.3	U	0.87	2.3	3.9	ppbv	75-34-3
TO-14	Air	04-Nov-14	VE-4D_SV75E05	1,1-DICHLOROETHENE	2.3	U	0.99	2.3	3.9	ppbv	75-35-4
TO-14	Air	04-Nov-14	VE-4D_SV75E05	1,2,4-TRICHLOROBENZENE	8.6	UJ	2.2	8.6	16	ppbv	120-82-1
TO-14	Air	04-Nov-14	VE-4D_SV75E05	1,2,4-TRIMETHYLBENZENE	2.3	UJ	0.91	2.3	3.9	ppbv	95-63-6
TO-14	Air	04-Nov-14	VE-4D_SV75E05	1,2-DIBROMOETHANE (EDB)	2.3	U	0.89	2.3	3.9	ppbv	106-93-4
TO-14	Air	04-Nov-14	VE-4D_SV75E05	1,2-DICHLOROBENZENE	2.3	U	0.8	2.3	3.9	ppbv	95-50-1
TO-14	Air	04-Nov-14	VE-4D_SV75E05	1,2-DICHLOROETHANE	2.3	U	1.3	2.3	3.9	ppbv	107-06-2

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	04-Nov-14	VE-4D_SV75E05	1,2-DICHLOROPROPANE	2.3	U	1.6	2.3	3.9	ppbv	78-87-5
TO-14	Air	04-Nov-14	VE-4D_SV75E05	1,3,5-TRIMETHYLBENZENE	2.3	U	0.6	2.3	3.9	ppbv	108-67-8
TO-14	Air	04-Nov-14	VE-4D_SV75E05	1,3-BUTADIENE	2.3	U	0.77	2.3	3.9	ppbv	106-99-0
TO-14	Air	04-Nov-14	VE-4D_SV75E05	1,3-DICHLOROBENZENE	2.3	U	0.63	2.3	3.9	ppbv	541-73-1
TO-14	Air	04-Nov-14	VE-4D_SV75E05	1,4-DICHLOROBENZENE	2.3	U	0.78	2.3	3.9	ppbv	106-46-7
TO-14	Air	04-Nov-14	VE-4D_SV75E05	1,4-DIOXANE	8.6	U	2.8	8.6	16	ppbv	123-91-1
TO-14	Air	04-Nov-14	VE-4D_SV75E05	2,2,4-TRIMETHYLPENTANE	2.3	U	0.3	2.3	3.9	ppbv	540-84-1
TO-14	Air	04-Nov-14	VE-4D_SV75E05	2-BUTANONE (METHYL ETHYL KETONE)	5.1	J	1.7	8.6	16	ppbv	78-93-3
TO-14	Air	04-Nov-14	VE-4D_SV75E05	2-HEXANONE	8.6	U	1.9	8.6	16	ppbv	591-78-6
TO-14	Air	04-Nov-14	VE-4D_SV75E05	2-PROPANOL	2.7	U	1.3	8.6	16	ppbv	67-63-0
TO-14	Air	04-Nov-14	VE-4D_SV75E05	3-CHLOROPROPENE	8.6	U	1.9	8.6	16	ppbv	107-05-1
TO-14	Air	04-Nov-14	VE-4D_SV75E05	4-ETHYLTOLUENE	2.3	U	0.82	2.3	3.9	ppbv	622-96-8
TO-14	Air	04-Nov-14	VE-4D_SV75E05	4-METHYL-2-PENTANONE	2.3	U	0.7	2.3	3.9	ppbv	108-10-1
TO-14	Air	04-Nov-14	VE-4D_SV75E05	ACETONE	22	J	2.6	8.6	39	ppbv	67-64-1
TO-14	Air	04-Nov-14	VE-4D_SV75E05	ALPHA-CHLOROTOLUENE	2.3	U	0.55	2.3	3.9	ppbv	100-44-7
TO-14	Air	04-Nov-14	VE-4D_SV75E05	BENZENE	1.1	J	0.89	2.3	3.9	ppbv	71-43-2
TO-14	Air	04-Nov-14	VE-4D_SV75E05	BROMODICHLOROMETHANE	2.3	U	0.94	2.3	3.9	ppbv	75-27-4
TO-14	Air	04-Nov-14	VE-4D_SV75E05	BROMOFORM	2.3	U	0.83	2.3	3.9	ppbv	75-25-2
TO-14	Air	04-Nov-14	VE-4D_SV75E05	BROMOMETHANE	2.5	U	2.5	2.5	39	ppbv	74-83-9
TO-14	Air	04-Nov-14	VE-4D_SV75E05	CARBON DISULFIDE	1.2	U	0.79	8.6	16	ppbv	75-15-0
TO-14	Air	04-Nov-14	VE-4D_SV75E05	CARBON TETRACHLORIDE	2.3	U	0.84	2.3	3.9	ppbv	56-23-5
TO-14	Air	04-Nov-14	VE-4D_SV75E05	CHLOROBENZENE	2.3	U	0.61	2.3	3.9	ppbv	108-90-7
TO-14	Air	04-Nov-14	VE-4D_SV75E05	CHLOROETHANE	8.6	U	1.6	8.6	16	ppbv	75-00-3
TO-14	Air	04-Nov-14	VE-4D_SV75E05	CHLOROFORM	2.3	J	0.87	2.3	3.9	ppbv	67-66-3
TO-14	Air	04-Nov-14	VE-4D_SV75E05	CHLOROMETHANE	8.6	U	2.5	8.6	16	ppbv	74-87-3
TO-14	Air	04-Nov-14	VE-4D_SV75E05	CIS-1,2-DICHLOROETHENE	52		0.75	2.3	3.9	ppbv	156-59-2
TO-14	Air	04-Nov-14	VE-4D_SV75E05	CIS-1,3-DICHLOROPROPENE	2.3	U	0.68	2.3	3.9	ppbv	10061-01-5
TO-14	Air	04-Nov-14	VE-4D_SV75E05	CUMENE	2.3	U	0.77	2.3	3.9	ppbv	98-82-8
TO-14	Air	04-Nov-14	VE-4D_SV75E05	CYCLOHEXANE	2.3	U	1.1	2.3	3.9	ppbv	110-82-7



**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	04-Nov-14	VE-4D_SV75E05	DIBROMOCHLOROMETHANE	2.3	U	0.92	2.3	3.9	ppbv	124-48-1
TO-14	Air	04-Nov-14	VE-4D_SV75E05	ETHANOL	7.4	J	6	8.6	16	ppbv	64-17-5
TO-14	Air	04-Nov-14	VE-4D_SV75E05	ETHYL BENZENE	2.3	U	1.1	2.3	3.9	ppbv	100-41-4
TO-14	Air	04-Nov-14	VE-4D_SV75E05	FREON 11	4.1		1	2.3	3.9	ppbv	75-69-4
TO-14	Air	04-Nov-14	VE-4D_SV75E05	FREON 113	2.8	J	1.3	2.3	3.9	ppbv	76-13-1
TO-14	Air	04-Nov-14	VE-4D_SV75E05	FREON 114	2.3	U	1.3	2.3	3.9	ppbv	76-14-2
TO-14	Air	04-Nov-14	VE-4D_SV75E05	FREON 12	2.3	U	0.88	2.3	3.9	ppbv	75-71-8
TO-14	Air	04-Nov-14	VE-4D_SV75E05	HEPTANE	2.3	U	1.2	2.3	3.9	ppbv	142-82-5
TO-14	Air	04-Nov-14	VE-4D_SV75E05	HEXACHLOROBUTADIENE	8.6	UJ	2.7	8.6	16	ppbv	87-68-3
TO-14	Air	04-Nov-14	VE-4D_SV75E05	HEXANE	2.3	U	0.83	2.3	3.9	ppbv	110-54-3
TO-14	Air	04-Nov-14	VE-4D_SV75E05	ISOPROPYL ETHER	1.2	UJ	1.2		16	ppbv	108-20-3
TO-14	Air	04-Nov-14	VE-4D_SV75E05	M,P-XYLENE	2.3	U	0.54	2.3	3.9	ppbv	108-38-3/1
TO-14	Air	04-Nov-14	VE-4D_SV75E05	METHYL TERT-BUTYL ETHER	2.3	U	0.53	2.3	3.9	ppbv	1634-04-4
TO-14	Air	04-Nov-14	VE-4D_SV75E05	METHYLENE CHLORIDE	2.3	U	2	2.3	39	ppbv	75-09-2
TO-14	Air	04-Nov-14	VE-4D_SV75E05	NAPHTHALENE	8.6	UJ	0.32	8.6	16	ppbv	91-20-3
TO-14	Air	04-Nov-14	VE-4D_SV75E05	O-XYLENE	2.3	U	0.81	2.3	3.9	ppbv	95-47-6
TO-14	Air	04-Nov-14	VE-4D_SV75E05	PROPYLBENZENE	2.3	U	0.59	2.3	3.9	ppbv	103-65-1
TO-14	Air	04-Nov-14	VE-4D_SV75E05	STYRENE	2.3	U	1	2.3	3.9	ppbv	100-42-5
TO-14	Air	04-Nov-14	VE-4D_SV75E05	TETRACHLOROETHENE	1.9	J	0.84	2.3	3.9	ppbv	127-18-4
TO-14	Air	04-Nov-14	VE-4D_SV75E05	TETRAHYDROFURAN	2.3	U	0.67	2.3	3.9	ppbv	109-99-9
TO-14	Air	04-Nov-14	VE-4D_SV75E05	TOLUENE	2.3	U	0.57	2.3	3.9	ppbv	108-88-3
TO-14	Air	04-Nov-14	VE-4D_SV75E05	TRANS-1,2-DICHLOROETHENE	2.3	U	1.1	2.3	3.9	ppbv	156-60-5
TO-14	Air	04-Nov-14	VE-4D_SV75E05	TRANS-1,3-DICHLOROPROPENE	2.3	U	0.94	2.3	3.9	ppbv	10061-02-6
TO-14	Air	04-Nov-14	VE-4D_SV75E05	TRICHLOROETHENE	1100		1.4	2.3	3.9	ppbv	79-01-6
TO-14	Air	04-Nov-14	VE-4D_SV75E05	VINYL ACETATE	8.6	U	4	8.6	16	ppbv	108-05-4
TO-14	Air	04-Nov-14	VE-4D_SV75E05	VINYL CHLORIDE	2.3	U	0.79	2.3	3.9	ppbv	75-01-4
TO-14	Air	04-Nov-14	VE-4S_SV30E05	1,1,1-TRICHLOROETHANE	29	U	10	29	48	ppbv	71-55-6
TO-14	Air	04-Nov-14	VE-4S_SV30E05	1,1,2,2-TETRACHLOROETHANE	29	U	9.3	29	48	ppbv	79-34-5
TO-14	Air	04-Nov-14	VE-4S_SV30E05	1,1,2-TRICHLOROETHANE	29	U	13	29	48	ppbv	79-00-5

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	04-Nov-14	VE-4S_SV30E05	1,1-DICHLOROETHANE	29	U	11	29	48	ppbv	75-34-3
TO-14	Air	04-Nov-14	VE-4S_SV30E05	1,1-DICHLOROETHENE	29	U	12	29	48	ppbv	75-35-4
TO-14	Air	04-Nov-14	VE-4S_SV30E05	1,2,4-TRICHLOROBENZENE	100	UJ	28	100	190	ppbv	120-82-1
TO-14	Air	04-Nov-14	VE-4S_SV30E05	1,2,4-TRIMETHYLBENZENE	29	UJ	11	29	48	ppbv	95-63-6
TO-14	Air	04-Nov-14	VE-4S_SV30E05	1,2-DIBROMOETHANE (EDB)	29	U	11	29	48	ppbv	106-93-4
TO-14	Air	04-Nov-14	VE-4S_SV30E05	1,2-DICHLOROBENZENE	29	U	9.8	29	48	ppbv	95-50-1
TO-14	Air	04-Nov-14	VE-4S_SV30E05	1,2-DICHLOROETHANE	29	U	16	29	48	ppbv	107-06-2
TO-14	Air	04-Nov-14	VE-4S_SV30E05	1,2-DICHLOROPROPANE	29	U	20	29	48	ppbv	78-87-5
TO-14	Air	04-Nov-14	VE-4S_SV30E05	1,3,5-TRIMETHYLBENZENE	29	U	7.4	29	48	ppbv	108-67-8
TO-14	Air	04-Nov-14	VE-4S_SV30E05	1,3-BUTADIENE	29	U	9.4	29	48	ppbv	106-99-0
TO-14	Air	04-Nov-14	VE-4S_SV30E05	1,3-DICHLOROBENZENE	29	U	7.7	29	48	ppbv	541-73-1
TO-14	Air	04-Nov-14	VE-4S_SV30E05	1,4-DICHLOROBENZENE	29	U	9.6	29	48	ppbv	106-46-7
TO-14	Air	04-Nov-14	VE-4S_SV30E05	1,4-DIOXANE	100	U	34	100	190	ppbv	123-91-1
TO-14	Air	04-Nov-14	VE-4S_SV30E05	2,2,4-TRIMETHYLPENTANE	29	U	3.7	29	48	ppbv	540-84-1
TO-14	Air	04-Nov-14	VE-4S_SV30E05	2-BUTANONE (METHYL ETHYL KETONE)	100	U	21	100	190	ppbv	78-93-3
TO-14	Air	04-Nov-14	VE-4S_SV30E05	2-HEXANONE	100	U	23	100	190	ppbv	591-78-6
TO-14	Air	04-Nov-14	VE-4S_SV30E05	2-PROPANOL	100	U	16	100	190	ppbv	67-63-0
TO-14	Air	04-Nov-14	VE-4S_SV30E05	3-CHLOROPROPENE	100	U	24	100	190	ppbv	107-05-1
TO-14	Air	04-Nov-14	VE-4S_SV30E05	4-ETHYLTOLUENE	29	U	10	29	48	ppbv	622-96-8
TO-14	Air	04-Nov-14	VE-4S_SV30E05	4-METHYL-2-PENTANONE	29	U	8.6	29	48	ppbv	108-10-1
TO-14	Air	04-Nov-14	VE-4S_SV30E05	ACETONE	41	J	32	100	480	ppbv	67-64-1
TO-14	Air	04-Nov-14	VE-4S_SV30E05	ALPHA-CHLOROTOLUENE	29	U	6.7	29	48	ppbv	100-44-7
TO-14	Air	04-Nov-14	VE-4S_SV30E05	BENZENE	29	U	11	29	48	ppbv	71-43-2
TO-14	Air	04-Nov-14	VE-4S_SV30E05	BROMODICHLOROMETHANE	29	U	12	29	48	ppbv	75-27-4
TO-14	Air	04-Nov-14	VE-4S_SV30E05	BROMOFORM	29	U	10	29	48	ppbv	75-25-2
TO-14	Air	04-Nov-14	VE-4S_SV30E05	BROMOMETHANE	31	U	31	31	480	ppbv	74-83-9
TO-14	Air	04-Nov-14	VE-4S_SV30E05	CARBON DISULFIDE	16	U	9.7	100	190	ppbv	75-15-0
TO-14	Air	04-Nov-14	VE-4S_SV30E05	CARBON TETRACHLORIDE	29	U	10	29	48	ppbv	56-23-5
TO-14	Air	04-Nov-14	VE-4S_SV30E05	CHLOROBENZENE	9.5	J	7.5	29	48	ppbv	108-90-7

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	04-Nov-14	VE-4S_SV30E05	CHLOROETHANE	100	U	20	100	190	ppbv	75-00-3
TO-14	Air	04-Nov-14	VE-4S_SV30E05	CHLOROFORM	29	U	11	29	48	ppbv	67-66-3
TO-14	Air	04-Nov-14	VE-4S_SV30E05	CHLOROMETHANE	100	U	31	100	190	ppbv	74-87-3
TO-14	Air	04-Nov-14	VE-4S_SV30E05	CIS-1,2-DICHLOROETHENE	1,400		9.2	29	48	ppbv	156-59-2
TO-14	Air	04-Nov-14	VE-4S_SV30E05	CIS-1,3-DICHLOROPROPENE	29	U	8.4	29	48	ppbv	10061-01-5
TO-14	Air	04-Nov-14	VE-4S_SV30E05	CUMENE	29	U	9.5	29	48	ppbv	98-82-8
TO-14	Air	04-Nov-14	VE-4S_SV30E05	CYCLOHEXANE	29	U	13	29	48	ppbv	110-82-7
TO-14	Air	04-Nov-14	VE-4S_SV30E05	DIBROMOCHLOROMETHANE	29	U	11	29	48	ppbv	124-48-1
TO-14	Air	04-Nov-14	VE-4S_SV30E05	ETHANOL	100	U	74	100	190	ppbv	64-17-5
TO-14	Air	04-Nov-14	VE-4S_SV30E05	ETHYL BENZENE	29	U	13	29	48	ppbv	100-41-4
TO-14	Air	04-Nov-14	VE-4S_SV30E05	FREON 11	29	U	13	29	48	ppbv	75-69-4
TO-14	Air	04-Nov-14	VE-4S_SV30E05	FREON 113	29	U	16	29	48	ppbv	76-13-1
TO-14	Air	04-Nov-14	VE-4S_SV30E05	FREON 114	29	U	16	29	48	ppbv	76-14-2
TO-14	Air	04-Nov-14	VE-4S_SV30E05	FREON 12	29	U	11	29	48	ppbv	75-71-8
TO-14	Air	04-Nov-14	VE-4S_SV30E05	HEPTANE	29	U	15	29	48	ppbv	142-82-5
TO-14	Air	04-Nov-14	VE-4S_SV30E05	HEXACHLOROBUTADIENE	100	UJ	33	100	190	ppbv	87-68-3
TO-14	Air	04-Nov-14	VE-4S_SV30E05	HEXANE	29	U	10	29	48	ppbv	110-54-3
TO-14	Air	04-Nov-14	VE-4S_SV30E05	ISOPROPYL ETHER	14	UJ	14		190	ppbv	108-20-3
TO-14	Air	04-Nov-14	VE-4S_SV30E05	M,P-XYLENE	29	U	6.6	29	48	ppbv	108-38-3/1
TO-14	Air	04-Nov-14	VE-4S_SV30E05	METHYL TERT-BUTYL ETHER	29	U	6.5	29	48	ppbv	1634-04-4
TO-14	Air	04-Nov-14	VE-4S_SV30E05	METHYLENE CHLORIDE	29	U	24	29	480	ppbv	75-09-2
TO-14	Air	04-Nov-14	VE-4S_SV30E05	NAPHTHALENE	100	UJ	3.9	100	190	ppbv	91-20-3
TO-14	Air	04-Nov-14	VE-4S_SV30E05	O-XYLENE	29	U	9.9	29	48	ppbv	95-47-6
TO-14	Air	04-Nov-14	VE-4S_SV30E05	PROPYLBENZENE	29	U	7.2	29	48	ppbv	103-65-1
TO-14	Air	04-Nov-14	VE-4S_SV30E05	STYRENE	29	U	12	29	48	ppbv	100-42-5
TO-14	Air	04-Nov-14	VE-4S_SV30E05	TETRACHLOROETHENE	29	U	10	29	48	ppbv	127-18-4
TO-14	Air	04-Nov-14	VE-4S_SV30E05	TETRAHYDROFURAN	29	U	8.2	29	48	ppbv	109-99-9
TO-14	Air	04-Nov-14	VE-4S_SV30E05	TOLUENE	9.2	J	7	29	48	ppbv	108-88-3
TO-14	Air	04-Nov-14	VE-4S_SV30E05	TRANS-1,2-DICHLOROETHENE	29	U	14	29	48	ppbv	156-60-5

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Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	04-Nov-14	VE-4S_SV30E05	TRANS-1,3-DICHLOROPROPENE	29	U	11	29	48	ppbv	10061-02-6
TO-14	Air	04-Nov-14	VE-4S_SV30E05	TRICHLOROETHENE	14,000		17	29	48	ppbv	79-01-6
TO-14	Air	04-Nov-14	VE-4S_SV30E05	VINYL ACETATE	100	U	48	100	190	ppbv	108-05-4
TO-14	Air	04-Nov-14	VE-4S_SV30E05	VINYL CHLORIDE	29	U	9.7	29	48	ppbv	75-01-4
TO-14	Air	11-Nov-14	PRIMEFF_E03	1,1,1-TRICHLOROETHANE	0.79	U	0.28	0.79	1.3	ppbv	71-55-6
TO-14	Air	11-Nov-14	PRIMEFF_E03	1,1,2,2-TETRACHLOROETHANE	0.79	U	0.25	0.79	1.3	ppbv	79-34-5
TO-14	Air	11-Nov-14	PRIMEFF_E03	1,1,2-TRICHLOROETHANE	0.79	U	0.37	0.79	1.3	ppbv	79-00-5
TO-14	Air	11-Nov-14	PRIMEFF_E03	1,1-DICHLOROETHANE	0.79	U	0.29	0.79	1.3	ppbv	75-34-3
TO-14	Air	11-Nov-14	PRIMEFF_E03	1,1-DICHLOROETHENE	0.79	U	0.34	0.79	1.3	ppbv	75-35-4
TO-14	Air	11-Nov-14	PRIMEFF_E03	1,2,4-TRICHLOROBENZENE	2.9	U	0.76	2.9	5.3	ppbv	120-82-1
TO-14	Air	11-Nov-14	PRIMEFF_E03	1,2,4-TRIMETHYLBENZENE	0.79	UJ	0.31	0.79	1.3	ppbv	95-63-6
TO-14	Air	11-Nov-14	PRIMEFF_E03	1,2-DIBROMOETHANE (EDB)	0.79	U	0.3	0.79	1.3	ppbv	106-93-4
TO-14	Air	11-Nov-14	PRIMEFF_E03	1,2-DICHLOROBENZENE	0.79	U	0.27	0.79	1.3	ppbv	95-50-1
TO-14	Air	11-Nov-14	PRIMEFF_E03	1,2-DICHLOROETHANE	0.79	U	0.44	0.79	1.3	ppbv	107-06-2
TO-14	Air	11-Nov-14	PRIMEFF_E03	1,2-DICHLOROPROPANE	0.79	U	0.54	0.79	1.3	ppbv	78-87-5
TO-14	Air	11-Nov-14	PRIMEFF_E03	1,3,5-TRIMETHYLBENZENE	0.79	U	0.2	0.79	1.3	ppbv	108-67-8
TO-14	Air	11-Nov-14	PRIMEFF_E03	1,3-BUTADIENE	0.79	U	0.26	0.79	1.3	ppbv	106-99-0
TO-14	Air	11-Nov-14	PRIMEFF_E03	1,3-DICHLOROBENZENE	0.79	U	0.21	0.79	1.3	ppbv	541-73-1
TO-14	Air	11-Nov-14	PRIMEFF_E03	1,4-DICHLOROBENZENE	0.79	U	0.26	0.79	1.3	ppbv	106-46-7
TO-14	Air	11-Nov-14	PRIMEFF_E03	1,4-DIOXANE	2.9	U	0.94	2.9	5.3	ppbv	123-91-1
TO-14	Air	11-Nov-14	PRIMEFF_E03	2,2,4-TRIMETHYLPENTANE	0.79	U	0.1	0.79	1.3	ppbv	540-84-1
TO-14	Air	11-Nov-14	PRIMEFF_E03	2-BUTANONE (METHYL ETHYL KETONE)	2.9	U	0.57	2.9	5.3	ppbv	78-93-3
TO-14	Air	11-Nov-14	PRIMEFF_E03	2-HEXANONE	2.9	U	0.63	2.9	5.3	ppbv	591-78-6
TO-14	Air	11-Nov-14	PRIMEFF_E03	2-PROPANOL	1	U	0.45	2.9	5.3	ppbv	67-63-0
TO-14	Air	11-Nov-14	PRIMEFF_E03	3-CHLOROPROPENE	2.9	U	0.65	2.9	5.3	ppbv	107-05-1
TO-14	Air	11-Nov-14	PRIMEFF_E03	4-ETHYLTOLUENE	0.79	U	0.28	0.79	1.3	ppbv	622-96-8
TO-14	Air	11-Nov-14	PRIMEFF_E03	4-METHYL-2-PENTANONE	0.79	U	0.24	0.79	1.3	ppbv	108-10-1
TO-14	Air	11-Nov-14	PRIMEFF_E03	ACETONE	5.3	J	0.89	2.9	13	ppbv	67-64-1
TO-14	Air	11-Nov-14	PRIMEFF_E03	ALPHA-CHLOROTOLUENE	0.79	U	0.18	0.79	1.3	ppbv	100-44-7

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	11-Nov-14	PRIMEFF_E03	BENZENE	0.79	U	0.3	0.79	1.3	ppbv	71-43-2
TO-14	Air	11-Nov-14	PRIMEFF_E03	BROMODICHLOROMETHANE	0.79	U	0.32	0.79	1.3	ppbv	75-27-4
TO-14	Air	11-Nov-14	PRIMEFF_E03	BROMOFORM	0.79	U	0.28	0.79	1.3	ppbv	75-25-2
TO-14	Air	11-Nov-14	PRIMEFF_E03	BROMOMETHANE	0.86	U	0.86	0.86	13	ppbv	74-83-9
TO-14	Air	11-Nov-14	PRIMEFF_E03	CARBON DISULFIDE	0.61	U	0.27	2.9	5.3	ppbv	75-15-0
TO-14	Air	11-Nov-14	PRIMEFF_E03	CARBON TETRACHLORIDE	0.79	U	0.28	0.79	1.3	ppbv	56-23-5
TO-14	Air	11-Nov-14	PRIMEFF_E03	CHLOROBENZENE	0.79	U	0.21	0.79	1.3	ppbv	108-90-7
TO-14	Air	11-Nov-14	PRIMEFF_E03	CHLOROETHANE	2.9	U	0.55	2.9	5.3	ppbv	75-00-3
TO-14	Air	11-Nov-14	PRIMEFF_E03	CHLOROFORM	0.32	J	0.29	0.79	1.3	ppbv	67-66-3
TO-14	Air	11-Nov-14	PRIMEFF_E03	CHLOROMETHANE	2.9	U	0.86	2.9	5.3	ppbv	74-87-3
TO-14	Air	11-Nov-14	PRIMEFF_E03	CIS-1,2-DICHLOROETHENE	140		0.25	0.79	1.3	ppbv	156-59-2
TO-14	Air	11-Nov-14	PRIMEFF_E03	CIS-1,3-DICHLOROPROPENE	0.79	U	0.23	0.79	1.3	ppbv	10061-01-5
TO-14	Air	11-Nov-14	PRIMEFF_E03	CUMENE	0.79	U	0.26	0.79	1.3	ppbv	98-82-8
TO-14	Air	11-Nov-14	PRIMEFF_E03	CYCLOHEXANE	0.79	U	0.37	0.79	1.3	ppbv	110-82-7
TO-14	Air	11-Nov-14	PRIMEFF_E03	DIBROMOCHLOROMETHANE	0.79	U	0.31	0.79	1.3	ppbv	124-48-1
TO-14	Air	11-Nov-14	PRIMEFF_E03	ETHANOL	2.9	U	2	2.9	5.3	ppbv	64-17-5
TO-14	Air	11-Nov-14	PRIMEFF_E03	ETHYL BENZENE	0.79	U	0.37	0.79	1.3	ppbv	100-41-4
TO-14	Air	11-Nov-14	PRIMEFF_E03	FREON 11	2.9		0.35	0.79	1.3	ppbv	75-69-4
TO-14	Air	11-Nov-14	PRIMEFF_E03	FREON 113	0.79	U	0.45	0.79	1.3	ppbv	76-13-1
TO-14	Air	11-Nov-14	PRIMEFF_E03	FREON 114	0.79	U	0.45	0.79	1.3	ppbv	76-14-2
TO-14	Air	11-Nov-14	PRIMEFF_E03	FREON 12	0.56	J	0.3	0.79	1.3	ppbv	75-71-8
TO-14	Air	11-Nov-14	PRIMEFF_E03	HEPTANE	0.79	U	0.42	0.79	1.3	ppbv	142-82-5
TO-14	Air	11-Nov-14	PRIMEFF_E03	HEXACHLOROBUTADIENE	2.9	U	0.91	2.9	5.3	ppbv	87-68-3
TO-14	Air	11-Nov-14	PRIMEFF_E03	HEXANE	0.79	U	0.28	0.79	1.3	ppbv	110-54-3
TO-14	Air	11-Nov-14	PRIMEFF_E03	ISOPROPYL ETHER	0.4	UJ	0.4		5.3	ppbv	108-20-3
TO-14	Air	11-Nov-14	PRIMEFF_E03	M,P-XYLENE	0.79	U	0.18	0.79	1.3	ppbv	108-38-3/1
TO-14	Air	11-Nov-14	PRIMEFF_E03	METHYL TERT-BUTYL ETHER	0.79	U	0.18	0.79	1.3	ppbv	1634-04-4
TO-14	Air	11-Nov-14	PRIMEFF_E03	METHYLENE CHLORIDE	0.79	U	0.67	0.79	13	ppbv	75-09-2
TO-14	Air	11-Nov-14	PRIMEFF_E03	NAPHTHALENE	2.9	UJ	0.11	2.9	5.3	ppbv	91-20-3

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	11-Nov-14	PRIMEFF_E03	O-XYLENE	0.79	U	0.27	0.79	1.3	ppbv	95-47-6
TO-14	Air	11-Nov-14	PRIMEFF_E03	PROPYLBENZENE	0.79	U	0.2	0.79	1.3	ppbv	103-65-1
TO-14	Air	11-Nov-14	PRIMEFF_E03	STYRENE	0.79	U	0.34	0.79	1.3	ppbv	100-42-5
TO-14	Air	11-Nov-14	PRIMEFF_E03	TETRACHLOROETHENE	0.79	U	0.28	0.79	1.3	ppbv	127-18-4
TO-14	Air	11-Nov-14	PRIMEFF_E03	TETRAHYDROFURAN	0.79	U	0.22	0.79	1.3	ppbv	109-99-9
TO-14	Air	11-Nov-14	PRIMEFF_E03	TOLUENE	0.79	U	0.19	0.79	1.3	ppbv	108-88-3
TO-14	Air	11-Nov-14	PRIMEFF_E03	TRANS-1,2-DICHLOROETHENE	0.79	U	0.38	0.79	1.3	ppbv	156-60-5
TO-14	Air	11-Nov-14	PRIMEFF_E03	TRANS-1,3-DICHLOROPROPENE	0.79	U	0.32	0.79	1.3	ppbv	10061-02-6
TO-14	Air	11-Nov-14	PRIMEFF_E03	TRICHLOROETHENE	14		0.48	0.79	1.3	ppbv	79-01-6
TO-14	Air	11-Nov-14	PRIMEFF_E03	VINYL ACETATE	2.9	U	1.3	2.9	5.3	ppbv	108-05-4
TO-14	Air	11-Nov-14	PRIMEFF_E03	VINYL CHLORIDE	0.79	U	0.26	0.79	1.3	ppbv	75-01-4
TO-14	Air	11-Nov-14	VE-4D_SV75E06	1,1,1-TRICHLOROETHANE	1.3	U	0.48	1.3	2.2	ppbv	71-55-6
TO-14	Air	11-Nov-14	VE-4D_SV75E06	1,1,2,2-TETRACHLOROETHANE	1.3	U	0.43	1.3	2.2	ppbv	79-34-5
TO-14	Air	11-Nov-14	VE-4D_SV75E06	1,1,2-TRICHLOROETHANE	1.3	U	0.62	1.3	2.2	ppbv	79-00-5
TO-14	Air	11-Nov-14	VE-4D_SV75E06	1,1-DICHLOROETHANE	1.3	U	0.5	1.3	2.2	ppbv	75-34-3
TO-14	Air	11-Nov-14	VE-4D_SV75E06	1,1-DICHLOROETHENE	1.3	U	0.57	1.3	2.2	ppbv	75-35-4
TO-14	Air	11-Nov-14	VE-4D_SV75E06	1,2,4-TRICHLOROBENZENE	4.9	U	1.3	4.9	9	ppbv	120-82-1
TO-14	Air	11-Nov-14	VE-4D_SV75E06	1,2,4-TRIMETHYLBENZENE	1.3	UJ	0.52	1.3	2.2	ppbv	95-63-6
TO-14	Air	11-Nov-14	VE-4D_SV75E06	1,2-DIBROMOETHANE (EDB)	1.3	U	0.51	1.3	2.2	ppbv	106-93-4
TO-14	Air	11-Nov-14	VE-4D_SV75E06	1,2-DICHLOROBENZENE	1.3	U	0.46	1.3	2.2	ppbv	95-50-1
TO-14	Air	11-Nov-14	VE-4D_SV75E06	1,2-DICHLOROETHANE	1.3	U	0.74	1.3	2.2	ppbv	107-06-2
TO-14	Air	11-Nov-14	VE-4D_SV75E06	1,2-DICHLOROPROPANE	1.3	U	0.92	1.3	2.2	ppbv	78-87-5
TO-14	Air	11-Nov-14	VE-4D_SV75E06	1,3,5-TRIMETHYLBENZENE	1.3	U	0.35	1.3	2.2	ppbv	108-67-8
TO-14	Air	11-Nov-14	VE-4D_SV75E06	1,3-BUTADIENE	1.3	U	0.44	1.3	2.2	ppbv	106-99-0
TO-14	Air	11-Nov-14	VE-4D_SV75E06	1,3-DICHLOROBENZENE	1.3	U	0.36	1.3	2.2	ppbv	541-73-1
TO-14	Air	11-Nov-14	VE-4D_SV75E06	1,4-DICHLOROBENZENE	1.3	U	0.45	1.3	2.2	ppbv	106-46-7
TO-14	Air	11-Nov-14	VE-4D_SV75E06	1,4-DIOXANE	4.9	U	1.6	4.9	9	ppbv	123-91-1
TO-14	Air	11-Nov-14	VE-4D_SV75E06	2,2,4-TRIMETHYLPENTANE	1.3	U	0.17	1.3	2.2	ppbv	540-84-1
TO-14	Air	11-Nov-14	VE-4D_SV75E06	2-BUTANONE (METHYL ETHYL KETONE)	4.9	U	0.98	4.9	9	ppbv	78-93-3

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	11-Nov-14	VE-4D_SV75E06	2-HEXANONE	4.9	U	1.1	4.9	9	ppbv	591-78-6
TO-14	Air	11-Nov-14	VE-4D_SV75E06	2-PROPANOL	4.9	U	0.77	4.9	9	ppbv	67-63-0
TO-14	Air	11-Nov-14	VE-4D_SV75E06	3-CHLOROPROPENE	4.9	U	1.1	4.9	9	ppbv	107-05-1
TO-14	Air	11-Nov-14	VE-4D_SV75E06	4-ETHYLTOLUENE	1.3	U	0.47	1.3	2.2	ppbv	622-96-8
TO-14	Air	11-Nov-14	VE-4D_SV75E06	4-METHYL-2-PENTANONE	1.3	U	0.4	1.3	2.2	ppbv	108-10-1
TO-14	Air	11-Nov-14	VE-4D_SV75E06	ACETONE	24		1.5	4.9	22	ppbv	67-64-1
TO-14	Air	11-Nov-14	VE-4D_SV75E06	ALPHA-CHLOROTOLUENE	1.3	U	0.32	1.3	2.2	ppbv	100-44-7
TO-14	Air	11-Nov-14	VE-4D_SV75E06	BENZENE	1.3	U	0.51	1.3	2.2	ppbv	71-43-2
TO-14	Air	11-Nov-14	VE-4D_SV75E06	BROMODICHLOROMETHANE	1.3	U	0.54	1.3	2.2	ppbv	75-27-4
TO-14	Air	11-Nov-14	VE-4D_SV75E06	BROMOFORM	1.3	U	0.48	1.3	2.2	ppbv	75-25-2
TO-14	Air	11-Nov-14	VE-4D_SV75E06	BROMOMETHANE	1.4	U	1.4	1.4	22	ppbv	74-83-9
TO-14	Air	11-Nov-14	VE-4D_SV75E06	CARBON DISULFIDE	4.9	U	0.46	4.9	9	ppbv	75-15-0
TO-14	Air	11-Nov-14	VE-4D_SV75E06	CARBON TETRACHLORIDE	1.3	U	0.48	1.3	2.2	ppbv	56-23-5
TO-14	Air	11-Nov-14	VE-4D_SV75E06	CHLOROBENZENE	1.3	U	0.35	1.3	2.2	ppbv	108-90-7
TO-14	Air	11-Nov-14	VE-4D_SV75E06	CHLOROETHANE	4.9	U	0.94	4.9	9	ppbv	75-00-3
TO-14	Air	11-Nov-14	VE-4D_SV75E06	CHLOROFORM	2.6		0.5	1.3	2.2	ppbv	67-66-3
TO-14	Air	11-Nov-14	VE-4D_SV75E06	CHLOROMETHANE	4.9	U	1.5	4.9	9	ppbv	74-87-3
TO-14	Air	11-Nov-14	VE-4D_SV75E06	CIS-1,2-DICHLOROETHENE	30		0.43	1.3	2.2	ppbv	156-59-2
TO-14	Air	11-Nov-14	VE-4D_SV75E06	CIS-1,3-DICHLOROPROPENE	1.3	U	0.39	1.3	2.2	ppbv	10061-01-5
TO-14	Air	11-Nov-14	VE-4D_SV75E06	CUMENE	1.3	U	0.44	1.3	2.2	ppbv	98-82-8
TO-14	Air	11-Nov-14	VE-4D_SV75E06	CYCLOHEXANE	1.3	U	0.62	1.3	2.2	ppbv	110-82-7
TO-14	Air	11-Nov-14	VE-4D_SV75E06	DIBROMOCHLOROMETHANE	1.3	U	0.53	1.3	2.2	ppbv	124-48-1
TO-14	Air	11-Nov-14	VE-4D_SV75E06	ETHANOL	21		3.4	4.9	9	ppbv	64-17-5
TO-14	Air	11-Nov-14	VE-4D_SV75E06	ETHYL BENZENE	1.3	U	0.62	1.3	2.2	ppbv	100-41-4
TO-14	Air	11-Nov-14	VE-4D_SV75E06	FREON 11	3.9		0.59	1.3	2.2	ppbv	75-69-4
TO-14	Air	11-Nov-14	VE-4D_SV75E06	FREON 113	3.5		0.76	1.3	2.2	ppbv	76-13-1
TO-14	Air	11-Nov-14	VE-4D_SV75E06	FREON 114	1.3	U	0.76	1.3	2.2	ppbv	76-14-2
TO-14	Air	11-Nov-14	VE-4D_SV75E06	FREON 12	1.3	U	0.51	1.3	2.2	ppbv	75-71-8
TO-14	Air	11-Nov-14	VE-4D_SV75E06	HEPTANE	1.3	U	0.72	1.3	2.2	ppbv	142-82-5

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	11-Nov-14	VE-4D_SV75E06	HEXACHLOROBUTADIENE	4.9	U	1.5	4.9	9	ppbv	87-68-3
TO-14	Air	11-Nov-14	VE-4D_SV75E06	HEXANE	1.3	U	0.48	1.3	2.2	ppbv	110-54-3
TO-14	Air	11-Nov-14	VE-4D_SV75E06	ISOPROPYL ETHER	0.68	UJ	0.68		9	ppbv	108-20-3
TO-14	Air	11-Nov-14	VE-4D_SV75E06	M,P-XYLENE	1.3	U	0.31	1.3	2.2	ppbv	108-38-3/1
TO-14	Air	11-Nov-14	VE-4D_SV75E06	METHYL TERT-BUTYL ETHER	1.3	U	0.3	1.3	2.2	ppbv	1634-04-4
TO-14	Air	11-Nov-14	VE-4D_SV75E06	METHYLENE CHLORIDE	1.3	U	1.1	1.3	22	ppbv	75-09-2
TO-14	Air	11-Nov-14	VE-4D_SV75E06	NAPHTHALENE	4.9	UJ	0.18	4.9	9	ppbv	91-20-3
TO-14	Air	11-Nov-14	VE-4D_SV75E06	O-XYLENE	1.3	U	0.46	1.3	2.2	ppbv	95-47-6
TO-14	Air	11-Nov-14	VE-4D_SV75E06	PROPYLBENZENE	1.3	U	0.34	1.3	2.2	ppbv	103-65-1
TO-14	Air	11-Nov-14	VE-4D_SV75E06	STYRENE	1.3	U	0.58	1.3	2.2	ppbv	100-42-5
TO-14	Air	11-Nov-14	VE-4D_SV75E06	TETRACHLOROETHENE	1.3	U	0.48	1.3	2.2	ppbv	127-18-4
TO-14	Air	11-Nov-14	VE-4D_SV75E06	TETRAHYDROFURAN	1.3	U	0.38	1.3	2.2	ppbv	109-99-9
TO-14	Air	11-Nov-14	VE-4D_SV75E06	TOLUENE	1.3	U	0.33	1.3	2.2	ppbv	108-88-3
TO-14	Air	11-Nov-14	VE-4D_SV75E06	TRANS-1,2-DICHLOROETHENE	1.3	U	0.65	1.3	2.2	ppbv	156-60-5
TO-14	Air	11-Nov-14	VE-4D_SV75E06	TRANS-1,3-DICHLOROPROPENE	1.3	U	0.54	1.3	2.2	ppbv	10061-02-6
TO-14	Air	11-Nov-14	VE-4D_SV75E06	TRICHLOROETHENE	650		0.82	1.3	2.2	ppbv	79-01-6
TO-14	Air	11-Nov-14	VE-4D_SV75E06	VINYL ACETATE	4.9	U	2.3	4.9	9	ppbv	108-05-4
TO-14	Air	11-Nov-14	VE-4D_SV75E06	VINYL CHLORIDE	1.3	U	0.45	1.3	2.2	ppbv	75-01-4
TO-14	Air	11-Nov-14	VE-4S_SV30E06	1,1,1-TRICHLOROETHANE	28	U	9.8	28	46	ppbv	71-55-6
TO-14	Air	11-Nov-14	VE-4S_SV30E06	1,1,2,2-TETRACHLOROETHANE	28	U	8.9	28	46	ppbv	79-34-5
TO-14	Air	11-Nov-14	VE-4S_SV30E06	1,1,2-TRICHLOROETHANE	28	U	13	28	46	ppbv	79-00-5
TO-14	Air	11-Nov-14	VE-4S_SV30E06	1,1-DICHLOROETHANE	28	U	10	28	46	ppbv	75-34-3
TO-14	Air	11-Nov-14	VE-4S_SV30E06	1,1-DICHLOROETHENE	28	U	12	28	46	ppbv	75-35-4
TO-14	Air	11-Nov-14	VE-4S_SV30E06	1,2,4-TRICHLOROBENZENE	100	U	26	100	180	ppbv	120-82-1
TO-14	Air	11-Nov-14	VE-4S_SV30E06	1,2,4-TRIMETHYLBENZENE	28	UJ	11	28	46	ppbv	95-63-6
TO-14	Air	11-Nov-14	VE-4S_SV30E06	1,2-DIBROMOETHANE (EDB)	28	U	10	28	46	ppbv	106-93-4
TO-14	Air	11-Nov-14	VE-4S_SV30E06	1,2-DICHLOROBENZENE	28	U	9.3	28	46	ppbv	95-50-1
TO-14	Air	11-Nov-14	VE-4S_SV30E06	1,2-DICHLOROETHANE	28	U	15	28	46	ppbv	107-06-2
TO-14	Air	11-Nov-14	VE-4S_SV30E06	1,2-DICHLOROPROPANE	28	U	19	28	46	ppbv	78-87-5



**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	11-Nov-14	VE-4S_SV30E06	1,3,5-TRIMETHYLBENZENE	28	U	7.1	28	46	ppbv	108-67-8
TO-14	Air	11-Nov-14	VE-4S_SV30E06	1,3-BUTADIENE	28	U	9	28	46	ppbv	106-99-0
TO-14	Air	11-Nov-14	VE-4S_SV30E06	1,3-DICHLOROBENZENE	28	U	7.4	28	46	ppbv	541-73-1
TO-14	Air	11-Nov-14	VE-4S_SV30E06	1,4-DICHLOROBENZENE	28	U	9.2	28	46	ppbv	106-46-7
TO-14	Air	11-Nov-14	VE-4S_SV30E06	1,4-DIOXANE	100	U	33	100	180	ppbv	123-91-1
TO-14	Air	11-Nov-14	VE-4S_SV30E06	2,2,4-TRIMETHYLPENTANE	28	U	3.6	28	46	ppbv	540-84-1
TO-14	Air	11-Nov-14	VE-4S_SV30E06	2-BUTANONE (METHYL ETHYL KETONE)	100	U	20	100	180	ppbv	78-93-3
TO-14	Air	11-Nov-14	VE-4S_SV30E06	2-HEXANONE	100	U	22	100	180	ppbv	591-78-6
TO-14	Air	11-Nov-14	VE-4S_SV30E06	2-PROPANOL	100	U	16	100	180	ppbv	67-63-0
TO-14	Air	11-Nov-14	VE-4S_SV30E06	3-CHLOROPROPENE	100	U	22	100	180	ppbv	107-05-1
TO-14	Air	11-Nov-14	VE-4S_SV30E06	4-ETHYLTOLUENE	28	U	9.6	28	46	ppbv	622-96-8
TO-14	Air	11-Nov-14	VE-4S_SV30E06	4-METHYL-2-PENTANONE	28	U	8.3	28	46	ppbv	108-10-1
TO-14	Air	11-Nov-14	VE-4S_SV30E06	ACETONE	100	U	31	100	460	ppbv	67-64-1
TO-14	Air	11-Nov-14	VE-4S_SV30E06	ALPHA-CHLOROTOLUENE	28	U	6.4	28	46	ppbv	100-44-7
TO-14	Air	11-Nov-14	VE-4S_SV30E06	BENZENE	28	U	10	28	46	ppbv	71-43-2
TO-14	Air	11-Nov-14	VE-4S_SV30E06	BROMODICHLOROMETHANE	28	U	11	28	46	ppbv	75-27-4
TO-14	Air	11-Nov-14	VE-4S_SV30E06	BROMOFORM	28	U	9.7	28	46	ppbv	75-25-2
TO-14	Air	11-Nov-14	VE-4S_SV30E06	BROMOMETHANE	30	U	30	30	460	ppbv	74-83-9
TO-14	Air	11-Nov-14	VE-4S_SV30E06	CARBON DISULFIDE	100	U	9.3	100	180	ppbv	75-15-0
TO-14	Air	11-Nov-14	VE-4S_SV30E06	CARBON TETRACHLORIDE	28	U	9.9	28	46	ppbv	56-23-5
TO-14	Air	11-Nov-14	VE-4S_SV30E06	CHLOROBENZENE	28	U	7.2	28	46	ppbv	108-90-7
TO-14	Air	11-Nov-14	VE-4S_SV30E06	CHLOROETHANE	100	U	19	100	180	ppbv	75-00-3
TO-14	Air	11-Nov-14	VE-4S_SV30E06	CHLOROFORM	28	U	10	28	46	ppbv	67-66-3
TO-14	Air	11-Nov-14	VE-4S_SV30E06	CHLOROMETHANE	100	U	30	100	180	ppbv	74-87-3
TO-14	Air	11-Nov-14	VE-4S_SV30E06	CIS-1,2-DICHLOROETHENE	1,300		8.8	28	46	ppbv	156-59-2
TO-14	Air	11-Nov-14	VE-4S_SV30E06	CIS-1,3-DICHLOROPROPENE	28	U	8	28	46	ppbv	10061-01-5
TO-14	Air	11-Nov-14	VE-4S_SV30E06	CUMENE	28	U	9.1	28	46	ppbv	98-82-8
TO-14	Air	11-Nov-14	VE-4S_SV30E06	CYCLOHEXANE	28	U	13	28	46	ppbv	110-82-7
TO-14	Air	11-Nov-14	VE-4S_SV30E06	DIBROMOCHLOROMETHANE	28	U	11	28	46	ppbv	124-48-1

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	11-Nov-14	VE-4S_SV30E06	ETHANOL	100	U	71	100	180	ppbv	64-17-5
TO-14	Air	11-Nov-14	VE-4S_SV30E06	ETHYL BENZENE	28	U	13	28	46	ppbv	100-41-4
TO-14	Air	11-Nov-14	VE-4S_SV30E06	FREON 11	28	U	12	28	46	ppbv	75-69-4
TO-14	Air	11-Nov-14	VE-4S_SV30E06	FREON 113	28	U	16	28	46	ppbv	76-13-1
TO-14	Air	11-Nov-14	VE-4S_SV30E06	FREON 114	28	U	16	28	46	ppbv	76-14-2
TO-14	Air	11-Nov-14	VE-4S_SV30E06	FREON 12	28	U	10	28	46	ppbv	75-71-8
TO-14	Air	11-Nov-14	VE-4S_SV30E06	HEPTANE	28	U	15	28	46	ppbv	142-82-5
TO-14	Air	11-Nov-14	VE-4S_SV30E06	HEXACHLOROBUTADIENE	100	U	32	100	180	ppbv	87-68-3
TO-14	Air	11-Nov-14	VE-4S_SV30E06	HEXANE	28	U	9.8	28	46	ppbv	110-54-3
TO-14	Air	11-Nov-14	VE-4S_SV30E06	ISOPROPYL ETHER	14	UJ	14		180	ppbv	108-20-3
TO-14	Air	11-Nov-14	VE-4S_SV30E06	M,P-XYLENE	28	U	6.3	28	46	ppbv	108-38-3/1
TO-14	Air	11-Nov-14	VE-4S_SV30E06	METHYL TERT-BUTYL ETHER	28	U	6.2	28	46	ppbv	1634-04-4
TO-14	Air	11-Nov-14	VE-4S_SV30E06	METHYLENE CHLORIDE	28	U	23	28	460	ppbv	75-09-2
TO-14	Air	11-Nov-14	VE-4S_SV30E06	NAPHTHALENE	100	UJ	3.8	100	180	ppbv	91-20-3
TO-14	Air	11-Nov-14	VE-4S_SV30E06	O-XYLENE	28	U	9.5	28	46	ppbv	95-47-6
TO-14	Air	11-Nov-14	VE-4S_SV30E06	PROPYLBENZENE	28	U	6.9	28	46	ppbv	103-65-1
TO-14	Air	11-Nov-14	VE-4S_SV30E06	STYRENE	28	U	12	28	46	ppbv	100-42-5
TO-14	Air	11-Nov-14	VE-4S_SV30E06	TETRACHLOROETHENE	28	U	9.8	28	46	ppbv	127-18-4
TO-14	Air	11-Nov-14	VE-4S_SV30E06	TETRAHYDROFURAN	28	U	7.8	28	46	ppbv	109-99-9
TO-14	Air	11-Nov-14	VE-4S_SV30E06	TOLUENE	28	U	6.7	28	46	ppbv	108-88-3
TO-14	Air	11-Nov-14	VE-4S_SV30E06	TRANS-1,2-DICHLOROETHENE	28	U	13	28	46	ppbv	156-60-5
TO-14	Air	11-Nov-14	VE-4S_SV30E06	TRANS-1,3-DICHLOROPROPENE	28	U	11	28	46	ppbv	10061-02-6
TO-14	Air	11-Nov-14	VE-4S_SV30E06	TRICHLOROETHENE	11,000		17	28	46	ppbv	79-01-6
TO-14	Air	11-Nov-14	VE-4S_SV30E06	VINYL ACETATE	100	U	46	100	180	ppbv	108-05-4
TO-14	Air	11-Nov-14	VE-4S_SV30E06	VINYL CHLORIDE	28	U	9.2	28	46	ppbv	75-01-4
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	1,1,1-TRICHLOROETHANE	27	U	9.6	27	45	ppbv	71-55-6
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	1,1,2,2-TETRACHLOROETHANE	27	U	8.7	27	45	ppbv	79-34-5
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	1,1,2-TRICHLOROETHANE	27	U	12	27	45	ppbv	79-00-5
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	1,1-DICHLOROETHANE	27	U	10	27	45	ppbv	75-34-3

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	1,1-DICHLOROETHENE	27	U	11	27	45	ppbv	75-35-4
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	1,2,4-TRICHLOROBENZENE	99	U	26	99	180	ppbv	120-82-1
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	1,2,4-TRIMETHYLBENZENE	27	UJ	10	27	45	ppbv	95-63-6
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	1,2-DIBROMOETHANE (EDB)	27	U	10	27	45	ppbv	106-93-4
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	1,2-DICHLOROBENZENE	27	U	9.1	27	45	ppbv	95-50-1
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	1,2-DICHLOROETHANE	27	U	15	27	45	ppbv	107-06-2
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	1,2-DICHLOROPROPANE	27	U	18	27	45	ppbv	78-87-5
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	1,3,5-TRIMETHYLBENZENE	27	U	6.9	27	45	ppbv	108-67-8
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	1,3-BUTADIENE	27	U	8.8	27	45	ppbv	106-99-0
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	1,3-DICHLOROBENZENE	27	U	7.2	27	45	ppbv	541-73-1
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	1,4-DICHLOROBENZENE	27	U	9	27	45	ppbv	106-46-7
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	1,4-DIOXANE	99	U	32	99	180	ppbv	123-91-1
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	2,2,4-TRIMETHYLPENTANE	27	U	3.5	27	45	ppbv	540-84-1
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	2-BUTANONE (METHYL ETHYL KETONE)	99	U	19	99	180	ppbv	78-93-3
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	2-HEXANONE	99	U	22	99	180	ppbv	591-78-6
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	2-PROPANOL	24	U	15	99	180	ppbv	67-63-0
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	3-CHLOROPROPENE	99	U	22	99	180	ppbv	107-05-1
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	4-ETHYLTOLUENE	27	U	9.4	27	45	ppbv	622-96-8
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	4-METHYL-2-PENTANONE	27	U	8.1	27	45	ppbv	108-10-1
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	ACETONE	43	J	30	99	450	ppbv	67-64-1
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	ALPHA-CHLOROTOLUENE	27	U	6.3	27	45	ppbv	100-44-7
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	BENZENE	27	U	10	27	45	ppbv	71-43-2
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	BROMODICHLOROMETHANE	27	U	11	27	45	ppbv	75-27-4
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	BROMOFORM	27	U	9.5	27	45	ppbv	75-25-2
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	BROMOMETHANE	29	U	29	29	450	ppbv	74-83-9
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	CARBON DISULFIDE	32	U	9.1	99	180	ppbv	75-15-0
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	CARBON TETRACHLORIDE	27	U	9.7	27	45	ppbv	56-23-5
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	CHLOROBENZENE	8.3	J	7	27	45	ppbv	108-90-7
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	CHLOROETHANE	99	U	19	99	180	ppbv	75-00-3

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	CHLOROFORM	27	U	10	27	45	ppbv	67-66-3
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	CHLOROMETHANE	99	U	29	99	180	ppbv	74-87-3
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	CIS-1,2-DICHLOROETHENE	1,200		8.6	27	45	ppbv	156-59-2
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	CIS-1,3-DICHLOROPROPENE	27	U	7.8	27	45	ppbv	10061-01-5
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	CUMENE	27	U	8.9	27	45	ppbv	98-82-8
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	CYCLOHEXANE	27	U	12	27	45	ppbv	110-82-7
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	DIBROMOCHLOROMETHANE	27	U	10	27	45	ppbv	124-48-1
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	ETHANOL	99	U	69	99	180	ppbv	64-17-5
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	ETHYL BENZENE	27	U	12	27	45	ppbv	100-41-4
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	FREON 11	27	U	12	27	45	ppbv	75-69-4
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	FREON 113	27	U	15	27	45	ppbv	76-13-1
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	FREON 114	27	U	15	27	45	ppbv	76-14-2
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	FREON 12	27	U	10	27	45	ppbv	75-71-8
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	HEPTANE	27	U	14	27	45	ppbv	142-82-5
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	HEXACHLOROBUTADIENE	99	U	31	99	180	ppbv	87-68-3
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	HEXANE	27	U	9.5	27	45	ppbv	110-54-3
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	ISOPROPYL ETHER	14	UJ	14		180	ppbv	108-20-3
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	M,P-XYLENE	27	U	6.2	27	45	ppbv	108-38-3/1
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	METHYL TERT-BUTYL ETHER	27	U	6	27	45	ppbv	1634-04-4
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	METHYLENE CHLORIDE	27	U	23	27	450	ppbv	75-09-2
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	NAPHTHALENE	99	UJ	3.7	99	180	ppbv	91-20-3
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	O-XYLENE	27	U	9.3	27	45	ppbv	95-47-6
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	PROPYLBENZENE	27	U	6.8	27	45	ppbv	103-65-1
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	STYRENE	27	U	12	27	45	ppbv	100-42-5
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	TETRACHLOROETHENE	27	U	9.6	27	45	ppbv	127-18-4
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	TETRAHYDROFURAN	27	U	7.7	27	45	ppbv	109-99-9
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	TOLUENE	7.2	J	6.5	27	45	ppbv	108-88-3
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	TRANS-1,2-DICHLOROETHENE	27	U	13	27	45	ppbv	156-60-5
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	TRANS-1,3-DICHLOROPROPENE	27	U	11	27	45	ppbv	10061-02-6

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	TRICHLOROETHENE	11,000		16	27	45	ppbv	79-01-6
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	VINYL ACETATE	99	U	45	99	180	ppbv	108-05-4
TO-14	Air	11-Nov-14	VE-4S_SV30E06FD	VINYL CHLORIDE	27	U	9	27	45	ppbv	75-01-4
TO-14	Air	19-Nov-14	VE-4D_SV75E07	1,1,1-TRICHLOROETHANE	1.8	U	0.33	1.8	2.5	ppbv	71-55-6
TO-14	Air	19-Nov-14	VE-4D_SV75E07	1,1,2,2-TETRACHLOROETHANE	1.8	U	0.33	1.8	2.5	ppbv	79-34-5
TO-14	Air	19-Nov-14	VE-4D_SV75E07	1,1,2-TRICHLOROETHANE	1.8	U	0.46	1.8	2.5	ppbv	79-00-5
TO-14	Air	19-Nov-14	VE-4D_SV75E07	1,1-DICHLOROETHANE	0.39	J	0.32	1.8	2.5	ppbv	75-34-3
TO-14	Air	19-Nov-14	VE-4D_SV75E07	1,1-DICHLOROETHENE	1.8	U	0.55	1.8	2.5	ppbv	75-35-4
TO-14	Air	19-Nov-14	VE-4D_SV75E07	1,2,4-TRICHLOROBENZENE	4.5	U	1.6	4.5	10	ppbv	120-82-1
TO-14	Air	19-Nov-14	VE-4D_SV75E07	1,2,4-TRIMETHYLBENZENE	1.8	U	0.24	1.8	2.5	ppbv	95-63-6
TO-14	Air	19-Nov-14	VE-4D_SV75E07	1,2-DIBROMOETHANE (EDB)	1.8	U	0.37	1.8	2.5	ppbv	106-93-4
TO-14	Air	19-Nov-14	VE-4D_SV75E07	1,2-DICHLOROBENZENE	1.8	U	0.2	1.8	2.5	ppbv	95-50-1
TO-14	Air	19-Nov-14	VE-4D_SV75E07	1,2-DICHLOROETHANE	1.8	U	0.3	1.8	2.5	ppbv	107-06-2
TO-14	Air	19-Nov-14	VE-4D_SV75E07	1,2-DICHLOROPROPANE	0.57	J	0.36	1.8	2.5	ppbv	78-87-5
TO-14	Air	19-Nov-14	VE-4D_SV75E07	1,3,5-TRIMETHYLBENZENE	1.8	U	0.3	1.8	2.5	ppbv	108-67-8
TO-14	Air	19-Nov-14	VE-4D_SV75E07	1,3-BUTADIENE	1.8	U	0.84	1.8	2.5	ppbv	106-99-0
TO-14	Air	19-Nov-14	VE-4D_SV75E07	1,3-DICHLOROBENZENE	0.38	J	0.22	1.8	2.5	ppbv	541-73-1
TO-14	Air	19-Nov-14	VE-4D_SV75E07	1,4-DICHLOROBENZENE	1.8	U	0.48	1.8	2.5	ppbv	106-46-7
TO-14	Air	19-Nov-14	VE-4D_SV75E07	1,4-DIOXANE	4.5	U	2.5	4.5	10	ppbv	123-91-1
TO-14	Air	19-Nov-14	VE-4D_SV75E07	2,2,4-TRIMETHYLPENTANE	0.29	J	0.28	1.8	2.5	ppbv	540-84-1
TO-14	Air	19-Nov-14	VE-4D_SV75E07	2-BUTANONE (METHYL ETHYL KETONE)	8.9	J	2.2	4.5	10	ppbv	78-93-3
TO-14	Air	19-Nov-14	VE-4D_SV75E07	2-HEXANONE	1.6	J	1.6	4.5	10	ppbv	591-78-6
TO-14	Air	19-Nov-14	VE-4D_SV75E07	2-PROPANOL	2.3	J	2.2	4.5	10	ppbv	67-63-0
TO-14	Air	19-Nov-14	VE-4D_SV75E07	3-CHLOROPROPENE	4.5	U	2.4	4.5	10	ppbv	107-05-1
TO-14	Air	19-Nov-14	VE-4D_SV75E07	4-ETHYLTOLUENE	1.8	U	0.44	1.8	2.5	ppbv	622-96-8
TO-14	Air	19-Nov-14	VE-4D_SV75E07	4-METHYL-2-PENTANONE	1.2	J	1	1.8	2.5	ppbv	108-10-1
TO-14	Air	19-Nov-14	VE-4D_SV75E07	ACETONE	25		4.9	4.9	25	ppbv	67-64-1
TO-14	Air	19-Nov-14	VE-4D_SV75E07	ALPHA-CHLOROTOLUENE	1.8	U	0.38	1.8	2.5	ppbv	100-44-7
TO-14	Air	19-Nov-14	VE-4D_SV75E07	BENZENE	1.4	J	0.7	1.8	2.5	ppbv	71-43-2

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	19-Nov-14	VE-4D_SV75E07	BROMODICHLOROMETHANE	0.37	J	0.3	1.8	2.5	ppbv	75-27-4
TO-14	Air	19-Nov-14	VE-4D_SV75E07	BROMOFORM	1.8	U	0.43	1.8	2.5	ppbv	75-25-2
TO-14	Air	19-Nov-14	VE-4D_SV75E07	BROMOMETHANE	4.5	U	1.5	4.5	25	ppbv	74-83-9
TO-14	Air	19-Nov-14	VE-4D_SV75E07	CARBON DISULFIDE	4.1	J	2.2	4.5	10	ppbv	75-15-0
TO-14	Air	19-Nov-14	VE-4D_SV75E07	CARBON TETRACHLORIDE	1.8	U	0.31	1.8	2.5	ppbv	56-23-5
TO-14	Air	19-Nov-14	VE-4D_SV75E07	CHLOROBENZENE	1.8	U	0.45	1.8	2.5	ppbv	108-90-7
TO-14	Air	19-Nov-14	VE-4D_SV75E07	CHLOROETHANE	2.2	J	2	4.5	10	ppbv	75-00-3
TO-14	Air	19-Nov-14	VE-4D_SV75E07	CHLOROFORM	2.8		0.35	1.8	2.5	ppbv	67-66-3
TO-14	Air	19-Nov-14	VE-4D_SV75E07	CHLOROMETHANE	4.5	U	3.3	4.5	10	ppbv	74-87-3
TO-14	Air	19-Nov-14	VE-4D_SV75E07	CIS-1,2-DICHLOROETHENE	52		0.8	1.8	2.5	ppbv	156-59-2
TO-14	Air	19-Nov-14	VE-4D_SV75E07	CIS-1,3-DICHLOROPROPENE	1.8	U	0.64	1.8	2.5	ppbv	10061-01-5
TO-14	Air	19-Nov-14	VE-4D_SV75E07	CUMENE	1.8	U	0.42	1.8	2.5	ppbv	98-82-8
TO-14	Air	19-Nov-14	VE-4D_SV75E07	CYCLOHEXANE	1.8	U	0.53	1.8	2.5	ppbv	110-82-7
TO-14	Air	19-Nov-14	VE-4D_SV75E07	DIBROMOCHLOROMETHANE	1.8	U	0.41	1.8	2.5	ppbv	124-48-1
TO-14	Air	19-Nov-14	VE-4D_SV75E07	ETHANOL	6.4	J	3.1	4.5	10	ppbv	64-17-5
TO-14	Air	19-Nov-14	VE-4D_SV75E07	ETHYL BENZENE	1.8	U	0.36	1.8	2.5	ppbv	100-41-4
TO-14	Air	19-Nov-14	VE-4D_SV75E07	FREON 11	4.1		0.26	1.8	2.5	ppbv	75-69-4
TO-14	Air	19-Nov-14	VE-4D_SV75E07	FREON 113	3.3		0.48	1.8	2.5	ppbv	76-13-1
TO-14	Air	19-Nov-14	VE-4D_SV75E07	FREON 114	1.8	U	0.16	1.8	2.5	ppbv	76-14-2
TO-14	Air	19-Nov-14	VE-4D_SV75E07	FREON 12	1.1	J	0.27	1.8	2.5	ppbv	75-71-8
TO-14	Air	19-Nov-14	VE-4D_SV75E07	HEPTANE	2	J	0.72	1.8	2.5	ppbv	142-82-5
TO-14	Air	19-Nov-14	VE-4D_SV75E07	HEXACHLOROBUTADIENE	4.5	U	1.8	4.5	10	ppbv	87-68-3
TO-14	Air	19-Nov-14	VE-4D_SV75E07	HEXANE	1.8	U	0.67	1.8	2.5	ppbv	110-54-3
TO-14	Air	19-Nov-14	VE-4D_SV75E07	ISOPROPYL ETHER	1.8	UJ	1.8		10	ppbv	108-20-3
TO-14	Air	19-Nov-14	VE-4D_SV75E07	M,P-XYLENE	0.59	U	0.31	1.8	2.5	ppbv	108-38-3/1
TO-14	Air	19-Nov-14	VE-4D_SV75E07	METHYL TERT-BUTYL ETHER	0.66	J	0.63	1.8	2.5	ppbv	1634-04-4
TO-14	Air	19-Nov-14	VE-4D_SV75E07	METHYLENE CHLORIDE	4.5	U	2.4	4.5	25	ppbv	75-09-2
TO-14	Air	19-Nov-14	VE-4D_SV75E07	NAPHTHALENE	4.5	U	0.4	4.5	10	ppbv	91-20-3
TO-14	Air	19-Nov-14	VE-4D_SV75E07	O-XYLENE	1.8	U	0.42	1.8	2.5	ppbv	95-47-6

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	19-Nov-14	VE-4D_SV75E07	PROPYLBENZENE	1.8	U	0.36	1.8	2.5	ppbv	103-65-1
TO-14	Air	19-Nov-14	VE-4D_SV75E07	STYRENE	1.8	U	0.45	1.8	2.5	ppbv	100-42-5
TO-14	Air	19-Nov-14	VE-4D_SV75E07	TETRACHLOROETHENE	2	J	0.54	1.8	2.5	ppbv	127-18-4
TO-14	Air	19-Nov-14	VE-4D_SV75E07	TETRAHYDROFURAN	1.8	U	0.56	1.8	2.5	ppbv	109-99-9
TO-14	Air	19-Nov-14	VE-4D_SV75E07	TOLUENE	0.78	J	0.44	1.8	2.5	ppbv	108-88-3
TO-14	Air	19-Nov-14	VE-4D_SV75E07	TRANS-1,2-DICHLOROETHENE	1.5	J	0.62	1.8	2.5	ppbv	156-60-5
TO-14	Air	19-Nov-14	VE-4D_SV75E07	TRANS-1,3-DICHLOROPROPENE	1.8	U	0.6	1.8	2.5	ppbv	10061-02-6
TO-14	Air	19-Nov-14	VE-4D_SV75E07	TRICHLOROETHENE	610		0.67	1.8	2.5	ppbv	79-01-6
TO-14	Air	19-Nov-14	VE-4D_SV75E07	VINYL ACETATE	4.5	U	2.2	4.5	10	ppbv	108-05-4
TO-14	Air	19-Nov-14	VE-4D_SV75E07	VINYL CHLORIDE	1.8	U	0.66	1.8	2.5	ppbv	75-01-4
TO-14	Air	19-Nov-14	VE-4S_SV30E07	1,1,1-TRICHLOROETHANE	17	U	3.3	17	25	ppbv	71-55-6
TO-14	Air	19-Nov-14	VE-4S_SV30E07	1,1,2,2-TETRACHLOROETHANE	17	U	3.3	17	25	ppbv	79-34-5
TO-14	Air	19-Nov-14	VE-4S_SV30E07	1,1,2-TRICHLOROETHANE	17	U	4.6	17	25	ppbv	79-00-5
TO-14	Air	19-Nov-14	VE-4S_SV30E07	1,1-DICHLOROETHANE	17	U	3.2	17	25	ppbv	75-34-3
TO-14	Air	19-Nov-14	VE-4S_SV30E07	1,1-DICHLOROETHENE	6.4	J	5.5	17	25	ppbv	75-35-4
TO-14	Air	19-Nov-14	VE-4S_SV30E07	1,2,4-TRICHLOROBENZENE	44	U	16	44	99	ppbv	120-82-1
TO-14	Air	19-Nov-14	VE-4S_SV30E07	1,2,4-TRIMETHYLBENZENE	17	U	2.4	17	25	ppbv	95-63-6
TO-14	Air	19-Nov-14	VE-4S_SV30E07	1,2-DIBROMOETHANE (EDB)	17	U	3.6	17	25	ppbv	106-93-4
TO-14	Air	19-Nov-14	VE-4S_SV30E07	1,2-DICHLOROBENZENE	17	U	1.9	17	25	ppbv	95-50-1
TO-14	Air	19-Nov-14	VE-4S_SV30E07	1,2-DICHLOROETHANE	17	U	2.9	17	25	ppbv	107-06-2
TO-14	Air	19-Nov-14	VE-4S_SV30E07	1,2-DICHLOROPROPANE	5.4	J	3.6	17	25	ppbv	78-87-5
TO-14	Air	19-Nov-14	VE-4S_SV30E07	1,3,5-TRIMETHYLBENZENE	17	U	3	17	25	ppbv	108-67-8
TO-14	Air	19-Nov-14	VE-4S_SV30E07	1,3-BUTADIENE	17	U	8.3	17	25	ppbv	106-99-0
TO-14	Air	19-Nov-14	VE-4S_SV30E07	1,3-DICHLOROBENZENE	2.8	J	2.1	17	25	ppbv	541-73-1
TO-14	Air	19-Nov-14	VE-4S_SV30E07	1,4-DICHLOROBENZENE	17	U	4.8	17	25	ppbv	106-46-7
TO-14	Air	19-Nov-14	VE-4S_SV30E07	1,4-DIOXANE	44	U	25	44	99	ppbv	123-91-1
TO-14	Air	19-Nov-14	VE-4S_SV30E07	2,2,4-TRIMETHYLPENTANE	17	U	2.8	17	25	ppbv	540-84-1
TO-14	Air	19-Nov-14	VE-4S_SV30E07	2-BUTANONE (METHYL ETHYL KETONE)	44	U	22	44	99	ppbv	78-93-3
TO-14	Air	19-Nov-14	VE-4S_SV30E07	2-HEXANONE	44	U	16	44	99	ppbv	591-78-6

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	19-Nov-14	VE-4S_SV30E07	2-PROPANOL	44	U	22	44	99	ppbv	67-63-0
TO-14	Air	19-Nov-14	VE-4S_SV30E07	3-CHLOROPROPENE	44	U	23	44	99	ppbv	107-05-1
TO-14	Air	19-Nov-14	VE-4S_SV30E07	4-ETHYLTOLUENE	17	U	4.3	17	25	ppbv	622-96-8
TO-14	Air	19-Nov-14	VE-4S_SV30E07	4-METHYL-2-PENTANONE	17	U	10	17	25	ppbv	108-10-1
TO-14	Air	19-Nov-14	VE-4S_SV30E07	ACETONE	49	U	49	49	250	ppbv	67-64-1
TO-14	Air	19-Nov-14	VE-4S_SV30E07	ALPHA-CHLOROTOLUENE	17	U	3.8	17	25	ppbv	100-44-7
TO-14	Air	19-Nov-14	VE-4S_SV30E07	BENZENE	17	U	6.9	17	25	ppbv	71-43-2
TO-14	Air	19-Nov-14	VE-4S_SV30E07	BROMODICHLOROMETHANE	17	U	3	17	25	ppbv	75-27-4
TO-14	Air	19-Nov-14	VE-4S_SV30E07	BROMOFORM	17	U	4.3	17	25	ppbv	75-25-2
TO-14	Air	19-Nov-14	VE-4S_SV30E07	BROMOMETHANE	44	U	15	44	250	ppbv	74-83-9
TO-14	Air	19-Nov-14	VE-4S_SV30E07	CARBON DISULFIDE	44	U	21	44	99	ppbv	75-15-0
TO-14	Air	19-Nov-14	VE-4S_SV30E07	CARBON TETRACHLORIDE	17	U	3.1	17	25	ppbv	56-23-5
TO-14	Air	19-Nov-14	VE-4S_SV30E07	CHLOROBENZENE	5.5	J	4.4	17	25	ppbv	108-90-7
TO-14	Air	19-Nov-14	VE-4S_SV30E07	CHLOROETHANE	44	U	20	44	99	ppbv	75-00-3
TO-14	Air	19-Nov-14	VE-4S_SV30E07	CHLOROFORM	3.8	J	3.5	17	25	ppbv	67-66-3
TO-14	Air	19-Nov-14	VE-4S_SV30E07	CHLOROMETHANE	44	U	32	44	99	ppbv	74-87-3
TO-14	Air	19-Nov-14	VE-4S_SV30E07	CIS-1,2-DICHLOROETHENE	860		7.9	17	25	ppbv	156-59-2
TO-14	Air	19-Nov-14	VE-4S_SV30E07	CIS-1,3-DICHLOROPROPENE	17	U	6.4	17	25	ppbv	10061-01-5
TO-14	Air	19-Nov-14	VE-4S_SV30E07	CUMENE	17	U	4.1	17	25	ppbv	98-82-8
TO-14	Air	19-Nov-14	VE-4S_SV30E07	CYCLOHEXANE	17	U	5.2	17	25	ppbv	110-82-7
TO-14	Air	19-Nov-14	VE-4S_SV30E07	DIBROMOCHLOROMETHANE	17	U	4.1	17	25	ppbv	124-48-1
TO-14	Air	19-Nov-14	VE-4S_SV30E07	ETHANOL	44	U	31	44	99	ppbv	64-17-5
TO-14	Air	19-Nov-14	VE-4S_SV30E07	ETHYL BENZENE	17	U	3.6	17	25	ppbv	100-41-4
TO-14	Air	19-Nov-14	VE-4S_SV30E07	FREON 11	3.3	J	2.5	17	25	ppbv	75-69-4
TO-14	Air	19-Nov-14	VE-4S_SV30E07	FREON 113	7.1	J	4.8	17	25	ppbv	76-13-1
TO-14	Air	19-Nov-14	VE-4S_SV30E07	FREON 114	17	U	1.5	17	25	ppbv	76-14-2
TO-14	Air	19-Nov-14	VE-4S_SV30E07	FREON 12	17	U	2.6	17	25	ppbv	75-71-8
TO-14	Air	19-Nov-14	VE-4S_SV30E07	HEPTANE	17	U	7.1	17	25	ppbv	142-82-5
TO-14	Air	19-Nov-14	VE-4S_SV30E07	HEXACHLOROBUTADIENE	44	U	18	44	99	ppbv	87-68-3



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Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	19-Nov-14	VE-4S_SV30E07	HEXANE	17	U	6.6	17	25	ppbv	110-54-3
TO-14	Air	19-Nov-14	VE-4S_SV30E07	ISOPROPYL ETHER	18	UJ	18		99	ppbv	108-20-3
TO-14	Air	19-Nov-14	VE-4S_SV30E07	M,P-XYLENE	3.6	U	3.1	17	25	ppbv	108-38-3/1
TO-14	Air	19-Nov-14	VE-4S_SV30E07	METHYL TERT-BUTYL ETHER	17	U	6.2	17	25	ppbv	1634-04-4
TO-14	Air	19-Nov-14	VE-4S_SV30E07	METHYLENE CHLORIDE	44	U	23	44	250	ppbv	75-09-2
TO-14	Air	19-Nov-14	VE-4S_SV30E07	NAPHTHALENE	44	U	4	44	99	ppbv	91-20-3
TO-14	Air	19-Nov-14	VE-4S_SV30E07	O-XYLENE	17	U	4.1	17	25	ppbv	95-47-6
TO-14	Air	19-Nov-14	VE-4S_SV30E07	PROPYLBENZENE	17	U	3.6	17	25	ppbv	103-65-1
TO-14	Air	19-Nov-14	VE-4S_SV30E07	STYRENE	17	U	4.4	17	25	ppbv	100-42-5
TO-14	Air	19-Nov-14	VE-4S_SV30E07	TETRACHLOROETHENE	17	U	5.3	17	25	ppbv	127-18-4
TO-14	Air	19-Nov-14	VE-4S_SV30E07	TETRAHYDROFURAN	17	U	5.5	17	25	ppbv	109-99-9
TO-14	Air	19-Nov-14	VE-4S_SV30E07	TOLUENE	7.6	J	4.3	17	25	ppbv	108-88-3
TO-14	Air	19-Nov-14	VE-4S_SV30E07	TRANS-1,2-DICHLOROETHENE	17	U	6.1	17	25	ppbv	156-60-5
TO-14	Air	19-Nov-14	VE-4S_SV30E07	TRANS-1,3-DICHLOROPROPENE	17	U	5.9	17	25	ppbv	10061-02-6
TO-14	Air	19-Nov-14	VE-4S_SV30E07	TRICHLOROETHENE	6,200		6.6	17	25	ppbv	79-01-6
TO-14	Air	19-Nov-14	VE-4S_SV30E07	VINYL ACETATE	44	U	21	44	99	ppbv	108-05-4
TO-14	Air	19-Nov-14	VE-4S_SV30E07	VINYL CHLORIDE	17	U	6.5	17	25	ppbv	75-01-4
TO-14	Air	25-Nov-14	VE-4D_SV75E08	1,1,1-TRICHLOROETHANE	0.89	U	0.17	0.89	1.3	ppbv	71-55-6
TO-14	Air	25-Nov-14	VE-4D_SV75E08	1,1,2,2-TETRACHLOROETHANE	0.89	U	0.17	0.89	1.3	ppbv	79-34-5
TO-14	Air	25-Nov-14	VE-4D_SV75E08	1,1,2-TRICHLOROETHANE	0.89	U	0.23	0.89	1.3	ppbv	79-00-5
TO-14	Air	25-Nov-14	VE-4D_SV75E08	1,1-DICHLOROETHANE	0.89	U	0.16	0.89	1.3	ppbv	75-34-3
TO-14	Air	25-Nov-14	VE-4D_SV75E08	1,1-DICHLOROETHENE	0.56	J	0.28	0.89	1.3	ppbv	75-35-4
TO-14	Air	25-Nov-14	VE-4D_SV75E08	1,2,4-TRICHLOROBENZENE	2.3	U	0.84	2.3	5.1	ppbv	120-82-1
TO-14	Air	25-Nov-14	VE-4D_SV75E08	1,2,4-TRIMETHYLBENZENE	0.89	U	0.12	0.89	1.3	ppbv	95-63-6
TO-14	Air	25-Nov-14	VE-4D_SV75E08	1,2-DIBROMOETHANE (EDB)	0.89	U	0.19	0.89	1.3	ppbv	106-93-4
TO-14	Air	25-Nov-14	VE-4D_SV75E08	1,2-DICHLOROBENZENE	0.89	U	0.1	0.89	1.3	ppbv	95-50-1
TO-14	Air	25-Nov-14	VE-4D_SV75E08	1,2-DICHLOROETHANE	0.89	U	0.15	0.89	1.3	ppbv	107-06-2
TO-14	Air	25-Nov-14	VE-4D_SV75E08	1,2-DICHLOROPROPANE	0.89	U	0.18	0.89	1.3	ppbv	78-87-5
TO-14	Air	25-Nov-14	VE-4D_SV75E08	1,3,5-TRIMETHYLBENZENE	0.89	U	0.15	0.89	1.3	ppbv	108-67-8

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	25-Nov-14	VE-4D_SV75E08	1,3-BUTADIENE	0.89	U	0.43	0.89	1.3	ppbv	106-99-0
TO-14	Air	25-Nov-14	VE-4D_SV75E08	1,3-DICHLOROBENZENE	0.89	U	0.11	0.89	1.3	ppbv	541-73-1
TO-14	Air	25-Nov-14	VE-4D_SV75E08	1,4-DICHLOROBENZENE	0.89	U	0.24	0.89	1.3	ppbv	106-46-7
TO-14	Air	25-Nov-14	VE-4D_SV75E08	1,4-DIOXANE	2.3	U	1.3	2.3	5.1	ppbv	123-91-1
TO-14	Air	25-Nov-14	VE-4D_SV75E08	2,2,4-TRIMETHYLPENTANE	0.16	J	0.14	0.89	1.3	ppbv	540-84-1
TO-14	Air	25-Nov-14	VE-4D_SV75E08	2-BUTANONE (METHYL ETHYL KETONE)	2.2	J	1.1	2.3	5.1	ppbv	78-93-3
TO-14	Air	25-Nov-14	VE-4D_SV75E08	2-HEXANONE	2.3	U	0.8	2.3	5.1	ppbv	591-78-6
TO-14	Air	25-Nov-14	VE-4D_SV75E08	2-PROPANOL	42		1.1	2.3	5.1	ppbv	67-63-0
TO-14	Air	25-Nov-14	VE-4D_SV75E08	3-CHLOROPROPENE	2.3	U	1.2	2.3	5.1	ppbv	107-05-1
TO-14	Air	25-Nov-14	VE-4D_SV75E08	4-ETHYLTOLUENE	0.89	U	0.22	0.89	1.3	ppbv	622-96-8
TO-14	Air	25-Nov-14	VE-4D_SV75E08	4-METHYL-2-PENTANONE	0.89	U	0.54	0.89	1.3	ppbv	108-10-1
TO-14	Air	25-Nov-14	VE-4D_SV75E08	ACETONE	17		2.5	2.5	13	ppbv	67-64-1
TO-14	Air	25-Nov-14	VE-4D_SV75E08	ALPHA-CHLOROTOLUENE	0.89	U	0.19	0.89	1.3	ppbv	100-44-7
TO-14	Air	25-Nov-14	VE-4D_SV75E08	BENZENE	0.59	J	0.36	0.89	1.3	ppbv	71-43-2
TO-14	Air	25-Nov-14	VE-4D_SV75E08	BROMODICHLOROMETHANE	0.89	U	0.15	0.89	1.3	ppbv	75-27-4
TO-14	Air	25-Nov-14	VE-4D_SV75E08	BROMOFORM	0.89	U	0.22	0.89	1.3	ppbv	75-25-2
TO-14	Air	25-Nov-14	VE-4D_SV75E08	BROMOMETHANE	2.3	U	0.77	2.3	13	ppbv	74-83-9
TO-14	Air	25-Nov-14	VE-4D_SV75E08	CARBON DISULFIDE	1.3	J	1.1	2.3	5.1	ppbv	75-15-0
TO-14	Air	25-Nov-14	VE-4D_SV75E08	CARBON TETRACHLORIDE	0.89	U	0.16	0.89	1.3	ppbv	56-23-5
TO-14	Air	25-Nov-14	VE-4D_SV75E08	CHLOROBENZENE	0.89	U	0.23	0.89	1.3	ppbv	108-90-7
TO-14	Air	25-Nov-14	VE-4D_SV75E08	CHLOROETHANE	2.3	U	1	2.3	5.1	ppbv	75-00-3
TO-14	Air	25-Nov-14	VE-4D_SV75E08	CHLOROFORM	1.1	J	0.18	0.89	1.3	ppbv	67-66-3
TO-14	Air	25-Nov-14	VE-4D_SV75E08	CHLOROMETHANE	2.3	U	1.7	2.3	5.1	ppbv	74-87-3
TO-14	Air	25-Nov-14	VE-4D_SV75E08	CIS-1,2-DICHLOROETHENE	61		0.41	0.89	1.3	ppbv	156-59-2
TO-14	Air	25-Nov-14	VE-4D_SV75E08	CIS-1,3-DICHLOROPROPENE	0.89	U	0.33	0.89	1.3	ppbv	10061-01-5
TO-14	Air	25-Nov-14	VE-4D_SV75E08	CUMENE	0.89	U	0.21	0.89	1.3	ppbv	98-82-8
TO-14	Air	25-Nov-14	VE-4D_SV75E08	CYCLOHEXANE	0.89	U	0.27	0.89	1.3	ppbv	110-82-7
TO-14	Air	25-Nov-14	VE-4D_SV75E08	DIBROMOCHLOROMETHANE	0.89	U	0.21	0.89	1.3	ppbv	124-48-1
TO-14	Air	25-Nov-14	VE-4D_SV75E08	ETHANOL	9.6		1.6	2.3	5.1	ppbv	64-17-5

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	25-Nov-14	VE-4D_SV75E08	ETHYL BENZENE	0.19	J	0.18	0.89	1.3	ppbv	100-41-4
TO-14	Air	25-Nov-14	VE-4D_SV75E08	FREON 11	4.3		0.13	0.89	1.3	ppbv	75-69-4
TO-14	Air	25-Nov-14	VE-4D_SV75E08	FREON 113	0.72	J	0.24	0.89	1.3	ppbv	76-13-1
TO-14	Air	25-Nov-14	VE-4D_SV75E08	FREON 114	0.89	U	0.08	0.89	1.3	ppbv	76-14-2
TO-14	Air	25-Nov-14	VE-4D_SV75E08	FREON 12	0.81	J	0.14	0.89	1.3	ppbv	75-71-8
TO-14	Air	25-Nov-14	VE-4D_SV75E08	HEPTANE	0.81	J	0.37	0.89	1.3	ppbv	142-82-5
TO-14	Air	25-Nov-14	VE-4D_SV75E08	HEXACHLOROBUTADIENE	2.3	U	0.92	2.3	5.1	ppbv	87-68-3
TO-14	Air	25-Nov-14	VE-4D_SV75E08	HEXANE	0.48	J	0.34	0.89	1.3	ppbv	110-54-3
TO-14	Air	25-Nov-14	VE-4D_SV75E08	ISOPROPYL ETHER	0.93	UJ	0.93		5.1	ppbv	108-20-3
TO-14	Air	25-Nov-14	VE-4D_SV75E08	M,P-XYLENE	0.36	U	0.16	0.89	1.3	ppbv	108-38-3/1
TO-14	Air	25-Nov-14	VE-4D_SV75E08	METHYL TERT-BUTYL ETHER	0.89	U	0.32	0.89	1.3	ppbv	1634-04-4
TO-14	Air	25-Nov-14	VE-4D_SV75E08	METHYLENE CHLORIDE	2.3	U	1.2	2.3	13	ppbv	75-09-2
TO-14	Air	25-Nov-14	VE-4D_SV75E08	NAPHTHALENE	2.3	U	0.2	2.3	5.1	ppbv	91-20-3
TO-14	Air	25-Nov-14	VE-4D_SV75E08	O-XYLENE	0.89	U	0.21	0.89	1.3	ppbv	95-47-6
TO-14	Air	25-Nov-14	VE-4D_SV75E08	PROPYLBENZENE	0.89	U	0.18	0.89	1.3	ppbv	103-65-1
TO-14	Air	25-Nov-14	VE-4D_SV75E08	STYRENE	0.89	U	0.23	0.89	1.3	ppbv	100-42-5
TO-14	Air	25-Nov-14	VE-4D_SV75E08	TETRACHLOROETHENE	0.89	U	0.27	0.89	1.3	ppbv	127-18-4
TO-14	Air	25-Nov-14	VE-4D_SV75E08	TETRAHYDROFURAN	3.9		0.28	0.89	1.3	ppbv	109-99-9
TO-14	Air	25-Nov-14	VE-4D_SV75E08	TOLUENE	0.81	J	0.22	0.89	1.3	ppbv	108-88-3
TO-14	Air	25-Nov-14	VE-4D_SV75E08	TRANS-1,2-DICHLOROETHENE	0.71	J	0.31	0.89	1.3	ppbv	156-60-5
TO-14	Air	25-Nov-14	VE-4D_SV75E08	TRANS-1,3-DICHLOROPROPENE	0.89	U	0.3	0.89	1.3	ppbv	10061-02-6
TO-14	Air	25-Nov-14	VE-4D_SV75E08	TRICHLOROETHENE	240		0.34	0.89	1.3	ppbv	79-01-6
TO-14	Air	25-Nov-14	VE-4D_SV75E08	VINYL ACETATE	2.3	U	1.1	2.3	5.1	ppbv	108-05-4
TO-14	Air	25-Nov-14	VE-4D_SV75E08	VINYL CHLORIDE	0.89	U	0.33	0.89	1.3	ppbv	75-01-4
TO-14	Air	25-Nov-14	VE-4S_SV30E08	1,1,1-TRICHLOROETHANE	1.6	U	0.31	1.6	2.4	ppbv	71-55-6
TO-14	Air	25-Nov-14	VE-4S_SV30E08	1,1,2,2-TETRACHLOROETHANE	1.6	U	0.32	1.6	2.4	ppbv	79-34-5
TO-14	Air	25-Nov-14	VE-4S_SV30E08	1,1,2-TRICHLOROETHANE	1.6	U	0.44	1.6	2.4	ppbv	79-00-5
TO-14	Air	25-Nov-14	VE-4S_SV30E08	1,1-DICHLOROETHANE	1.6	U	0.3	1.6	2.4	ppbv	75-34-3
TO-14	Air	25-Nov-14	VE-4S_SV30E08	1,1-DICHLOROETHENE	1	J	0.52	1.6	2.4	ppbv	75-35-4

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	25-Nov-14	VE-4S_SV30E08	1,2,4-TRICHLOROENZENE	4.3	U	1.6	4.3	9.5	ppbv	120-82-1
TO-14	Air	25-Nov-14	VE-4S_SV30E08	1,2,4-TRIMETHYLBENZENE	1.6	U	0.23	1.6	2.4	ppbv	95-63-6
TO-14	Air	25-Nov-14	VE-4S_SV30E08	1,2-DIBROMOETHANE (EDB)	1.6	U	0.35	1.6	2.4	ppbv	106-93-4
TO-14	Air	25-Nov-14	VE-4S_SV30E08	1,2-DICHLOROENZENE	1.6	U	0.18	1.6	2.4	ppbv	95-50-1
TO-14	Air	25-Nov-14	VE-4S_SV30E08	1,2-DICHLOROETHANE	1.6	U	0.28	1.6	2.4	ppbv	107-06-2
TO-14	Air	25-Nov-14	VE-4S_SV30E08	1,2-DICHLOROPROPANE	1.6	U	0.34	1.6	2.4	ppbv	78-87-5
TO-14	Air	25-Nov-14	VE-4S_SV30E08	1,3,5-TRIMETHYLBENZENE	1.6	U	0.29	1.6	2.4	ppbv	108-67-8
TO-14	Air	25-Nov-14	VE-4S_SV30E08	1,3-BUTADIENE	1.6	U	0.8	1.6	2.4	ppbv	106-99-0
TO-14	Air	25-Nov-14	VE-4S_SV30E08	1,3-DICHLOROENZENE	1.6	U	0.2	1.6	2.4	ppbv	541-73-1
TO-14	Air	25-Nov-14	VE-4S_SV30E08	1,4-DICHLOROENZENE	1.6	U	0.46	1.6	2.4	ppbv	106-46-7
TO-14	Air	25-Nov-14	VE-4S_SV30E08	1,4-DIOXANE	4.3	U	2.4	4.3	9.5	ppbv	123-91-1
TO-14	Air	25-Nov-14	VE-4S_SV30E08	2,2,4-TRIMETHYLPENTANE	1.6	U	0.27	1.6	2.4	ppbv	540-84-1
TO-14	Air	25-Nov-14	VE-4S_SV30E08	2-BUTANONE (METHYL ETHYL KETONE)	6.2	J	2.1	4.3	9.5	ppbv	78-93-3
TO-14	Air	25-Nov-14	VE-4S_SV30E08	2-HEXANONE	4.3	U	1.5	4.3	9.5	ppbv	591-78-6
TO-14	Air	25-Nov-14	VE-4S_SV30E08	2-PROPANOL	110		2.1	4.3	9.5	ppbv	67-63-0
TO-14	Air	25-Nov-14	VE-4S_SV30E08	3-CHLOROPROPENE	4.3	U	2.2	4.3	9.5	ppbv	107-05-1
TO-14	Air	25-Nov-14	VE-4S_SV30E08	4-ETHYLTOLUENE	1.6	U	0.41	1.6	2.4	ppbv	622-96-8
TO-14	Air	25-Nov-14	VE-4S_SV30E08	4-METHYL-2-PENTANONE	1.6	U	1	1.6	2.4	ppbv	108-10-1
TO-14	Air	25-Nov-14	VE-4S_SV30E08	ACETONE	32		4.7	4.7	24	ppbv	67-64-1
TO-14	Air	25-Nov-14	VE-4S_SV30E08	ALPHA-CHLOROTOLUENE	1.6	U	0.36	1.6	2.4	ppbv	100-44-7
TO-14	Air	25-Nov-14	VE-4S_SV30E08	BENZENE	0.94	J	0.67	1.6	2.4	ppbv	71-43-2
TO-14	Air	25-Nov-14	VE-4S_SV30E08	BROMODICHLOROMETHANE	1.6	U	0.28	1.6	2.4	ppbv	75-27-4
TO-14	Air	25-Nov-14	VE-4S_SV30E08	BROMOFORM	1.6	U	0.41	1.6	2.4	ppbv	75-25-2
TO-14	Air	25-Nov-14	VE-4S_SV30E08	BROMOMETHANE	4.3	U	1.4	4.3	24	ppbv	74-83-9
TO-14	Air	25-Nov-14	VE-4S_SV30E08	CARBON DISULFIDE	4.3	U	2	4.3	9.5	ppbv	75-15-0
TO-14	Air	25-Nov-14	VE-4S_SV30E08	CARBON TETRACHLORIDE	1.6	U	0.29	1.6	2.4	ppbv	56-23-5
TO-14	Air	25-Nov-14	VE-4S_SV30E08	CHLOROENZENE	1.6	U	0.42	1.6	2.4	ppbv	108-90-7
TO-14	Air	25-Nov-14	VE-4S_SV30E08	CHLOROETHANE	4.3	U	1.9	4.3	9.5	ppbv	75-00-3
TO-14	Air	25-Nov-14	VE-4S_SV30E08	CHLOROFORM	1.2	J	0.33	1.6	2.4	ppbv	67-66-3

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	25-Nov-14	VE-4S_SV30E08	CHLOROMETHANE	4.3	U	3.1	4.3	9.5	ppbv	74-87-3
TO-14	Air	25-Nov-14	VE-4S_SV30E08	CIS-1,2-DICHLOROETHENE	350		0.76	1.6	2.4	ppbv	156-59-2
TO-14	Air	25-Nov-14	VE-4S_SV30E08	CIS-1,3-DICHLOROPROPENE	1.6	U	0.61	1.6	2.4	ppbv	10061-01-5
TO-14	Air	25-Nov-14	VE-4S_SV30E08	CUMENE	1.6	U	0.39	1.6	2.4	ppbv	98-82-8
TO-14	Air	25-Nov-14	VE-4S_SV30E08	CYCLOHEXANE	1.6	U	0.5	1.6	2.4	ppbv	110-82-7
TO-14	Air	25-Nov-14	VE-4S_SV30E08	DIBROMOCHLOROMETHANE	1.6	U	0.39	1.6	2.4	ppbv	124-48-1
TO-14	Air	25-Nov-14	VE-4S_SV30E08	ETHANOL	25		3	4.3	9.5	ppbv	64-17-5
TO-14	Air	25-Nov-14	VE-4S_SV30E08	ETHYL BENZENE	0.35	J	0.34	1.6	2.4	ppbv	100-41-4
TO-14	Air	25-Nov-14	VE-4S_SV30E08	FREON 11	1.6	J	0.24	1.6	2.4	ppbv	75-69-4
TO-14	Air	25-Nov-14	VE-4S_SV30E08	FREON 113	4.1		0.46	1.6	2.4	ppbv	76-13-1
TO-14	Air	25-Nov-14	VE-4S_SV30E08	FREON 114	1.6	U	0.15	1.6	2.4	ppbv	76-14-2
TO-14	Air	25-Nov-14	VE-4S_SV30E08	FREON 12	2.2	J	0.25	1.6	2.4	ppbv	75-71-8
TO-14	Air	25-Nov-14	VE-4S_SV30E08	HEPTANE	2.3	J	0.68	1.6	2.4	ppbv	142-82-5
TO-14	Air	25-Nov-14	VE-4S_SV30E08	HEXACHLOROBUTADIENE	4.3	U	1.7	4.3	9.5	ppbv	87-68-3
TO-14	Air	25-Nov-14	VE-4S_SV30E08	HEXANE	0.72	J	0.63	1.6	2.4	ppbv	110-54-3
TO-14	Air	25-Nov-14	VE-4S_SV30E08	ISOPROPYL ETHER	1.7	UJ	1.7		9.5	ppbv	108-20-3
TO-14	Air	25-Nov-14	VE-4S_SV30E08	M,P-XYLENE	0.76	U	0.29	1.6	2.4	ppbv	108-38-3/1
TO-14	Air	25-Nov-14	VE-4S_SV30E08	METHYL TERT-BUTYL ETHER	1.6	U	0.6	1.6	2.4	ppbv	1634-04-4
TO-14	Air	25-Nov-14	VE-4S_SV30E08	METHYLENE CHLORIDE	4.3	U	2.2	4.3	24	ppbv	75-09-2
TO-14	Air	25-Nov-14	VE-4S_SV30E08	NAPHTHALENE	4.3	U	0.38	4.3	9.5	ppbv	91-20-3
TO-14	Air	25-Nov-14	VE-4S_SV30E08	O-XYLENE	1.6	U	0.4	1.6	2.4	ppbv	95-47-6
TO-14	Air	25-Nov-14	VE-4S_SV30E08	PROPYLBENZENE	1.6	U	0.34	1.6	2.4	ppbv	103-65-1
TO-14	Air	25-Nov-14	VE-4S_SV30E08	STYRENE	1.6	U	0.42	1.6	2.4	ppbv	100-42-5
TO-14	Air	25-Nov-14	VE-4S_SV30E08	TETRACHLOROETHENE	1.6	U	0.51	1.6	2.4	ppbv	127-18-4
TO-14	Air	25-Nov-14	VE-4S_SV30E08	TETRAHYDROFURAN	7.3		0.53	1.6	2.4	ppbv	109-99-9
TO-14	Air	25-Nov-14	VE-4S_SV30E08	TOLUENE	1.6	J	0.41	1.6	2.4	ppbv	108-88-3
TO-14	Air	25-Nov-14	VE-4S_SV30E08	TRANS-1,2-DICHLOROETHENE	0.98	J	0.58	1.6	2.4	ppbv	156-60-5
TO-14	Air	25-Nov-14	VE-4S_SV30E08	TRANS-1,3-DICHLOROPROPENE	1.6	U	0.56	1.6	2.4	ppbv	10061-02-6
TO-14	Air	25-Nov-14	VE-4S_SV30E08	TRICHLOROETHENE	510		0.64	1.6	2.4	ppbv	79-01-6

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	25-Nov-14	VE-4S_SV30E08	VINYL ACETATE	4.3	U	2	4.3	9.5	ppbv	108-05-4
TO-14	Air	25-Nov-14	VE-4S_SV30E08	VINYL CHLORIDE	1.6	U	0.62	1.6	2.4	ppbv	75-01-4
TO-14	Air	02-Dec-14	VE-4D_SV75E09	1,1,1-TRICHLOROETHANE	0.9	U	0.17	0.9	1.3	ppbv	71-55-6
TO-14	Air	02-Dec-14	VE-4D_SV75E09	1,1,2,2-TETRACHLOROETHANE	0.9	U	0.17	0.9	1.3	ppbv	79-34-5
TO-14	Air	02-Dec-14	VE-4D_SV75E09	1,1,2-TRICHLOROETHANE	0.9	U	0.24	0.9	1.3	ppbv	79-00-5
TO-14	Air	02-Dec-14	VE-4D_SV75E09	1,1-DICHLOROETHANE	0.17	J	0.16	0.9	1.3	ppbv	75-34-3
TO-14	Air	02-Dec-14	VE-4D_SV75E09	1,1-DICHLOROETHENE	0.9	U	0.28	0.9	1.3	ppbv	75-35-4
TO-14	Air	02-Dec-14	VE-4D_SV75E09	1,2,4-TRICHLOROBENZENE	2.3	U	0.84	2.3	5.1	ppbv	120-82-1
TO-14	Air	02-Dec-14	VE-4D_SV75E09	1,2,4-TRIMETHYLBENZENE	0.33	J	0.12	0.9	1.3	ppbv	95-63-6
TO-14	Air	02-Dec-14	VE-4D_SV75E09	1,2-DIBROMOETHANE (EDB)	0.9	U	0.19	0.9	1.3	ppbv	106-93-4
TO-14	Air	02-Dec-14	VE-4D_SV75E09	1,2-DICHLOROBENZENE	0.9	U	0.1	0.9	1.3	ppbv	95-50-1
TO-14	Air	02-Dec-14	VE-4D_SV75E09	1,2-DICHLOROETHANE	0.9	U	0.15	0.9	1.3	ppbv	107-06-2
TO-14	Air	02-Dec-14	VE-4D_SV75E09	1,2-DICHLOROPROPANE	0.85	J	0.19	0.9	1.3	ppbv	78-87-5
TO-14	Air	02-Dec-14	VE-4D_SV75E09	1,3,5-TRIMETHYLBENZENE	0.9	U	0.16	0.9	1.3	ppbv	108-67-8
TO-14	Air	02-Dec-14	VE-4D_SV75E09	1,3-BUTADIENE	0.9	U	0.43	0.9	1.3	ppbv	106-99-0
TO-14	Air	02-Dec-14	VE-4D_SV75E09	1,3-DICHLOROBENZENE	0.13	J	0.11	0.9	1.3	ppbv	541-73-1
TO-14	Air	02-Dec-14	VE-4D_SV75E09	1,4-DICHLOROBENZENE	0.9	U	0.25	0.9	1.3	ppbv	106-46-7
TO-14	Air	02-Dec-14	VE-4D_SV75E09	1,4-DIOXANE	2.3	U	1.3	2.3	5.1	ppbv	123-91-1
TO-14	Air	02-Dec-14	VE-4D_SV75E09	2,2,4-TRIMETHYLPENTANE	0.17	J	0.14	0.9	1.3	ppbv	540-84-1
TO-14	Air	02-Dec-14	VE-4D_SV75E09	2-BUTANONE (METHYL ETHYL KETONE)	6.8		1.1	2.3	5.1	ppbv	78-93-3
TO-14	Air	02-Dec-14	VE-4D_SV75E09	2-HEXANONE	1.2	J	0.81	2.3	5.1	ppbv	591-78-6
TO-14	Air	02-Dec-14	VE-4D_SV75E09	2-PROPANOL	1.8	J	1.1	2.3	5.1	ppbv	67-63-0
TO-14	Air	02-Dec-14	VE-4D_SV75E09	3-CHLOROPROPENE	2.3	U	1.2	2.3	5.1	ppbv	107-05-1
TO-14	Air	02-Dec-14	VE-4D_SV75E09	4-ETHYLTOLUENE	0.9	U	0.22	0.9	1.3	ppbv	622-96-8
TO-14	Air	02-Dec-14	VE-4D_SV75E09	4-METHYL-2-PENTANONE	1.4		0.54	0.9	1.3	ppbv	108-10-1
TO-14	Air	02-Dec-14	VE-4D_SV75E09	ACETONE	22		2.5	2.5	13	ppbv	67-64-1
TO-14	Air	02-Dec-14	VE-4D_SV75E09	ALPHA-CHLOROTOLUENE	0.9	UJ	0.2	0.9	1.3	ppbv	100-44-7
TO-14	Air	02-Dec-14	VE-4D_SV75E09	BENZENE	0.69	J	0.36	0.9	1.3	ppbv	71-43-2
TO-14	Air	02-Dec-14	VE-4D_SV75E09	BROMODICHLOROMETHANE	0.21	J	0.15	0.9	1.3	ppbv	75-27-4

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Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	02-Dec-14	VE-4D_SV75E09	BROMOFORM	0.9	U	0.22	0.9	1.3	ppbv	75-25-2
TO-14	Air	02-Dec-14	VE-4D_SV75E09	BROMOMETHANE	2.3	U	0.78	2.3	13	ppbv	74-83-9
TO-14	Air	02-Dec-14	VE-4D_SV75E09	CARBON DISULFIDE	1.4	J	1.1	2.3	5.1	ppbv	75-15-0
TO-14	Air	02-Dec-14	VE-4D_SV75E09	CARBON TETRACHLORIDE	0.9	U	0.16	0.9	1.3	ppbv	56-23-5
TO-14	Air	02-Dec-14	VE-4D_SV75E09	CHLOROBENZENE	0.9	U	0.23	0.9	1.3	ppbv	108-90-7
TO-14	Air	02-Dec-14	VE-4D_SV75E09	CHLOROETHANE	2.3	U	1	2.3	5.1	ppbv	75-00-3
TO-14	Air	02-Dec-14	VE-4D_SV75E09	CHLOROFORM	1.6		0.18	0.9	1.3	ppbv	67-66-3
TO-14	Air	02-Dec-14	VE-4D_SV75E09	CHLOROMETHANE	2.3	UJ	1.7	2.3	5.1	ppbv	74-87-3
TO-14	Air	02-Dec-14	VE-4D_SV75E09	CIS-1,2-DICHLOROETHENE	26		0.41	0.9	1.3	ppbv	156-59-2
TO-14	Air	02-Dec-14	VE-4D_SV75E09	CIS-1,3-DICHLOROPROPENE	0.9	U	0.33	0.9	1.3	ppbv	10061-01-5
TO-14	Air	02-Dec-14	VE-4D_SV75E09	CUMENE	0.9	U	0.21	0.9	1.3	ppbv	98-82-8
TO-14	Air	02-Dec-14	VE-4D_SV75E09	CYCLOHEXANE	0.9	U	0.27	0.9	1.3	ppbv	110-82-7
TO-14	Air	02-Dec-14	VE-4D_SV75E09	DIBROMOCHLOROMETHANE	0.9	U	0.21	0.9	1.3	ppbv	124-48-1
TO-14	Air	02-Dec-14	VE-4D_SV75E09	ETHANOL	7.7		1.6	2.3	5.1	ppbv	64-17-5
TO-14	Air	02-Dec-14	VE-4D_SV75E09	ETHYL BENZENE	0.32	J	0.18	0.9	1.3	ppbv	100-41-4
TO-14	Air	02-Dec-14	VE-4D_SV75E09	FREON 11	5.2		0.13	0.9	1.3	ppbv	75-69-4
TO-14	Air	02-Dec-14	VE-4D_SV75E09	FREON 113	0.69	J	0.25	0.9	1.3	ppbv	76-13-1
TO-14	Air	02-Dec-14	VE-4D_SV75E09	FREON 114	0.9	U	0.08	0.9	1.3	ppbv	76-14-2
TO-14	Air	02-Dec-14	VE-4D_SV75E09	FREON 12	0.85	J	0.14	0.9	1.3	ppbv	75-71-8
TO-14	Air	02-Dec-14	VE-4D_SV75E09	HEPTANE	1.8		0.37	0.9	1.3	ppbv	142-82-5
TO-14	Air	02-Dec-14	VE-4D_SV75E09	HEXACHLOROBUTADIENE	2.3	U	0.93	2.3	5.1	ppbv	87-68-3
TO-14	Air	02-Dec-14	VE-4D_SV75E09	HEXANE	0.9	U	0.34	0.9	1.3	ppbv	110-54-3
TO-14	Air	02-Dec-14	VE-4D_SV75E09	ISOPROPYL ETHER	0.94	UJ	0.94		5.1	ppbv	108-20-3
TO-14	Air	02-Dec-14	VE-4D_SV75E09	M,P-XYLENE	0.71	J	0.16	0.9	1.3	ppbv	108-38-3/1
TO-14	Air	02-Dec-14	VE-4D_SV75E09	METHYL TERT-BUTYL ETHER	0.9	U	0.32	0.9	1.3	ppbv	1634-04-4
TO-14	Air	02-Dec-14	VE-4D_SV75E09	METHYLENE CHLORIDE	2.3	U	1.2	2.3	13	ppbv	75-09-2
TO-14	Air	02-Dec-14	VE-4D_SV75E09	NAPHTHALENE	1.4	J	0.21	2.3	5.1	ppbv	91-20-3
TO-14	Air	02-Dec-14	VE-4D_SV75E09	O-XYLENE	0.43	J	0.21	0.9	1.3	ppbv	95-47-6
TO-14	Air	02-Dec-14	VE-4D_SV75E09	PROPYLBENZENE	0.9	U	0.18	0.9	1.3	ppbv	103-65-1

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	02-Dec-14	VE-4D_SV75E09	STYRENE	0.9	U	0.23	0.9	1.3	ppbv	100-42-5
TO-14	Air	02-Dec-14	VE-4D_SV75E09	TETRACHLOROETHENE	2.1		0.28	0.9	1.3	ppbv	127-18-4
TO-14	Air	02-Dec-14	VE-4D_SV75E09	TETRAHYDROFURAN	0.9	U	0.28	0.9	1.3	ppbv	109-99-9
TO-14	Air	02-Dec-14	VE-4D_SV75E09	TOLUENE	0.82	J	0.22	0.9	1.3	ppbv	108-88-3
TO-14	Air	02-Dec-14	VE-4D_SV75E09	TRANS-1,2-DICHLOROETHENE	0.6	J	0.32	0.9	1.3	ppbv	156-60-5
TO-14	Air	02-Dec-14	VE-4D_SV75E09	TRANS-1,3-DICHLOROPROPENE	0.9	U	0.3	0.9	1.3	ppbv	10061-02-6
TO-14	Air	02-Dec-14	VE-4D_SV75E09	TRICHLOROETHENE	280		0.34	0.9	1.3	ppbv	79-01-6
TO-14	Air	02-Dec-14	VE-4D_SV75E09	VINYL ACETATE	2.3	U	1.1	2.3	5.1	ppbv	108-05-4
TO-14	Air	02-Dec-14	VE-4D_SV75E09	VINYL CHLORIDE	0.46	J	0.34	0.9	1.3	ppbv	75-01-4
TO-14	Air	02-Dec-14	VE-4S_SV30E09	1,1,1-TRICHLOROETHANE	9.1	U	1.7	9.1	13	ppbv	71-55-6
TO-14	Air	02-Dec-14	VE-4S_SV30E09	1,1,2,2-TETRACHLOROETHANE	9.1	U	1.7	9.1	13	ppbv	79-34-5
TO-14	Air	02-Dec-14	VE-4S_SV30E09	1,1,2-TRICHLOROETHANE	9.1	U	2.4	9.1	13	ppbv	79-00-5
TO-14	Air	02-Dec-14	VE-4S_SV30E09	1,1-DICHLOROETHANE	9.1	U	1.7	9.1	13	ppbv	75-34-3
TO-14	Air	02-Dec-14	VE-4S_SV30E09	1,1-DICHLOROETHENE	9.1	U	2.9	9.1	13	ppbv	75-35-4
TO-14	Air	02-Dec-14	VE-4S_SV30E09	1,2,4-TRICHLOROBENZENE	23	U	8.6	23	52	ppbv	120-82-1
TO-14	Air	02-Dec-14	VE-4S_SV30E09	1,2,4-TRIMETHYLBENZENE	9.1	U	1.2	9.1	13	ppbv	95-63-6
TO-14	Air	02-Dec-14	VE-4S_SV30E09	1,2-DIBROMOETHANE (EDB)	9.1	U	1.9	9.1	13	ppbv	106-93-4
TO-14	Air	02-Dec-14	VE-4S_SV30E09	1,2-DICHLOROBENZENE	9.1	U	1	9.1	13	ppbv	95-50-1
TO-14	Air	02-Dec-14	VE-4S_SV30E09	1,2-DICHLOROETHANE	9.1	U	1.5	9.1	13	ppbv	107-06-2
TO-14	Air	02-Dec-14	VE-4S_SV30E09	1,2-DICHLOROPROPANE	5.6	J	1.9	9.1	13	ppbv	78-87-5
TO-14	Air	02-Dec-14	VE-4S_SV30E09	1,3,5-TRIMETHYLBENZENE	9.1	U	1.6	9.1	13	ppbv	108-67-8
TO-14	Air	02-Dec-14	VE-4S_SV30E09	1,3-BUTADIENE	9.1	U	4.4	9.1	13	ppbv	106-99-0
TO-14	Air	02-Dec-14	VE-4S_SV30E09	1,3-DICHLOROBENZENE	1.2	J	1.1	9.1	13	ppbv	541-73-1
TO-14	Air	02-Dec-14	VE-4S_SV30E09	1,4-DICHLOROBENZENE	9.1	U	2.5	9.1	13	ppbv	106-46-7
TO-14	Air	02-Dec-14	VE-4S_SV30E09	1,4-DIOXANE	23	U	13	23	52	ppbv	123-91-1
TO-14	Air	02-Dec-14	VE-4S_SV30E09	2,2,4-TRIMETHYLPENTANE	9.1	U	1.5	9.1	13	ppbv	540-84-1
TO-14	Air	02-Dec-14	VE-4S_SV30E09	2-BUTANONE (METHYL ETHYL KETONE)	15	J	12	23	52	ppbv	78-93-3
TO-14	Air	02-Dec-14	VE-4S_SV30E09	2-HEXANONE	23	U	8.2	23	52	ppbv	591-78-6
TO-14	Air	02-Dec-14	VE-4S_SV30E09	2-PROPANOL	23	U	12	23	52	ppbv	67-63-0



**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	02-Dec-14	VE-4S_SV30E09	3-CHLOROPROPENE	23	U	12	23	52	ppbv	107-05-1
TO-14	Air	02-Dec-14	VE-4S_SV30E09	4-ETHYLTOLUENE	9.1	U	2.3	9.1	13	ppbv	622-96-8
TO-14	Air	02-Dec-14	VE-4S_SV30E09	4-METHYL-2-PENTANONE	9.1	U	5.5	9.1	13	ppbv	108-10-1
TO-14	Air	02-Dec-14	VE-4S_SV30E09	ACETONE	38	J	26	26	130	ppbv	67-64-1
TO-14	Air	02-Dec-14	VE-4S_SV30E09	ALPHA-CHLOROTOLUENE	9.1	UJ	2	9.1	13	ppbv	100-44-7
TO-14	Air	02-Dec-14	VE-4S_SV30E09	BENZENE	9.1	U	3.6	9.1	13	ppbv	71-43-2
TO-14	Air	02-Dec-14	VE-4S_SV30E09	BROMODICHLOROMETHANE	9.1	U	1.6	9.1	13	ppbv	75-27-4
TO-14	Air	02-Dec-14	VE-4S_SV30E09	BROMOFORM	9.1	U	2.2	9.1	13	ppbv	75-25-2
TO-14	Air	02-Dec-14	VE-4S_SV30E09	BROMOMETHANE	23	U	7.9	23	130	ppbv	74-83-9
TO-14	Air	02-Dec-14	VE-4S_SV30E09	CARBON DISULFIDE	23	U	11	23	52	ppbv	75-15-0
TO-14	Air	02-Dec-14	VE-4S_SV30E09	CARBON TETRACHLORIDE	9.1	U	1.6	9.1	13	ppbv	56-23-5
TO-14	Air	02-Dec-14	VE-4S_SV30E09	CHLOROBENZENE	2.5	J	2.3	9.1	13	ppbv	108-90-7
TO-14	Air	02-Dec-14	VE-4S_SV30E09	CHLOROETHANE	23	U	10	23	52	ppbv	75-00-3
TO-14	Air	02-Dec-14	VE-4S_SV30E09	CHLOROFORM	2.8	J	1.8	9.1	13	ppbv	67-66-3
TO-14	Air	02-Dec-14	VE-4S_SV30E09	CHLOROMETHANE	23	UJ	17	23	52	ppbv	74-87-3
TO-14	Air	02-Dec-14	VE-4S_SV30E09	CIS-1,2-DICHLOROETHENE	710		4.2	9.1	13	ppbv	156-59-2
TO-14	Air	02-Dec-14	VE-4S_SV30E09	CIS-1,3-DICHLOROPROPENE	9.1	U	3.4	9.1	13	ppbv	10061-01-5
TO-14	Air	02-Dec-14	VE-4S_SV30E09	CUMENE	9.1	U	2.2	9.1	13	ppbv	98-82-8
TO-14	Air	02-Dec-14	VE-4S_SV30E09	CYCLOHEXANE	9.1	U	2.8	9.1	13	ppbv	110-82-7
TO-14	Air	02-Dec-14	VE-4S_SV30E09	DIBROMOCHLOROMETHANE	9.1	U	2.1	9.1	13	ppbv	124-48-1
TO-14	Air	02-Dec-14	VE-4S_SV30E09	ETHANOL	21	J	16	23	52	ppbv	64-17-5
TO-14	Air	02-Dec-14	VE-4S_SV30E09	ETHYL BENZENE	9.1	U	1.9	9.1	13	ppbv	100-41-4
TO-14	Air	02-Dec-14	VE-4S_SV30E09	FREON 11	1.4	J	1.3	9.1	13	ppbv	75-69-4
TO-14	Air	02-Dec-14	VE-4S_SV30E09	FREON 113	6.9	J	2.5	9.1	13	ppbv	76-13-1
TO-14	Air	02-Dec-14	VE-4S_SV30E09	FREON 114	9.1	U	0.82	9.1	13	ppbv	76-14-2
TO-14	Air	02-Dec-14	VE-4S_SV30E09	FREON 12	3.9	J	1.4	9.1	13	ppbv	75-71-8
TO-14	Air	02-Dec-14	VE-4S_SV30E09	HEPTANE	9.1	U	3.7	9.1	13	ppbv	142-82-5
TO-14	Air	02-Dec-14	VE-4S_SV30E09	HEXACHLOROBUTADIENE	23	U	9.5	23	52	ppbv	87-68-3
TO-14	Air	02-Dec-14	VE-4S_SV30E09	HEXANE	9.1	U	3.5	9.1	13	ppbv	110-54-3

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	02-Dec-14	VE-4S_SV30E09	ISOPROPYL ETHER	9.6	UJ	9.6		52	ppbv	108-20-3
TO-14	Air	02-Dec-14	VE-4S_SV30E09	M,P-XYLENE	9.1	U	1.6	9.1	13	ppbv	108-38-3/1
TO-14	Air	02-Dec-14	VE-4S_SV30E09	METHYL TERT-BUTYL ETHER	9.1	U	3.3	9.1	13	ppbv	1634-04-4
TO-14	Air	02-Dec-14	VE-4S_SV30E09	METHYLENE CHLORIDE	23	U	12	23	130	ppbv	75-09-2
TO-14	Air	02-Dec-14	VE-4S_SV30E09	NAPHTHALENE	23	U	2.1	23	52	ppbv	91-20-3
TO-14	Air	02-Dec-14	VE-4S_SV30E09	O-XYLENE	9.1	U	2.2	9.1	13	ppbv	95-47-6
TO-14	Air	02-Dec-14	VE-4S_SV30E09	PROPYLBENZENE	9.1	U	1.9	9.1	13	ppbv	103-65-1
TO-14	Air	02-Dec-14	VE-4S_SV30E09	STYRENE	9.1	U	2.3	9.1	13	ppbv	100-42-5
TO-14	Air	02-Dec-14	VE-4S_SV30E09	TETRACHLOROETHENE	9.1	U	2.8	9.1	13	ppbv	127-18-4
TO-14	Air	02-Dec-14	VE-4S_SV30E09	TETRAHYDROFURAN	9.1	U	2.9	9.1	13	ppbv	109-99-9
TO-14	Air	02-Dec-14	VE-4S_SV30E09	TOLUENE	9.1	U	2.3	9.1	13	ppbv	108-88-3
TO-14	Air	02-Dec-14	VE-4S_SV30E09	TRANS-1,2-DICHLOROETHENE	9.1	U	3.2	9.1	13	ppbv	156-60-5
TO-14	Air	02-Dec-14	VE-4S_SV30E09	TRANS-1,3-DICHLOROPROPENE	9.1	U	3.1	9.1	13	ppbv	10061-02-6
TO-14	Air	02-Dec-14	VE-4S_SV30E09	TRICHLOROETHENE	3,700		3.5	9.1	13	ppbv	79-01-6
TO-14	Air	02-Dec-14	VE-4S_SV30E09	VINYL ACETATE	23	U	11	23	52	ppbv	108-05-4
TO-14	Air	02-Dec-14	VE-4S_SV30E09	VINYL CHLORIDE	5.1	J	3.4	9.1	13	ppbv	75-01-4
TO-14	Air	17-Dec-14	FINALEFF_E10	1,1,1-TRICHLOROETHANE	3.4	U	0.64	3.4	4.9	ppbv	71-55-6
TO-14	Air	17-Dec-14	FINALEFF_E10	1,1,2,2-TETRACHLOROETHANE	3.4	U	0.65	3.4	4.9	ppbv	79-34-5
TO-14	Air	17-Dec-14	FINALEFF_E10	1,1,2-TRICHLOROETHANE	3.4	U	0.9	3.4	4.9	ppbv	79-00-5
TO-14	Air	17-Dec-14	FINALEFF_E10	1,1-DICHLOROETHANE	3.4	U	0.62	3.4	4.9	ppbv	75-34-3
TO-14	Air	17-Dec-14	FINALEFF_E10	1,1-DICHLOROETHENE	2.9	J	1.1	3.4	4.9	ppbv	75-35-4
TO-14	Air	17-Dec-14	FINALEFF_E10	1,2,4-TRICHLOROBENZENE	8.8	U	3.2	8.8	19	ppbv	120-82-1
TO-14	Air	17-Dec-14	FINALEFF_E10	1,2,4-TRIMETHYLBENZENE	1.4	U	0.46	3.4	4.9	ppbv	95-63-6
TO-14	Air	17-Dec-14	FINALEFF_E10	1,2-DIBROMOETHANE (EDB)	3.4	U	0.72	3.4	4.9	ppbv	106-93-4
TO-14	Air	17-Dec-14	FINALEFF_E10	1,2-DICHLOROBENZENE	3.4	U	0.38	3.4	4.9	ppbv	95-50-1
TO-14	Air	17-Dec-14	FINALEFF_E10	1,2-DICHLOROETHANE	3.4	U	0.58	3.4	4.9	ppbv	107-06-2
TO-14	Air	17-Dec-14	FINALEFF_E10	1,2-DICHLOROPROPANE	3.4	U	0.71	3.4	4.9	ppbv	78-87-5
TO-14	Air	17-Dec-14	FINALEFF_E10	1,3,5-TRIMETHYLBENZENE	3.4	U	0.59	3.4	4.9	ppbv	108-67-8
TO-14	Air	17-Dec-14	FINALEFF_E10	1,3-BUTADIENE	3.4	U	1.6	3.4	4.9	ppbv	106-99-0

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	17-Dec-14	FINALEFF_E10	1,3-DICHLOROBENZENE	3.4	U	0.42	3.4	4.9	ppbv	541-73-1
TO-14	Air	17-Dec-14	FINALEFF_E10	1,4-DICHLOROBENZENE	3.4	U	0.94	3.4	4.9	ppbv	106-46-7
TO-14	Air	17-Dec-14	FINALEFF_E10	1,4-DIOXANE	8.8	U	4.9	8.8	19	ppbv	123-91-1
TO-14	Air	17-Dec-14	FINALEFF_E10	2,2,4-TRIMETHYLPENTANE	0.6	J	0.55	3.4	4.9	ppbv	540-84-1
TO-14	Air	17-Dec-14	FINALEFF_E10	2-BUTANONE (METHYL ETHYL KETONE)	8.8	U	4.3	8.8	19	ppbv	78-93-3
TO-14	Air	17-Dec-14	FINALEFF_E10	2-HEXANONE	8.8	U	3.1	8.8	19	ppbv	591-78-6
TO-14	Air	17-Dec-14	FINALEFF_E10	2-PROPANOL	8.8	U	4.3	8.8	19	ppbv	67-63-0
TO-14	Air	17-Dec-14	FINALEFF_E10	3-CHLOROPROPENE	8.8	U	4.6	8.8	19	ppbv	107-05-1
TO-14	Air	17-Dec-14	FINALEFF_E10	4-ETHYLTOLUENE	3.4	U	0.85	3.4	4.9	ppbv	622-96-8
TO-14	Air	17-Dec-14	FINALEFF_E10	4-METHYL-2-PENTANONE	3.4	U	2	3.4	4.9	ppbv	108-10-1
TO-14	Air	17-Dec-14	FINALEFF_E10	ACETONE	16	J	9.6	9.6	49	ppbv	67-64-1
TO-14	Air	17-Dec-14	FINALEFF_E10	ALPHA-CHLOROTOLUENE	3.4	U	0.74	3.4	4.9	ppbv	100-44-7
TO-14	Air	17-Dec-14	FINALEFF_E10	BENZENE	3.4	U	1.4	3.4	4.9	ppbv	71-43-2
TO-14	Air	17-Dec-14	FINALEFF_E10	BROMODICHLOROMETHANE	3.4	U	0.58	3.4	4.9	ppbv	75-27-4
TO-14	Air	17-Dec-14	FINALEFF_E10	BROMOFORM	3.4	U	0.84	3.4	4.9	ppbv	75-25-2
TO-14	Air	17-Dec-14	FINALEFF_E10	BROMOMETHANE	8.8	U	3	8.8	49	ppbv	74-83-9
TO-14	Air	17-Dec-14	FINALEFF_E10	CARBON DISULFIDE	4.6	U	4.2	8.8	19	ppbv	75-15-0
TO-14	Air	17-Dec-14	FINALEFF_E10	CARBON TETRACHLORIDE	3.4	U	0.6	3.4	4.9	ppbv	56-23-5
TO-14	Air	17-Dec-14	FINALEFF_E10	CHLOROBENZENE	3.4	U	0.87	3.4	4.9	ppbv	108-90-7
TO-14	Air	17-Dec-14	FINALEFF_E10	CHLOROETHANE	8.8	U	4	8.8	19	ppbv	75-00-3
TO-14	Air	17-Dec-14	FINALEFF_E10	CHLOROFORM	3.2	J	0.68	3.4	4.9	ppbv	67-66-3
TO-14	Air	17-Dec-14	FINALEFF_E10	CHLOROMETHANE	8.8	U	6.4	8.8	19	ppbv	74-87-3
TO-14	Air	17-Dec-14	FINALEFF_E10	CIS-1,2-DICHLOROETHENE	1,200		1.6	3.4	4.9	ppbv	156-59-2
TO-14	Air	17-Dec-14	FINALEFF_E10	CIS-1,3-DICHLOROPROPENE	3.4	U	1.2	3.4	4.9	ppbv	10061-01-5
TO-14	Air	17-Dec-14	FINALEFF_E10	CUMENE	3.4	U	0.81	3.4	4.9	ppbv	98-82-8
TO-14	Air	17-Dec-14	FINALEFF_E10	CYCLOHEXANE	3.4	U	1	3.4	4.9	ppbv	110-82-7
TO-14	Air	17-Dec-14	FINALEFF_E10	DIBROMOCHLOROMETHANE	3.4	U	0.8	3.4	4.9	ppbv	124-48-1
TO-14	Air	17-Dec-14	FINALEFF_E10	ETHANOL	6.4	J	6.1	8.8	19	ppbv	64-17-5
TO-14	Air	17-Dec-14	FINALEFF_E10	ETHYL BENZENE	0.9	J	0.7	3.4	4.9	ppbv	100-41-4

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	17-Dec-14	FINALEFF_E10	FREON 11	5.3		0.5	3.4	4.9	ppbv	75-69-4
TO-14	Air	17-Dec-14	FINALEFF_E10	FREON 113	4.5	J	0.94	3.4	4.9	ppbv	76-13-1
TO-14	Air	17-Dec-14	FINALEFF_E10	FREON 114	3.4	U	0.3	3.4	4.9	ppbv	76-14-2
TO-14	Air	17-Dec-14	FINALEFF_E10	FREON 12	3.4	U	0.52	3.4	4.9	ppbv	75-71-8
TO-14	Air	17-Dec-14	FINALEFF_E10	HEPTANE	3.4	U	1.4	3.4	4.9	ppbv	142-82-5
TO-14	Air	17-Dec-14	FINALEFF_E10	HEXACHLOROBUTADIENE	8.8	U	3.5	8.8	19	ppbv	87-68-3
TO-14	Air	17-Dec-14	FINALEFF_E10	HEXANE	3.4	U	1.3	3.4	4.9	ppbv	110-54-3
TO-14	Air	17-Dec-14	FINALEFF_E10	ISOPROPYL ETHER	3.6	UJ	3.6		19	ppbv	108-20-3
TO-14	Air	17-Dec-14	FINALEFF_E10	M,P-XYLENE	3.9	J	0.6	3.4	4.9	ppbv	108-38-3/1
TO-14	Air	17-Dec-14	FINALEFF_E10	METHYL TERT-BUTYL ETHER	3.4	U	1.2	3.4	4.9	ppbv	1634-04-4
TO-14	Air	17-Dec-14	FINALEFF_E10	METHYLENE CHLORIDE	8.8	U	4.6	8.8	49	ppbv	75-09-2
TO-14	Air	17-Dec-14	FINALEFF_E10	NAPHTHALENE	8.8	UJ	0.78	8.8	19	ppbv	91-20-3
TO-14	Air	17-Dec-14	FINALEFF_E10	O-XYLENE	1.4	J	0.81	3.4	4.9	ppbv	95-47-6
TO-14	Air	17-Dec-14	FINALEFF_E10	PROPYLBENZENE	3.4	U	0.7	3.4	4.9	ppbv	103-65-1
TO-14	Air	17-Dec-14	FINALEFF_E10	STYRENE	3.4	U	0.87	3.4	4.9	ppbv	100-42-5
TO-14	Air	17-Dec-14	FINALEFF_E10	TETRACHLOROETHENE	3.4	U	1	3.4	4.9	ppbv	127-18-4
TO-14	Air	17-Dec-14	FINALEFF_E10	TETRAHYDROFURAN	3.8	J	1.1	3.4	4.9	ppbv	109-99-9
TO-14	Air	17-Dec-14	FINALEFF_E10	TOLUENE	0.92	J	0.85	3.4	4.9	ppbv	108-88-3
TO-14	Air	17-Dec-14	FINALEFF_E10	TRANS-1,2-DICHLOROETHENE	3.2	J	1.2	3.4	4.9	ppbv	156-60-5
TO-14	Air	17-Dec-14	FINALEFF_E10	TRANS-1,3-DICHLOROPROPENE	3.4	U	1.2	3.4	4.9	ppbv	10061-02-6
TO-14	Air	17-Dec-14	FINALEFF_E10	TRICHLOROETHENE	59		1.3	3.4	4.9	ppbv	79-01-6
TO-14	Air	17-Dec-14	FINALEFF_E10	VINYL ACETATE	8.8	U	4.2	8.8	19	ppbv	108-05-4
TO-14	Air	17-Dec-14	FINALEFF_E10	VINYL CHLORIDE	3.4	U	1.3	3.4	4.9	ppbv	75-01-4
TO-14	Air	17-Dec-14	PRIMEFF_E10	1,1,1-TRICHLOROETHANE	7.2	U	1.4	7.2	10	ppbv	71-55-6
TO-14	Air	17-Dec-14	PRIMEFF_E10	1,1,2,2-TETRACHLOROETHANE	7.2	U	1.4	7.2	10	ppbv	79-34-5
TO-14	Air	17-Dec-14	PRIMEFF_E10	1,1,2-TRICHLOROETHANE	7.2	U	1.9	7.2	10	ppbv	79-00-5
TO-14	Air	17-Dec-14	PRIMEFF_E10	1,1-DICHLOROETHANE	7.2	U	1.3	7.2	10	ppbv	75-34-3
TO-14	Air	17-Dec-14	PRIMEFF_E10	1,1-DICHLOROETHENE	7.2	U	2.3	7.2	10	ppbv	75-35-4
TO-14	Air	17-Dec-14	PRIMEFF_E10	1,2,4-TRICHLOROBENZENE	18	U	6.7	18	41	ppbv	120-82-1

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	17-Dec-14	PRIMEFF_E10	1,2,4-TRIMETHYLBENZENE	7.2	U	0.98	7.2	10	ppbv	95-63-6
TO-14	Air	17-Dec-14	PRIMEFF_E10	1,2-DIBROMOETHANE (EDB)	7.2	U	1.5	7.2	10	ppbv	106-93-4
TO-14	Air	17-Dec-14	PRIMEFF_E10	1,2-DICHLOROBENZENE	7.2	U	0.8	7.2	10	ppbv	95-50-1
TO-14	Air	17-Dec-14	PRIMEFF_E10	1,2-DICHLOROETHANE	7.2	U	1.2	7.2	10	ppbv	107-06-2
TO-14	Air	17-Dec-14	PRIMEFF_E10	1,2-DICHLOROPROPANE	7.2	U	1.5	7.2	10	ppbv	78-87-5
TO-14	Air	17-Dec-14	PRIMEFF_E10	1,3,5-TRIMETHYLBENZENE	7.2	U	1.2	7.2	10	ppbv	108-67-8
TO-14	Air	17-Dec-14	PRIMEFF_E10	1,3-BUTADIENE	7.2	U	3.5	7.2	10	ppbv	106-99-0
TO-14	Air	17-Dec-14	PRIMEFF_E10	1,3-DICHLOROBENZENE	7.2	U	0.89	7.2	10	ppbv	541-73-1
TO-14	Air	17-Dec-14	PRIMEFF_E10	1,4-DICHLOROBENZENE	7.2	U	2	7.2	10	ppbv	106-46-7
TO-14	Air	17-Dec-14	PRIMEFF_E10	1,4-DIOXANE	18	U	10	18	41	ppbv	123-91-1
TO-14	Air	17-Dec-14	PRIMEFF_E10	2,2,4-TRIMETHYLPENTANE	7.2	U	1.2	7.2	10	ppbv	540-84-1
TO-14	Air	17-Dec-14	PRIMEFF_E10	2-BUTANONE (METHYL ETHYL KETONE)	18	U	9.1	18	41	ppbv	78-93-3
TO-14	Air	17-Dec-14	PRIMEFF_E10	2-HEXANONE	18	U	6.5	18	41	ppbv	591-78-6
TO-14	Air	17-Dec-14	PRIMEFF_E10	2-PROPANOL	18	U	9.1	18	41	ppbv	67-63-0
TO-14	Air	17-Dec-14	PRIMEFF_E10	3-CHLOROPROPENE	18	U	9.6	18	41	ppbv	107-05-1
TO-14	Air	17-Dec-14	PRIMEFF_E10	4-ETHYLTOLUENE	7.2	U	1.8	7.2	10	ppbv	622-96-8
TO-14	Air	17-Dec-14	PRIMEFF_E10	4-METHYL-2-PENTANONE	7.2	U	4.3	7.2	10	ppbv	108-10-1
TO-14	Air	17-Dec-14	PRIMEFF_E10	ACETONE	20	U	20	20	100	ppbv	67-64-1
TO-14	Air	17-Dec-14	PRIMEFF_E10	ALPHA-CHLOROTOLUENE	7.2	U	1.6	7.2	10	ppbv	100-44-7
TO-14	Air	17-Dec-14	PRIMEFF_E10	BENZENE	7.2	U	2.9	7.2	10	ppbv	71-43-2
TO-14	Air	17-Dec-14	PRIMEFF_E10	BROMODICHLOROMETHANE	7.2	U	1.2	7.2	10	ppbv	75-27-4
TO-14	Air	17-Dec-14	PRIMEFF_E10	BROMOFORM	7.2	U	1.8	7.2	10	ppbv	75-25-2
TO-14	Air	17-Dec-14	PRIMEFF_E10	BROMOMETHANE	18	U	6.2	18	100	ppbv	74-83-9
TO-14	Air	17-Dec-14	PRIMEFF_E10	CARBON DISULFIDE	18	U	8.9	18	41	ppbv	75-15-0
TO-14	Air	17-Dec-14	PRIMEFF_E10	CARBON TETRACHLORIDE	7.2	U	1.3	7.2	10	ppbv	56-23-5
TO-14	Air	17-Dec-14	PRIMEFF_E10	CHLOROBENZENE	7.2	U	1.8	7.2	10	ppbv	108-90-7
TO-14	Air	17-Dec-14	PRIMEFF_E10	CHLOROETHANE	18	U	8.3	18	41	ppbv	75-00-3
TO-14	Air	17-Dec-14	PRIMEFF_E10	CHLOROFORM	6.5	J	1.4	7.2	10	ppbv	67-66-3
TO-14	Air	17-Dec-14	PRIMEFF_E10	CHLOROMETHANE	18	U	13	18	41	ppbv	74-87-3

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	17-Dec-14	PRIMEFF_E10	CIS-1,2-DICHLOROETHENE	1,900		3.3	7.2	10	ppbv	156-59-2
TO-14	Air	17-Dec-14	PRIMEFF_E10	CIS-1,3-DICHLOROPROPENE	7.2	U	2.6	7.2	10	ppbv	10061-01-5
TO-14	Air	17-Dec-14	PRIMEFF_E10	CUMENE	7.2	U	1.7	7.2	10	ppbv	98-82-8
TO-14	Air	17-Dec-14	PRIMEFF_E10	CYCLOHEXANE	7.2	U	2.2	7.2	10	ppbv	110-82-7
TO-14	Air	17-Dec-14	PRIMEFF_E10	DIBROMOCHLOROMETHANE	7.2	U	1.7	7.2	10	ppbv	124-48-1
TO-14	Air	17-Dec-14	PRIMEFF_E10	ETHANOL	150		13	18	41	ppbv	64-17-5
TO-14	Air	17-Dec-14	PRIMEFF_E10	ETHYL BENZENE	7.2	U	1.5	7.2	10	ppbv	100-41-4
TO-14	Air	17-Dec-14	PRIMEFF_E10	FREON 11	4	J	1	7.2	10	ppbv	75-69-4
TO-14	Air	17-Dec-14	PRIMEFF_E10	FREON 113	4.8	J	2	7.2	10	ppbv	76-13-1
TO-14	Air	17-Dec-14	PRIMEFF_E10	FREON 114	7.2	U	0.64	7.2	10	ppbv	76-14-2
TO-14	Air	17-Dec-14	PRIMEFF_E10	FREON 12	7.2	U	1.1	7.2	10	ppbv	75-71-8
TO-14	Air	17-Dec-14	PRIMEFF_E10	HEPTANE	7.2	U	3	7.2	10	ppbv	142-82-5
TO-14	Air	17-Dec-14	PRIMEFF_E10	HEXACHLOROBUTADIENE	18	U	7.5	18	41	ppbv	87-68-3
TO-14	Air	17-Dec-14	PRIMEFF_E10	HEXANE	7.2	U	2.7	7.2	10	ppbv	110-54-3
TO-14	Air	17-Dec-14	PRIMEFF_E10	ISOPROPYL ETHER	7.5	UJ	7.5		41	ppbv	108-20-3
TO-14	Air	17-Dec-14	PRIMEFF_E10	M,P-XYLENE	7.2	U	1.3	7.2	10	ppbv	108-38-3/1
TO-14	Air	17-Dec-14	PRIMEFF_E10	METHYL TERT-BUTYL ETHER	7.2	U	2.6	7.2	10	ppbv	1634-04-4
TO-14	Air	17-Dec-14	PRIMEFF_E10	METHYLENE CHLORIDE	18	U	9.7	18	100	ppbv	75-09-2
TO-14	Air	17-Dec-14	PRIMEFF_E10	NAPHTHALENE	18	UJ	1.6	18	41	ppbv	91-20-3
TO-14	Air	17-Dec-14	PRIMEFF_E10	O-XYLENE	7.2	U	1.7	7.2	10	ppbv	95-47-6
TO-14	Air	17-Dec-14	PRIMEFF_E10	PROPYLBENZENE	7.2	U	1.5	7.2	10	ppbv	103-65-1
TO-14	Air	17-Dec-14	PRIMEFF_E10	STYRENE	7.2	U	1.8	7.2	10	ppbv	100-42-5
TO-14	Air	17-Dec-14	PRIMEFF_E10	TETRACHLOROETHENE	7.2	U	2.2	7.2	10	ppbv	127-18-4
TO-14	Air	17-Dec-14	PRIMEFF_E10	TETRAHYDROFURAN	18		2.3	7.2	10	ppbv	109-99-9
TO-14	Air	17-Dec-14	PRIMEFF_E10	TOLUENE	7.2	U	1.8	7.2	10	ppbv	108-88-3
TO-14	Air	17-Dec-14	PRIMEFF_E10	TRANS-1,2-DICHLOROETHENE	4.4	J	2.5	7.2	10	ppbv	156-60-5
TO-14	Air	17-Dec-14	PRIMEFF_E10	TRANS-1,3-DICHLOROPROPENE	7.2	U	2.4	7.2	10	ppbv	10061-02-6
TO-14	Air	17-Dec-14	PRIMEFF_E10	TRICHLOROETHENE	1,400		2.8	7.2	10	ppbv	79-01-6
TO-14	Air	17-Dec-14	PRIMEFF_E10	VINYL ACETATE	18	U	8.8	18	41	ppbv	108-05-4

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	17-Dec-14	PRIMEFF_E10	VINYL CHLORIDE	7.2	U	2.7	7.2	10	ppbv	75-01-4
TO-14	Air	17-Dec-14	VE-4D_SV75E10	1,1,1-TRICHLOROETHANE	0.88	U	0.16	0.88	1.2	ppbv	71-55-6
TO-14	Air	17-Dec-14	VE-4D_SV75E10	1,1,2,2-TETRACHLOROETHANE	0.88	U	0.17	0.88	1.2	ppbv	79-34-5
TO-14	Air	17-Dec-14	VE-4D_SV75E10	1,1,2-TRICHLOROETHANE	0.88	U	0.23	0.88	1.2	ppbv	79-00-5
TO-14	Air	17-Dec-14	VE-4D_SV75E10	1,1-DICHLOROETHANE	0.19	J	0.16	0.88	1.2	ppbv	75-34-3
TO-14	Air	17-Dec-14	VE-4D_SV75E10	1,1-DICHLOROETHENE	0.88	U	0.28	0.88	1.2	ppbv	75-35-4
TO-14	Air	17-Dec-14	VE-4D_SV75E10	1,2,4-TRICHLOROBENZENE	2.2	U	0.83	2.2	5	ppbv	120-82-1
TO-14	Air	17-Dec-14	VE-4D_SV75E10	1,2,4-TRIMETHYLBENZENE	0.88	U	0.12	0.88	1.2	ppbv	95-63-6
TO-14	Air	17-Dec-14	VE-4D_SV75E10	1,2-DIBROMOETHANE (EDB)	0.88	U	0.18	0.88	1.2	ppbv	106-93-4
TO-14	Air	17-Dec-14	VE-4D_SV75E10	1,2-DICHLOROBENZENE	0.88	U	0.098	0.88	1.2	ppbv	95-50-1
TO-14	Air	17-Dec-14	VE-4D_SV75E10	1,2-DICHLOROETHANE	0.88	U	0.15	0.88	1.2	ppbv	107-06-2
TO-14	Air	17-Dec-14	VE-4D_SV75E10	1,2-DICHLOROPROPANE	0.88	U	0.18	0.88	1.2	ppbv	78-87-5
TO-14	Air	17-Dec-14	VE-4D_SV75E10	1,3,5-TRIMETHYLBENZENE	0.88	U	0.15	0.88	1.2	ppbv	108-67-8
TO-14	Air	17-Dec-14	VE-4D_SV75E10	1,3-BUTADIENE	0.88	U	0.42	0.88	1.2	ppbv	106-99-0
TO-14	Air	17-Dec-14	VE-4D_SV75E10	1,3-DICHLOROBENZENE	0.88	U	0.11	0.88	1.2	ppbv	541-73-1
TO-14	Air	17-Dec-14	VE-4D_SV75E10	1,4-DICHLOROBENZENE	0.88	U	0.24	0.88	1.2	ppbv	106-46-7
TO-14	Air	17-Dec-14	VE-4D_SV75E10	1,4-DIOXANE	2.2	U	1.3	2.2	5	ppbv	123-91-1
TO-14	Air	17-Dec-14	VE-4D_SV75E10	2,2,4-TRIMETHYLPENTANE	0.88	U	0.14	0.88	1.2	ppbv	540-84-1
TO-14	Air	17-Dec-14	VE-4D_SV75E10	2-BUTANONE (METHYL ETHYL KETONE)	3.4	J	1.1	2.2	5	ppbv	78-93-3
TO-14	Air	17-Dec-14	VE-4D_SV75E10	2-HEXANONE	2.2	U	0.79	2.2	5	ppbv	591-78-6
TO-14	Air	17-Dec-14	VE-4D_SV75E10	2-PROPANOL	1.2	J	1.1	2.2	5	ppbv	67-63-0
TO-14	Air	17-Dec-14	VE-4D_SV75E10	3-CHLOROPROPENE	2.2	U	1.2	2.2	5	ppbv	107-05-1
TO-14	Air	17-Dec-14	VE-4D_SV75E10	4-ETHYLTOLUENE	0.88	U	0.22	0.88	1.2	ppbv	622-96-8
TO-14	Air	17-Dec-14	VE-4D_SV75E10	4-METHYL-2-PENTANONE	0.88	U	0.53	0.88	1.2	ppbv	108-10-1
TO-14	Air	17-Dec-14	VE-4D_SV75E10	ACETONE	14		2.5	2.5	12	ppbv	67-64-1
TO-14	Air	17-Dec-14	VE-4D_SV75E10	ALPHA-CHLOROTOLUENE	0.88	U	0.19	0.88	1.2	ppbv	100-44-7
TO-14	Air	17-Dec-14	VE-4D_SV75E10	BENZENE	0.88	U	0.35	0.88	1.2	ppbv	71-43-2
TO-14	Air	17-Dec-14	VE-4D_SV75E10	BROMODICHLOROMETHANE	0.3	J	0.15	0.88	1.2	ppbv	75-27-4
TO-14	Air	17-Dec-14	VE-4D_SV75E10	BROMOFORM	0.88	U	0.22	0.88	1.2	ppbv	75-25-2

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	17-Dec-14	VE-4D_SV75E10	BROMOMETHANE	2.2	U	0.76	2.2	12	ppbv	74-83-9
TO-14	Air	17-Dec-14	VE-4D_SV75E10	CARBON DISULFIDE	2.2	U	1.1	2.2	5	ppbv	75-15-0
TO-14	Air	17-Dec-14	VE-4D_SV75E10	CARBON TETRACHLORIDE	0.88	U	0.16	0.88	1.2	ppbv	56-23-5
TO-14	Air	17-Dec-14	VE-4D_SV75E10	CHLOROBENZENE	0.88	U	0.22	0.88	1.2	ppbv	108-90-7
TO-14	Air	17-Dec-14	VE-4D_SV75E10	CHLOROETHANE	2.2	U	1	2.2	5	ppbv	75-00-3
TO-14	Air	17-Dec-14	VE-4D_SV75E10	CHLOROFORM	2.1		0.18	0.88	1.2	ppbv	67-66-3
TO-14	Air	17-Dec-14	VE-4D_SV75E10	CHLOROMETHANE	2.2	U	1.6	2.2	5	ppbv	74-87-3
TO-14	Air	17-Dec-14	VE-4D_SV75E10	CIS-1,2-DICHLOROETHENE	24		0.4	0.88	1.2	ppbv	156-59-2
TO-14	Air	17-Dec-14	VE-4D_SV75E10	CIS-1,3-DICHLOROPROPENE	0.88	U	0.32	0.88	1.2	ppbv	10061-01-5
TO-14	Air	17-Dec-14	VE-4D_SV75E10	CUMENE	0.88	U	0.21	0.88	1.2	ppbv	98-82-8
TO-14	Air	17-Dec-14	VE-4D_SV75E10	CYCLOHEXANE	0.88	U	0.27	0.88	1.2	ppbv	110-82-7
TO-14	Air	17-Dec-14	VE-4D_SV75E10	DIBROMOCHLOROMETHANE	0.88	U	0.21	0.88	1.2	ppbv	124-48-1
TO-14	Air	17-Dec-14	VE-4D_SV75E10	ETHANOL	9.7		1.6	2.2	5	ppbv	64-17-5
TO-14	Air	17-Dec-14	VE-4D_SV75E10	ETHYL BENZENE	0.88	U	0.18	0.88	1.2	ppbv	100-41-4
TO-14	Air	17-Dec-14	VE-4D_SV75E10	FREON 11	6.2		0.13	0.88	1.2	ppbv	75-69-4
TO-14	Air	17-Dec-14	VE-4D_SV75E10	FREON 113	0.51	J	0.24	0.88	1.2	ppbv	76-13-1
TO-14	Air	17-Dec-14	VE-4D_SV75E10	FREON 114	0.88	U	0.079	0.88	1.2	ppbv	76-14-2
TO-14	Air	17-Dec-14	VE-4D_SV75E10	FREON 12	0.77	J	0.13	0.88	1.2	ppbv	75-71-8
TO-14	Air	17-Dec-14	VE-4D_SV75E10	HEPTANE	0.49	J	0.36	0.88	1.2	ppbv	142-82-5
TO-14	Air	17-Dec-14	VE-4D_SV75E10	HEXACHLOROBUTADIENE	2.2	U	0.91	2.2	5	ppbv	87-68-3
TO-14	Air	17-Dec-14	VE-4D_SV75E10	HEXANE	0.88	U	0.34	0.88	1.2	ppbv	110-54-3
TO-14	Air	17-Dec-14	VE-4D_SV75E10	ISOPROPYL ETHER	0.92	UJ	0.92		5	ppbv	108-20-3
TO-14	Air	17-Dec-14	VE-4D_SV75E10	M,P-XYLENE	0.88	U	0.16	0.88	1.2	ppbv	108-38-3/1
TO-14	Air	17-Dec-14	VE-4D_SV75E10	METHYL TERT-BUTYL ETHER	0.88	U	0.32	0.88	1.2	ppbv	1634-04-4
TO-14	Air	17-Dec-14	VE-4D_SV75E10	METHYLENE CHLORIDE	1.3	J	1.2	2.2	12	ppbv	75-09-2
TO-14	Air	17-Dec-14	VE-4D_SV75E10	NAPHTHALENE	2.2	UJ	0.2	2.2	5	ppbv	91-20-3
TO-14	Air	17-Dec-14	VE-4D_SV75E10	O-XYLENE	0.88	U	0.21	0.88	1.2	ppbv	95-47-6
TO-14	Air	17-Dec-14	VE-4D_SV75E10	PROPYLBENZENE	0.88	U	0.18	0.88	1.2	ppbv	103-65-1
TO-14	Air	17-Dec-14	VE-4D_SV75E10	STYRENE	0.88	U	0.22	0.88	1.2	ppbv	100-42-5



**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	17-Dec-14	VE-4D_SV75E10	TETRACHLOROETHENE	2.5		0.27	0.88	1.2	ppbv	127-18-4
TO-14	Air	17-Dec-14	VE-4D_SV75E10	TETRAHYDROFURAN	0.88	U	0.28	0.88	1.2	ppbv	109-99-9
TO-14	Air	17-Dec-14	VE-4D_SV75E10	TOLUENE	0.88	U	0.22	0.88	1.2	ppbv	108-88-3
TO-14	Air	17-Dec-14	VE-4D_SV75E10	TRANS-1,2-DICHLOROETHENE	0.84	J	0.31	0.88	1.2	ppbv	156-60-5
TO-14	Air	17-Dec-14	VE-4D_SV75E10	TRANS-1,3-DICHLOROPROPENE	0.88	U	0.3	0.88	1.2	ppbv	10061-02-6
TO-14	Air	17-Dec-14	VE-4D_SV75E10	TRICHLOROETHENE	430		0.34	0.88	1.2	ppbv	79-01-6
TO-14	Air	17-Dec-14	VE-4D_SV75E10	VINYL ACETATE	2.2	U	1.1	2.2	5	ppbv	108-05-4
TO-14	Air	17-Dec-14	VE-4D_SV75E10	VINYL CHLORIDE	0.88	U	0.33	0.88	1.2	ppbv	75-01-4
TO-14	Air	17-Dec-14	VE-4S_SV30E10	1,1,1-TRICHLOROETHANE	7	U	1.3	7	10	ppbv	71-55-6
TO-14	Air	17-Dec-14	VE-4S_SV30E10	1,1,2,2-TETRACHLOROETHANE	7	U	1.3	7	10	ppbv	79-34-5
TO-14	Air	17-Dec-14	VE-4S_SV30E10	1,1,2-TRICHLOROETHANE	7	U	1.8	7	10	ppbv	79-00-5
TO-14	Air	17-Dec-14	VE-4S_SV30E10	1,1-DICHLOROETHANE	7	U	1.3	7	10	ppbv	75-34-3
TO-14	Air	17-Dec-14	VE-4S_SV30E10	1,1-DICHLOROETHENE	7	U	2.2	7	10	ppbv	75-35-4
TO-14	Air	17-Dec-14	VE-4S_SV30E10	1,2,4-TRICHLOROBENZENE	18	U	6.6	18	40	ppbv	120-82-1
TO-14	Air	17-Dec-14	VE-4S_SV30E10	1,2,4-TRIMETHYLBENZENE	7	U	0.95	7	10	ppbv	95-63-6
TO-14	Air	17-Dec-14	VE-4S_SV30E10	1,2-DIBROMOETHANE (EDB)	7	U	1.5	7	10	ppbv	106-93-4
TO-14	Air	17-Dec-14	VE-4S_SV30E10	1,2-DICHLOROBENZENE	7	U	0.78	7	10	ppbv	95-50-1
TO-14	Air	17-Dec-14	VE-4S_SV30E10	1,2-DICHLOROETHANE	7	U	1.2	7	10	ppbv	107-06-2
TO-14	Air	17-Dec-14	VE-4S_SV30E10	1,2-DICHLOROPROPANE	1.9	J	1.4	7	10	ppbv	78-87-5
TO-14	Air	17-Dec-14	VE-4S_SV30E10	1,3,5-TRIMETHYLBENZENE	7	U	1.2	7	10	ppbv	108-67-8
TO-14	Air	17-Dec-14	VE-4S_SV30E10	1,3-BUTADIENE	7	U	3.4	7	10	ppbv	106-99-0
TO-14	Air	17-Dec-14	VE-4S_SV30E10	1,3-DICHLOROBENZENE	7	U	0.87	7	10	ppbv	541-73-1
TO-14	Air	17-Dec-14	VE-4S_SV30E10	1,4-DICHLOROBENZENE	7	U	1.9	7	10	ppbv	106-46-7
TO-14	Air	17-Dec-14	VE-4S_SV30E10	1,4-DIOXANE	18	U	10	18	40	ppbv	123-91-1
TO-14	Air	17-Dec-14	VE-4S_SV30E10	2,2,4-TRIMETHYLPENTANE	7	U	1.1	7	10	ppbv	540-84-1
TO-14	Air	17-Dec-14	VE-4S_SV30E10	2-BUTANONE (METHYL ETHYL KETONE)	18	U	8.9	18	40	ppbv	78-93-3
TO-14	Air	17-Dec-14	VE-4S_SV30E10	2-HEXANONE	18	U	6.3	18	40	ppbv	591-78-6
TO-14	Air	17-Dec-14	VE-4S_SV30E10	2-PROPANOL	18	U	8.9	18	40	ppbv	67-63-0
TO-14	Air	17-Dec-14	VE-4S_SV30E10	3-CHLOROPROPENE	18	U	9.4	18	40	ppbv	107-05-1

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	17-Dec-14	VE-4S_SV30E10	4-ETHYLTOLUENE	7	U	1.7	7	10	ppbv	622-96-8
TO-14	Air	17-Dec-14	VE-4S_SV30E10	4-METHYL-2-PENTANONE	7	U	4.2	7	10	ppbv	108-10-1
TO-14	Air	17-Dec-14	VE-4S_SV30E10	ACETONE	20	U	20	20	100	ppbv	67-64-1
TO-14	Air	17-Dec-14	VE-4S_SV30E10	ALPHA-CHLOROTOLUENE	7	U	1.5	7	10	ppbv	100-44-7
TO-14	Air	17-Dec-14	VE-4S_SV30E10	BENZENE	7	U	2.8	7	10	ppbv	71-43-2
TO-14	Air	17-Dec-14	VE-4S_SV30E10	BROMODICHLOROMETHANE	7	U	1.2	7	10	ppbv	75-27-4
TO-14	Air	17-Dec-14	VE-4S_SV30E10	BROMOFORM	7	U	1.7	7	10	ppbv	75-25-2
TO-14	Air	17-Dec-14	VE-4S_SV30E10	BROMOMETHANE	18	U	6.1	18	100	ppbv	74-83-9
TO-14	Air	17-Dec-14	VE-4S_SV30E10	CARBON DISULFIDE	18	U	8.6	18	40	ppbv	75-15-0
TO-14	Air	17-Dec-14	VE-4S_SV30E10	CARBON TETRACHLORIDE	7	U	1.2	7	10	ppbv	56-23-5
TO-14	Air	17-Dec-14	VE-4S_SV30E10	CHLOROBENZENE	2.1	J	1.8	7	10	ppbv	108-90-7
TO-14	Air	17-Dec-14	VE-4S_SV30E10	CHLOROETHANE	18	U	8.1	18	40	ppbv	75-00-3
TO-14	Air	17-Dec-14	VE-4S_SV30E10	CHLOROFORM	3.2	J	1.4	7	10	ppbv	67-66-3
TO-14	Air	17-Dec-14	VE-4S_SV30E10	CHLOROMETHANE	18	U	13	18	40	ppbv	74-87-3
TO-14	Air	17-Dec-14	VE-4S_SV30E10	CIS-1,2-DICHLOROETHENE	570		3.2	7	10	ppbv	156-59-2
TO-14	Air	17-Dec-14	VE-4S_SV30E10	CIS-1,3-DICHLOROPROPENE	7	U	2.6	7	10	ppbv	10061-01-5
TO-14	Air	17-Dec-14	VE-4S_SV30E10	CUMENE	7	U	1.6	7	10	ppbv	98-82-8
TO-14	Air	17-Dec-14	VE-4S_SV30E10	CYCLOHEXANE	7	U	2.1	7	10	ppbv	110-82-7
TO-14	Air	17-Dec-14	VE-4S_SV30E10	DIBROMOCHLOROMETHANE	7	U	1.6	7	10	ppbv	124-48-1
TO-14	Air	17-Dec-14	VE-4S_SV30E10	ETHANOL	22	J	12	18	40	ppbv	64-17-5
TO-14	Air	17-Dec-14	VE-4S_SV30E10	ETHYL BENZENE	7	U	1.4	7	10	ppbv	100-41-4
TO-14	Air	17-Dec-14	VE-4S_SV30E10	FREON 11	2.5	J	1	7	10	ppbv	75-69-4
TO-14	Air	17-Dec-14	VE-4S_SV30E10	FREON 113	8.6	J	1.9	7	10	ppbv	76-13-1
TO-14	Air	17-Dec-14	VE-4S_SV30E10	FREON 114	7	U	0.63	7	10	ppbv	76-14-2
TO-14	Air	17-Dec-14	VE-4S_SV30E10	FREON 12	7	U	1.1	7	10	ppbv	75-71-8
TO-14	Air	17-Dec-14	VE-4S_SV30E10	HEPTANE	7	U	2.9	7	10	ppbv	142-82-5
TO-14	Air	17-Dec-14	VE-4S_SV30E10	HEXACHLOROBUTADIENE	18	U	7.3	18	40	ppbv	87-68-3
TO-14	Air	17-Dec-14	VE-4S_SV30E10	HEXANE	7	U	2.7	7	10	ppbv	110-54-3
TO-14	Air	17-Dec-14	VE-4S_SV30E10	ISOPROPYL ETHER	7.4	UJ	7.4		40	ppbv	108-20-3

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	17-Dec-14	VE-4S_SV30E10	M,P-XYLENE	7	U	1.2	7	10	ppbv	108-38-3/1
TO-14	Air	17-Dec-14	VE-4S_SV30E10	METHYL TERT-BUTYL ETHER	7	U	2.5	7	10	ppbv	1634-04-4
TO-14	Air	17-Dec-14	VE-4S_SV30E10	METHYLENE CHLORIDE	18	U	9.4	18	100	ppbv	75-09-2
TO-14	Air	17-Dec-14	VE-4S_SV30E10	NAPHTHALENE	18	UJ	1.6	18	40	ppbv	91-20-3
TO-14	Air	17-Dec-14	VE-4S_SV30E10	O-XYLENE	7	U	1.7	7	10	ppbv	95-47-6
TO-14	Air	17-Dec-14	VE-4S_SV30E10	PROPYLBENZENE	7	U	1.4	7	10	ppbv	103-65-1
TO-14	Air	17-Dec-14	VE-4S_SV30E10	STYRENE	7	U	1.8	7	10	ppbv	100-42-5
TO-14	Air	17-Dec-14	VE-4S_SV30E10	TETRACHLOROETHENE	5.4	J	2.2	7	10	ppbv	127-18-4
TO-14	Air	17-Dec-14	VE-4S_SV30E10	TETRAHYDROFURAN	7	U	2.2	7	10	ppbv	109-99-9
TO-14	Air	17-Dec-14	VE-4S_SV30E10	TOLUENE	7	U	1.7	7	10	ppbv	108-88-3
TO-14	Air	17-Dec-14	VE-4S_SV30E10	TRANS-1,2-DICHLOROETHENE	7	U	2.5	7	10	ppbv	156-60-5
TO-14	Air	17-Dec-14	VE-4S_SV30E10	TRANS-1,3-DICHLOROPROPENE	7	U	2.4	7	10	ppbv	10061-02-6
TO-14	Air	17-Dec-14	VE-4S_SV30E10	TRICHLOROETHENE	2700		2.7	7	10	ppbv	79-01-6
TO-14	Air	17-Dec-14	VE-4S_SV30E10	VINYL ACETATE	18	U	8.6	18	40	ppbv	108-05-4
TO-14	Air	17-Dec-14	VE-4S_SV30E10	VINYL CHLORIDE	7	U	2.6	7	10	ppbv	75-01-4
TO-14	Air	14-Jan-15	VE-4D_SV75E11	1,1,1-TRICHLOROETHANE	0.98	U	0.17	0.98	1.3	ppbv	71-55-6
TO-14	Air	14-Jan-15	VE-4D_SV75E11	1,1,2,2-TETRACHLOROETHANE	0.98	U	0.17	0.98	1.3	ppbv	79-34-5
TO-14	Air	14-Jan-15	VE-4D_SV75E11	1,1,2-TRICHLOROETHANE	0.98	U	0.24	0.98	1.3	ppbv	79-00-5
TO-14	Air	14-Jan-15	VE-4D_SV75E11	1,1-DICHLOROETHANE	0.98	U	0.16	0.98	1.3	ppbv	75-34-3
TO-14	Air	14-Jan-15	VE-4D_SV75E11	1,1-DICHLOROETHENE	0.98	U	0.28	0.98	1.3	ppbv	75-35-4
TO-14	Air	14-Jan-15	VE-4D_SV75E11	1,2,4-TRICHLOROBENZENE	2.3	U	0.85	2.3	5.2	ppbv	120-82-1
TO-14	Air	14-Jan-15	VE-4D_SV75E11	1,2,4-TRIMETHYLBENZENE	0.13	U	0.12	0.98	1.3	ppbv	95-63-6
TO-14	Air	14-Jan-15	VE-4D_SV75E11	1,2-DIBROMOETHANE (EDB)	0.98	U	0.19	0.98	1.3	ppbv	106-93-4
TO-14	Air	14-Jan-15	VE-4D_SV75E11	1,2-DICHLOROBENZENE	0.98	U	0.1	0.98	1.3	ppbv	95-50-1
TO-14	Air	14-Jan-15	VE-4D_SV75E11	1,2-DICHLOROETHANE	0.98	U	0.15	0.98	1.3	ppbv	107-06-2
TO-14	Air	14-Jan-15	VE-4D_SV75E11	1,2-DICHLOROPROPANE	0.98	U	0.19	0.98	1.3	ppbv	78-87-5
TO-14	Air	14-Jan-15	VE-4D_SV75E11	1,3,5-TRIMETHYLBENZENE	0.98	U	0.16	0.98	1.3	ppbv	108-67-8
TO-14	Air	14-Jan-15	VE-4D_SV75E11	1,3-BUTADIENE	0.98	U	0.44	0.98	1.3	ppbv	106-99-0
TO-14	Air	14-Jan-15	VE-4D_SV75E11	1,3-DICHLOROBENZENE	0.98	U	0.11	0.98	1.3	ppbv	541-73-1

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	14-Jan-15	VE-4D_SV75E11	1,4-DICHLOROBENZENE	0.98	U	0.25	0.98	1.3	ppbv	106-46-7
TO-14	Air	14-Jan-15	VE-4D_SV75E11	1,4-DIOXANE	2.3	U	1.3	2.3	5.2	ppbv	123-91-1
TO-14	Air	14-Jan-15	VE-4D_SV75E11	2,2,4-TRIMETHYLPENTANE	0.98	U	0.15	0.98	1.3	ppbv	540-84-1
TO-14	Air	14-Jan-15	VE-4D_SV75E11	2-BUTANONE (METHYL ETHYL KETONE)	2.3	U	1.1	2.3	5.2	ppbv	78-93-3
TO-14	Air	14-Jan-15	VE-4D_SV75E11	2-HEXANONE	2.3	U	0.81	2.3	5.2	ppbv	591-78-6
TO-14	Air	14-Jan-15	VE-4D_SV75E11	2-PROPANOL	1.8	J	1.1	2.3	5.2	ppbv	67-63-0
TO-14	Air	14-Jan-15	VE-4D_SV75E11	3-CHLOROPROPENE	2.3	U	1.2	2.3	5.2	ppbv	107-05-1
TO-14	Air	14-Jan-15	VE-4D_SV75E11	4-ETHYLTOLUENE	0.98	U	0.22	0.98	1.3	ppbv	622-96-8
TO-14	Air	14-Jan-15	VE-4D_SV75E11	4-METHYL-2-PENTANONE	0.98	U	0.54	0.98	1.3	ppbv	108-10-1
TO-14	Air	14-Jan-15	VE-4D_SV75E11	ACETONE	5.9	J	2.5	2.5	13	ppbv	67-64-1
TO-14	Air	14-Jan-15	VE-4D_SV75E11	ALPHA-CHLOROTOLUENE	0.98	U	0.2	0.98	1.3	ppbv	100-44-7
TO-14	Air	14-Jan-15	VE-4D_SV75E11	BENZENE	0.98	U	0.36	0.98	1.3	ppbv	71-43-2
TO-14	Air	14-Jan-15	VE-4D_SV75E11	BROMODICHLOROMETHANE	0.16	U	0.16	0.98	1.3	ppbv	75-27-4
TO-14	Air	14-Jan-15	VE-4D_SV75E11	BROMOFORM	0.98	U	0.22	0.98	1.3	ppbv	75-25-2
TO-14	Air	14-Jan-15	VE-4D_SV75E11	BROMOMETHANE	2.3	U	0.78	2.3	13	ppbv	74-83-9
TO-14	Air	14-Jan-15	VE-4D_SV75E11	CARBON DISULFIDE	2.3	U	1.1	2.3	5.2	ppbv	75-15-0
TO-14	Air	14-Jan-15	VE-4D_SV75E11	CARBON TETRACHLORIDE	0.98	U	0.16	0.98	1.3	ppbv	56-23-5
TO-14	Air	14-Jan-15	VE-4D_SV75E11	CHLOROBENZENE	0.98	U	0.23	0.98	1.3	ppbv	108-90-7
TO-14	Air	14-Jan-15	VE-4D_SV75E11	CHLOROETHANE	2.3	U	1	2.3	5.2	ppbv	75-00-3
TO-14	Air	14-Jan-15	VE-4D_SV75E11	CHLOROFORM	0.98	U	0.18	0.98	1.3	ppbv	67-66-3
TO-14	Air	14-Jan-15	VE-4D_SV75E11	CHLOROMETHANE	2.3	U	1.7	2.3	5.2	ppbv	74-87-3
TO-14	Air	14-Jan-15	VE-4D_SV75E11	CIS-1,2-DICHLOROETHENE	0.74	J	0.41	0.98	1.3	ppbv	156-59-2
TO-14	Air	14-Jan-15	VE-4D_SV75E11	CIS-1,3-DICHLOROPROPENE	0.98	U	0.33	0.98	1.3	ppbv	10061-01-5
TO-14	Air	14-Jan-15	VE-4D_SV75E11	CUMENE	0.98	U	0.21	0.98	1.3	ppbv	98-82-8
TO-14	Air	14-Jan-15	VE-4D_SV75E11	CYCLOHEXANE	0.98	U	0.27	0.98	1.3	ppbv	110-82-7
TO-14	Air	14-Jan-15	VE-4D_SV75E11	DIBROMOCHLOROMETHANE	0.98	U	0.21	0.98	1.3	ppbv	124-48-1
TO-14	Air	14-Jan-15	VE-4D_SV75E11	ETHANOL	5	J	1.6	2.3	5.2	ppbv	64-17-5
TO-14	Air	14-Jan-15	VE-4D_SV75E11	ETHYL BENZENE	0.98	U	0.19	0.98	1.3	ppbv	100-41-4
TO-14	Air	14-Jan-15	VE-4D_SV75E11	FREON 11	0.21	J	0.13	0.98	1.3	ppbv	75-69-4

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	14-Jan-15	VE-4D_SV75E11	FREON 113	0.98	U	0.25	0.98	1.3	ppbv	76-13-1
TO-14	Air	14-Jan-15	VE-4D_SV75E11	FREON 114	0.98	U	0.081	0.98	1.3	ppbv	76-14-2
TO-14	Air	14-Jan-15	VE-4D_SV75E11	FREON 12	0.58	J	0.14	0.98	1.3	ppbv	75-71-8
TO-14	Air	14-Jan-15	VE-4D_SV75E11	HEPTANE	0.98	U	0.37	0.98	1.3	ppbv	142-82-5
TO-14	Air	14-Jan-15	VE-4D_SV75E11	HEXACHLOROBUTADIENE	2.3	U	0.94	2.3	5.2	ppbv	87-68-3
TO-14	Air	14-Jan-15	VE-4D_SV75E11	HEXANE	0.98	U	0.34	0.98	1.3	ppbv	110-54-3
TO-14	Air	14-Jan-15	VE-4D_SV75E11	ISOPROPYL ETHER	0.95	UJ	0.95		5.2	ppbv	108-20-3
TO-14	Air	14-Jan-15	VE-4D_SV75E11	M,P-XYLENE	0.18	J	0.16	0.98	1.3	ppbv	108-38-3/1
TO-14	Air	14-Jan-15	VE-4D_SV75E11	METHYL TERT-BUTYL ETHER	0.98	U	0.32	0.98	1.3	ppbv	1634-04-4
TO-14	Air	14-Jan-15	VE-4D_SV75E11	METHYLENE CHLORIDE	2.3	U	1.2	2.3	13	ppbv	75-09-2
TO-14	Air	14-Jan-15	VE-4D_SV75E11	NAPHTHALENE	1.4	J	0.21	2.3	5.2	ppbv	91-20-3
TO-14	Air	14-Jan-15	VE-4D_SV75E11	O-XYLENE	0.98	U	0.22	0.98	1.3	ppbv	95-47-6
TO-14	Air	14-Jan-15	VE-4D_SV75E11	PROPYLBENZENE	0.98	U	0.18	0.98	1.3	ppbv	103-65-1
TO-14	Air	14-Jan-15	VE-4D_SV75E11	STYRENE	0.98	U	0.23	0.98	1.3	ppbv	100-42-5
TO-14	Air	14-Jan-15	VE-4D_SV75E11	TETRACHLOROETHENE	0.98	U	0.28	0.98	1.3	ppbv	127-18-4
TO-14	Air	14-Jan-15	VE-4D_SV75E11	TETRAHYDROFURAN	0.51	J	0.29	0.98	1.3	ppbv	109-99-9
TO-14	Air	14-Jan-15	VE-4D_SV75E11	TOLUENE	0.37	J	0.22	0.98	1.3	ppbv	108-88-3
TO-14	Air	14-Jan-15	VE-4D_SV75E11	TRANS-1,2-DICHLOROETHENE	0.98	U	0.32	0.98	1.3	ppbv	156-60-5
TO-14	Air	14-Jan-15	VE-4D_SV75E11	TRANS-1,3-DICHLOROPROPENE	0.98	U	0.31	0.98	1.3	ppbv	10061-02-6
TO-14	Air	14-Jan-15	VE-4D_SV75E11	TRICHLOROETHENE	3.2		0.35	0.98	1.3	ppbv	79-01-6
TO-14	Air	14-Jan-15	VE-4D_SV75E11	VINYL ACETATE	2.3	U	1.1	2.3	5.2	ppbv	108-05-4
TO-14	Air	14-Jan-15	VE-4D_SV75E11	VINYL CHLORIDE	0.98	U	0.34	0.98	1.3	ppbv	75-01-4
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	1,1,1-TRICHLOROETHANE	0.92	U	0.16	0.92	1.2	ppbv	71-55-6
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	1,1,2,2-TETRACHLOROETHANE	0.92	U	0.16	0.92	1.2	ppbv	79-34-5
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	1,1,2-TRICHLOROETHANE	0.92	U	0.22	0.92	1.2	ppbv	79-00-5
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	1,1-DICHLOROETHANE	0.92	U	0.15	0.92	1.2	ppbv	75-34-3
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	1,1-DICHLOROETHENE	0.92	U	0.27	0.92	1.2	ppbv	75-35-4
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	1,2,4-TRICHLOROBENZENE	2.2	U	0.8	2.2	4.8	ppbv	120-82-1
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	1,2,4-TRIMETHYLBENZENE	0.16	U	0.12	0.92	1.2	ppbv	95-63-6

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	1,2-DIBROMOETHANE (EDB)	0.92	U	0.18	0.92	1.2	ppbv	106-93-4
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	1,2-DICHLOROBENZENE	0.92	U	0.095	0.92	1.2	ppbv	95-50-1
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	1,2-DICHLOROETHANE	0.92	U	0.14	0.92	1.2	ppbv	107-06-2
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	1,2-DICHLOROPROPANE	0.92	U	0.18	0.92	1.2	ppbv	78-87-5
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	1,3,5-TRIMETHYLBENZENE	0.92	U	0.15	0.92	1.2	ppbv	108-67-8
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	1,3-BUTADIENE	0.92	U	0.41	0.92	1.2	ppbv	106-99-0
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	1,3-DICHLOROBENZENE	0.92	U	0.1	0.92	1.2	ppbv	541-73-1
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	1,4-DICHLOROBENZENE	0.92	U	0.23	0.92	1.2	ppbv	106-46-7
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	1,4-DIOXANE	2.2	U	1.2	2.2	4.8	ppbv	123-91-1
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	2,2,4-TRIMETHYLPENTANE	0.32	J	0.14	0.92	1.2	ppbv	540-84-1
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	2-BUTANONE (METHYL ETHYL KETONE)	2.2	U	1.1	2.2	4.8	ppbv	78-93-3
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	2-HEXANONE	2.2	U	0.76	2.2	4.8	ppbv	591-78-6
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	2-PROPANOL	1.7	J	1.1	2.2	4.8	ppbv	67-63-0
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	3-CHLOROPROPENE	2.2	U	1.1	2.2	4.8	ppbv	107-05-1
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	4-ETHYLTOLUENE	0.92	U	0.21	0.92	1.2	ppbv	622-96-8
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	4-METHYL-2-PENTANONE	0.92	U	0.51	0.92	1.2	ppbv	108-10-1
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	ACETONE	6	J	2.4	2.4	12	ppbv	67-64-1
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	ALPHA-CHLOROTOLUENE	0.92	U	0.18	0.92	1.2	ppbv	100-44-7
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	BENZENE	0.38	J	0.34	0.92	1.2	ppbv	71-43-2
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	BROMODICHLOROMETHANE	0.92	U	0.14	0.92	1.2	ppbv	75-27-4
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	BROMOFORM	0.92	U	0.21	0.92	1.2	ppbv	75-25-2
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	BROMOMETHANE	2.2	U	0.73	2.2	12	ppbv	74-83-9
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	CARBON DISULFIDE	2.2	U	1	2.2	4.8	ppbv	75-15-0
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	CARBON TETRACHLORIDE	0.92	U	0.15	0.92	1.2	ppbv	56-23-5
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	CHLOROBENZENE	0.92	U	0.22	0.92	1.2	ppbv	108-90-7
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	CHLOROETHANE	2.2	U	0.98	2.2	4.8	ppbv	75-00-3
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	CHLOROFORM	0.92	U	0.17	0.92	1.2	ppbv	67-66-3
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	CHLOROMETHANE	2.2	U	1.6	2.2	4.8	ppbv	74-87-3
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	CIS-1,2-DICHLOROETHENE	0.92	U	0.39	0.92	1.2	ppbv	156-59-2

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	CIS-1,3-DICHLOROPROPENE	0.92	U	0.31	0.92	1.2	ppbv	10061-01-5
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	CUMENE	0.92	U	0.2	0.92	1.2	ppbv	98-82-8
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	CYCLOHEXANE	0.72	J	0.26	0.92	1.2	ppbv	110-82-7
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	DIBROMOCHLOROMETHANE	0.92	U	0.2	0.92	1.2	ppbv	124-48-1
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	ETHANOL	3.3	J	1.5	2.2	4.8	ppbv	64-17-5
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	ETHYL BENZENE	0.21	J	0.17	0.92	1.2	ppbv	100-41-4
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	FREON 11	0.27	J	0.12	0.92	1.2	ppbv	75-69-4
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	FREON 113	0.92	U	0.23	0.92	1.2	ppbv	76-13-1
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	FREON 114	0.92	U	0.076	0.92	1.2	ppbv	76-14-2
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	FREON 12	0.53	J	0.13	0.92	1.2	ppbv	75-71-8
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	HEPTANE	0.8	J	0.35	0.92	1.2	ppbv	142-82-5
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	HEXACHLOROBUTADIENE	2.2	U	0.88	2.2	4.8	ppbv	87-68-3
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	HEXANE	0.95	J	0.32	0.92	1.2	ppbv	110-54-3
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	ISOPROPYL ETHER	0.89	UJ	0.89		4.8	ppbv	108-20-3
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	M,P-XYLENE	0.21	J	0.15	0.92	1.2	ppbv	108-38-3/1
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	METHYL TERT-BUTYL ETHER	0.92	U	0.3	0.92	1.2	ppbv	1634-04-4
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	METHYLENE CHLORIDE	2.2	U	1.1	2.2	12	ppbv	75-09-2
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	NAPHTHALENE	2.2	U	0.2	2.2	4.8	ppbv	91-20-3
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	O-XYLENE	0.92	U	0.2	0.92	1.2	ppbv	95-47-6
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	PROPYLBENZENE	0.92	U	0.17	0.92	1.2	ppbv	103-65-1
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	STYRENE	0.92	U	0.22	0.92	1.2	ppbv	100-42-5
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	TETRACHLOROETHENE	0.92	U	0.26	0.92	1.2	ppbv	127-18-4
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	TETRAHYDROFURAN	0.66	J	0.27	0.92	1.2	ppbv	109-99-9
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	TOLUENE	0.33	J	0.21	0.92	1.2	ppbv	108-88-3
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	TRANS-1,2-DICHLOROETHENE	0.92	U	0.3	0.92	1.2	ppbv	156-60-5
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	TRANS-1,3-DICHLOROPROPENE	0.92	U	0.29	0.92	1.2	ppbv	10061-02-6
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	TRICHLOROETHENE	1.6		0.32	0.92	1.2	ppbv	79-01-6
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	VINYL ACETATE	2.2	U	1	2.2	4.8	ppbv	108-05-4
TO-14	Air	14-Jan-15	VE-4D_SV75E11FD	VINYL CHLORIDE	0.92	U	0.32	0.92	1.2	ppbv	75-01-4

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	1,1,1-TRICHLOROETHANE	1.9	U	0.33	1.9	2.5	ppbv	71-55-6
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	1,1,2,2-TETRACHLOROETHANE	1.9	U	0.33	1.9	2.5	ppbv	79-34-5
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	1,1,2-TRICHLOROETHANE	1.9	U	0.46	1.9	2.5	ppbv	79-00-5
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	1,1-DICHLOROETHANE	1.9	U	0.32	1.9	2.5	ppbv	75-34-3
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	1,1-DICHLOROETHENE	1.9	U	0.56	1.9	2.5	ppbv	75-35-4
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	1,2,4-TRICHLOROBENZENE	4.5	U	1.6	4.5	10	ppbv	120-82-1
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	1,2,4-TRIMETHYLBENZENE	1.9	U	0.24	1.9	2.5	ppbv	95-63-6
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	1,2-DIBROMOETHANE (EDB)	1.9	U	0.37	1.9	2.5	ppbv	106-93-4
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	1,2-DICHLOROBENZENE	1.9	U	0.2	1.9	2.5	ppbv	95-50-1
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	1,2-DICHLOROETHANE	1.9	U	0.3	1.9	2.5	ppbv	107-06-2
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	1,2-DICHLOROPROPANE	0.42	U	0.37	1.9	2.5	ppbv	78-87-5
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	1,3,5-TRIMETHYLBENZENE	1.9	U	0.31	1.9	2.5	ppbv	108-67-8
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	1,3-BUTADIENE	1.9	U	0.85	1.9	2.5	ppbv	106-99-0
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	1,3-DICHLOROBENZENE	1.9	U	0.22	1.9	2.5	ppbv	541-73-1
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	1,4-DICHLOROBENZENE	1.9	U	0.48	1.9	2.5	ppbv	106-46-7
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	1,4-DIOXANE	4.5	U	2.6	4.5	10	ppbv	123-91-1
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	2,2,4-TRIMETHYLPENTANE	1.9	U	0.28	1.9	2.5	ppbv	540-84-1
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	2-BUTANONE (METHYL ETHYL KETONE)	4.5	U	2.2	4.5	10	ppbv	78-93-3
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	2-HEXANONE	4.5	U	1.6	4.5	10	ppbv	591-78-6
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	2-PROPANOL	4.5	U	2.2	4.5	10	ppbv	67-63-0
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	3-CHLOROPROPENE	4.5	U	2.4	4.5	10	ppbv	107-05-1
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	4-ETHYLTOLUENE	1.9	U	0.44	1.9	2.5	ppbv	622-96-8
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	4-METHYL-2-PENTANONE	1.9	U	1.1	1.9	2.5	ppbv	108-10-1
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	ACETONE	5.5	J	5	5	25	ppbv	67-64-1
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	ALPHA-CHLOROTOLUENE	1.9	U	0.38	1.9	2.5	ppbv	100-44-7
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	BENZENE	1.9	U	0.71	1.9	2.5	ppbv	71-43-2
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	BROMODICHLOROMETHANE	1.9	U	0.3	1.9	2.5	ppbv	75-27-4
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	BROMOFORM	1.9	U	0.43	1.9	2.5	ppbv	75-25-2
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	BROMOMETHANE	4.5	U	1.5	4.5	25	ppbv	74-83-9



**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	CARBON DISULFIDE	4.5	U	2.2	4.5	10	ppbv	75-15-0
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	CARBON TETRACHLORIDE	1.9	U	0.31	1.9	2.5	ppbv	56-23-5
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	CHLOROBENZENE	1.9	U	0.45	1.9	2.5	ppbv	108-90-7
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	CHLOROETHANE	4.5	U	2	4.5	10	ppbv	75-00-3
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	CHLOROFORM	1.9	U	0.35	1.9	2.5	ppbv	67-66-3
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	CHLOROMETHANE	4.5	U	3.3	4.5	10	ppbv	74-87-3
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	CIS-1,2-DICHLOROETHENE	110		0.81	1.9	2.5	ppbv	156-59-2
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	CIS-1,3-DICHLOROPROPENE	1.9	U	0.65	1.9	2.5	ppbv	10061-01-5
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	CUMENE	1.9	U	0.42	1.9	2.5	ppbv	98-82-8
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	CYCLOHEXANE	1.9	U	0.53	1.9	2.5	ppbv	110-82-7
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	DIBROMOCHLOROMETHANE	1.9	U	0.42	1.9	2.5	ppbv	124-48-1
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	ETHANOL	4.5	U	3.2	4.5	10	ppbv	64-17-5
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	ETHYL BENZENE	1.9	U	0.36	1.9	2.5	ppbv	100-41-4
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	FREON 11	0.32	J	0.26	1.9	2.5	ppbv	75-69-4
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	FREON 113	0.76	J	0.48	1.9	2.5	ppbv	76-13-1
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	FREON 114	1.9	U	0.16	1.9	2.5	ppbv	76-14-2
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	FREON 12	0.93	J	0.27	1.9	2.5	ppbv	75-71-8
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	HEPTANE	1.9	U	0.72	1.9	2.5	ppbv	142-82-5
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	HEXACHLOROBUTADIENE	4.5	U	1.8	4.5	10	ppbv	87-68-3
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	HEXANE	1.9	U	0.67	1.9	2.5	ppbv	110-54-3
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	ISOPROPYL ETHER	1.8	UJ	1.8		10	ppbv	108-20-3
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	M,P-XYLENE	1.9	U	0.31	1.9	2.5	ppbv	108-38-3/1
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	METHYL TERT-BUTYL ETHER	1.9	U	0.63	1.9	2.5	ppbv	1634-04-4
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	METHYLENE CHLORIDE	4.5	U	2.4	4.5	25	ppbv	75-09-2
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	NAPHTHALENE	4.5	U	0.4	4.5	10	ppbv	91-20-3
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	O-XYLENE	1.9	U	0.42	1.9	2.5	ppbv	95-47-6
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	PROPYLBENZENE	1.9	U	0.36	1.9	2.5	ppbv	103-65-1
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	STYRENE	1.9	U	0.45	1.9	2.5	ppbv	100-42-5
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	TETRACHLOROETHENE	1.9	U	0.54	1.9	2.5	ppbv	127-18-4

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	TETRAHYDROFURAN	1.9	U	0.56	1.9	2.5	ppbv	109-99-9
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	TOLUENE	0.52	J	0.44	1.9	2.5	ppbv	108-88-3
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	TRANS-1,2-DICHLOROETHENE	1.9	U	0.62	1.9	2.5	ppbv	156-60-5
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	TRANS-1,3-DICHLOROPROPENE	1.9	U	0.6	1.9	2.5	ppbv	10061-02-6
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	TRICHLOROETHENE	560		0.68	1.9	2.5	ppbv	79-01-6
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	VINYL ACETATE	4.5	U	2.2	4.5	10	ppbv	108-05-4
TO-14	Air	14-Jan-15	VE-4S_SV30E11A	VINYL CHLORIDE	1.9	U	0.66	1.9	2.5	ppbv	75-01-4
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	1,1,1-TRICHLOROETHANE	7.5	U	1.3	7.5	9.9	ppbv	71-55-6
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	1,1,2,2-TETRACHLOROETHANE	7.5	U	1.3	7.5	9.9	ppbv	79-34-5
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	1,1,2-TRICHLOROETHANE	7.5	U	1.8	7.5	9.9	ppbv	79-00-5
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	1,1-DICHLOROETHANE	7.5	U	1.3	7.5	9.9	ppbv	75-34-3
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	1,1-DICHLOROETHENE	7.5	U	2.2	7.5	9.9	ppbv	75-35-4
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	1,2,4-TRICHLOROBENZENE	18	U	6.5	18	40	ppbv	120-82-1
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	1,2,4-TRIMETHYLBENZENE	7.5	U	0.94	7.5	9.9	ppbv	95-63-6
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	1,2-DIBROMOETHANE (EDB)	7.5	U	1.5	7.5	9.9	ppbv	106-93-4
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	1,2-DICHLOROBENZENE	7.5	U	0.78	7.5	9.9	ppbv	95-50-1
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	1,2-DICHLOROETHANE	7.5	U	1.2	7.5	9.9	ppbv	107-06-2
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	1,2-DICHLOROPROPANE	1.9	U	1.4	7.5	9.9	ppbv	78-87-5
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	1,3,5-TRIMETHYLBENZENE	7.5	U	1.2	7.5	9.9	ppbv	108-67-8
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	1,3-BUTADIENE	7.5	U	3.3	7.5	9.9	ppbv	106-99-0
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	1,3-DICHLOROBENZENE	7.5	U	0.86	7.5	9.9	ppbv	541-73-1
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	1,4-DICHLOROBENZENE	7.5	U	1.9	7.5	9.9	ppbv	106-46-7
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	1,4-DIOXANE	18	U	10	18	40	ppbv	123-91-1
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	2,2,4-TRIMETHYLPENTANE	7.5	U	1.1	7.5	9.9	ppbv	540-84-1
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	2-BUTANONE (METHYL ETHYL KETONE)	18	U	8.8	18	40	ppbv	78-93-3
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	2-HEXANONE	18	U	6.2	18	40	ppbv	591-78-6
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	2-PROPANOL	10	J	8.8	18	40	ppbv	67-63-0
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	3-CHLOROPROPENE	18	U	9.3	18	40	ppbv	107-05-1
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	4-ETHYLTOLUENE	7.5	U	1.7	7.5	9.9	ppbv	622-96-8

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	4-METHYL-2-PENTANONE	7.5	U	4.2	7.5	9.9	ppbv	108-10-1
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	ACETONE	20	U	20	20	99	ppbv	67-64-1
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	ALPHA-CHLOROTOLUENE	7.5	U	1.5	7.5	9.9	ppbv	100-44-7
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	BENZENE	7.5	U	2.8	7.5	9.9	ppbv	71-43-2
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	BROMODICHLOROMETHANE	7.5	U	1.2	7.5	9.9	ppbv	75-27-4
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	BROMOFORM	7.5	U	1.7	7.5	9.9	ppbv	75-25-2
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	BROMOMETHANE	18	U	6	18	99	ppbv	74-83-9
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	CARBON DISULFIDE	18	U	8.6	18	40	ppbv	75-15-0
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	CARBON TETRACHLORIDE	7.5	U	1.2	7.5	9.9	ppbv	56-23-5
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	CHLOROBENZENE	7.5	U	1.8	7.5	9.9	ppbv	108-90-7
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	CHLOROETHANE	18	U	8.1	18	40	ppbv	75-00-3
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	CHLOROFORM	2.6	U	1.4	7.5	9.9	ppbv	67-66-3
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	CHLOROMETHANE	18	U	13	18	40	ppbv	74-87-3
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	CIS-1,2-DICHLOROETHENE	520		3.2	7.5	9.9	ppbv	156-59-2
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	CIS-1,3-DICHLOROPROPENE	7.5	U	2.6	7.5	9.9	ppbv	10061-01-5
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	CUMENE	7.5	U	1.6	7.5	9.9	ppbv	98-82-8
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	CYCLOHEXANE	7.5	U	2.1	7.5	9.9	ppbv	110-82-7
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	DIBROMOCHLOROMETHANE	7.5	U	1.6	7.5	9.9	ppbv	124-48-1
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	ETHANOL	18	U	12	18	40	ppbv	64-17-5
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	ETHYL BENZENE	7.5	U	1.4	7.5	9.9	ppbv	100-41-4
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	FREON 11	1.8	J	1	7.5	9.9	ppbv	75-69-4
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	FREON 113	6.3	J	1.9	7.5	9.9	ppbv	76-13-1
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	FREON 114	7.5	U	0.62	7.5	9.9	ppbv	76-14-2
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	FREON 12	7.5	U	1	7.5	9.9	ppbv	75-71-8
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	HEPTANE	7.5	U	2.8	7.5	9.9	ppbv	142-82-5
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	HEXACHLOROBUTADIENE	18	U	7.2	18	40	ppbv	87-68-3
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	HEXANE	7.5	U	2.6	7.5	9.9	ppbv	110-54-3
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	ISOPROPYL ETHER	7.3	UJ	7.3		40	ppbv	108-20-3
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	M,P-XYLENE	7.5	U	1.2	7.5	9.9	ppbv	108-38-3/1

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	METHYL TERT-BUTYL ETHER	7.5	U	2.5	7.5	9.9	ppbv	1634-04-4
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	METHYLENE CHLORIDE	18	U	9.3	18	99	ppbv	75-09-2
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	NAPHTHALENE	18	U	1.6	18	40	ppbv	91-20-3
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	O-XYLENE	7.5	U	1.6	7.5	9.9	ppbv	95-47-6
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	PROPYLBENZENE	7.5	U	1.4	7.5	9.9	ppbv	103-65-1
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	STYRENE	7.5	U	1.8	7.5	9.9	ppbv	100-42-5
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	TETRACHLOROETHENE	7.5	U	2.1	7.5	9.9	ppbv	127-18-4
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	TETRAHYDROFURAN	7.5	U	2.2	7.5	9.9	ppbv	109-99-9
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	TOLUENE	7.5	U	1.7	7.5	9.9	ppbv	108-88-3
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	TRANS-1,2-DICHLOROETHENE	7.5	U	2.4	7.5	9.9	ppbv	156-60-5
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	TRANS-1,3-DICHLOROPROPENE	7.5	U	2.4	7.5	9.9	ppbv	10061-02-6
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	TRICHLOROETHENE	2,200		2.6	7.5	9.9	ppbv	79-01-6
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	VINYL ACETATE	18	U	8.6	18	40	ppbv	108-05-4
TO-14	Air	14-Jan-15	VE-4S_SV30E11B	VINYL CHLORIDE	7.5	U	2.6	7.5	9.9	ppbv	75-01-4
TO-14	Air	21-Jan-15	VE-4S_SV30E12	1,1,1-TRICHLOROETHANE	9.7	U	4.2	9.7	24	ppbv	71-55-6
TO-14	Air	21-Jan-15	VE-4S_SV30E12	1,1,2,2-TETRACHLOROETHANE	9.7	U	1.4	9.7	24	ppbv	79-34-5
TO-14	Air	21-Jan-15	VE-4S_SV30E12	1,1,2-TRICHLOROETHANE	9.7	U	4.9	9.7	24	ppbv	79-00-5
TO-14	Air	21-Jan-15	VE-4S_SV30E12	1,1-DICHLOROETHANE	9.7	U	2.2	9.7	24	ppbv	75-34-3
TO-14	Air	21-Jan-15	VE-4S_SV30E12	1,1-DICHLOROETHENE	9.7	U	9	9.7	24	ppbv	75-35-4
TO-14	Air	21-Jan-15	VE-4S_SV30E12	1,2,4-TRICHLOROBENZENE	97	U	5	97	97	ppbv	120-82-1
TO-14	Air	21-Jan-15	VE-4S_SV30E12	1,2,4-TRIMETHYLBENZENE	9.7	U	3.8	9.7	24	ppbv	95-63-6
TO-14	Air	21-Jan-15	VE-4S_SV30E12	1,2-DIBROMOETHANE (EDB)	9.7	U	3.3	9.7	24	ppbv	106-93-4
TO-14	Air	21-Jan-15	VE-4S_SV30E12	1,2-DICHLOROBENZENE	9.7	U	3.1	9.7	24	ppbv	95-50-1
TO-14	Air	21-Jan-15	VE-4S_SV30E12	1,2-DICHLOROETHANE	9.7	U	7.1	9.7	24	ppbv	107-06-2
TO-14	Air	21-Jan-15	VE-4S_SV30E12	1,2-DICHLOROPROPANE	9.7	U	3.2	9.7	24	ppbv	78-87-5
TO-14	Air	21-Jan-15	VE-4S_SV30E12	1,3,5-TRIMETHYLBENZENE	9.7	U	3	9.7	24	ppbv	108-67-8
TO-14	Air	21-Jan-15	VE-4S_SV30E12	1,3-BUTADIENE	9.7	U	7.9	9.7	24	ppbv	106-99-0
TO-14	Air	21-Jan-15	VE-4S_SV30E12	1,3-DICHLOROBENZENE	9.7	U	3.1	9.7	24	ppbv	541-73-1
TO-14	Air	21-Jan-15	VE-4S_SV30E12	1,4-DICHLOROBENZENE	9.7	U	3	9.7	24	ppbv	106-46-7

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	21-Jan-15	VE-4S_SV30E12	1,4-DIOXANE	97	U	12	97	97	ppbv	123-91-1
TO-14	Air	21-Jan-15	VE-4S_SV30E12	2,2,4-TRIMETHYLPENTANE	9.7	U	4.8	9.7	24	ppbv	540-84-1
TO-14	Air	21-Jan-15	VE-4S_SV30E12	2-BUTANONE (METHYL ETHYL KETONE)	97	U	25	97	97	ppbv	78-93-3
TO-14	Air	21-Jan-15	VE-4S_SV30E12	2-HEXANONE	97	U	13	97	97	ppbv	591-78-6
TO-14	Air	21-Jan-15	VE-4S_SV30E12	2-PROPANOL	97	U	13	97	97	ppbv	67-63-0
TO-14	Air	21-Jan-15	VE-4S_SV30E12	3-CHLOROPROPENE	97	U	13	97	97	ppbv	107-05-1
TO-14	Air	21-Jan-15	VE-4S_SV30E12	4-ETHYLTOLUENE	9.7	U	5.1	9.7	24	ppbv	622-96-8
TO-14	Air	21-Jan-15	VE-4S_SV30E12	4-METHYL-2-PENTANONE	9.7	U	4.2	9.7	24	ppbv	108-10-1
TO-14	Air	21-Jan-15	VE-4S_SV30E12	ACETONE	97	U	18	97	240	ppbv	67-64-1
TO-14	Air	21-Jan-15	VE-4S_SV30E12	ALPHA-CHLOROTOLUENE	9.7	U	5.7	9.7	24	ppbv	100-44-7
TO-14	Air	21-Jan-15	VE-4S_SV30E12	BENZENE	9.7	U	2.3	9.7	24	ppbv	71-43-2
TO-14	Air	21-Jan-15	VE-4S_SV30E12	BROMODICHLOROMETHANE	9.7	U	2.6	9.7	24	ppbv	75-27-4
TO-14	Air	21-Jan-15	VE-4S_SV30E12	BROMOFORM	9.7	U	3.4	9.7	24	ppbv	75-25-2
TO-14	Air	21-Jan-15	VE-4S_SV30E12	BROMOMETHANE	97	U	8.5	97	240	ppbv	74-83-9
TO-14	Air	21-Jan-15	VE-4S_SV30E12	CARBON DISULFIDE	97	U	9.1	97	97	ppbv	75-15-0
TO-14	Air	21-Jan-15	VE-4S_SV30E12	CARBON TETRACHLORIDE	9.7	U	5.6	9.7	24	ppbv	56-23-5
TO-14	Air	21-Jan-15	VE-4S_SV30E12	CHLOROBENZENE	9.7	U	1.7	9.7	24	ppbv	108-90-7
TO-14	Air	21-Jan-15	VE-4S_SV30E12	CHLOROETHANE	97	U	15	97	97	ppbv	75-00-3
TO-14	Air	21-Jan-15	VE-4S_SV30E12	CHLOROFORM	9.7	U	5	9.7	24	ppbv	67-66-3
TO-14	Air	21-Jan-15	VE-4S_SV30E12	CHLOROMETHANE	97	U	17	97	97	ppbv	74-87-3
TO-14	Air	21-Jan-15	VE-4S_SV30E12	CIS-1,2-DICHLOROETHENE	930		6.2	9.7	24	ppbv	156-59-2
TO-14	Air	21-Jan-15	VE-4S_SV30E12	CIS-1,3-DICHLOROPROPENE	9.7	U	3.6	9.7	24	ppbv	10061-01-5
TO-14	Air	21-Jan-15	VE-4S_SV30E12	CUMENE	9.7	U	1.9	9.7	24	ppbv	98-82-8
TO-14	Air	21-Jan-15	VE-4S_SV30E12	CYCLOHEXANE	9.7	U	7	9.7	24	ppbv	110-82-7
TO-14	Air	21-Jan-15	VE-4S_SV30E12	DIBROMOCHLOROMETHANE	9.7	U	3.9	9.7	24	ppbv	124-48-1
TO-14	Air	21-Jan-15	VE-4S_SV30E12	ETHANOL	97	U	40	97	97	ppbv	64-17-5
TO-14	Air	21-Jan-15	VE-4S_SV30E12	ETHYL BENZENE	9.7	U	4.2	9.7	24	ppbv	100-41-4
TO-14	Air	21-Jan-15	VE-4S_SV30E12	FREON 11	9.7	U	4.3	9.7	24	ppbv	75-69-4
TO-14	Air	21-Jan-15	VE-4S_SV30E12	FREON 113	11	J	6.4	9.7	24	ppbv	76-13-1

**ATTACHMENT 3**

Raw Data

Method	Matrix	Sample Date	Field ID	Analyte	Final Result	Final Flag	MDL	LOD	RL	Units	CAS No.
TO-14	Air	21-Jan-15	VE-4S_SV30E12	FREON 114	9.7	U	5.3	9.7	24	ppbv	76-14-2
TO-14	Air	21-Jan-15	VE-4S_SV30E12	FREON 12	9.7	U	4.6	9.7	24	ppbv	75-71-8
TO-14	Air	21-Jan-15	VE-4S_SV30E12	HEPTANE	9.7	U	5.7	9.7	24	ppbv	142-82-5
TO-14	Air	21-Jan-15	VE-4S_SV30E12	HEXACHLOROBUTADIENE	97	U	10	97	97	ppbv	87-68-3
TO-14	Air	21-Jan-15	VE-4S_SV30E12	HEXANE	9.7	U	4.2	9.7	24	ppbv	110-54-3
TO-14	Air	21-Jan-15	VE-4S_SV30E12	ISOPROPYL ETHER	97	UJ	97		97	ppbv	108-20-3
TO-14	Air	21-Jan-15	VE-4S_SV30E12	M,P-XYLENE	9.7	U	3.2	9.7	24	ppbv	108-38-3/1
TO-14	Air	21-Jan-15	VE-4S_SV30E12	METHYL TERT-BUTYL ETHER	9.7	U	3.7	9.7	24	ppbv	1634-04-4
TO-14	Air	21-Jan-15	VE-4S_SV30E12	METHYLENE CHLORIDE	97	U	12	97	240	ppbv	75-09-2
TO-14	Air	21-Jan-15	VE-4S_SV30E12	NAPHTHALENE	97	UJ	1.2	97	97	ppbv	91-20-3
TO-14	Air	21-Jan-15	VE-4S_SV30E12	O-XYLENE	9.7	U	2.2	9.7	24	ppbv	95-47-6
TO-14	Air	21-Jan-15	VE-4S_SV30E12	PROPYLBENZENE	9.7	U	1.6	9.7	24	ppbv	103-65-1
TO-14	Air	21-Jan-15	VE-4S_SV30E12	STYRENE	9.7	U	2.5	9.7	24	ppbv	100-42-5
TO-14	Air	21-Jan-15	VE-4S_SV30E12	TETRACHLOROETHENE	9.7	U	3	9.7	24	ppbv	127-18-4
TO-14	Air	21-Jan-15	VE-4S_SV30E12	TETRAHYDROFURAN	10	U	10	10	24	ppbv	109-99-9
TO-14	Air	21-Jan-15	VE-4S_SV30E12	TOLUENE	9.7	U	2.3	9.7	24	ppbv	108-88-3
TO-14	Air	21-Jan-15	VE-4S_SV30E12	TRANS-1,2-DICHLOROETHENE	9.7	U	4.9	9.7	24	ppbv	156-60-5
TO-14	Air	21-Jan-15	VE-4S_SV30E12	TRANS-1,3-DICHLOROPROPENE	9.7	U	2.7	9.7	24	ppbv	10061-02-6
TO-14	Air	21-Jan-15	VE-4S_SV30E12	TRICHLOROETHENE	6,900		1.6	9.7	24	ppbv	79-01-6
TO-14	Air	21-Jan-15	VE-4S_SV30E12	VINYL ACETATE	97	U	38	97	97	ppbv	108-05-4
TO-14	Air	21-Jan-15	VE-4S_SV30E12	VINYL CHLORIDE	9.7	U	5.4	9.7	24	ppbv	75-01-4

**Attachment 4**  
**SVEET Model Documentation**

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# SVE Endstate Tool (SVEET)

Described in: *Soil Vapor Extraction System Optimization, Transition, and Closure Guidance*

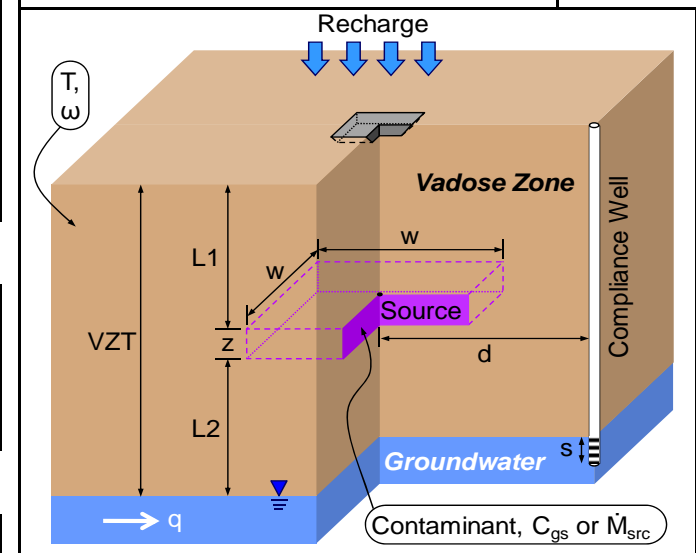
Version 1.0.0

2012-Sep-24

Parameter Name	Permissible Range	Key Values
$T$	10 - 30	20
$\omega$	1 - 9 <sup>a</sup>	1, 5, 9 <sup>a</sup>
$R$	0.4 - 7.5 <sup>b</sup>	0.4
VZT	10 - 60	10, 30, 60
$L1$	varies <sup>c</sup>	—
$z$	varies <sup>d</sup>	—
$w$	10 - 50 <sup>e</sup>	—
$q$	0.005 - 0.3	0.005, 0.03, 0.3
$d$	10 <sup>f</sup> , 25, 50, 75, 100	10, 25, 50, 75, 100
$s$	5 - 30	5
$C_{gs}$	1 - 2000	159
$\dot{M}_{src}$	0.1 - 5000	from STOMP simulations at 3 months elapsed time

See footnotes below.

Allow  $\omega$  down to  $S_r = 0.05$ ?  
FALSE



## User Input

Scenario Name:	—	Case A		
Contaminant:	—	TCE		
$T$ Temperature:	[°C]	20		
$\omega$ Avg. Moisture Content:	[wt %]	8.5		
$R$ Avg. Recharge:	[cm/yr]	7.5		
VZT Vadose Zone Thickness:	[m]	20		
$L1$ Depth to Top of Source:	[m]	8		
$z$ Source Thickness:	[m]	3		
$w$ (= l) Source Width (= Length):	[m]	10		
$q$ GW Darcy Velocity:	[m/day]	0.24		
$d$ Distance to Compliance Well:	[m]	10		
$s$ Compl. Well Screen Length:	[m]	8		
Source Strength Input Type:	—	Gas Concentration		
$C_{gs}$ Source Gas Concentration:	[ppmv]	6.9		
$\dot{M}_{src}$ Source Mass Discharge:	[g/day]			

## Calculated Input

STR	Source Thickness Ratio*:	[--]	0.150	#DIV/0!	#DIV/0!
SA	Areal Footprint of Source*:	[m <sup>2</sup> ]	100	0	0
RSP	Relative Source Position*:	[--]	0.89	#DIV/0!	#DIV/0!
L2	Distance – Source to GW:	[m]	9.00	0.00	0.00
H	Henry's Law Constant**:	[--]	0.263	#N/A	#N/A

## Result – Estimated Groundwater Contaminant Concentration at Selected Compliance Well

$C_w$	Final Groundwater Conc'n:	[µg/L]	2	#N/A	#N/A
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\* See below for permissible ranges of intermediate calculated values.

\*\* See the 'HLC' worksheet for details of the temperature-dependent calculation of H.

Parameter Name	Permissible Range	Key Values
STR	0.1 - 0.5	0.1, 0.25, 0.5
SA	100 - 2500	100, 400, 900, 2500
RSP	0.1 - 10	0.1, 1, 10
L2	0.5 - 49	—
H	contaminant-specific	0.89

<sup>a</sup> The pre-modeled scenarios actually use residual saturation ( $S_r$ ), not gravimetric moisture content. However, for user convenience gravimetric moisture content is used as the input parameter. The key values for  $S_r$  were 0.05, 0.3, and 0.55, which correspond to moisture content values of 0.8078, 4.843, and 8.879, respectively. Again for convenience, the moisture content range is truncated at 1 wt% and extended to 9 wt%, although values at or above 8.879 wt% are treated as  $S_r$  values of 0.55.

<sup>b</sup> The applicability of the estimation approach used here should be confirmed for sites with recharge between 2.5 and 7.5 cm/yr. See Section 4.2.2.1 of the PNNL report entitled *Soil Vapor Extraction System Optimization, Transition, and Closure Guidance* for further discussion.

<sup>c</sup> The range for  $L1$  is variable (with a maximum range of 0.5 - 49 m) because it is a function of the permissible range for RSP and the input values of  $z$  and VZT.

<sup>d</sup> The range for  $z$  is variable (with a maximum range of 1 - 30 m) because it is a function of the permissible range for STR and the input value of VZT.

<sup>e</sup> The range for  $w$  is a function of the permissible range for SA and the square footprint of the source area.

<sup>f</sup> The source width must be less than or equal to 20 m to use  $d = 10$ .