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DATA SUMMARY REPORT ENHANCED IN SITU BIOREMEDIATION PILOT TEST SOUTHERN AREA NWIRP CALVERTON NY

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TETRA TECH

Data Summary Report

Enhanced In Situ Bioremediation Pilot Test

Southern Area

Naval Weapons Industrial Reserve Plant
Calverton, New York

Mid-Atlantic Division
Naval Facilities Engineering Command

Contract Number N62470-08-D-1001
Contract Task Order WE08

March 2012

TETRA TECH

DATA SUMMARY REPORT
ENHANCED IN SITU BIOREMEDIATION PILOT TEST
SOUTHERN AREA

NAVAL WEAPONS INDUSTRIAL RESERVE PLANT
CALVERTON, NEW YORK

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ACRONYMS AND ABBREVIATIONS

µg/L	microgram per liter
bgs	below ground surface
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CLEAN	Comprehensive Long-Term Environmental Action Navy
COC	chain-of-custody
CTO	Contract Task Order
DCA	1,1-Dichloroethane
DCE	1,1-Dichloroethene
DHB	*Dehalobacter sp.*
DHC	*Dehalococcoides sp.*
DO	dissolved oxygen
DPT	direct-push technology
EISB	Enhanced In Situ Bioremediation
ERP	Environmental Restoration Program
GAC	granulated activated carbon
MCL	Maximum Contaminant Level
MEE	methane, ethane, and ethene
mg/L	milligrams per liter
mL	milliliter
mS/cm	millisiemens per centimeter
MS/MSD	matrix spike/matrix spike duplicate
mV	millivolts
NAVFAC	Naval Facilities Engineering Command
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NTU	nephelometric turbidity units
NWIRP	Naval Weapons Industrial Reserve Plant
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
ORP	oxidation-reduction potential
PVC	polyvinyl chloride
QA/QC	quality control/quality assurance
RCRA	Resource Conservation and Recovery Act
TAL	Target Analyte List
TCA	1,1,1-Trichloroethane
TCL	Target Compound List

TOC	Total Organic Carbon
VOC	volatile organic compound

1.0 INTRODUCTION

This Data Summary Report for the anaerobic Enhanced In Situ Bioremediation (EISB) Pilot Test in the Southern Area groundwater plume at Naval Weapons Industrial Reserve Plant (NWIRP) Calverton, Suffolk County, Long Island, New York (Figures 1-1 and 1-2), was prepared by Tetra Tech Inc. for Naval Facilities Engineering Command (NAVFAC) – Mid-Atlantic under the U.S. Navy's Comprehensive Long-Term Environmental Action Navy (CLEAN) Contract No. N62470-08-D-1001, Contract Task Order (CTO) WE08. The Southern Area consists of chlorinated volatile organic compound (VOC)-impacted groundwater that originates at Site 6A on NWIRP Calverton property and extends offsite and southeast to the Peconic River. The primary chlorinated VOCs consist of 1,1,1-trichloroethane (TCA), 1,1-dichloroethane (DCA), 1,1-dichloroethene (DCE), and chloroethane. This report documents anaerobic EISB pilot-scale testing activities that started in July 2010 and were completed in June 2011. Groundwater results from facility-wide semi-annual and annual sampling events from March 2010 to September 2011 are also being used to evaluate the effectiveness of the anaerobic EISB system.

Field activities conducted during the pilot study consisted of the following: monitoring well installation and development, injection and extraction well installation and development, ethyl lactate injection system construction, ethyl lactate injection and groundwater recirculation (three events), and groundwater sampling (five events). The field activities were conducted in accordance with the Work Plan for anaerobic EISB (Tetra Tech, 2010) and the Work Plan Addendum (Tetra Tech, February 2011a). This project is being conducted in accordance with the Navy Environmental Restoration Program (ERP) and the New York State Department of Environmental Conservation (NYSDEC) Resource Conservation and Recovery Act (RCRA) permit number 1-4730-00013/00001-0.

1.1 SCOPE AND OBJECTIVES

This pilot-scale study was conducted to evaluate the effectiveness of anaerobic EISB to treat chlorinated VOCs in a portion of the onsite Southern Area plume. It was conducted in an area with the highest concentrations of VOCs (greater than 500 micrograms per liter [µg/L] near the facilities downgradient property line). The objectives of the pilot-scale test are as follows:

- Evaluate the ability to effectively distribute ethyl lactate.
- Evaluate the effectiveness of anaerobic EISB on chlorinated VOCs.
- Collect data needed to design a full-scale system, including well spacing, injection rates, volume of ethyl lactate, frequency of subsequent injections, and chlorinated VOC degradation rates.
- Determine whether EISB affects iron, manganese, or other metal concentrations significantly in groundwater.

Optimal conditions for biodegradation of TCA, DCA, and DCE include an anaerobic environment (oxygen deficient), a chemically-reducing environment (low positive or negative oxidation-reduction potential [ORP]), and the presence of dehalogenating bacteria including *Dehalobacter sp.* [DHB] and *Dehalococcoides sp.* [DHC]), and the presence of organics and nutrients that facilitate bacterial growth.

Ethyl lactate was selected for the anaerobic EISB pilot-scale test because it has been demonstrated to accelerate dechlorination of chlorinated VOCs, has a low viscosity, is completely soluble in water, and is relatively fast-acting. In addition, ethyl lactate is allowed for use as a food additive by the U.S. Food and Drug Administration. After evaluating trends from the July 2010 and October 2010 ethyl lactate injection events, it was determined that the brief, high ethyl lactate dosage rates combined with high groundwater flow rates in the area resulted in a rapid washout of the substrate from the treatment area. As a result, the March to May 2011 injection event was modified to distribute the ethyl lactate over a longer time period. Refer to Section 3.4 for additional discussion.

1.2 REPORT ORGANIZATION

This report is organized as shown in the Table of Contents. Tables and figures are presented at the end of the document.

2.0 SITE BACKGROUND

NWIRP Calverton was a government-owned, contractor-operated facility owned by the Navy and operated by Northrop Grumman Corporation. The pilot study is part of the Navy's ERP, which is designed to identify contamination resulting from historical operations or releases at Navy lands and facilities, and to institute removal or remedial actions as necessary. The Navy is lead federal agency under the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 CFR Part 300, and Executive Order 12580, as amended by Executive Order 13016, for Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) response activities at Calverton and under the Defense Environmental Restoration Program amendments of 10 U.S.C. § 2701, *et seq..* NYSDEC is the lead oversight agency in accordance with the requirements of the New York State RCRA Hazardous Waste Permit.

The Southern Area is mostly wooded and includes two shallow ponds and drainage swales, including a drainage swale and culvert system originating from Site 6A (Figure 2-1). In 2010, an approximate 15-foot thick and 150-foot wide stratified plume was identified leaving Site 6A. This plume appears to have been acting as a continuing source of Southern Area groundwater contamination. A source area remedy was completed in 2010 and is believed to have eliminated the continuing source, but confirmation monitoring is being conducted.

In November 2009, six monitoring wells were sampled to evaluate natural biodegradation of chlorinated VOCs. The study indicated that conditions are generally favorable for anaerobic biodegradation throughout much of the Southern Area. In addition, DHB and DHC were present in in all six monitoring wells sampled, indicating that bacteria were naturally present in site groundwater. This study is presented and discussed in the Southern Area Corrective Measures Study/Feasibility Study for the Southern Area (Tetra Tech, 2011b).

3.0 FIELD ACTIVITIES

Field activities performed during the pilot test included the installation of nineteen wells, construction and operation of an ethyl lactate injection and groundwater treatment and recirculation system during three events (July 2010, October 2010, March to May 2011), and collection of groundwater samples [baseline sampling (July 2010) and four post-injection monitoring events (October 2010, December 2010, March 2011 and June 2011)]. The following sections provide a description of the pilot test location and a summary of field activities conducted in support of the pilot test.

3.1 PILOT TEST LOCATION AND LAYOUT

The injections for the pilot-scale test were conducted in an area approximately 250 feet north of the Navy fence line (Figure 3-1). The injections were conducted in the treatment area using seven injection and extraction wells (SA-PZ-150I1 through SA-PZ-156I), spaced approximately 25 feet apart, in two offsetting lines. For purposes of discussion, the data will be evaluated by area based on proximity to the injection points (treatment area wells, near downgradient wells, and downgradient wells) (see Figure 3-1). Six monitoring wells are located near downgradient of the injection/extraction wells (SA-PZ-157I through SA-PZ-159I1). Near downgradient wells are located approximately 25 to 75 feet from treatment area injection/extraction wells. The near downgradient wells would expect to see effects of the ethyl lactate injections in groundwater samples within one-half months to one and a half months (based on a groundwater seepage velocity of 640 feet per year). Three other monitoring wells (SA-PZ-160I, -160I1, and -161I) are located downgradient of the treatment area by approximately 150 to 300 feet. The downgradient wells would expect to see effects of the ethyl lactate injections in groundwater samples within three to six months (based on a groundwater seepage velocity of 640 feet per year). The remaining monitoring wells are upgradient or cross-gradient of the treatment area.

Groundwater flow in the treatment area is to the southeast and the groundwater seepage velocity in this area is approximately 640 feet per year. The dimensions of the VOC plume in the treatment area are approximately 200 feet wide and 5 to 10 feet thick. As discussed further in Section 4.5, the plume appears to have shifted to the southwest (up to 200 feet) since 2008. During this period, several monitoring wells remained in the “hotspot” contamination boundaries, while other monitoring wells showed that some cross-gradient locations were not as contaminated in 2011 samples. Supplemental investigations were conducted in 2011 to identify shifting plume boundaries, as discussed further in Section 4.5.

Twenty-six monitoring, injection, and/or extraction wells were used during the pilot test. Wells located downgradient of the treatment area were used to evaluate the effectiveness of the study. Upgradient and cross-gradient monitoring wells were used as reference wells for untreated groundwater.

3.2 PIEZOMETER WELL INSTALLATION

Of the 26 monitoring wells, 19 new wells were installed for the pilot test. Table 3-1 provides a summary of well construction details and water level measurements. Documentation of well construction and development records is provided in the March 2011 Data Summary Report for the Enhanced In-Situ Anaerobic Biodegradation Pilot Study (Tetra Tech, 2011c) and the Data Summary Report for 2011 Groundwater Investigation Activities at Site 2 – Fire Training Area, Site 6A – Fuel Calibration Area, Site 10B – Engine Test House, and the Southern Area (Tetra Tech, 2012). Screen depths for these wells ranged from 32 to 53.5 feet below ground surface (bgs), which is the approximate depth of VOC-impacted groundwater in this area.

The wells were installed using a direct push technology (DPT) rig and constructed in a 3¼- inch diameter boring. The wells were constructed using 1-inch diameter Schedule 40 polyvinyl chloride (PVC) pipe, with 5-foot, 0.010-inch slot, pre-packed well screens, and a bentonite seal. The remainder of the annular space up to the ground surface was filled using bentonite/cement grout. The wells were completed with a 2-foot stickup and a lockable well plug. Each well was developed by hand using a stainless steel foot valve and disposable polyethylene tubing.

3.3 INJECTION/RECIRCULATION SYSTEM CONSTRUCTION AND PROVE OUT

During operation of the injection and recirculation system, groundwater was extracted from several wells in the treatment area, treated using liquid-phase granular activated carbon (GAC), and injected into other wells to distribute ethyl lactate throughout the treatment area. An ethyl lactate mixture was metered into the treated water via a peristaltic pump prior to injection. The system was constructed and operated to minimize the introduction of air, which could counter maintaining anaerobic conditions and cause biofouling.

The pumps, treatment equipment, and piping were located in an open area east of the treatment area. A pump was used to extract and circulate groundwater from the wells. Two 55-gallon liquid-phase GAC units operating in parallel were used to treat the extracted groundwater. A flow meter and valve were used to monitor and control flow rates. Piping for the injection and extraction system was schedule 40 PVC pipe and flexible ½-inch polyethylene tubing. Wells were vented during operation. Photographs of the injection system are provided in the Data Summary Report for the EISB Pilot Test (Tetra Tech, 2011c).

Prior to the July 2010 ethyl lactate injection, a system prove out was performed to determine the performance of the GAC treatment system. Pre-carbon and post-carbon treated groundwater samples were collected from the system on July 20, 2010. Sample results showed that the GAC treatment system was operating as expected. Prove-out sample results can also be found in the Data Summary Report for

the EISB Pilot Test (Tetra Tech, 2011c). A summary of the project's analytical program for evaluating the ethyl lactate system operation is provided in Table 3-2.

3.4 INJECTION SYSTEM OPERATION AND DOSING

The initial injection event was conducted from July 21, 2010 through August 3, 2010 (Table 3-3), during which ten gallons of ethyl lactate were injected and approximately 18,000 gallons of groundwater were recirculated. A second injection event occured from October 14 through 21, 2010 (Table 3-4). Ten gallons of ethyl lactate were injected, and approximately 15,000 gallons of groundwater were recirculated. The injection process for both the July 2010 and October 2010 events is detailed in the Data Summary Report for the EISB Pilot Test (Tetra Tech, 2011c). Based on an evaluation of data from the July 2010 and October 2010 injection events, it was concluded that the substrate was washing out of the treatment area too quickly to optimize biological growth. As a result, for the third injection event, ethyl lactate concentrations were reduced and the ethyl lactate injection occurred over a seven-week time period instead of a two-week time period as conducted during the first two injection events. The third injection event was conducted from March 12, 2011 through May 10, 2011 (Table 3-5) and is detailed in this report. During this event, five gallons of ethyl lactate were injected, and approximately 36,000 gallons of groundwater were recirculated.

To evaluate the connection between injected and extracted water, samples were collected weekly from the carbon inlet sample port (pre-carbon treatment) after approximately 4,000 gallons of groundwater was re-circulated each week. Samples were analyzed for field parameters [pH, dissolved oxygen (DO), ORP, and specific conductivity], Target Compound List (TCL) VOCs, and total organic carbon (TOC).

To evaluate downgradient migration of the ethyl lactate, weekly groundwater samples were collected from the six monitoring wells located immediately downgradient from the treatment area, SA-PZ-157I, -157I1, -158I, -158I1, -159I, and -159I1. Samples were analyzed for TOC and field parameters (pH, DO, ORP, and specific conductivity). During the final sampling event (week seven) samples were also analyzed for TCL VOCs. The weekly samples were collected after approximately 4,000 gallons of groundwater was re-circulated each week.

Quality Control/Quality Assurance (QA/QC) samples collected during the injections included trip blanks for VOC samples. Chain of custody (COC) forms documenting the collection of samples are provided in Appendix A. Low flow purge data and groundwater sample log sheets can be found in Appendix B.

Following the injections, treated groundwater was used to flush the pump and piping prior to disassembly and storage.

During operation of the treatment system in each of the three injection events, there were no apparent issues with excessive drawdown in extraction wells, and evidence of plugging in the treatment or injection system.

3.5 GROUNDWATER SAMPLING

Groundwater samples were collected to evaluate the effectiveness of the ethyl lactate injections. Table 3-6 provides a summary of the wells sampled during groundwater sampling events. Sixteen monitoring wells were initially included in the monitoring program; however because there was concern that the plume may have shifted to the west, two additional monitoring wells (SA-PZ-135 and SA-PZ-136) were also sampled during the December 2010 and March and June 2011 sampling events. Additional sampling of these two wells was conducted in August and September 2011. Monitoring well SA-PZ-408, a new upgradient point, was installed on June 10th, 2011 and was sampled during the June 2011 and September 2011 site-wide semi-annual sampling events, along with monitoring well SA-PZ-133I1. Groundwater samples were collected as follows:

- Baseline Sampling Event (July 2010)
- Post-Injection Sampling Events
  - Month 3 (October 2010)
  - Month 5 (December 2010)
  - Month 8 (March 2011)
  - Month 11 (June 2011)

In addition, to address concern that “hotspot” boundaries of the VOC plume had shifted, the following investigations were performed. Wells SA-PZ-133I, -133I1, -135, -136, and -137 were sampled during the June 2011 and the site-wide annual sampling event in September 2011. Wells SA-PZ-135 and SA-PZ-136 were sampled prior to, between, and after redevelopment in August 2011 to ensure representative samples of the aquifer were being taken. In addition, temporary wells SA-TW-408 to SA-TW-420 were installed and sampled between June 2011 and October 2011 to provide additional evidence of a potential shift of the VOC plume.

Groundwater samples were collected from the monitoring wells using low-flow (low-stress) purging and sampling techniques. Sampling occurred after field parameters stabilized and a minimum of three well screen volumes were purged. Field parameters including turbidity, DO, pH, ORP, specific conductivity, and temperature were recorded during low-flow purging and sampling activities. Low-flow purge data and groundwater sample log sheets can be found in Appendix C.

Groundwater samples collected from each well were analyzed for VOCs. In addition to VOCs, samples from select wells were also analyzed for TOC, methane, ethane, and ethene (MEE), iron and manganese, nitrate/nitrite, sulfide, chloride, DHC, and DHB. During the July 2010, December 2010, and June 2011 sampling events, samples were analyzed for additional metals (Table 3-6) to evaluate whether the ethyl lactate injections were mobilizing arsenic or other metals of concern. QA/QC samples included matrix spike and matrix spike duplicates (MS/MSD), field duplicates, trip blanks and field blanks. The information was documented on QA sample log sheets, provided in Appendix D.

Samples collected during field sampling activities were shipped to CompuChem Environmental Testing Laboratories of Cary, North Carolina, for analysis. Samples analyzing microbial populations of DHC and DHB were sent to Microbial Insights of Rockford, Tennessee for analysis. Laboratory analytical forms from samples collected during operation of the ethyl lactate injection system are provided in Appendix E. Laboratory validation reports for groundwater samples collected from monitoring wells are provided in Appendix F.

4.0 ANALYTICAL RESULTS

This section presents analytical results from groundwater samples collected during the pilot study for the following field events:

- Ethyl Lactate Injection System Operation (March – May 2011)
- Post-Injection Sampling Events
  - Month 8 – March 2011 (18 monitoring wells)
  - Month 11 – June 2011 (20 monitoring wells)

In addition to the above listed sampling events, analytical data from the March 2010, July 2010, October 2010, December 2010, and September 2011 sampling events is also included for trend analysis. Also, an evaluation of plume shift is discussed in this section.

4.1 ETHYL LACTATE INJECTION SYSTEM OPERATION RESULTS

During operation of the injection and recirculation system, groundwater was extracted from several wells in the treatment area, treated using liquid-phase GAC, and injected into other wells to distribute ethyl lactate throughout the treatment area. Analytical and field parameter results from extracted water samples taken during operation of the injection and recirculation system are provided in Table 4-1. Groundwater samples were collected from the sample port prior to treatment in the GAC unit and analyzed for VOCs, TOC, and field parameters in all three injection events.

Samples from the July and October 2010 injection and recirculation events were used to evaluate the distribution of ethyl lactate within the injection and extraction wells by tracking TOC concentrations. Proveout samples were taken prior to the first injection event in July 2010 to provide a baseline value of TOC at 1.4 milligrams per liter (mg/L). Distribution of ethyl lactate proved effective during the July 2010 injection event, as TOC values increased from 1.4 mg/L to 16 mg/L by the end of the injection event. Distribution of ethyl lactate was again confirmed during the October 2010 injection event, as concentrations of TOC increased from 1.02 mg/L to 1.59 mg/L. Total VOC concentrations did not change significantly during groundwater extraction, ranging from 176 µg/L to 304 µg/L. During the third injection event, TOC decreased from 1.4 mg/L during the first week of operation to not detected during the sixth and seventh weeks. As a result, effective distribution was not confirmed during the third injection event.

Downgradient monitoring wells SA-PZ-157I, -157I1, -158I, -158I1, -159I, and -159I1 were sampled during the March to May 2011 injection and recirculation event to evaluate the migration of ethyl lactate downgradient of the treatment area. Water quality (field parameters) and TOC results are presented in Table 4-2. Values of TOC detected during the July 2010 baseline sampling event ranged from 0.69 mg/L to 1.3 mg/L. For the period of March to June 2011, TOC results ranged from not detected to 26 mg/L.

Each of the wells exhibited TOC concentrations greater than the baseline samples; however, peak TOC concentrations varied by distance and time. In general, the ethyl lactate was better distributed in the shallower (-I1) wells, and not as well in the deeper (–I) wells. By the June 2011 sampling event, downgradient shallow wells SA-PZ-157I1, SA-PZ-158I1, and SA-PZ-159I1 had detections of TOC ranging from 1.6 mg/L to 1.9 mg/L, indicating that ethyl lactate had been distributed to this zone. Field parameter results for these wells did not provide additional patterns to identify trends during the injection and recirculation process.

4.2 EVALUATION OF BIODEGRADATION

Sixteen monitoring wells were sampled during the Baseline (July 2010) and Month 3 (October 2010) sampling events. Eighteen monitoring wells were sampled during the Month 5 (December 2010) and Month 8 (March 2011) sampling events. Twenty monitoring wells were sampled during the Month 11 (June 2011) sampling event. In addition, data from supplemental investigations conducted in the area, including the annual sampling event in September 2011, is provided in the following figures and tables. Figure 4-1 presents a summary of chlorinated VOC detections and downgradient monitoring well groundwater samples. Figure 4-2 presents a summary of iron, manganese, and TOC results in the treatment area and downgradient monitoring well groundwater samples. Figure 4-3 provides a conceptual cross section of the treatment area and downgradient monitoring well groundwater with chlorinated VOC detections. Tables 4-3 and 4-4 provide a summary of the VOC and metal results, respectively.

To evaluate the effectiveness of the anaerobic biodegradation, several factors are considered, as follows:

- Reduction in total VOCs
- Sequential conversion of TCA to DCA to chloroethane
- Presence and/or increase in the presence of bacteria capable of dechlorinating VOCs

Of these factors, for a pilot-scale test, formation of chloroethane is the most significant factor. Reduction in total VOCs and the presence/increase in dechlorinating bacteria are of lesser importance.

For purposes of discussion, the data will be evaluated by area based on proximity to the injection points (see Figure 3-1). Wells are referred to as treatment area wells (injection/extraction wells SA-PZ-150I1 through SA-PZ-156I), near downgradient wells (wells SA-PZ-157I through SA-PZ-159I1 located 25 to 75 feet downgradient of the treatment area), and downgradient wells (SA-PZ-160I through SA-PZ-161I located 150 to 300 feet downgradient of the treatment area).

Wells that showed evidence of biodegradation are SA-PZ-151I1, -157I1, -158I1, -159I, -159I1, and -160I1. Evaluation of the total VOC results from July 2010 to September 2011 indicates that there was a

decrease of approximately 8 to 85 percent in wells located in and downgradient of the treatment area. This reduction likely results from a combination of GAC treatment of groundwater, plume shift, and biodegradation. Evaluation of trends in chloroethane concentrations versus total VOC concentrations show that for shallower groundwater wells both in and downgradient of the treatment area (SA-PZ-151I1, -157I1, -158I1, -159I1, and -160I1), chloroethane concentrations increased by 40% to 312%, while total VOC concentrations generally decreased. However, total VOC concentrations in wells SA-PZ-157I1 and SA-PZ-160I1 increased by 111% and 4%, respectively. Treatment area well SA-PZ-151I1 had variable total VOC concentrations, with a decrease in total VOCs of 8 percent, but an increase in chloroethane concentrations of 163%. Near downgradient well SA-PZ-157I1 had an increase in total VOCs of 111%, and an increase in chloroethane concentrations of 654%. The increase in total VOCs is attributable to plume shift, whereas the increase in chloroethane is attributable to biodegradation. Downgradient well SA-PZ-160I1 also had variable total VOC concentrations, with an increase in VOCs of 4%, but the chloroethane concentrations increased by 312%. The increase in chloroethane concentrations was significantly higher than the increase in total VOCs, indicating that biodegradation is also occurring in this well. Near downgradient well SA-PZ-159I had a decrease in total VOC concentrations of 42%, and an increase in chloroethane concentrations of 183%, indicating that biodegradation is also occurring in this deep well. Total VOC concentrations for groundwater monitoring wells are provided in Table 4-3.

Wells that indicated biodegradation with increasing chloroethane to TCA ratios include wells SA-PZ-157I1, SA-PZ-158I1, and SA-PZ-159I1. Well SA-PZ-157I1 showed an increase in total VOCs from 493 µg/L in July 2010 to 1,041 µg/L in September 2011, but also showed an increase in the ratio of chloroethane to TCA, indicating that reductive dechlorination resulting from biodegradation may be occurring (Figure 4-4 and Table 4-3). Well SA-PZ-158I1 showed a decrease in total VOCs from 477 µg/L in July 2010 to 375 µg/L in June 2011, and also showed an increase in the ratio of chloroethane to TCA. TCA was not detected in this well in June 2011 (Figure 4-5 and Table 4-3). Total VOC concentrations in well SA-PZ-159I1 decreased from 359 µg/L in July 2010 to 131.8 µg/L in June 2011 (see Figure 4-6 and Table 4-3). These trends provide evidence that anaerobic biodegradation of VOCs is occurring within the aquifer in shallow wells near downgradient of the treatment area.

Appendix G contains additional data graphs showing trends of VOC concentrations versus groundwater levels and chloroethane to DCA and TCA ratios for wells SA-PZ-157I1, SA-PZ-158I1, and SA-PZ-159I1. The ratio of chloroethane to TCA in well SA-PZ-157I1 increased from 0.78 in July 2010 to 9.35 in September 2011. The chloroethane to TCA ratio in well SA-PZ-158I1 increased from 0.79 in July 2010 to 20 in May 2011. TCA was not detected in this well during the June 2011 sampling event. The ratio of chloroethane to TCA in well SA-PZ-159I1 also increased from 1.22 in July 2010 to 21 in June 2011. Increasing ratios of chloroethane to TCA indicate that daughter products of TCA formed as a result of biodegradation in these wells.

Bacterial growth was evident in wells downgradient of the treatment area. SA-PZ-157I experienced biomass growth from 50.2 cells per milliliter (cells/mL) in July 2010 to 544 cells/mL in June 2011. Based on levels of bacterial populations of DHC and DHB, it can be determined that well SA-PZ-159I1 had active biomass remaining in June 2011 that continued to degrade TCA to daughter products. Concentrations of DHC in SA-PZ-159I1 increased from 2.7 cells/mL in July 2010 to 50.2 cells/mL in June 2011, and concentrations of DHB increased from 649 cells/mL in July 2010 to 6,010 cells/mL in June 2011. Bacterial counts are provided in Table 4-3.

Wells that did not show evidence of biodegradation are SA-PZ-155I, -157I, -158I, -160I, and -161I. Deeper groundwater wells both in and downgradient of the treatment area (SA-PZ-155I, -157I, -158I, 160I, and 161I), experienced an overall decrease in total VOCs of 42% to 85%, while chloroethane concentrations also decreased 58% to 87%, indicating that plume shift or a non-biodegradation reduction in total VOCs (GAC treatment) may be occurring. Total VOC concentrations for deeper downgradient wells are provided in Table 4-3. Well SA-PZ-158I (Figure 4-7), for example, showed a decrease in total VOCs of 72%, but also experienced a decrease in chloroethane concentrations of 58%.

Some upgradient and cross-gradient wells showed an increase in total VOCs. Total VOC concentrations for upgradient and cross-gradient wells are provided in Table 4-3. Cross-gradient well SA-PZ-133I1 had an increase in total VOCs from 34.5 µg/L in March 2010 to 123.2 µg/L in September 2011, but did not show an increase in the ratio of chloroethane to TCA. Upgradient well SA-PZ-138I1 showed an increase in total VOCs of 1,475 µg/L in July 2010 to 1,565 µg/L in September 2011, with a peak concentration of 2,170 µg/L in June 2011.

4.3 OTHER FACTORS CONSIDERED

Low levels of aromatic compounds were present throughout monitoring samples, with periodic elevations in di- and trichlorobenzenes (Table 4-3). Benzene detections ranged from not detected to 4.4 µg/L. Detections of 1,4-dichlorobenzene ranged from not detected to a maximum detection of 68 µg/L in well SA-PZ-159I1. Detections of 1,4-dichlorobenzene decreased to 22 µg/L by June 2011. Detections of 1,3-dichlorobenzene ranged from not detected to 4.4 µg/L, and detections of 1,2-dichlorobenzene ranged from not detected to 17 µg/L (maximum detection in well SA-PZ-159I1). 1,2,4-Trichlorobenzene was detected at concentrations ranging from not detected to 14 µg/L (maximum detection in well SA-PZ-138I1), isopropyl benzene was detected at concentrations ranging from not detected to 11 µg/L (maximum detection in well SA-PZ-138I1), chlorobenzene was detected at concentrations ranging from not detected to 9.6 µg/L (maximum detection in well SA-PZ-159I1), and naphthalene was also detected at concentrations ranging from not detected to 4.5 µg/L.

Ethane and ethene were not detected during sampling. Methane production was evident in sampled wells, with detections ranging from not detected to 402 µg/L.

Concentrations of nitrate (competing electron acceptor), nitrite, chloride, and sulfide remained low or were not detected during sampling (Table 4-3). Nitrate concentrations ranged from not detected to 2.11 mg/L, and nitrite concentrations ranged from not detected to 0.236 mg/L. The absence of nitrate/nitrite indicates that biological activity may have become nutrient limited. Detections of chloride ranged from not detected to 8.31 mg/L and sulfide was not detected.

No trends were evident in field parameter results in groundwater monitoring wells. DO remained low during sampling, ranging from 0 to 2.99 mg/L (Table 4-3). Turbidity ranged from 0 to 247 nephelometric turbidity units (NTU), specific conductivity ranged from 0.025 millisiemens per centimeter (mS/cm) to 0.317 mS/cm, and ORP ranged from -392 millivolts (mV) to 224 mV. Temperatures ranged from 6.09 degrees Celsius to 16.39 degrees Celsius. Detections of pH typically ranged from 4.75 to 6.98. Wells SA-PZ-135, SA-PZ-136, SA-PZ-158I, SA-PZ-159I, SA-PZ-159I1, and SA-PZ-160I had a pH ranging from 7.02 to 7.96 during the December 2010 and/or June 2011 sampling events. The readings appear to be valid, but there is no direct cause for the slightly elevated readings. The only alkali used in the program was cement used to grout the wells.

4.4 METALS EVALUATION

Wells SA-PZ-151I1, -155I, -157I, -157I1, -159I, -159I1, -160I, and -408 were measured for TAL metals (Table 4-4 and Figure 4-2). Detections of iron during the baseline (July 2010) sampling event ranged from not detected to 4,320 µg/L. Peak detections of iron were seen during sampling in downgradient wells SA-PZ-157I (maximum detection of 10,600 µg/L in December 2010), SA-PZ-159I (maximum detection of 9,680 µg/L in June 2011), and SA-PZ-160I (maximum detection of 11,800 µg/L in June 2011). Detections of iron during the month 11 sampling (June 2011) ranged from 205 µg/L to 11,800 µg/L, showing that iron concentrations increased during the test.

Manganese was detected throughout the sampling process, but the June 2011 levels of manganese did not increase as high as the iron concentrations (Table 4-4 and Figure 4-2). Detections of manganese during the baseline (July 2010) sampling event ranged from 302 µg/L to 4,680 µg/L. Final detections of manganese ranged from 291 µg/L to 5,270 µg/L.

Arsenic was not detected during the baseline sampling event (July 2010), but detections ranged from not detected to 19.4 µg/L by the June 2011 sampling event (Table 4-4 and Figure 4-2). The highest concentrations of arsenic were seen in wells SA-PZ-159I at 11.9 µg/L and SA-PZ-160I at 19.4 µg/L in June 2011. The New York State Department of Health (NYSDOH) maximum contaminant limit (MCL) is 10 µg/L for arsenic.

4.5 PLUME FLUCTUATION EVALUATION

Based on groundwater data collected from 2008 to 2009, the treatment area was designed to treat the western half of the plume. At that time, the highest detected concentrations of chlorinated VOCs in Southern Area groundwater samples consisted of DCA at 1,200 µg/L in SA-TW-312 and 1,000 µg/L in SA-TW-322 (see Figure 4-8). Well SA-PZ-138I1 also had relatively high and consistent detections of chlorinated VOCs, including detections of DCA at 980 µg/L in 2010 and 1,100 µg/L in 2011. In addition, the Suffolk County Department of Health Services detected concentrations of DCA in temporary wells along River Road (including a maximum concentration of 1,090 µg/L in SCGB2). These wells established the approximate centerline of the plume at that time.

By 2011, concentrations of DCA in wells in the eastern part of the plume had decreased significantly. For example, concentrations of DCA in SA-PZ-133I (cross-gradient well) decreased from 460 µg/L in 2010 to 31 µg/L September 2011; concentrations of DCA in well SA-PZ-139 (cross-gradient well) decreased from 160 µg/L in 2010 to 4.6 µg/L in June 2011; concentrations of DCA in well SA-PZ-160I (downgradient well) decreased from 210 µg/L in 2010 to 85 µg/L in June 2011; concentrations of DCA in well SA-PZ-161I (downgradient well) also decreased from 530 µg/L in 2010 to 88 µg/L in September 2011. VOCs were not detected in well SA-PZ-136 in June 2011, but had total VOC concentrations ranging from 173.6 µg/L in August 2011 to 1.7 µg/L in September 2011 (see Figure 4-9).

In 2011, DCA was detected at higher concentrations west of the estimated 2008 500 µg/L DCA isoconcentration contour. Because of the potential shift in the plume, additional temporary wells were installed in 2011 to clarify current plume boundaries (see Figure 4-8). DCA was detected in new temporary wells SA-TW-414 and SA-TW-415 at 710 µg/L and 850 µg/L, respectively. 2008/2009 Data evaluation did not identify higher concentrations of DCA in this area. As shown on Figure 4-8, the EISB pilot test wells were located within the 2008 (blue) 500 µg/L DCA isoconcentration contour of the groundwater plume to target higher levels of contamination on Navy property. The 2011 (red) 500 µg/L DCA contour indicates current 500 µg/L DCA isoconcentration contours. This evaluation suggests that the plume had shifted by approximately 100 feet to the west between 2008/2009 and 2011.

5.0 CONCLUSIONS

The objectives of the pilot study were met as detailed below.

- Evaluate the ability to effectively distribute ethyl lactate.

  - During injection events one and two, ethyl lactate was effectively distributed through the treatment area. Effective distribution was not confirmed for the third event.

  - The substrate was effectively distributed to 5 out of the 7 downgradient wells evaluated (SA-PZ-157I1, -158I1, -159I, -159I1, -160I) during all three injection events. Detections of TOC increased from a baseline range of 0.69 mg/L to 1.3 mg/L to a range of 1.6 mg/L to 122 mg/L. An increase in TOC was not detected in two downgradient wells (SA-PZ-157I and SA-PZ-158I). Detections of TOC dropped below baseline values in these wells.

  - There was no evidence of biofouling in the injection/extraction wells. There was also no evidence of excessive drawdown in extraction wells or issues with operation of the extraction, treatment, and injection system.

- Evaluate the effectiveness of EISB on chlorinated VOCs.

  - A reduction of total VOCs in most groundwater wells was achieved through GAC treatment and biodegradation. Increasing chloroethane to DCA and TCA ratios were exhibited in 6 out of 11 injection/extraction and downgradient monitoring wells, providing good evidence of biodegradation. Sample results from monitoring wells closest to the treatment area showed the best evidence of biodegradation. Effectiveness was further supported by biomass growth in wells SA-PZ-157I and SA-PZ-159I1 where increasing numbers of both DHC and DHB were detected by June 2011. Decreasing chloroethane concentrations were exhibited in 5 out of 11 injection/extraction and downgradient wells that also exhibited a decrease in total VOC concentrations, indicating that some non-biodegradation mechanism (plume shift or GAC treatment) may be occurring.

  - Between 2008 and 2011 the plume appears to have shifted west, which would remain a factor in tracking biodegradation and final design specifications.

- Collect data needed to design a full-scale system, including well spacing, injection rates, volume of ethyl lactate, frequency of subsequent injections, and chlorinated VOC degradation rates.

  - The data collected was sufficient to develop a full scale system design.

- The injection methodology (well spacing and recirculation volumes) are confirmed as appropriate. Connectivity between injection and extraction wells was confirmed for distances of 25 feet. Greater distances may be viable. Ethyl lactate injection rates were metered for up to a half gallon per well, but the injection system was not stress tested.

- The ethyl lactate moved through the area much faster than originally anticipated.

- Determine whether EISB affects iron, manganese, or other metal concentrations significantly in groundwater.

  - Detections of iron during the baseline (July 2010) sampling event ranged from not detected to 4,320 µg/L and detections of iron during the month 11 sampling (June 2011) ranged from 205 µg/L to 11,800 µg/L. There is some evidence that iron was temporarily mobilized during the pilot test. Manganese was detected throughout the sampling process, but final levels of manganese did not increase at the same levels as iron. Detections of manganese during the baseline (July 2010) sampling event ranged from 302 µg/L to 4,680 µg/L. Final detections of manganese ranged from 291 µg/L to 5,270 µg/L.

  - There is evidence that arsenic may have been mobilized during the test. Arsenic was not detected during the baseline sampling event (July 2010), but concentrations ranged from not detected to 19.4 µg/L by the June 2011 sampling event. The highest concentrations of arsenic were seen in wells SA-PZ-159I at 11.9 µg/L and SA-PZ-160I at 19.4 µg/L in June 2011.

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TABLES

TABLE 3-1
MONITORING WELL CONSTRUCTION DETAILS AND GROUNDWATER GAUGING DATA
SOUTHERN AREA - EISB PILOT TEST
NWIRP CALVERTON, NEW YORK

Well ID	Well Install Date	Purpose	Total Depth (ft bgs)	Screened Interval Depth (ft bgs)	Top PVC Elevation (ft msl)	Groundwater Levels									
						July 6-8, 2010		September 22, 2010		December 13-15, 2010		March 7-8, 2011		September 27, 2011	
						Depth to Groundwater (ft below Top PVC)	Groundwater Elevation (ft msl)	Depth to Groundwater (ft below Top PVC)	Groundwater Elevation (ft msl)	Depth to Groundwater (ft below Top PVC)	Groundwater Elevation (ft msl)	Depth to Groundwater (ft below Top PVC)	Groundwater Elevation (ft msl)	Depth to Groundwater (ft below Top PVC)	Groundwater Elevation (ft msl)
SA-PZ-133I	Mar-10	Downgradient monitoring	47	42 - 47	41.55	7.78	33.8	--	--	--	--	7.23	34.32	7.87	33.68
SA-PZ-133I1 (1)	Mar-10	Downgradient monitoring	40	35 - 40	41.43	7.87	33.6	--	--	--	--	--	--	7.91	33.52
SA-PZ-135 (2)	Mar-10	Downgradient monitoring	46.5	41.5 - 46.5	38.75	--	--	5.26	33.5	4.73	34.0	4.13	34.62	4.74	34.01
SA-PZ-136 (2)	Mar-10	Downgradient monitoring	49	44 - 49	39.55	--	--	5.9	33.7	5.34	34.2	4.76	34.79	5.45	34.1
SA-PZ-137 (1)	Mar-10	Downgradient monitoring	54	49 - 54	41.67	7.45	34.2	7.9	33.8	7.37	34.3	--	--	7.4	34.27
SA-PZ-138I	Mar-10	Upgradient monitoring	53.5	48.5 - 53.5	40.03	5.03	35.0	5.76	34.3	5.27	34.8	7.44	32.59	5.24	34.79
SA-PZ-138I1	Jun-10	Upgradient monitoring	42	37 - 42	39.80	4.89	34.9	5.62	34.2	5.14	34.7	4.46	35.34	5.1	34.7
SA-PZ-139I	Mar-10	Crossgradient monitoring	47.5	42.5 - 47.5	42.28	7.91	34.4	8.65	33.6	8.16	34.1	4.61	37.67	8.13	34.15
SA-PZ-149I1	Jun-10	Upgradient monitoring	37	32 - 37	44.73	9.49	35.2	10.30	34.4	9.86	34.9	9.16	35.57	--	--
SA-PZ-150I1	Jun-10	Injection / Extraction	40	35 - 40	--	--	--	--	--	--	--	2.30	--	--	--
SA-PZ-151I1	Jun-10	Injection / Monitoring	40	35 - 40	--	5.50	--	4.79	--	--	--	3.64	--	--	--
SA-PZ-152I1	Jun-10	Injection / Extraction	40	35 - 40	--	--	--	--	--	--	--	4.67	--	--	--
SA-PZ-153I1	Jun-10	Injection / Extraction	40	35 - 40	--	--	--	--	--	--	--	4.91	--	--	--
SA-PZ-154I	Jun-10	Injection / Extraction	46	41 - 46	37.14	--	--	--	--	--	--	1.87	35.27	--	--
SA-PZ-155I	Jun-10	Injection / Monitoring	46	41 - 46	40.24	5.33	34.9	--	--	--	--	4.93	35.31	--	--
SA-PZ-156I	Jun-10	Injection / Extraction	46	41 - 46	39.51	--	--	--	--	--	--	3.72	35.79	--	--
SA-PZ-157I	Jun-10	Downgradient monitoring	46	41 - 46	39.51	4.82	34.7	--	--	--	--	4.36	35.15	--	--
SA-PZ-157I1	Jun-10	Downgradient monitoring	38	33 - 38	39.76	5.02	34.7	5.79	34.0	--	--	4.61	35.15	--	--
SA-PZ-158I	Jun-10	Downgradient monitoring	46	41 - 46	39.73	5.07	34.7	5.44	34.3	--	--	4.64	35.09	--	--
SA-PZ-158I1	Jun-10	Downgradient monitoring	38	33 - 38	39.37	4.71	34.7	5.42	34.0	--	--	4.28	35.09	--	--
SA-PZ-159I	Jun-10	Downgradient monitoring	46	41 - 46	39.17	4.57	34.6	--	--	4.77	34.4	4.13	35.04	--	--
SA-PZ-159I1	Jun-10	Downgradient monitoring	38	33 - 38	39.37	4.81	34.6	--	--	4.97	34.4	4.32	35.05	--	--
SA-PZ-160I	Jun-10	Downgradient monitoring	46	41 - 46	39.29	4.92	34.4	5.55	33.7	--	--	4.39	34.9	--	--
SA-PZ-160I1	Jun-10	Downgradient monitoring	38	33 - 38	38.95	4.55	34.4	5.23	33.7	--	--	4.06	34.89	--	--
SA-PZ-161I	Jun-10	Downgradient monitoring	46	41 - 46	40.59	6.36	34.2	6.96	33.6	6.43	34.2	5.82	34.77	6.44	34.15
SA-PZ-408 (3)	Jun-11	Upgradient monitoring	42	37 - 42	--	--	--	--	--	--	--	--	--	--	--

Notes

ft - feet bgs - below ground surface msl - mean sea level Top PVC - top of polyvinyl chloride well casing

1. Monitoring wells SA-PZ-133I1, and SA-PZ-137 were added to the sampling list in June 2011.
2. Monitoring wells SA-PZ-135 and SA-PZ-136 were added to the sampling list in Dec 2010 (not sampled during the July and October 2010 sampling event).
3. Monitoring well SA-PZ-408 was installed on June 10th, 2011 and was aded to the sampling list in June 2011 (not sampled during the July, October, and December 2010, and March 2011 sampling events).

TABLE 3-2
ANALYTICAL PROGRAM SUMMARY - ETHYL LACTATE INJECTION/GROUNDWATER RECIRCULATION SYSTEM OPERATION
SOUTHERN AREA - EISB PILOT TEST
NWIRP CALVERTON, NEW YORK

Well ID	Description	Screened Interval (ft bgs)	System Proveout (Pre Injection Events) July 2010	System Operation (First Injection Event) July to August 2010	System Operation (Second Injection Event) October 2010	System Operation (Third Injection Event) March to May 2011
SA-PZ-150I1	Injection / Extraction Well	34 - 39	--	FP	FP	--
SA-PZ-153I1	Injection / Extraction Well	34 - 39	--	FP	FP	--
SA-PZ-154I	Injection / Extraction Well	40 - 45	--	FP	FP	--
SA-PZ-156I	Injection / Extraction Well	40 - 45	--	FP	--	--
SA-PZ-157I	Downgradient Well	42 - 47	--	FP	FP	FP, TOC *
SA-PZ-157I1	Downgradient Well	34 - 39	--	--	--	FP, TOC *
SA-PZ-158I	Downgradient Well	42 - 47	--	--	--	FP, TOC *
SA-PZ-158I1	Downgradient Well	34 - 39	--	--	--	FP, TOC *
SA-PZ-159I	Downgradient Well	42 - 47	--	--	--	FP, TOC *
SA-PZ-159I1	Downgradient Well	34 - 39	--	--	--	FP, TOC *
Carbon Inlet	Treatment Efficiency	NA	FP, VOCs, TOC	FP, VOCs, TOC	FP, VOCs, TOC	FP, VOCs, TOC
Carbon Outlet	Treatment Efficiency	NA	FP, VOCs, TOC	--	--	--

ft bgs - feet below ground surface

NA - not applicable

FP - field parameters - consisting of pH, specific conductivity, dissolved oxygen (DO), ferrous iron (Fe^{+2}), temperature, and oxidation-reduction potential (ORP). DO and Fe^{+2} were analyzed via field test kits.

VOCs - volatile organic compounds

TOC - Total organic carbon.

* During the May 9th 2011 sampling event, samples were also analyzed for VOCs.

TABLE 3-3
INJECTION/EXTRACTION VOLUMES SUMMARY - JULY TO AUGUST 2010 (EVENT No. 1)
SOUTHERN AREA - EISB PILOT TEST
NWIRP CALVERTON, NEW YORK

STAGE	Groundwater Extraction		Groundwater Injection		
	Extraction Wells	Extraction Volume (gallons) (1)	Injection Wells	Injection Volume (gallons) (1)	Ethyl Lactate Injection Volume (gallons) (1)
1	SA-PZ-150I1	388	SA-PZ-151I	517	2.5
	SA-PZ-153I1	388	SA-PZ-152I1	517	2.5
	SA-PZ-154I	388	SA-PZ-155I	517	2.5
	SA-PZ-156I	388			
2	SA-PZ-150I1	3,880	SA-PZ-151I	5,180	0.67
	SA-PZ-153I1	3,880	SA-PZ-152I1	5,180	0.67
	SA-PZ-154I	3,880	SA-PZ-155I	5,180	0.67
	SA-PZ-156I	3,880			
3	SA-PZ-138I	400	SA-PZ-150I1	200	0.13
	SA-PZ-138I1	400	SA-PZ-153I1	200	0.13
			SA-PZ-154I	200	0.13
			SA-PZ-156I	200	0.13

1. Injection and extraction volumes are per well.

TABLE 3-4
INJECTION/EXTRACTION VOLUMES SUMMARY - OCTOBER 2010 (EVENT No. 2)
SOUTHERN AREA - EISB PILOT TEST
NWIRP CALVERTON, NEW YORK

STAGE	Groundwater Extraction		Groundwater Injection		
	Extraction Wells	Extraction Volume (gallons) (1)	Injection Wells	Injection Volume (gallons) (1)	Ethyl Lactate Injection Volume (gallons) (1)
1	SA-PZ-150I1	375	SA-PZ-151I	500	2.5
	SA-PZ-153I1	375	SA-PZ-152I1	500	2.5
	SA-PZ-154I	375	SA-PZ-155I	500	2.5
	SA-PZ-157I	375			
2	SA-PZ-150I1	3,117	SA-PZ-151I	4,155	0.58
	SA-PZ-153I1	3,117	SA-PZ-152I1	4,155	0.58
	SA-PZ-154I	3,117	SA-PZ-155I	4,155	0.58
	SA-PZ-157I	3,117			
3	SA-PZ-158I	585	SA-PZ-150I1	293	0.19
	SA-PZ-158I1	585	SA-PZ-153I1	293	0.19
			SA-PZ-154I	293	0.19
			SA-PZ-156I	293	0.19

1. Injection and extraction volumes are per well.

TABLE 3-5
INJECTION/EXTRACTION VOLUMES SUMMARY - MARCH TO MAY 2011 (EVENT No. 3)
SOUTHERN AREA - EISB PILOT TEST
NWIRP CALVERTON, NEW YORK

WEEK	Groundwater Extraction		Groundwater Injection		
	Extraction Wells	Extraction Volume (gallons) (1)	Injection Wells	Injection Volume (gallons) (1)	Ethyl Lactate Injection Volume (gallons) (1)
3/12/2011 - 3/15/2011	SA-PZ-154I	1,767	SA-PZ-150I1	1,325	0.0625
	SA-PZ-155I	1,767	SA-PZ-151I1	1,325	0.0625
	SA-PZ-156I	1,767	SA-PZ-152I1	1,325	0.0625
			SA-PZ-153I1	1,325	0.0625
3/21/2011 - 3/23/2011	SA-PZ-154I	1,300	SA-PZ-150I1	975	0.0469
	SA-PZ-155I	1,300	SA-PZ-151I1	975	0.0469
	SA-PZ-156I	1,300	SA-PZ-152I1	975	0.0469
			SA-PZ-153I1	975	0.0469
3/28/2011 - 3/30/2011	SA-PZ-154I	1,833	SA-PZ-150I1	1,375	0.0781
	SA-PZ-155I	1,833	SA-PZ-151I1	1,375	0.0781
	SA-PZ-156I	1,833	SA-PZ-152I1	1,375	0.0781
			SA-PZ-153I1	1,375	0.0781
4/4/2011 - 4/6/2011 (2)	SA-PZ-154I	1,350	SA-PZ-150I1	1,013	0.0469
	SA-PZ-155I	1,350	SA-PZ-151I1	1,013	0.0469
	SA-PZ-156I	1,350	SA-PZ-152I1	1,013	0.0469
			SA-PZ-153I1	1,013	0.0469
4/6/2011 - 4/8/2011 (2)	SA-PZ-154I	1,350	SA-PZ-150I1	1,013	0.1250
	SA-PZ-155I	1,350	SA-PZ-151I1	1,013	0.1250
	SA-PZ-156I	1,350	SA-PZ-152I1	1,013	0.1250
			SA-PZ-153I1	1,013	0.1250
4/11/2011 - 4/13/2011	SA-PZ-154I	2,000	SA-PZ-150I1	1,500	0.1875
	SA-PZ-155I	2,000	SA-PZ-151I1	1,500	0.1875
	SA-PZ-156I	2,000	SA-PZ-152I1	1,500	0.1875
			SA-PZ-153I1	1,500	0.1875
4/19/2011 - 4/20/2011	SA-PZ-154I	1,000	SA-PZ-150I1	750	0.1250
	SA-PZ-155I	1,000	SA-PZ-151I1	750	0.1250
	SA-PZ-156I	1,000	SA-PZ-152I1	750	0.1250
			SA-PZ-153I1	750	0.1250
5/9/2011 - 5/10/2011	SA-PZ-154I	1,261	SA-PZ-150I1	945	0.5781
	SA-PZ-155I	1,261	SA-PZ-151I1	945	0.5781
	SA-PZ-156I	1,261	SA-PZ-152I1	945	0.5781
			SA-PZ-153I1	945	0.5781

1. Injection and extraction volumes are per well on a per weekly basis.
2. The injection volume of ethyl lactate was increased during the week of 4/4/2011 to 4/8/2011.

TABLE 3-6
ANALYTICAL PROGRAM SUMMARY - GROUNDWATER MONITORING WELLS
SOUTHERN AREA - EISB PILOT TEST
NWIRP CALVERTON, NEW YORK

Well ID	Description	Screened Interval (ft bgs)	Baseline July 2010	Post-Injection (Month 3 October 2010 Sampling Event)	Post-Injection (Month 5 December 2010 Sampling Event)	Post-Injection (Month 8 March 2011 Sampling Event)	Post-Injection (Month 11 June 2011 Sampling Event)
SA-PZ-133I	Cross-gradient Reference Well	42 - 47	FP, VOCs	FP, VOCs	FP, VOCs	FP, VOCs	FP, VOCs, Metals
SA-PZ-133I1	Cross-gradient Reference Well	35 - 40	--	--	--	--	FP, VOCs, Metals
SA-PZ-135I	Cross-gradient Reference Well	41.5 - 46.5	--	--	FP, VOCs	FP, VOCs	FP, VOCs, Metals (1)
SA-PZ-136I	Cross-gradient Reference Well	44 - 49	--	--	FP, VOCs	FP, VOCs	FP, VOCs, Metals (1)
SA-PZ-138I	Upgradient Well	48.5 - 53.5	FP, VOCs	FP, VOCs	FP, VOCs	FP, VOCs	FP, VOCs, Metals
SA-PZ-138I1	Upgradient Well	37 - 42	FP, VOCs	FP, VOCs	FP, VOCs	FP, VOCs	FP, VOCs, Metals
SA-PZ-139I	Cross-gradient Reference Well	42.5 - 47.5	FP, VOCs	FP, VOCs	FP, VOCs	FP, VOCs	FP, VOCs, Metals
SA-PZ-149I1	Upgradient Well	32 - 37	FP, VOCs	FP, VOCs	FP, VOCs	FP, VOCs	FP, VOCs, Metals
SA-PZ-151I1	Injection/Extraction Well	34 - 39	FP, VOCs, TOC, MEE, TAL Metals	FP, VOCs, TOC, MEE, Metals	FP, VOCs, TOC, MEE, TAL Metals	FP, VOCs, TOC, MEE, Metals	FP, VOCs, TOC, MEE, TAL Metals, Wet Chemistry
SA-PZ-155I	Injection/Extraction Well	40 - 45	FP, VOCs, TOC, MEE, TAL Metals	FP, VOCs, TOC, MEE, Metals	FP, VOCs, TOC, MEE, TAL Metals	FP, VOCs, TOC, MEE, Metals	FP, VOCs, TOC, MEE, TAL Metals, Wet Chemistry
SA-PZ-157I	Downgradient Well	42 - 47	FP, VOCs, TOC, MEE, Metals, Wet Chemistry, DHC, DHB	FP, VOCs, TOC, MEE, Metals	FP, VOCs, TOC, MEE, TAL Metals, Wet Chemistry, DHC, DHB	FP, VOCs, TOC, MEE, Metals	FP, VOCs, TOC, MEE, TAL Metals, Wet Chemistry, DHC, DHB
SA-PZ-157I1	Downgradient Well	34 - 39	FP, VOCs, TOC, MEE, Metals	FP, VOCs, TOC, MEE, Metals	FP, VOCs, TOC, MEE, TAL Metals, Wet Chemistry	FP, VOCs, TOC, MEE, Metals	FP, VOCs, TOC, MEE, TAL Metals, Wet Chemistry
SA-PZ-158I	Downgradient Well	42 - 47	FP, VOCs	FP, VOCs	FP, VOCs	FP, VOCs	FP, VOCs, Metals
SA-PZ-158I1	Downgradient Well	34 - 39	FP, VOCs	FP, VOCs	FP, VOCs	FP, VOCs	FP, VOCs, Metals
SA-PZ-159I	Downgradient Well	42 - 47	FP, VOCs, TOC, MEE, TAL Metals	FP, VOCs, TOC, MEE, Metals	FP, VOCs, TOC, MEE, TAL Metals	FP, VOCs, TOC, MEE, Metals	FP, VOCs, TOC, MEE, TAL Metals, Wet Chemistry
SA-PZ-159I1	Downgradient Well	34 - 39	FP, VOCs, TOC, MEE, Metals, Wet Chemistry, DHC, DHB	FP, VOCs, TOC, MEE, Metals	FP, VOCs, TOC, MEE, TAL Metals, Wet Chemistry, DHC, DHB	FP, VOCs, TOC, MEE, Metals	FP, VOCs, TOC, MEE, TAL Metals, Wet Chemistry, DHC, DHB
SA-PZ-160I	Downgradient Well	42 - 47	FP, VOCs, TOC, MEE, Metals	FP, VOCs, TOC, MEE, Metals	FP, VOCs, TOC, MEE, TAL Metals	FP, VOCs, TOC, MEE, Metals	FP, VOCs, TOC, MEE, TAL Metals, Wet Chemistry
SA-PZ-160I1	Downgradient Well	35 - 40	FP, VOCs	FP, VOCs	FP, VOCs	FP, VOCs	FP, VOCs, Metals
SA-PZ-161I	Downgradient Well	42 - 47	FP, VOCs	FP, VOCs	FP, VOCs	FP, VOCs	FP, VOCs, Metals
SA-PZ-408 (2)	Upgradient Well	37 - 42	--	--	--	--	FP, VOCs, TOC, MEE, TAL Metals, Wet Chemistry

ft bgs - feet below ground surface
FP - field parameters - consisting of pH, specific conductivity, dissolved oxygen (DO), ferrous iron (Fe^{+2}), temperature, and oxidation-reduction potential (ORP). DO was additionaly analyzed via field test kits during the March and June 2011 sampling events. Fe^{+2} was additionally analyzed via field test kits during the March 2011 sampling event.
VOCs - volatile organic compounds
TOC - total organic carbon.
DHB - *Dehalobacter sp.*
Wet Chemistry - nitrate/nitrite, sulfide, chloride
TAL Metals - complete target analyte metals list
MEE - methane, ethane, ethene.
Metals - iron and manganese.
DHC - *Dehalococcoides sp.*
-- well not sampled during this event.
1. Samples were additionally taken prior to and after the well was redeveloped in August 2011.
2. SA-PZ-408 was installed on June 10th 2011 and was added to the sampling list for the June 2011 (Month 11) sampling event.

TABLE 4-1
EXTRACTED GROUNDWATER RESULTS (PRE-CARBON TREATMENT)
ETHYL LACTATE INJECTION SYSTEM - EISB PILOT TEST
NWIRP CALVERTON, NEW YORK

Sample Date	**NYS MCLs**	7/20/2010	7/21/2010	7/28/2010	8/3/2010	10/19/2010	10/20/2010	10/21/2010	3/15/2011	4/4/2011	4/11/2011	4/20/2011	5/9/2011
Volume Extracted (gallons)		0 (1)	2,330 (2)	9,940 (2)	15,400 (2)	4,749 (3)	8,683 (3)	11,806 (3)	5,300 (4)	18,750 (4)	22,800 (4)	31,800 (4)	35,600 (4)
Sample Type		proveout	operation	operation	operation	operation	operation	operation	operation	operation	operation	operation	operation
Volatile Organic Compounds (µg/L)													
1,1,1-Trichloroethane	5	39	50	45	41	32	31	32	24	29	27	32 J	21
1,1-Dichloroethane	5	190	190	210	200	150	150	150	120	150	150	130	110
1,1-Dichloroethene	5	11	14	14	12	10	10	11	ND	10	10	12 J	7.3
Chloroethane	5	42	50	33	36	35	37	38	80	64	51	98 J	38
Total Target VOCs	--	*282*	*304*	*302*	*289*	*227*	*228*	*231*	*224*	*253*	*238*	*272*	*176.3*
Benzene	5	0.57 J	0.66 J	0.58 J	0.54 J	ND	ND	ND	0.69 J	0.59 J	0.58 J	0.67 J	ND
1,4-Dichlorobenzene	5	3.4 J	2.8 J	ND	ND	4.7 J	5.0 J	5.3	3.6	1.7	1.7	1.5 J	ND
1,2-Dichlorobenzene	5	1.3 J	1.2 J	ND	ND	1.5 J	1.6 J	1.6 J	1.0 J	0.57 J	0.79 J	0.61 J	ND
Isopropyl Benzene	5	0.39 J	0.37 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	5	2.1 J	2.1 J	ND	ND	ND	ND	ND	2.5	2.2	3.0	2.2 J	ND
Total Organic Carbon (mg/L)	--	1.4	1.1	1.1	16	1.02	1.04	1.59	1.9	--	--	ND	ND
Field Parameters													
pH	--	6.9	--	--	--	6.12	6.25	6.15	6.01	6.05	--	5.93	6.34
Specific Conductivity (mS/cm)	--	--	--	--	--	0.100	0.097	0.106	0.117	0.104	--	0.131	0.113
DO (mg/L)	--	4.35	--	--	--	3.23	**	5.4	**	4.92	--	4.64	4.23
Temperature (°C)	--	--	--	--	--	12.1	12.3	13.5	11.74	11.29	--	11.37	22.94 (5)
ORP (mV)	--	268	--	--	--	137	156	174	75	33	--	67	124

µg/L - micrograms per liter
J - Estimated Value
mg/L - Milligrams per liter
mS/cm - Millisiemens per centimeter
°C - Degrees celsius
ORP - oxidation-reduction potential
mV - Millivolts
ND - Not detected at or above reporting limit
-- No data.
** - Instrument not functioning properly.
NYS MCL - New York State Maximum Contaminant Level
1. Initial system proveout sample to test function of Granular Activated Carbon (GAC) unit. Sample represents extracted groundwater from wells SA-PZ-150I1, SA-PZ-153I1, SA-PZ-154I, and SA-PZ-156I.
2. Value is the combined volume of groundwater extracted from wells SA-PZ-150I1, SA-PZ-153I1, SA-PZ-154I, and SA-PZ-156I prior to treatment in the GAC unit.
3. Value is the combined volume of groundwater extracted from wells SA-PZ-150I1, SA-PZ-153I1, SA-PZ-154I, and SA-PZ-157I prior to treatment in the GAC unit.
4. Value is the combined volume of groundwater extracted from wells SA-PZ-154I, SA-PZ-155I, and SA-PZ-156I, prior to treatment in the GAC unit.
5. Temperature reading believed to be in error.

TABLE 4-2
FIELD WATER QUALITY PARAMETERS AND ORGANIC CARBON (TOC) RESULTS IN DOWNGRADIENT GROUNDWATER MONITORING WELLS
MARCH TO MAY 2011 ETHYL LACTATE INJECTION/RECIRCULATION
EISB PILOT TEST
NWIRP CALVERTON, NEW YORK

Groundwater Travel Time From Injection Area	Monitoring (25 feet from injection well SA-PZ-155I)								
Location	**SA-PZ-157I (41-46 feet below ground surface)**								
Sample Description	Baseline Sampling Event	Pre-March 2011 Injection Event	Injection Week Two	Injection Week Three	Injection Week Four	Injection Week Five	Injection Week Six	Injection Week Seven	Month 11 Sampling Event
Sample Date	**7/8/2010**	**3/7/2011**	**3/21/2011**	**3/28/2011**	**4/4/2011**	**4/11/2011**	**4/20/2011**	**5/9/2011**	**6/21/2011**
Wet Chemistry (mg/L)									
TOC	0.73 J	1.1 J	1.0	1.4	2.0	1.9	< 0.097	2.4	0.599
Water Quality Parameters									
pH	5.57	5.69	5.86	5.95	6.05	6.12	6.09	5.97	5.31
Specific Conductivity (mS/cm)	0.107	0.133	0.108	0.112	0.104	0.107	0.142	0.156	0.096
Dissolved Oxygen (mg/L)	0	-- / 0.8	-- / 0.8	-- / 0.8	-- / 0.6	-- / 0.3	1.37 / 0.7	0.37 /0.70, 0.80	1.99 / 1.0
Temperature (ºC)	13.51	7.75	10.89	10.84	11.29	11.25	10.14	12.21	16.39
Oxygen Reduction Potential (mV)	73	73	65	59	33	38	54	24	106
Turbidity (NTU)	1.78	0.57	1.02	0.10	5.13	0.35	0.77	0.75	0

TABLE 4-2
FIELD WATER QUALITY PARAMETERS AND ORGANIC CARBON (TOC) RESULTS IN DOWNGRADIENT GROUNDWATER MONITORING WELLS
MARCH TO MAY 2011 ETHYL LACTATE INJECTION/RECIRCULATION
EISB PILOT TEST
NWIRP CALVERTON, NEW YORK

Groundwater Travel Time From Injection Area	Monitoring (25 feet from injection well SA-PZ-155I)								
Location	**SA-PZ-157I1 (33-38 feet below ground surface)**								
Sample Description	Baseline Sampling Event	Pre-March 2011 Injection Event	Injection Week Two	Injection Week Three	Injection Week Four	Injection Week Five	Injection Week Six	Injection Week Seven	Month 11 Sampling Event
Sample Date	**7/7/2010**	**3/7/2011**	**3/21/2011**	**3/28/2011**	**4/4/2011**	**4/11/2011**	**4/20/2011**	**5/9/2011**	**6/21/2011**
Wet Chemistry (mg/L)									
TOC	1.3	2.5 J	3.0	3.6	2.9	2.7	1.8	2.1	1.9
Water Quality Parameters									
pH	5.92	5.79	6.06	6.11	6.27	6.36	6.20	6.11	5.37
Specific Conductivity (mS/cm)	0.132	0.182	0.147	0.149	0.129	0.143	0.149	0.154	0.129
Dissolved Oxygen (mg/L)	0	-- / 0.8	-- / 0.8	-- / 0.6	-- / 0.6	-- / 0.2	0.77 / 0.7	0 / 0.6	1.41 / 0.8
Temperature (ºC)	13.80	7.43	10.95	10.82	11.44	11.34	10.31	12.08	15.42
Oxygen Reduction Potential (mV)	71	58	53	71	12	20	64	42	0
Turbidity (NTU)	0.09	0.47	1.14	0.20	3.71	0.85	3.93	0.71	0.07

TABLE 4-2
FIELD WATER QUALITY PARAMETERS AND ORGANIC CARBON (TOC) RESULTS IN DOWNGRADIENT GROUNDWATER MONITORING WELLS
MARCH TO MAY 2011 ETHYL LACTATE INJECTION/RECIRCULATION
EISB PILOT TEST
NWIRP CALVERTON, NEW YORK

Groundwater Travel Time From Injection Area	Monitoring (50 feet from injection well SA-PZ-155I)							
Location	**SA-PZ-158I (41-46 feet below ground surface)**							
Sample Description	Baseline Sampling Event	Pre-March 2011 Injection Event	Injection Week Two	Injection Week Three	Injection Week Four	Injection Week Five	Injection Week Six	Injection Week Seven
Sample Date	**7/6/2010**	**3/7/2011**	**3/21/2011**	**3/28/2011**	**4/4/2011**	**4/11/2011**	**4/20/2011**	**5/9/2011**
Wet Chemistry (mg/L)								
TOC	NS	NS	1.2	1.1	1.7	0.999	< 0.097	< 0.097
Water Quality Parameters								
pH	6.27	6.29	6.37	6.33	6.57	6.48	6.41	6.19
Specific Conductivity (mS/cm)	0.151	0.161	0.145	0.142	0.128	0.148	0.144	0.137
Dissolved Oxygen (mg/L)	1.57	-- / 6.0	-- / 0.4	-- / 0.2	-- / 0.3	-- / 0.2	0 / 0.25	0 / 0.3
Temperature (ºC)	14.87	11.11	10.76	11.11	11.46	11.28	10.36	12.06
Oxygen Reduction Potential (mV)	-224	32	-22	-17	-58	-51	-17	-29
Turbidity (NTU)	0.56	0.63	0.98	0.5	4.07	0.54	0	2.44

TABLE 4-2
FIELD WATER QUALITY PARAMETERS AND ORGANIC CARBON (TOC) RESULTS IN DOWNGRADIENT GROUNDWATER MONITORING WELLS
MARCH TO MAY 2011 ETHYL LACTATE INJECTION/RECIRCULATION
EISB PILOT TEST
NWIRP CALVERTON, NEW YORK

Groundwater Travel Time From Injection Area	Monitoring (50 feet from injection well SA-PZ-155I)							
Location	**SA-PZ-158I1 (33-38 feet below ground surface)**							
Sample Description	Baseline Sampling Event	Pre-March 2011 Injection Event	Injection Week Two	Injection Week Three	Injection Week Four	Injection Week Five	Injection Week Six	Injection Week Seven
Sample Date	**7/6/2010**	**3/7/2011**	**3/21/2011**	**3/28/2011**	**4/4/2011**	**4/11/2011**	**4/20/2011**	**5/9/2011**
Wet Chemistry (mg/L)								
TOC	NS	NS	3.2	3.5	3.3	3.1	2.3	2.7
Water Quality Parameters								
pH	6.45	6.01	6.14	6.15	6.28	6.25	5.94	6.11
Specific Conductivity (mS/cm)	0.161	0.139	0.153	0.154	0.140	0.151	0.168	0.158
Dissolved Oxygen (mg/L)	1.59	-- / 2.0	-- / 0.6	-- / 0.6	-- / 0.5	-- / 0.4	0.08 / 0.4	0 / 0.6
Temperature (ºC)	14.12	10.95	11.13	11.30	11.56	11.35	10.62	12.23
Oxygen Reduction Potential (mV)	-224	69	14	29	-5	0	56	16
Turbidity (NTU)	1.20	0.83	1.09	0.25	3.97	0.57	0.25	4.15

TABLE 4-2
FIELD WATER QUALITY PARAMETERS AND ORGANIC CARBON (TOC) RESULTS IN DOWNGRADIENT GROUNDWATER MONITORING WELLS
MARCH TO MAY 2011 ETHYL LACTATE INJECTION/RECIRCULATION
EISB PILOT TEST
NWIRP CALVERTON, NEW YORK

Groundwater Travel Time From Injection Area	Monitoring (75 feet from injection well SA-PZ-155I)								
Location	**SA-PZ-159I (42-47 feet below ground surface)**								
Sample Description	Baseline Sampling Event	Pre-March 2011 Injection Event	Injection Week Two	Injection Week Three	Injection Week Four	Injection Week Five	Injection Week Six	Injection Week Seven	Month 11 Sampling Event
Sample Date	**7/8/2010**	**3/7/2011**	**3/21/2011**	**3/28/2011**	**4/4/2011**	**4/11/2011**	**4/19/2011**	**5/9/2011**	**6/21/2011**
Wet Chemistry (mg/L)									
TOC	0.69 J	1.5 J	1.4	1.2	1.8	1.6	< 0.097	1.2	1.1
Water Quality Parameters									
pH	5.79	6.12	6.31	6.33	6.53	6.53	5.73	6.30	7.54
Specific Conductivity (mS/cm)	0.129	0.129	0.136	0.143	0.136	0.130	0.148	0.140	0.109
Dissolved Oxygen (mg/L)	--	-- / 1.0	-- / 0.2	-- / 0.3	-- / 0.2	-- / 0	-- / 0.4	0 / 0.8	0.0 / 1.0
Temperature (ºC)	14.03	11.02	10.89	11.40	11.41	11.34	10.99	14.19	13.41
Oxygen Reduction Potential (mV)	105	46	-21	-10	-60	-54	23	-24	-60
Turbidity (NTU)	0.55	0.85	0.65	0.26	3.97	0.75	0	4.04	0.72

TABLE 4-2
FIELD WATER QUALITY PARAMETERS AND ORGANIC CARBON (TOC) RESULTS IN DOWNGRADIENT GROUNDWATER MONITORING WELLS
MARCH TO MAY 2011 ETHYL LACTATE INJECTION/RECIRCULATION
EISB PILOT TEST
NWIRP CALVERTON, NEW YORK

Groundwater Travel Time From Injection Area	Monitoring (75 feet from injection well SA-PZ-155I)								
Location	**SA-PZ-159I1 (34-39 feet below ground surface)**								
Sample Description	Baseline Sampling Event	Pre-March 2011 Injection Event	Injection Week Two	Injection Week Three	Injection Week Four	Injection Week Five	Injection Week Six	Injection Week Seven	Month 11 Sampling Event
Sample Date	**7/8/2010**	**3/8/2011**	**3/21/2011**	**3/28/2011**	**4/4/2011**	**4/11/2011**	**4/20/2011**	**5/9/2011**	**6/21/2011**
Wet Chemistry (mg/L)									
TOC	1.3	26 J	11	5.9	3.6	3.2	2.2	1.9	1.7 / 1.6
Water Quality Parameters									
pH	6.67	5.84	5.93	5.98	6.16	6.30	6.16	6.13	7.30
Specific Conductivity (mS/cm)	0.162	0.183	0.147	0.131	0.130	0.143	0.149	0.149	0.110
Dissolved Oxygen (mg/L)	--	-- / 0.6	-- / 0.6	-- / 0.6	-- / 0.6	-- / 0.4	0 / 0.4	0 / 0.5	0.0 / 1.0
Temperature (ºC)	13.78	10.55	11.16	11.40	11.40	11.34	10.75	14.07	13.09
Oxygen Reduction Potential (mV)	-398	119	30	42	10	33	47	44	-18
Turbidity (NTU)	0	0.8	1.00	0.30	8.74	0.55	0	0.35	0.87

TOC - Total organic carbon

mg/L - Milligrams per liter

mS/cm - Millisiemens per centimeter

°C - Degrees celsius

ORP - oxidation-reduction potential

mV - Millivolts

NS - Not sampled.

ND - Not detected at or above reporting limit.

-- D.O. Probe malfunctioning.

-- / 0.6 - DO probe reading/ field test kit reading

1. The March to May 2011 injection and recirculation event occurred over a seven week period (March 12, 2011 through May 10, 2011). Samples were not taken from the target wells during the first week of injection and recirculation.

2. Wells SA-PZ-157I, I1 are located 50 feet directly downgradient of the ethyl lactate injection wells, SA-PZ-158I, I1 are located 75 feet directly downgradient of the injection wells, and SA-PZ-159I, I1 are located 100 feet downgradient of the injection wells.

TABLE 4-3
GROUNDWATER MONITORING WELL RESULTS
EISB PILOT TEST
NWIRP CALVERTON, NEW YORK

Purpose / Notes	NYSDOH MCLs [1]	Cross-gradient Reference Well									Cross-gradient Reference Well			
Location		**SA-PZ-133I (42-47 ft bgs)**									**SA-PZ-133I1 (35-40 ft bgs)**			
Sample Date		**3/31/2010**	**7/8/2010**	**10/12/2010**	**12/15/2010**	**12/15/2010 (duplicate)**	**3/8/2011**	**6/9/2011**	**6/21/2011**	**9/19/2011**	**3/31/2010**	**6/9/2011**	**6/21/2011**	**9/19/2011**
VOCs (µg/L)														
1,1,1-Trichloroethane (TCA)	5	120	24	14	18	17	11	9.5	10 J	4.2	2 J	22 J	14	5.8
1,1-Dichloroethane (DCA)	5	460	130	98	130	130	63	76	90 J	31	26	120	170	100
1,1-Dichloroethene (DCE)	5	41	7.8	4.9 J	6.9	6.7	3.9	4.3	4.2 J	2	1.6 J	13 J	8.3	6.4
Chloroethane (CA)	5	67	9.6	17	33	34	5.2	6.7	7.4 J	1.9	4.9 J	22 J	15	11
Benzene	5	1.1 J	ND	ND	0.35 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	5	2.2 J	ND	ND	ND	ND	ND	ND	ND	ND	1.2 J	ND	ND	ND
1,3-Dichlorobenzene	5	0.65 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	5	0.91 J	0.70 J	ND	ND	ND	ND	ND	ND	ND	0.36 J	ND	ND	ND
Isopropyl Benzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	5	3 J	0.98 J	ND	ND	ND	0.84 J	ND	ND	0.89 J	0.75 J	ND	ND	0.62 J
Chlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Napthalene	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Target VOCs (TCA, DCA, DCE, CA)	--	**688**	**171**	**134**	**188**	**188**	**83**	**96.5**	**111.6**	**39.1**	**34.5**	**177**	**207.3**	**123.2**
DCA/TCA Ratio	--	*3.8*	*5.4*	*7.0*	*7.2*	*7.6*	*5.7*	*8.0*	*9.0*	*7.4*	*13.0*	*5.5*	*12.1*	*17.2*
CA/DCA Ratio	--	*0.15*	*0.07*	*0.17*	*0.25*	*0.26*	*0.08*	*0.09*	*0.08*	*0.06*	*0.19*	*0.18*	*0.09*	*0.11*
CA/TCA Ratio	--	*0.56*	*0.40*	*1.21*	*1.83*	*2.00*	*0.47*	*0.71*	*0.74*	*0.45*	*2.45*	*1.00*	*1.07*	*1.90*
Dissolved Gases (µg/L)														
Methane	none	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethane	none	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethene	none	--	--	--	--	--	--	--	--	--	--	--	--	--
Dechlorinating Bacteria (cells/mL)														
Dehalococcoides sp.	none	--	--	--	--	--	--	--	--	--	--	--	--	--
Dehalobacter sp.	none	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals (µg/L)														
Iron	300 [2]	--	--	--	--	--	--	--	45.1 J	--	--	--	46.1 J	--
Fe^{2+} (Ferrous Iron)	none	--	--	--	--	--	0	--	--	--	--	--	--	--
Manganese	300 [2]	--	--	--	--	--	--	--	870	--	--	--	2,760	--
Wet Chemistry (mg/L)														
Nitrate (as N)	10	--	--	--	--	--	--	--	--	--	--	--	--	--
Nitrite (as N)	1	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloride	250	--	--	--	--	--	--	--	--	--	--	--	--	--
Sulfide	none	--	--	--	--	--	--	--	--	--	--	--	--	--
TOC	none	--	--	--	--	--	--	--	--	--	--	--	--	--
Water Quality Parameters														
pH	none	5.98	5.87	6.41	5.62	--	5.79	5.68	6.62	6.24	6.27	5.92	6.92	6.41
Specific Conductivity (mS/cm)	none	0.120	0.134	0.103	0.079	--	0.107	0.119	0.082	0.101	0.098	0.107	0.025	0.093
Dissolved Oxygen (mg/L)	none	0	--	0	0	--	-- / 0.6	1.49	0 / 1.0	0.74 / 0.80	--	1.40	0 / 1.0	1.13 / 0.60
Temperature (ºC)	none	11.21	14.72	14.93	10.56	--	7.18	12.16	12.63	12.58	11.21	12.44	13.38	13.73
Oxygen Reduction Potential (mV)	none	104	163	156	-12	--	125	116	81	172	2	70	29	62
Turbidity (NTU)	none	1.53	0	0	0	--	0.35	1.4	35.5	0.91	2.59	0.5	44.9	0.43

TABLE 4-3
GROUNDWATER MONITORING WELL RESULTS
EISB PILOT TEST
NWIRP CALVERTON, NEW YORK

Purpose / Notes	NYSDOH MCLs [1]	Cross-gradient Reference Well								
Location		**SA-PZ-135 (41.5-46.5 ft bgs)**								
Sample Date		**3/31/2010**	**12/14/2010**	**3/8/2011**	**6/7/2011**	**6/21/2011**	**8/3/2011**	**8/3/2011**	**8/4/2011**	**9/19/2011**
VOCs (µg/L)										
1,1,1-Trichloroethane (TCA)	5	70	12	7.3	5.6	4.6	0.52 J	6.3	4.0	14
1,1-Dichloroethane (DCA)	5	260	54	34	35	27	19	31	29	53
1,1-Dichloroethene (DCE)	5	22	3.3 J	2.6	2.8	1.9	1.1	2.0	1.8	3.5
Chloroethane (CA)	5	15 J	5.4	1.2	1.8	2.1	ND	ND	1.3	2.8
Benzene	5	0.35 J	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	5	0.38 J	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	5	0.91 J	ND	ND	ND	ND	ND	ND	ND	ND
Isopropyl Benzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
Napthalene	50	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Target VOCs (TCA, DCA, DCE, CA)	--	**367**	**74.7**	**45.1**	**45.2**	**35.6**	**20.62**	**39.3**	**36.1**	**73.3**
DCA/TCA Ratio	--	*3.7*	*4.5*	*4.7*	*6.3*	*5.9*	*37*	*4.9*	*7.3*	*3.8*
CA/DCA Ratio	--	*0.06*	*0.10*	*0.04*	*0.05*	*0.08*	--	--	*0.04*	*0.05*
CA/TCA Ratio	--	*0.21*	*0.45*	*0.16*	*0.32*	*0.46*	--	--	*0.33*	*0.20*
Dissolved Gases (µg/L)										
Methane	none	--	--	--	--	--	--	--	--	--
Ethane	none	--	--	--	--	--	--	--	--	--
Ethene	none	--	--	--	--	--	--	--	--	--
Dechlorinating Bacteria (cells/mL)										
Dehalococcoides sp.	none	--	--	--	--	--	--	--	--	--
Dehalobacter sp.	none	--	--	--	--	--	--	--	--	--
Metals (µg/L)										
Iron	300 [2]	--	--	--	--	26.7 J	--	--	--	--
Fe^{2+} (Ferrous Iron)	none	--	--	0	--	--	--	--	--	--
Manganese	300 [2]	--	--	--	--	927	--	--	--	--
Wet Chemistry (mg/L)										
Nitrate (as N)	10	--	--	--	--	--	--	--	--	--
Nitrite (as N)	1	--	--	--	--	--	--	--	--	--
Chloride	250	--	--	--	--	--	--	--	--	--
Sulfide	none	--	--	--	--	--	--	--	--	--
TOC	none	--	--	--	--	--	--	--	--	--
Water Quality Parameters										
pH	none	5.75	4.75	5.77	4.99	7.02	5.28	6.18	4.99	5.82
Specific Conductivity (mS/cm)	none	0.123	0.090	0.109	0.122	0.088	0.108	0.105	0.098	0.101
Dissolved Oxygen (mg/L)	none	0	--	-- / 1.0	1.56	0 / 1.8	0	0	0.13	0.58 / 0.20
Temperature (ºC)	none	10.83	10.8	11.14	13.01	14.12	13.41	14.55	13.56	13.83
Oxygen Reduction Potential (mV)	none	109	169	116	160	75	226	219	338	116
Turbidity (NTU)	none	3.52	0	0.77	0.5	85.6	0	0.55	0.32	0.01

TABLE 4-3
GROUNDWATER MONITORING WELL RESULTS
EISB PILOT TEST
NWIRP CALVERTON, NEW YORK

Purpose / Notes	NYSDOH MCLs [1]	Cross-gradient Reference Well									Cross-gradient Reference Well		
Location		**SA-PZ-136 (44-49 ft bgs)**									**SA-PZ-137 (49-54 ft bgs)**		
Sample Date		**3/31/2010**	**12/14/2010**	**3/8/2011**	**6/7/2011**	**6/21/2011**	**8/3/2011**	**8/3/2011**	**8/4/2011**	**9/19/2011**	**3/31/2010**	**6/8/2011**	**9/19/2011**
VOCs (µg/L)													
1,1,1-Trichloroethane (TCA)	5	ND	ND	ND	ND	ND	14	12	23	ND	ND	ND	ND
1,1-Dichloroethane (DCA)	5	1.5 J	1.5 J	1.8	ND	1.5	110	100	130	1.7	ND	1.2	1.2
1,1-Dichloroethene (DCE)	5	ND	ND	ND	ND	ND	6.4	5.3	8.6	ND	ND	ND	ND
Chloroethane (CA)	5	ND	ND	ND	ND	ND	9.3	8.6	12	ND	ND	ND	ND
Benzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropyl Benzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Napthalene	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Target VOCs (TCA, DCA, DCE, CA)	--	**1.5**	**1.5**	**1.8**	--	**1.5**	**139.7**	**125.9**	**173.6**	**1.7**	**0**	**1.2**	**1.2**
DCA/TCA Ratio	--	--	--	--	--	--	*7.9*	*8.3*	*5.7*	--	--	--	--
CA/DCA Ratio	--	--	--	--	--	--	*0.08*	*0.09*	*0.09*	--	--	--	--
CA/TCA Ratio	--	--	--	--	--	--	*0.66*	*0.72*	*0.52*	--	--	--	--
Dissolved Gases (µg/L)													
Methane	none	--	--	--	--	--	--	--	--	--	--	--	--
Ethane	none	--	--	--	--	--	--	--	--	--	--	--	--
Ethene	none	--	--	--	--	--	--	--	--	--	--	--	--
Dechlorinating Bacteria (cells/mL)													
Dehalococcoides sp.	none	--	--	--	--	--	--	--	--	--	--	--	--
Dehalobacter sp.	none	--	--	--	--	--	--	--	--	--	--	--	--
Metals (µg/L)													
Iron	300 [2]	--	--	--	--	877	--	--	--	--	--	--	--
Fe^{2+} (Ferrous Iron)	none	--	--	1,200	--	--	--	--	--	--	--	--	--
Manganese	300 [2]	--	--	--	--	1,600	--	--	--	--	--	--	--
Wet Chemistry (mg/L)													
Nitrate (as N)	10	--	--	--	--	--	--	--	--	--	--	--	--
Nitrite (as N)	1	--	--	--	--	--	--	--	--	--	--	--	--
Chloride	250	--	--	--	--	--	--	--	--	--	--	--	--
Sulfide	none	--	--	--	--	--	--	--	--	--	--	--	--
TOC	none	--	--	--	--	--	--	--	--	--	--	--	--
Water Quality Parameters													
pH	none	6.10	5.64	5.95	5.60	7.12	6.52	6.61	6.05	6.15	6.27	5.78	6.51
Specific Conductivity (mS/cm)	none	0.129	0.123	0.118	0.130	0.096	0.317	0.304	0.246	0.112	0.133	0.134	0.106
Dissolved Oxygen (mg/L)	none	--	0	-- / 0.8	1.4	0 / 1.0	0	0	0.14	0.75 / 0.60	0	1.64	0.36 / 0.20
Temperature (ºC)	none	10.23	10.45	10.81	11.56	13.49	13.93	15.32	13.92	13.51	10.28	11.39	13.91
Oxygen Reduction Potential (mV)	none	-7	-56	98	65	4	-55	-92	-5	94	4	47	88
Turbidity (NTU)	none	23.3	4.70	1.96	38.5	3.38	4.19	8.47	4.67	1.06	7.75	2.1	0.46

TABLE 4-3
GROUNDWATER MONITORING WELL RESULTS
EISB PILOT TEST
NWIRP CALVERTON, NEW YORK

Purpose / Notes	NYSDOH MCLs [1]	Upgradient Monitoring Well						
Location		**SA-PZ-138I (48.5-53.5 ft bgs)**						
Sample Date		**7/8/2010**	**7/8/2010 (duplicate)**	**10/12/2010**	**10/12/2010 (duplicate)**	**12/15/2010**	**3/8/2011**	**6/21/2011**
VOCs (µg/L)								
1,1,1-Trichloroethane (TCA)	5	4.4 J	4.4 J	8.1	8.2	5.6	ND	1.5
1,1-Dichloroethane (DCA)	5	20 J	20 J	33	32	20	4.1	9.6
1,1-Dichloroethene (DCE)	5	1.2 J	1.0 J	1.7 J	2.0 J	1.2 J	ND	0.6 J
Chloroethane (CA)	5	ND	1.7 J	ND	ND	ND	ND	ND
Benzene	5	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	5	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	5	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	5	ND	ND	ND	ND	ND	ND	ND
Isopropyl Benzene	5	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	5	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	5	ND	ND	ND	ND	ND	ND	ND
Napthalene	50	ND	ND	ND	ND	ND	ND	ND
Total Target VOCs (TCA, DCA, DCE, CA)	--	**26**	**27**	**43**	**42**	**27**	**4.1**	**12**
DCA/TCA Ratio	--	*4.5*	*4.5*	*4.1*	*3.9*	*3.6*	--	*6.4*
CA/DCA Ratio	--	--	*0.09*	--	--	--	--	--
CA/TCA Ratio	--	--	*0.39*	--	--	--	--	--
Dissolved Gases (µg/L)								
Methane	none	--	--	--	--	--	--	--
Ethane	none	--	--	--	--	--	--	--
Ethene	none	--	--	--	--	--	--	--
Dechlorinating Bacteria (cells/mL)								
Dehalococcoides sp.	none	--	--	--	--	--	--	--
Dehalobacter sp.	none	--	--	--	--	--	--	--
Metals (µg/L)								
Iron	300 [2]	--	--	--	--	--	--	ND
Fe^{2+} (Ferrous Iron)	none	--	--	--	--	--	0	0
Manganese	300 [2]	--	--	--	--	--	--	731
Wet Chemistry (mg/L)								
Nitrate (as N)	10	--	--	--	--	--	--	--
Nitrite (as N)	1	--	--	--	--	--	--	--
Chloride	250	--	--	--	--	--	--	--
Sulfide	none	--	--	--	--	--	--	--
TOC	none	--	--	--	--	--	--	--
Water Quality Parameters								
pH	none	5.88	--	5.85	--	6.38	5.62	5.67
Specific Conductivity (mS/cm)	none	0.134	--	0.099	--	0.089	0.114	0.094
Dissolved Oxygen (mg/L)	none	--	--	0.24	--	--	-- / 1.5	0 / 0.3
Temperature (ºC)	none	13.67	--	13.0	--	11.2	6.57	15.32
Oxygen Reduction Potential (mV)	none	-6.0	--	42	--	90	144	161
Turbidity (NTU)	none	0	--	0	--	0	0.3	0

TABLE 4-3
GROUNDWATER MONITORING WELL RESULTS
EISB PILOT TEST
NWIRP CALVERTON, NEW YORK

Purpose / Notes	NYSDOH MCLs [1]	Upgradient Monitoring Well							Cross-gradient Reference Well					
Location		**SA-PZ-138I1 (37-42 ft bgs)**							**SA-PZ-139I (42.5-47.5 ft bgs)**					
Sample Date		**7/6/2010**	**10/12/2010**	**12/15/2010**	**3/8/2011**	**6/21/2011 [3]**	**6/21/2011 [3] (duplicate)**	**9/20/2011**	**7/8/2010**	**10/12/2010**	**12/15/2010**	**3/8/2011**	**6/10/2011**	**6/20/2011**
VOCs (µg/L)														
1,1,1-Trichloroethane (TCA)	5	220	170 J	260	340	320	300	250	2.3 J	0.92 J	1.3 J	ND	ND	ND
1,1-Dichloroethane (DCA)	5	980	970	1,100	1,200	1,500	1,500	1,100	17	7.6	9.2	6.5	5.9 J	4.6
1,1-Dichloroethene (DCE)	5	65	60 J	63	86	100	85	65	0.94 J	ND	ND	ND	ND	ND
Chloroethane (CA)	5	210	230	320	240	250	280	150	1.8 J	ND	ND	ND	ND	ND
Benzene	5	3.4 J	4.4 J	ND	2.6	ND	ND	1.6	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	5	13 J	16 J	ND	7.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	5	3.1 J	4.0 J	ND	1.6	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	5	6.4 J	6.3 J	ND	3.7	ND	ND	1.9	ND	ND	ND	ND	ND	ND
Isopropyl Benzene	5	6.5 J	11	ND	8.2	ND	ND	2.5	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	5	5.7 J	14 J	ND	9.9	ND	ND	4.8	ND	ND	ND	ND	ND	ND
Chlorobenzene	5	ND	1.1 J	ND	0.55 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Napthalene	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Target VOCs (TCA, DCA, DCE, CA)	--	**1475**	**1430**	**1743**	**1866**	**2170**	**2165**	**1565**	**22**	**9**	**10.5**	**6.5**	**5.9**	**4.6**
DCA/TCA Ratio	--	*4.5*	*4.2*	*4.2*	*3.5*	*4.7*	*5.0*	*4.4*	*7.4*	*8.3*	*7.1*	--	--	--
CA/DCA Ratio	--	*0.21*	*0.24*	*0.29*	*0.20*	*0.17*	*0.19*	*0.14*	*0.11*	--	--	--	--	--
CA/TCA Ratio	--	*0.95*	*1.35*	*1.23*	*0.71*	*0.78*	*0.93*	*0.60*	*0.78*	--	--	--	--	--
Dissolved Gases (µg/L)														
Methane	none	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethane	none	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethene	none	--	--	--	--	--	--	--	--	--	--	--	--	--
Dechlorinating Bacteria (cells/mL)														
Dehalococcoides sp.	none	--	--	--	--	--	--	--	--	--	--	--	--	--
Dehalobacter sp.	none	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals (µg/L)														
Iron	300 [2]	--	--	--	--	ND	ND	--	--	--	--	--	--	40.7 J
Fe^{2+} (Ferrous Iron)	none	--	--	--	0	--	--	--	--	--	--	0	--	--
Manganese	300 [2]	--	--	--	--	5,220	5,260	--	--	--	--	--	--	172
Wet Chemistry (mg/L)														
Nitrate (as N)	10	--	--	--	--	--	--	--	--	--	--	--	--	--
Nitrite (as N)	1	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloride	250	--	--	--	--	--	--	--	--	--	--	--	--	--
Sulfide	none	--	--	--	--	--	--	--	--	--	--	--	--	--
TOC	none	--	--	--	--	--	--	--	--	--	--	--	--	--
Water Quality Parameters														
pH	none	6.12	5.93	5.97	5.74	6.98	--	6.15	5.28	6.15	5.53	5.71	5.58	6.47
Specific Conductivity (mS/cm)	none	0.190	0.146	0.139	0.181	0.135	--	0.153	0.099	0.101	0.087	0.108	0.126	0.083
Dissolved Oxygen (mg/L)	none	1.67	0.23	--	-- / 1.0	0 / 0.8	--	-- / 1.0	0	0	0	-- / 0.6	1.52	0 / 0.8
Temperature (ºC)	none	14.27	13.1	11.0	6.31	15.49	--	13.96	13.67	15.84	11.07	6.68	12.26	12.67
Oxygen Reduction Potential (mV)	none	62	127	120	130	82	--	50	137	183	-1	127	144	66
Turbidity (NTU)	none	0.45	0	0.24	0.31	0	--	0	1.29	0.08	0	0.29	0.5	20

TABLE 4-3
GROUNDWATER MONITORING WELL RESULTS
EISB PILOT TEST
NWIRP CALVERTON, NEW YORK

Purpose / Notes	NYSDOH MCLs [1]	Upgradient Monitoring Well					Injection/Extraction Well						
Location		**SA-PZ-149I1 (32-37 ft bgs)**					**SA-PZ-151I1 (34-39 ft bgs)**						
Sample Date		**7/8/2010**	**10/12/2010**	**12/15/2010**	**3/8/2011**	**6/20/2011**	**7/7/2010**	**10/12/2010**	**10/12/2010 (duplicate)**	**12/15/2010**	**3/8/2011**	**3/8/2011 (duplicate)**	**6/22/2011 [3]**
VOCs (µg/L)													
1,1,1-Trichloroethane (TCA)	5	6.6	ND	ND	ND	ND	110	36	35	32	36 J	39 J	ND
1,1-Dichloroethane (DCA)	5	40	3.6 J	6.7	18	12 J	490	180	170	190	310	310	390
1,1-Dichloroethene (DCE)	5	2.6 J	ND	0.82 J	1.7	1.3 J	33	14	13	13	20 J	22 J	24
Chloroethane (CA)	5	9.8	ND	10	18	14 J	99	91	91	140	220	220	260
Benzene	5	ND	ND	ND	ND	ND	1.1 J	1.3 J	1.2 J	1.6 J	2.1 J	2.3 J	ND
1,4-Dichlorobenzene	5	5.4	4.7 J	13	28	12 J	ND	11	11	22	23 J	26 J	ND
1,3-Dichlorobenzene	5	1.1 J	1.0 J	2.7 J	6.0	2.5 J	ND	2.5 J	2.3 J	4.0 J	5.3 J	5.8 J	ND
1,2-Dichlorobenzene	5	1.6 J	1.2 J	3.0 J	7.8	3.2 J	ND	3.6 J	3.6 J	5.8 J	6.9 J	7.5 J	ND
Isopropyl Benzene	5	0.42 J	ND	0.39 J	1.8	ND	ND	0.49 J	0.47 J	1.1 J	2.5 J	2.7 J	ND
1,2,4-Trichlorobenzene	5	ND	ND	ND	1.9	ND	ND	1.8 J	1.8 J	ND	9.6 J	11 J	ND
Chlorobenzene	5	1.3 J	ND	ND	5.1	1.5 J	ND	ND	ND	ND	2.7 J	3.0 J	ND
Napthalene	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Target VOCs (TCA, DCA, DCE, CA)	--	**59**	**4**	**18**	**38**	**27**	**732**	**321**	**309**	**375**	**586**	**591**	**674**
DCA/TCA Ratio	--	*6.1*	--	--	--	--	*4.5*	*5.0*	*4.9*	*5.9*	*8.6*	*7.9*	--
CA/DCA Ratio	--	*0.25*	--	*1.5*	*1.0*	*0.9*	*0.20*	*0.15*	*1.9*	*1.4*	*0.71*	*0.71*	*0.67*
CA/TCA Ratio	--	*1.48*	--	--	--	--	*0.90*	*2.53*	*2.60*	*4.38*	*6.11*	*5.64*	--
Dissolved Gases (µg/L)													
Methane	none	--	--	--	--	--	110	140 D	300 D	210 D	402 D	320 D	344
Ethane	none	--	--	--	--	--	ND	ND	ND	ND	ND	ND	ND
Ethene	none	--	--	--	--	--	ND	ND	ND	ND	ND	ND	ND
Dechlorinating Bacteria (cells/mL)													
Dehalococcoides sp.	none	--	--	--	--	--	--	--	--	--	--	--	--
Dehalobacter sp.	none	--	--	--	--	--	--	--	--	--	--	--	--
Metals (µg/L)													
Iron	300 [2]	--	--	--	--	112	1,500	1,010	1,020	1,170	214 J	225 J	612
Fe^{2+} (Ferrous Iron)	none	--	--	--	200	--	--	--	--	--	400	400	--
Manganese	300 [2]	--	--	--	--	1,630	4,680	5,460	5,550	5,580	5,460	5,750	5,270
Wet Chemistry (mg/L)													
Nitrate (as N)	10	--	--	--	--	--	--	--	--	--	--	--	ND
Nitrite (as N)	1	--	--	--	--	--	--	--	--	--	--	--	ND
Chloride	250	--	--	--	--	--	--	--	--	--	--	--	5.02
Sulfide	none	--	--	--	--	--	--	--	--	--	--	--	ND
TOC	none	--	--	--	--	--	1.5	1.1	1.33	1.31 J	2.6 J	3.2 J	2.1
Water Quality Parameters													
pH	none	5.83	5.96	6.70	5.78	6.69	6.38	6.10	--	5.90	5.66	--	6.42
Specific Conductivity (mS/cm)	none	0.103	0.09	0.079	0.102	0.063	0.174	0.127	--	0.123	0.161	--	0.123
Dissolved Oxygen (mg/L)	none	0	0.3	--	-- / 1.0	0 / 0.8	--	0.39	--	0	-- / 1.0	--	0 / 1.2
Temperature (ºC)	none	13.78	13.5	11.3	6.98	12.66	14.65	13.2	--	10.78	7.03	--	12.54
Oxygen Reduction Potential (mV)	none	42	71	69	98	18	-124	-16	--	-95	109	--	-51
Turbidity (NTU)	none	0	0	0.74	0.28	31.4	0.84	0	--	0.03	0.82	--	0

TABLE 4-3
GROUNDWATER MONITORING WELL RESULTS
EISB PILOT TEST
NWIRP CALVERTON, NEW YORK

Purpose / Notes	NYSDOH MCLs [1]	Injection/Extraction Well						Downgradient Monitoring Well					
Location		**SA-PZ-155I (41-46 ft bgs)**						**SA-PZ-157I (41-46 ft bgs)**					
Sample Date		**7/7/2010**	**7/7/2010 (duplicate)**	**10/12/2010**	**12/15/2010**	**3/7/2011**	**6/22/2011**	**7/8/2010**	**10/11/2010**	**12/14/2010**	**3/7/2011**	**5/9/2011**	**6/21/2011**
VOCs (µg/L)													
1,1,1-Trichloroethane (TCA)	5	38	36	15	16	19	7.8	46	15	17	21	31 J	9.7
1,1-Dichloroethane (DCA)	5	150	150	65	70	70	43	180	65	75	71	280 J	45
1,1-Dichloroethene (DCE)	5	12	11	3.7 J	3.4 J	5.4	2.4	13	4.2 J	4.1 J	5.2	17 J	3.4
Chloroethane (CA)	5	17	19	ND	ND	7.5	2.2	24	5.7	7.6	3.3	200 J	3.4 J
Benzene	5	0.33 J	0.31 J	ND	ND	ND	ND	0.43 J	ND	ND	ND	1.7 J	ND
1,4-Dichlorobenzene	5	0.31 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.6 J	ND
1,3-Dichlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.4 J	ND
1,2-Dichlorobenzene	5	ND	0.4 J	ND	ND	ND	ND	ND	ND	ND	ND	1.9 J	ND
Isopropyl Benzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5 J	0.85 J
Chlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.53 J	ND
Napthalene	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Target VOCs (TCA, DCA, DCE, CA)	--	**217**	**216**	**84**	**89.4**	**101.9**	**55.4**	**263**	**90**	**104**	**101**	**528**	**61.5**
DCA/TCA Ratio	--	*3.9*	*4.2*	*4.3*	*4.4*	*3.7*	*5.5*	*3.9*	*4.3*	*4.4*	*3.4*	*9.0*	*4.6*
CA/DCA Ratio	--	*0.11*	*0.13*	*--*	*--*	*0.11*	*0.05*	*0.13*	*0.09*	*0.10*	*0.05*	*0.71*	*0.08*
CA/TCA Ratio	--	*0.45*	*0.53*	*--*	*--*	*0.39*	*0.28*	*0.52*	*0.38*	*0.45*	*0.16*	*6.45*	*0.35*
Dissolved Gases (µg/L)													
Methane	none	9	12	3.7	2.5	8.1	ND	14	2.7	12	ND	--	ND
Ethane	none	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND
Ethene	none	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND
Dechlorinating Bacteria (cells/mL)													
Dehalococcoides sp.	none	--	--	--	--	--	--	0.20 J	--	1.6	--	--	ND
Dehalobacter sp.	none	--	--	--	--	--	--	50.2	--	40.4	--	--	544
Metals (µg/L)													
Iron	300 [2]	4,320	4,230	128 J	2,080	499 J	205	275	460 J	10,600	3,090 J	--	978
Fe^{2+} (Ferrous Iron)	none	--	--	--	--	600	--	--	--	--	2,200	--	--
Manganese	300 [2]	302	292	571	484	340	291	293	889	1,400	533	--	1,050
Wet Chemistry (mg/L)													
Nitrate (as N)	10	--	--	--	--	--	2.11	0.702	--	0.074 J	--	--	1.02
Nitrite (as N)	1	--	--	--	--	--	0.226	ND	--	ND	--	--	0.236
Chloride	250	--	--	--	--	--	7.42	8.31	--	4.12	--	--	7.48
Sulfide	none	--	--	--	--	--	ND	ND	--	ND	--	--	ND
TOC	none	0.83 J	0.77 J	ND	ND	0.989 J	0.662	0.73 J	ND	122 J	1.1 J	2.4	0.599
Water Quality Parameters													
pH	none	5.86	--	6.18	5.73	5.69	5.69	5.57	6.20	6.05	5.69	5.97	5.31
Specific Conductivity (mS/cm)	none	0.118	--	0.110	0.090	0.128	0.100	0.107	0.121	0.142	0.133	0.156	0.096
Dissolved Oxygen (mg/L)	none	0	--	0.68	0	-- / 1.0	0.55 / 1.0	0	0.89	0	-- / 0.8	0.37 /0.70, 0.80	1.99 / 1.0
Temperature (ºC)	none	13.47	--	15.62	11.07	6.94	15.5	13.51	15.41	10.94	7.75	12.21	16.39
Oxygen Reduction Potential (mV)	none	-32	--	133	-51	88	54	73	79	-155	73	24	106
Turbidity (NTU)	none	5.42	--	0	1.69	0.56	0	1.78	0	0	0.57	0.75	0

TABLE 4-3
GROUNDWATER MONITORING WELL RESULTS
EISB PILOT TEST
NWIRP CALVERTON, NEW YORK

Purpose / Notes	NYSDOH MCLs [1]	Downgradient Monitoring Well							
Location		**SA-PZ-157I1 (33-38 ft bgs)**							
Sample Date		**7/7/2010**	**10/11/2010**	**12/14/2010**	**12/14/2010 (duplicate)**	**3/7/2011**	**5/9/2011**	**6/21/2011**	**9/21/2011**
VOCs (µg/L)									
1,1,1-Trichloroethane (TCA)	5	73	48 J	20	21	20 J	16 J	23	46
1,1-Dichloroethane (DCA)	5	340	220	100	100	190	140	280	540
1,1-Dichloroethene (DCE)	5	23	17 J	7.6	7.9	14 J	13 J	19	25
Chloroethane (CA)	5	57	57 J	49	49	160 J	130	200	430
Benzene	5	0.81 J	0.84 J	ND	ND	1.7 J	1.9 J	ND	2.1
1,4-Dichlorobenzene	5	ND	6.1 J	7.3	7.4	26 J	37 J	26	19
1,3-Dichlorobenzene	5	ND	1.3 J	1.4 J	1.4 J	5.6 J	7.3 J	5.9 J	4.5
1,2-Dichlorobenzene	5	ND	2.3 J	2.1 J	2.2 J	7.4 J	9.8 J	7.4 J	5.9
Isopropyl Benzene	5	ND	ND	ND	ND	1.7 J	3.0 J	ND	ND
1,2,4-Trichlorobenzene	5	ND	ND	ND	ND	9.4 J	8.6 J	6.3 J	9.6
Chlorobenzene	5	ND	ND	0.73 J	ND	3.0 J	5.1 J	ND	1.7
Napthalene	50	ND	ND	ND	ND	ND	ND	ND	ND
Total Target VOCs (TCA, DCA, DCE, CA)	--	**493**	**342**	**177**	**177.9**	**384**	**299**	**522**	**1041**
DCA/TCA Ratio	--	*4.7*	*4.6*	*5.0*	*4.8*	*9.5*	*8.8*	*12.2*	*11.7*
CA/DCA Ratio	--	*0.17*	*0.26*	*0.49*	*0.49*	*1.2*	*0.93*	*0.71*	*0.80*
CA/TCA Ratio	--	*0.78*	*1.19*	*2.45*	*2.33*	*8.00*	*8.13*	*8.70*	*9.35*
Dissolved Gases (µg/L)									
Methane	none	80	66	78 D	90 D	258 D	--	207	--
Ethane	none	ND	ND	ND	ND	ND	--	ND	--
Ethene	none	ND	ND	ND	ND	ND	--	ND	--
Dechlorinating Bacteria (cells/mL)									
Dehalococcoides sp.	none	--	--	--	--	--	--	--	--
Dehalobacter sp.	none	--	--	--	--	--	--	--	--
Metals (µg/L)									
Iron	300 [2]	93.4 J	82.4 J	2,610	2,580	1,150 J	--	776	--
Fe^{2+} (Ferrous Iron)	none	--	--	--	--	1,400	--	--	--
Manganese	300 [2]	4,430	5,210	5,540	5,510	5,580	--	5,200	--
Wet Chemistry (mg/L)									
Nitrate (as N)	10	--	--	ND	--	--	--	ND	--
Nitrite (as N)	1	--	--	ND	--	--	--	ND	--
Chloride	250	--	--	6.65	--	--	--	4.51	--
Sulfide	none	--	--	ND	--	--	--	ND	--
TOC	none	1.3	0.94 J	107 J	ND	2.5 J	2.1	1.9	--
Water Quality Parameters									
pH	none	5.92	6.53	5.86	--	5.79	6.11	5.37	5.86
Specific Conductivity (mS/cm)	none	0.132	0.137	0.134	--	0.182	0.154	0.129	0.145
Dissolved Oxygen (mg/L)	none	0	0.57	0	--	-- / 0.8	0 / 0.6	1.41 / 0.8	0.63 / 0.05
Temperature (ºC)	none	13.80	15.34	10.79	--	7.43	12.08	15.42	13.66
Oxygen Reduction Potential (mV)	none	71	121	-116	--	58	42	0	51
Turbidity (NTU)	none	0.09	0	0	--	0.47	0.71	0.07	0.16

TABLE 4-3
GROUNDWATER MONITORING WELL RESULTS
EISB PILOT TEST
NWIRP CALVERTON, NEW YORK

Purpose / Notes	NYSDOH MCLs [1]	Downgradient Monitoring Well						Downgradient Monitoring Well					
Location		**SA-PZ-158I (41-46 ft bgs)**						**SA-PZ-158I1 (33-38 ft bgs)**					
Sample Date		**7/6/2010**	**10/11/2010**	**12/13/2010**	**3/7/2011**	**5/9/2011**	**6/20/2011**	**7/6/2010**	**10/11/2010**	**12/13/2010**	**3/7/2011**	**5/9/2011**	**6/20/2011**
VOCs (µg/L)													
1,1,1-Trichloroethane (TCA)	5	51	7.9	9.4	11 J	14	13 J	66	39	49	21 J	6.5	ND
1,1-Dichloroethane (DCA)	5	230	43	42	43 J	71	63 J	340	160	200	170	110	190
1,1-Dichloroethene (DCE)	5	15	2.6 J	2.1 J	3.0 J	5.0	4.6 J	19	12	15	12 J	8.5	15
Chloroethane (CA)	5	26	ND	ND	1.6 J	14	11 J	52	27	62	130	130	170
Benzene	5	0.52 J	ND	ND	ND	ND	ND	0.77 J	0.51 J	0.77 J	1.4 J	1.5	ND
1,4-Dichlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	2.8 J	6.4	17 J	30	ND
1,3-Dichlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	0.69 J	1.3 J	3.5 J	6.0	ND
1,2-Dichlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	1.2 J	2.1 J	5.0 J	7.6	5.3 J
Isopropyl Benzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.7 J	2.2	ND
1,2,4-Trichlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	1.4 J	2.0 J	6.9 J	6.6	6.8 J
Chlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	0.70 J	1.8 J	4.0	ND
Napthalene	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Target VOCs (TCA, DCA, DCE, CA)	--	**322**	**54**	**54**	**58.6**	**104**	**91.6**	**477**	**238**	**326**	**333**	**255**	**375**
DCA/TCA Ratio	--	*4.5*	*5.4*	*4.5*	*3.9*	*5.1*	*4.8*	*5.2*	*4.1*	*4.1*	*8.1*	*16.9*	*--*
CA/DCA Ratio	--	*0.11*	*--*	*--*	*0.04*	*0.20*	*0.17*	*0.15*	*0.17*	*0.31*	*0.76*	*1.18*	*0.89*
CA/TCA Ratio	--	*0.51*	*--*	*--*	*0.15*	*1.00*	*0.85*	*0.79*	*0.69*	*1.27*	*6.19*	*20*	*--*
Dissolved Gases (µg/L)													
Methane	none	--	--	--	--	--		--	--	--	--	--	--
Ethane	none	--	--	--	--	--	--	--	--	--	--	--	--
Ethene	none	--	--	--	--	--	--	--	--	--	--	--	--
Dechlorinating Bacteria (cells/mL)													
Dehalococcoides sp.	none	--	--	--	--	--	--	--	--	--	--	--	--
Dehalobacter sp.	none	--	--	--	--	--	--	--	--	--	--	--	--
Metals (µg/L)													
Iron	300 [2]	--	--	--	--	--	6,110	--	--	--	--	--	1,370
Fe^{2+} (Ferrous Iron)	none	--	--	--	2,600	--	--	--	--	--	2,400	--	--
Manganese	300 [2]	--	--	--	--	--	708	--	--	--	--	--	5,450
Wet Chemistry (mg/L)													
Nitrate (as N)	10	--	--	--	--	--	--	--	--	--	--	--	--
Nitrite (as N)	1	--	--	--	--	--	--	--	--	--	--	--	--
Chloride	250	--	--	--	--	--	--	--	--	--	--	--	--
Sulfide	none	--	--	--	--	--	--	--	--	--	--	--	--
TOC	none	--	--	--	--	ND	--	--	--	--	--	2.7	--
Water Quality Parameters													
pH	none	6.27	6.17	7.62	6.29	6.19	6.53	6.45	6.14	6.08	6.01	6.11	6.35
Specific Conductivity (mS/cm)	none	0.151	0.143	0.107	0.161	0.137	0.093	0.161	0.106	0.135	0.139	0.158	0.123
Dissolved Oxygen (mg/L)	none	1.57	0.27	--	-- / 6.0	0 / 0.3	0 / 0.8	1.59	0.24	0	-- / 2.0	0 / 0.6	0 / 1.0
Temperature (ºC)	none	14.87	14.4	11.9	11.11	12.06	12.59	14.12	13.7	11.87	10.95	12.23	12.95
Oxygen Reduction Potential (mV)	none	-224	-76	-55	32	-29	-76	-224	-94	-119	69	16	-30
Turbidity (NTU)	none	0.56	0.30	0	0.63	2.44	83.3	1.20	0.13	0	0.83	4.15	220

TABLE 4-3
GROUNDWATER MONITORING WELL RESULTS
EISB PILOT TEST
NWIRP CALVERTON, NEW YORK

Purpose / Notes	NYSDOH MCLs [1]	Downgradient Monitoring Well							
Location		**SA-PZ-159I (41-46 ft bgs)**							
Sample Date		**7/8/2010**	**10/12/2010**	**12/14/2010**	**3/7/2011**	**4/19/2011**	**4/20/2011**	**5/9/2011**	**6/21/2011**
VOCs (µg/L)									
1,1,1-Trichloroethane (TCA)	5	75	5.6	25	18	21 J	24 J	16	15
1,1-Dichloroethane (DCA)	5	300	35	100	65	89 J	100 J	90	130
1,1-Dichloroethene (DCE)	5	22	2.2 J	6.7	4.9	5.6 J	6.8 J	6.2	7.3
Chloroethane (CA)	5	35	3.3 J	9.7	3.3	10 J	14 J	28	99
Benzene	5	0.57 J	ND	ND	ND	ND	ND	ND	0.81 J
1,4-Dichlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	2.3
1,3-Dichlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	0.72 J
Isopropyl Benzene	5	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	1.2
Chlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	ND
Napthalene	50	ND	ND	ND	ND	ND	ND	ND	ND
Total Target VOCs (TCA, DCA, DCE, CA)	--	**432**	**46**	**141**	**91.2**	**126**	**145**	**140**	**251**
DCA/TCA Ratio	--	*4.0*	*6.3*	*4.0*	*3.6*	*4.2*	*4.2*	*5.6*	*8.7*
CA/DCA Ratio	--	*0.12*	*0.09*	*0.10*	*0.05*	*0.11*	*0.14*	*0.31*	*0.76*
CA/TCA Ratio	--	*0.47*	*0.59*	*0.39*	*0.18*	*0.48*	*0.58*	*1.75*	*6.60*
Dissolved Gases (µg/L)									
Methane	none	13	29	2.4	ND	--	--	--	39
Ethane	none	ND	ND	ND	ND	--	--	--	ND
Ethene	none	ND	ND	ND	ND	--	--	--	ND
Dechlorinating Bacteria (cells/mL)									
Dehalococcoides sp.	none	--	--	--	--	--	--	--	--
Dehalobacter sp.	none	--	--	--	--	--	--	--	--
Metals (µg/L)									
Iron	300 [2]	ND	7,990	9,680	7,440 J	--	--	--	7,910
Fe^{2+} (Ferrous Iron)	none	--	--	--	2,200	--	--	--	--
Manganese	300 [2]	388	799	1,090	707	--	--	--	845
Wet Chemistry (mg/L)									
Nitrate (as N)	10	--	--	--	--	--	--	--	ND
Nitrite (as N)	1	--	--	--	--	--	--	--	ND
Chloride	250	--	--	--	--	--	--	--	6.28
Sulfide	none	--	--	--	--	--	--	--	ND
TOC	none	0.69 J	116.16	4.70 J	1.5 J	ND	--	1.2	1.1
Water Quality Parameters									
pH	none	5.79	6.58	7.96	6.12	5.73	6.34	6.30	7.54
Specific Conductivity (mS/cm)	none	0.129	0.159	0.117	0.129	0.148	0.144	0.140	0.109
Dissolved Oxygen (mg/L)	none	--	0	--	-- / 1.0	-- / 0.4	0 / 0.4	0 / 0.8	0 / 1.0
Temperature (ºC)	none	14.03	15.57	11.1	11.02	10.99	10.87	14.19	13.41
Oxygen Reduction Potential (mV)	none	105	-32	-53	46	23	-1	-24	-60
Turbidity (NTU)	none	0.55	0	0.69	0.85	0	0.33	4.04	0.72

TABLE 4-3
GROUNDWATER MONITORING WELL RESULTS
EISB PILOT TEST
NWIRP CALVERTON, NEW YORK

Purpose / Notes	NYSDOH MCLs [1]	Downgradient Monitoring Well							
Location		**SA-PZ-159I1 (33-38 ft bgs)**							
Sample Date		**7/8/2010**	**10/12/2010**	**12/14/2010**	**12/16/2010**	**3/8/2011**	**5/9/2011**	**6/21/2011**	**6/21/2011 (duplicate)**
VOCs (µg/L)									
1,1,1-Trichloroethane (TCA)	5	41	44 J	38	--	13	9	3.2	2.8
1,1-Dichloroethane (DCA)	5	250	200	180	--	89 J	150	59	62
1,1-Dichloroethene (DCE)	5	18	14 J	12	--	8.8	13	3.6	3.7
Chloroethane (CA)	5	50	39 J	50	--	87	130	66	70
Benzene	5	0.64 J	0.52 J	ND	--	0.98 J	2.5	0.91 J	0.79 J
1,4-Dichlorobenzene	5	1.7 J	ND	5.4 J	--	17	68	21	22
1,3-Dichlorobenzene	5	ND	ND	ND	--	3.6	14	4.3	4.4
1,2-Dichlorobenzene	5	ND	ND	1.9 J	--	5.0	17	6.4	6
Isopropyl Benzene	5	0.29 J	ND	ND	--	0.63 J	7.1	2.6	2.5
1,2,4-Trichlorobenzene	5	ND	ND	ND	--	4.2	12	2.7	2.8
Chlorobenzene	5	ND	ND	ND	--	2.0	9.6	3.9	3.8
Napthalene	50	ND	ND	ND	--	ND	ND	ND	ND
Total Target VOCs (TCA, DCA, DCE, CA)	--	**359**	**297**	**280**	--	**198**	**302**	**131.8**	**138.5**
DCA/TCA Ratio	--	*6.1*	*4.5*	*4.7*	--	*6.8*	*16.7*	*18.4*	*22.1*
CA/DCA Ratio	--	*0.20*	*0.20*	*0.28*	--	*0.98*	*0.87*	*1.12*	*1.13*
CA/TCA Ratio	--	*1.22*	*0.89*	*1.32*		*6.69*	*14*	*21*	*25*
Dissolved Gases (µg/L)									
Methane	none	130 J	51 D	53 D	--	195 D	--	182 J	264 J
Ethane	none	ND	ND	ND	--	ND	--	ND	ND
Ethene	none	ND	ND	ND	--	ND	--	ND	ND
Dechlorinating Bacteria (cells/mL)									
Dehalococcoides sp.	none	2.70	--	12.3	--	--	--	50.2	--
Dehalobacter sp.	none	649	--	15.4	--	--	--	6,010	--
Metals (µg/L)									
Iron	300 [2]	2,610	1,180	2,370	--	5,380 J	--	1,460	1,400
Fe^{2+} (Ferrous Iron)	none	--	--	--	--	2,600	--	--	--
Manganese	300 [2]	4,150	6,430	6,480	--	7,910	--	4,690	4,560
Wet Chemistry (mg/L)									
Nitrate (as N)	10	ND	--	--	ND	--	--	ND	ND
Nitrite (as N)	1	ND	--	--	ND	--	--	ND	ND
Chloride	250	4.26	--	--	3.54 J	--	--	3.0	2.97
Sulfide	none	ND	--	--	ND	--	--	ND	ND
TOC	none	1.3	43.69	31.3 J	--	26 J	1.9	1.7	1.6
Water Quality Parameters									
pH	none	6.67	6.54	7.37	5.85	5.84	6.13	7.30	--
Specific Conductivity (mS/cm)	none	0.162	0.148	0.123	0.140	0.183	0.149	0.110	--
Dissolved Oxygen (mg/L)	none	--	0.45	--	0	-- / 0.6	0 / 0.5	0 / 1.0	--
Temperature (ºC)	none	13.78	15.72	11.2	11.31	10.55	14.07	13.09	--
Oxygen Reduction Potential (mV)	none	-398	22	-9	-13	119	44	-18	--
Turbidity (NTU)	none	0	0	1.51	2.00	0.8	0.35	0.87	--

TABLE 4-3
GROUNDWATER MONITORING WELL RESULTS
EISB PILOT TEST
NWIRP CALVERTON, NEW YORK

Purpose / Notes	NYSDOH MCLs [1]	Downgradient Monitoring Well						Downgradient Monitoring Well				
Location		**SA-PZ-160I (41-46 ft bgs)**						**SA-PZ-160I1 (33-38 ft bgs)**				
Sample Date		**7/7/2010**	**10/12/2010**	**12/13/2010**	**12/16/2010**	**3/8/2011**	**6/21/2011**	**7/6/2010**	**10/12/2010**	**12/13/2010**	**3/8/2011**	**6/21/2011**
VOCs (µg/L)												
1,1,1-Trichloroethane (TCA)	5	53	37	41	--	30 J	14	43	40 J	39	47	16
1,1-Dichloroethane (DCA)	5	210	150 J	160	--	130	85	250	200	180	210	190
1,1-Dichloroethene (DCE)	5	17	11	11	--	9.3 J	4.8	17	15 J	13	17	13
Chloroethane (CA)	5	26	13 J	21	--	11 J	6	34	42 J	33	55	140
Benzene	5	0.48 J	ND	ND	--	ND	ND	0.5 J	0.51 J	ND	0.82 J	ND
1,4-Dichlorobenzene	5	ND	ND	ND	--	ND	ND	ND	ND	ND	5.2	ND
1,3-Dichlorobenzene	5	ND	ND	ND	--	ND	ND	ND	ND	ND	1.2	ND
1,2-Dichlorobenzene	5	ND	ND	ND	--	ND	ND	ND	ND	ND	2.2	5.2 J
Isopropyl Benzene	5	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	5	1.9 J	ND	ND	--	0.63 J	ND	ND	ND	ND	2.7	ND
Chlorobenzene	5	ND	ND	ND	--	ND	ND	ND	ND	ND	0.66 J	ND
Napthalene	50	4.5 J	ND	ND	--	ND	ND	ND	ND	ND	ND	ND
Total Target VOCs (TCA, DCA, DCE, CA)	--	**306**	**211**	**233**	--	**180**	**110**	**344**	**297**	**265**	**329**	**359**
DCA/TCA Ratio	--	*4.0*	*4.1*	*3.9*	--	*4.3*	*6.1*	*5.8*	*5.0*	*4.6*	*4.5*	*12*
CA/DCA Ratio	--	*0.12*	*0.09*	*0.13*	--	*0.08*	*0.07*	*0.14*	*0.21*	*0.18*	*0.26*	*0.74*
CA/TCA Ratio	--	*0.49*	*0.35*	*0.51*		*0.37*	*0.43*	*0.79*	*1.05*	*0.85*	*1.17*	*8.75*
Dissolved Gases (µg/L)												
Methane	none	0.6	6.4	15	--	4.2	ND	--	--	--	--	--
Ethane	none	ND	ND	ND	--	ND	ND	--	--	--	--	--
Ethene	none	ND	ND	ND	--	ND	ND	--	--	--	--	--
Dechlorinating Bacteria (cells/mL)												
Dehalococcoides sp.	none	--	--	--	--	--	--	--	--	--	--	--
Dehalobacter sp.	none	--	--	--	--	--	--	--	--	--	--	--
Metals (µg/L)												
Iron	300 [2]	1,520	38.7 J	--	3,340	8,060 J	11,800	--	--	--	--	2,300
Fe^{2+} (Ferrous Iron)	none	--	--	--	--	2,600	--	--	--	--	2,200	--
Manganese	300 [2]	571	516	--	662	1,070	660	--	--	--	--	3,900
Wet Chemistry (mg/L)												
Nitrate (as N)	10	--	--	--	--	--	ND	--	--	--	--	--
Nitrite (as N)	1	--	--	--	--	--	ND	--	--	--	--	--
Chloride	250	--	--	--	--	--	7.6	--	--	--	--	--
Sulfide	none	--	--	--	--	--	ND	--	--	--	--	--
TOC	none	0.81 J	ND	16.8	--	2.8 J	1.1	--	--	--	--	--
Water Quality Parameters												
pH	none	6.05	5.78	7.42	5.88	6.36	7.74	6.17	6.15	6.06	6.08	5.70
Specific Conductivity (mS/cm)	none	0.133	0.093	0.106	0.118	0.155	0.119	0.115	0.110	0.124	0.157	0.106
Dissolved Oxygen (mg/L)	none	--	0.38	--	0	-- / 0.3	0 / 1.0	1.71	0.24	0	-- / 0.6	0.54 / 0.4
Temperature (ºC)	none	14.10	13.0	11.8	10.87	10.8	13.26	13.97	13.0	11.56	11.03	15.3
Oxygen Reduction Potential (mV)	none	-111	151	-51	-18	49	-114	64	109	-75	78	-20
Turbidity (NTU)	none	3.04	0.31	0	1.98	0.82	0.71	1.56	0	0.33	0.85	0.27

TABLE 4-3
GROUNDWATER MONITORING WELL RESULTS
EISB PILOT TEST
NWIRP CALVERTON, NEW YORK

Purpose / Notes	NYSDOH MCLs [1]	Downgradient Monitoring Well								Upgradient Monitoring Well		
Location		**SA-PZ-161I (41-46 ft bgs)**								**SA-PZ-408 (37-42 ft bgs)**		**SA-TW-408 [4] (38-42 ft bgs)**
Sample Date		**7/7/2010**	**10/12/2010**	**12/14/2010**	**3/8/2011**	**3/8/2011 (duplicate)**	**6/21/2011**	**9/19/2011**	**9/19/2011 (duplicate)**	**6/22/2011**	**9/20/2011**	**6/10/2011**
VOCs (µg/L)												
1,1,1-Trichloroethane (TCA)	5	100	18	16	26	30	35 J	6.5	6.6	ND	60	19
1,1-Dichloroethane (DCA)	5	530	110	97	140	140	290 J	88	83	160	420	190
1,1-Dichloroethene (DCE)	5	31	6.9	5.9	10	10	13 J	5.9	5.6	13	25	11
Chloroethane (CA)	5	51	9.5	8	9.5	11	16 J	8	8.2	130	230	110
Benzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.6	1.1
1,4-Dichlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.2	2.9
1,3-Dichlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.3	0.64 J
1,2-Dichlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	2	1.2
Isopropyl Benzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.6	4.3
Chlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Napthalene	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Target VOCs (TCA, DCA, DCE, CA)	--	**712**	**144**	**127**	**186**	**191**	**354**	**108.4**	**103.4**	**303**	**735**	**330**
DCA/TCA Ratio	--	*5.3*	*6.1*	*6.1*	*5.4*	*4.7*	*8.3*	*13.5*	*12.6*	--	*7.0*	*10*
CA/DCA Ratio	--	*0.10*	*0.09*	*0.08*	*0.07*	*0.08*	*0.06*	*0.09*	*0.10*	*0.81*	*0.55*	*0.58*
CA/TCA Ratio	--	*0.51*	*0.53*	*0.50*	*0.37*	*0.37*	*0.46*	*1.23*	*1.24*	--	*3.83*	*5.79*
Dissolved Gases (µg/L)												
Methane	none	--	--	--	--	--	--	--	--	180	--	--
Ethane	none	--	--	--	--	--	--	--	--	ND	--	--
Ethene	none	--	--	--	--	--	--	--	--	ND	--	--
Dechlorinating Bacteria (cells/mL)												
Dehalococcoides sp.	none	--	--	--	--	--	--	--	--	--	--	--
Dehalobacter sp.	none	--	--	--	--	--	--	--	--	--	--	--
Metals (µg/L)												
Iron	300 [2]	--	--	--	--	--	11,800	--	--	1,400	--	--
Fe^{2+} (Ferrous Iron)	none	--	--	--	0	0	--	--	--	--	--	--
Manganese	300 [2]	--	--	--	--	--	2,770	--	--	5,000	--	--
Wet Chemistry (mg/L)												
Nitrate (as N)	10	--	--	--	--	--	--	--	--	1.13	--	--
Nitrite (as N)	1	--	--	--	--	--	--	--	--	ND	--	--
Chloride	250	--	--	--	--	--	--	--	--	5.21	--	--
Sulfide	none	--	--	--	--	--	--	--	--	ND	--	--
TOC	none	--	--	--	--	--	--	--	--	1.6	--	--
Water Quality Parameters												
pH	none	5.65	6.07	5.14	5.72	--	6.76	6.49	--	5.99	6.17	5.87
Specific Conductivity (mS/cm)	none	0.129	0.124	0.090	0.114	--	0.182	0.296	--	0.136	0.140	0.171
Dissolved Oxygen (mg/L)	none	0	0	--	-- / 1.0	--	0 / 0.2	0.75 / 0.0	--	0.98 / 1.0	0.41 / 0.20	2.99
Temperature (ºC)	none	13.99	14.82	9.5	10.99	--	12.8	14.75	--	15.6	13.88	13.91
Oxygen Reduction Potential (mV)	none	4	168	142	128	--	-110	-61	--	14	135	29
Turbidity (NTU)	none	7.1	0	0	0.52	--	58.7	1.84	--	2.23	0.10	247

TABLE 4-3
GROUNDWATER MONITORING WELL RESULTS
EISB PILOT TEST
NWIRP CALVERTON, NEW YORK

Purpose / Notes	NYSDOH MCLs [1]	Cross-gradient Reference Well					
Location		**SA-MW-127I (36-46 ft bgs)**					
Sample Date		**7/30/2008**	**9/3/2009**	**9/16/2010**	**9/16/2010 (duplicate)**	**3/10/2011**	**9/22/2011**
VOCs (µg/L)							
1,1,1-Trichloroethane (TCA)	5	94	61	1.2 J	1.1	8.1	4.1
1,1-Dichloroethane (DCA)	5	470	270 J	9.1 J	9.3	93	71
1,1-Dichloroethene (DCE)	5	27	20	ND	ND	5.6	3.8
Chloroethane (CA)	5	63	29	ND	ND	26	8.5
Benzene	5	1.0	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	5	13	3.8 J	ND	ND	ND	ND
1,3-Dichlorobenzene	5	3.0	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	5	3.0	ND	ND	ND	ND	ND
Isopropyl Benzene	5	1.0	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	5	4.0	2.7 J	ND	ND	ND	ND
Chlorobenzene	5	1.0	ND	ND	ND	ND	ND
Napthalene	50	ND	ND	ND	ND	ND	ND
Total Target VOCs (TCA, DCA, DCE, CA)	--	**654**	**380**	**10.3**	**10.4**	**132.7**	**87.4**
DCA/TCA Ratio	--	*5.0*	*4.4*	*7.6*	*8.5*	*11.5*	*17.3*
CA/DCA Ratio	--	*0.13*	*0.11*	--	--	*0.28*	*0.12*
CA/TCA Ratio	--	*0.67*	*0.48*	--	--	*3.21*	*2.07*
Dissolved Gases (µg/L)							
Methane	none	--	35	15	15	6.1 J	--
Ethane	none	--	ND	ND	ND	ND	--
Ethene	none	--	--	--	--	--	--
Dechlorinating Bacteria (cells/mL)							
Dehalococcoides sp.	none	--	--	--	--	--	--
Dehalobacter sp.	none	--	--	--	--	--	--
Metals (µg/L)							
Iron	300 [2]	--	--	--	--	--	--
Fe^{2+} (Ferrous Iron)	none	--	--	--	--	--	--
Manganese	300 [2]	--	--	--	--	--	--
Wet Chemistry (mg/L)							
Nitrate (as N)	10	--	--	--	--	--	--
Nitrite (as N)	1	--	--	--	--	--	--
Chloride	250	--	--	--	--	--	--
Sulfide	none	--	--	--	--	--	--
TOC	none	--	--	--	--	--	--
Water Quality Parameters							
pH	none	6.36	5.16	5.89	--	5.79	6.06
Specific Conductivity (mS/cm)	none	0.113	0.083	0.079	--	0.096	0.098
Dissolved Oxygen (mg/L)	none	0.44	0.19	0.25	--	-- /0.7	0.61 / 0.60
Temperature (ºC)	none	13.6	13.07	13.0	--	6.09	13.85
Oxygen Reduction Potential (mV)	none	82	42	119	--	79	60
Turbidity (NTU)	none	1.35	0	0	--	1.44	0

TABLE 4-3
GROUNDWATER MONITORING WELL RESULTS
EISB PILOT TEST
NWIRP CALVERTON, NEW YORK

Shading indicates exceedance of the NYSDOH MCL
ft bgs - feet below ground surface
J qualifier - Estimated Value
ND - Not detected
1. New York State (NYS) Department of Health (NYSDOH) Maximum Contaminant Level (MCL). 10 NYCRR, Part 5, Subpart 5-1 Public Water Systems, Tables 1 through 3. http://www.health.ny.gov/□regulations/nycrr/title_10/part_5/sul
2. If iron and manganese are present, the total concentration of both should not exceed 500 µg/L.
3. Samples were diluted such that the concentrations of select chemicals (e.g., benzene, trichlorobenzenes and other aromatic compounds) may not have been detected at or above this limit and therefore were labeled as non-detects.
4. Vertical profile boring SA-TW-408 is located at a comparable screen depth (38-42 ft bgs) as SA-PZ-408, and is presented here to show a representative sample of the aquifer at this location and depth.
-- / 0.6 = DO probe reading/ field test kit reading
-- = Not Analyzed.

TABLE 4-4
TAL METALS RESULTS IN GROUNDWATER
EISB PILOT TEST
NWIRP CALVERTON, NEW YORK

Purpose / Notes	NYS MCL	NYS "Class C" Surface Water Quality Standard	ORNL Surface Water Benchmark	Injection			Injection & Extraction			Monitoring		Monitoring		
Location				**SA-PZ-151I1 (34-39 ft bgs)**			**SA-PZ-155I (41-46 ft bgs)**			**SA-PZ-157I (41-46 ft bgs)**		**SA-PZ-157I1 (33-38 ft bgs)**		
Sample Date				**7/7/2010**	**12/15/2010**	**6/22/2011**	**7/7/2010**	**12/15/2010**	**6/22/2011**	**12/14/2010**	**6/21/2011**	**12/14/2010**	**12/14/2010 (duplicate)**	**6/21/2011**
Metals (µg/L)														
Arsenic	10	150 (dissolved) *	3.1 (Arsenic V)	ND	7.03 J	ND	ND	12.1	ND	2.97 J	ND	5.32 J	3.63 J	ND
Barium	2,000	none	4	18 J	30.6 J	ND	20.1 J	22.7 J	ND	25.5 J	ND	21.4 J	21.5 J	ND
Calcium	none	none	none	14,900	15,700	16,000	6,640	5,830	6,810	9,500	6,420	14,800	14,800	15,900
Chromium	100	11 (dissolved, hexavalent) *	none	1.9 J	0.765 J	ND	2 J	0.868 J	ND	ND	ND	ND	1.08 J	2.37 J
Copper	none	none (3)	none	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron	300 (1)	none	none	1,500	1,170	612	4,320	2,080	205	10,600	978	2,610	2,580	776
Magnesium	none	none	none	972 J	987 J	1,100	1,730 J	1,800 J	1,820	2,730 J	1,440	1,150 J	1,140 J	1,130
Manganese	300 (1)	none	120	4,680	5,580	5,270	302	484	291	1,400	1,050	5,540	5,510	5,200
Mercury	2	0.0007 (dissolved)	<0.23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.42 J
Nickel	none	none (3)	none	3.3 J	ND	ND	4.5 J	3.58 J	ND	ND	ND	ND	ND	ND
Potassium	none	none	none	1,910 J	3,100 J	3,080	ND	930 J	935 J	1,170 J	1,420	2,520 J	2,530 J	2,820
Selenium	50	4.6 (dissolved)	none	ND	ND	ND	ND	ND	ND	ND	ND	2.21 J	ND	ND
Silver	100	0.1 (ionic)	0.36	ND	1.42 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	none (2)	none	none	7,930	8,170	6,460	9,320	9,940	8,830	10,300	9,530	7,920	7,740	5,990
Vanadium	none	14 *	20	ND	ND	ND	ND	1.77 J	ND	ND	8.39 J	ND	ND	ND
Zinc	5,000	none (3)	none	ND	ND	11.7 J	ND	ND	ND	10.8 J	7.12 J	ND	ND	ND

NOTES

Shading indicates exceedance of the NYSDOH MCL

J qualifier - Estimated Value

ND - Not detected at or above reporting limit

-- = Not Analyzed.

ft bgs = feet below ground surface

New York State (NYS) Maximum Contaminant Level (MCL). 10 NYCRR, Part 5, Subpart 5-1 Public Water Systems, Tables 1 through 3. http://www.health.ny.gov/regulations/nycrr/title_10/part_5/subpart_5-1_tables.htm#table1.

New York State (NYS) Surface Water Standard (6 NYCRR Part 703, Section 703.5[f], Table 1). **Peconic River is *Class C Surface Water***. http://www.dec.ny.gov/regs/4590.html.
* Standard relates to aquatic (chronic).

Oak Ridge National Laboratory (ORNL) (surface water) - Table 1 (secondary chronic values), Toxilogical Benchmarks for Screening Potential Contaminants of Concern for Effects on Aquatic Biota: 1996 Revision (Suter and Tsao, 1996). http://www.esd.ornl.gov/programs/ecorisk/documents/tm96r2.pdf.

1. If iron and manganese are present, the total concentration of both should not exceed 500 µg/L.

2. Water containing more than 20 mg/L of sodium should not be used for drinking by people on severely restricted sodium diets. Water containing more than 270 mg/L of sodium should not be used for drinking by people on moderately restricted sodium diets.

3. 6 NYCRR Part 703, Section 703.5(f), Table 1 expresses values in terms of (as related to) hardness.

TABLE 4-4
TAL METALS RESULTS IN GROUNDWATER
EISB PILOT TEST
NWIRP CALVERTON, NEW YORK

Purpose / Notes	NYS MCL	NYS "Class C" Surface Water Quality Standard	ORNL Surface Water Benchmark	Monitoring			Monitoring			Monitoring		Upgradient
Location				**SA-PZ-159I (42-47 ft bgs)**			**SA-PZ-159I1 (34-39 ft bgs)**			**SA-PZ-160I (42-47 ft bgs)**		**SA-PZ-408 (37-42 ft bgs)**
Sample Date				**7/8/2010**	**12/14/2010**	**6/21/2011**	**12/14/2010**	**6/21/2011**	**6/21/2011 (duplicate)**	**12/16/2010**	**6/21/2011**	**6/22/2011**
Metals (µg/L)												
Arsenic	10	150 (dissolved) *	3.1 (Arsenic V)	ND	13.9	11.9	3.43 J	ND	ND	7.42 J	19.4	ND
Barium	2,000	none	4	20.8 J	24.7 J	ND	21.8 J	ND	ND	28.5 J	ND	ND
Calcium	none	none	none	6,810	7,670	7,100	16,800	15,100	13,300	8,360	8,350	14,900
Chromium	100	11 (dissolved, hexavalent) *	none	ND	1.06 J	ND	1.43 J	ND	ND	ND	ND	ND
Copper	none	none (3)	none	ND	ND	ND	ND	ND	ND	12.8	ND	ND
Iron	300 (1)	none	none	ND	9,680	7,910	2,370	1,460	1,400	3,340	11,800	1,400
Magnesium	none	none	none	2,190 J	2,800 J	2,040	1,180 J	1,120	1,020	2,220 J	1,890	988 J
Manganese	300 (1)	none	120	388	1,090	845	6,480 J	4,690	4,560	662	660	5,000
Mercury	2	0.0007 (dissolved)	<0.23	ND	ND	ND	ND	ND	ND	ND	0.7 J	ND
Nickel	none	none (3)	none	ND	1.1 J	ND	0.91 J	ND	ND	ND	ND	ND
Potassium	none	none	none	ND	972 J	1,160	2,710 J	2,370	2,300	1,190 J	971 J	2,920
Selenium	50	4.6 (dissolved)	none	ND	ND	ND	2.17 J	ND	ND	ND	ND	ND
Silver	100	0.1 (ionic)	0.36	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	none (2)	none	none	9,980	10,500	8,520	7,240	5,400	6,190	9,780	9,000	7,570
Vanadium	none	14 *	20	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc	5,000	none (3)	none	ND	ND	ND	ND	6.87 J	ND	ND	ND	6.85 J

NOTES

Shading indicates exceedance of the NYSDOH MCL

J qualifier - Estimated Value

ND - Not detected at or above reporting limit

-- = Not Analyzed.

ft bgs = feet below ground surface

New York State (NYS) Maximum Contaminant Level (MCL). 10 NYCRR, Part 5, Subpart 5-1 Public Water Systems, Tables 1 through 3. http://www.health.ny.gov/regulations/nycrr/title_10/part_5/subpart_5-1_tables.htm#table1.

New York State (NYS) Surface Water Standard (6 NYCRR Part 703, Section 703.5[f], Table 1). **Peconic River is *Class C Surface Water***. http://www.dec.ny.gov/regs/4590.html.
* Standard relates to aquatic (chronic).

Oak Ridge National Laboratory (ORNL) (surface water) - Table 1 (secondary chronic values), Toxilogical Benchmarks for Screening Potential Contaminants of Concern for Effects on Aquatic Biota: 1996 Revision (Suter and Tsao, 1996). http://www.esd.ornl.gov/programs/ecorisk/documents/tm96r2.pdf.

1. If iron and manganese are present, the total concentration of both should not exceed 500 µg/L.

2. Water containing more than 20 mg/L of sodium should not be used for drinking by people on severely restricted sodium diets. Water containing more than 270 mg/L of sodium should not be used for drinking by people on moderately restricted sodium diets.

3. 6 NYCRR Part 703, Section 703.5(f), Table 1 expresses values in terms of (as related to) hardness.

FIGURES

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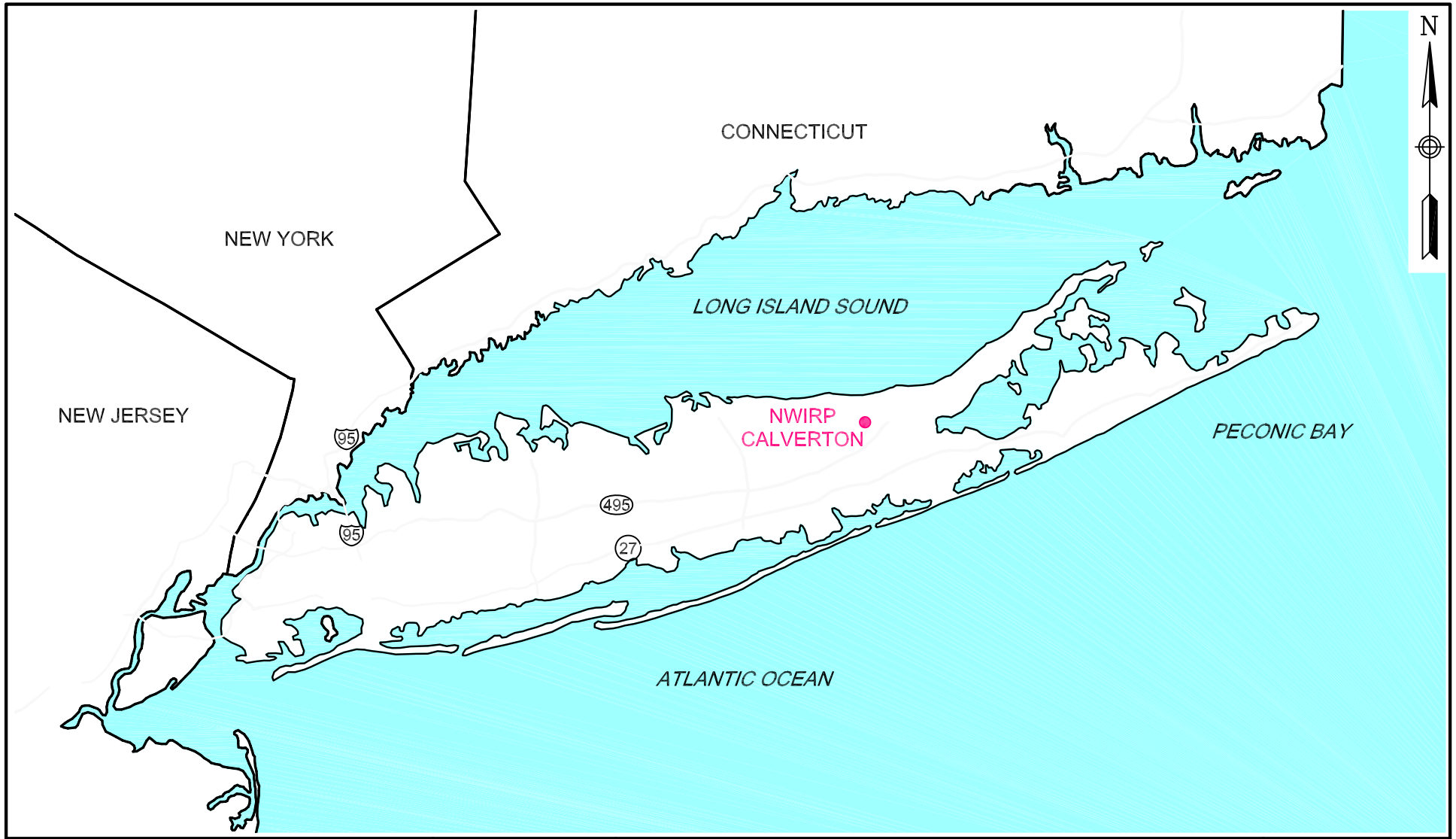

0 15 30
SCALE IN MILES

TETRA TECH

GENERAL LOCATION MAP
NWIRP CALVERTON
CALVERTON, NEW YORK

SCALE	NOT TO SCALE
FILE	112G02045CM05
REV	0
DATE	01/06/12
FIGURE NUMBER	FIGURE 1–1

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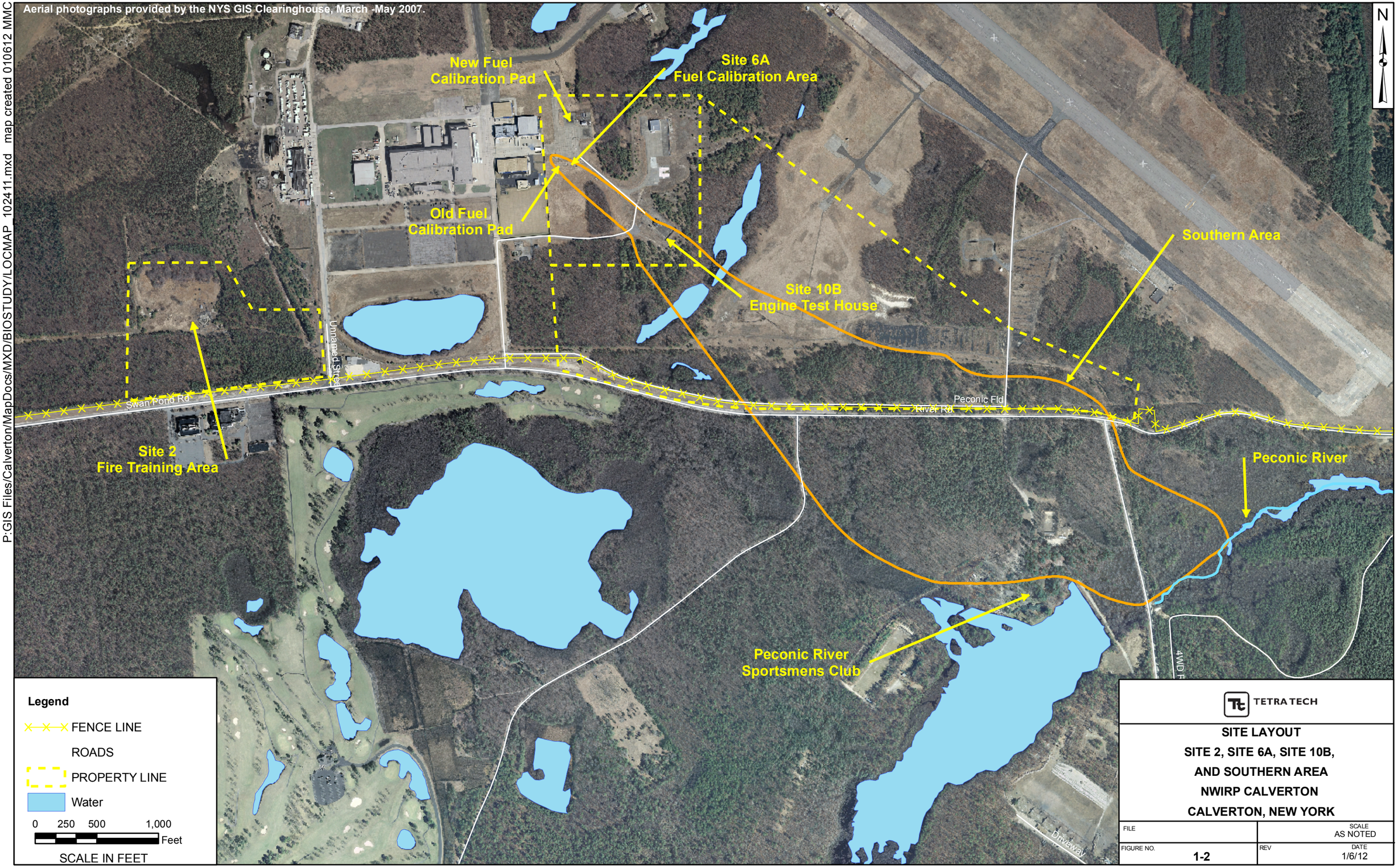

TETRA TECH

SITE LAYOUT
SITE 2, SITE 6A, SITE 10B,
AND SOUTHERN AREA
NWIRP CALVERTON
CALVERTON, NEW YORK

FILE	SCALE AS NOTED
FIGURE NO. 1-2	REV / DATE 1/6/12

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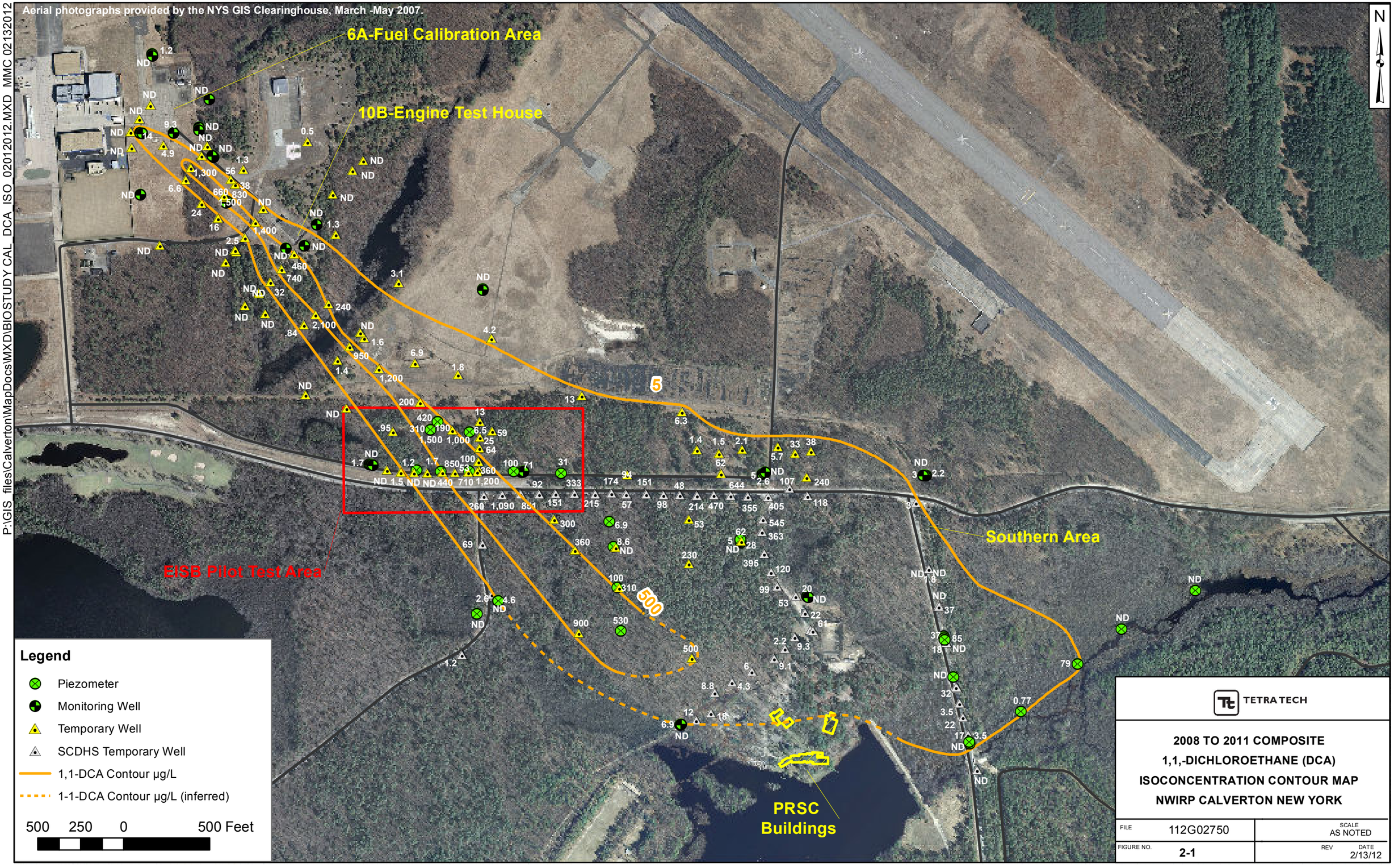
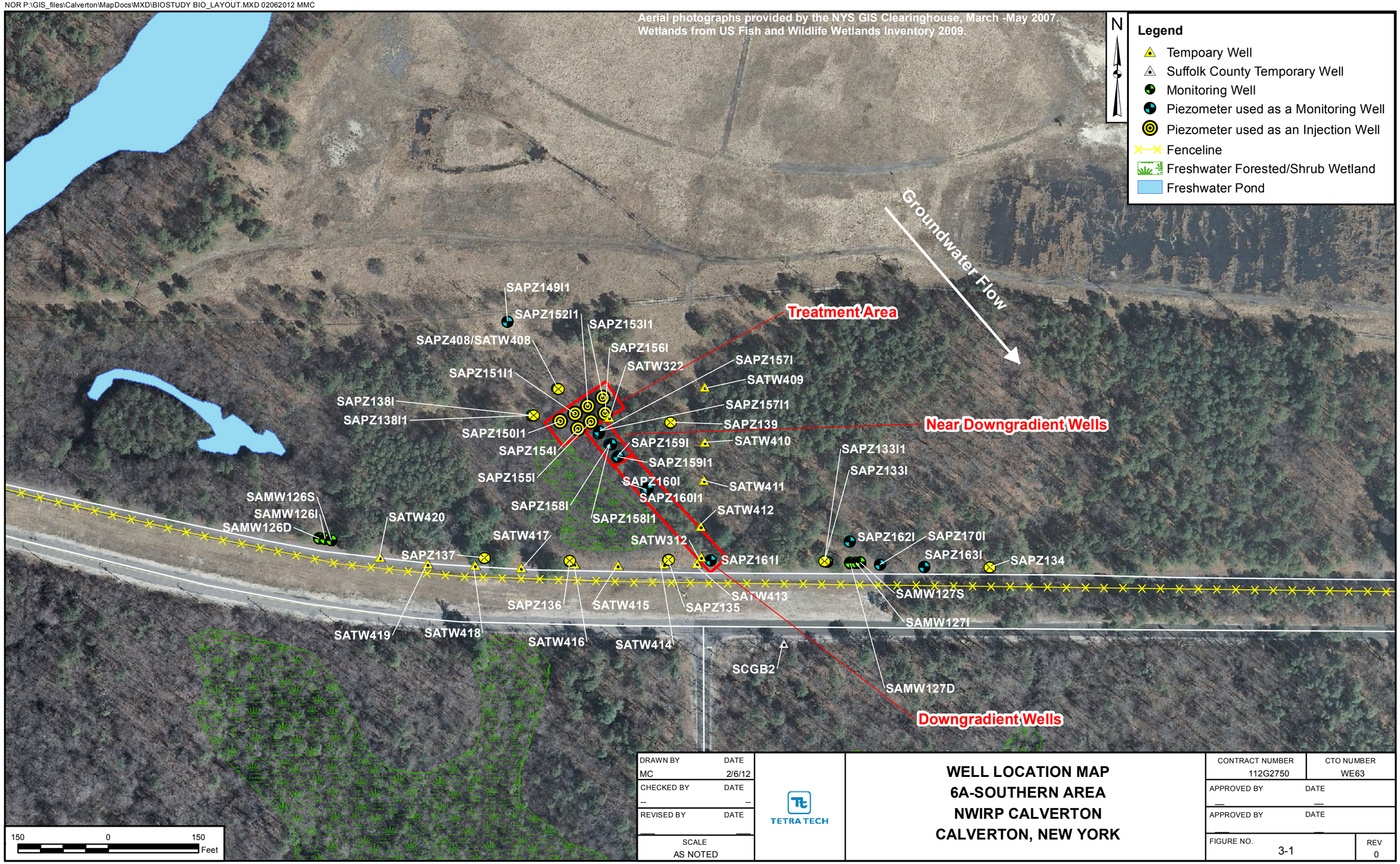


TETRA TECH

2008 TO 2011 COMPOSITE
1,1,-DICHLOROETHANE (DCA)
ISOCONCENTRATION CONTOUR MAP
NWIRP CALVERTON NEW YORK

FILE	112G02750	SCALE	AS NOTED
FIGURE NO.	2-1	REV / DATE	2/13/12

NOR P:\GIS_files\Calverton\MapDocs\MXD\BIOSTUDY BIO_LAYOUT.MXD 02062012 MMC



DRAWN BY	DATE
MC	2/6/12
CHECKED BY	DATE
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REVISED BY	DATE
SCALE	
AS NOTED	

TETRA TECH

WELL LOCATION MAP
6A-SOUTHERN AREA
NWIRP CALVERTON
CALVERTON, NEW YORK

CONTRACT NUMBER	CTO NUMBER
112G2750	WE63
APPROVED BY	DATE
APPROVED BY	DATE
FIGURE NO. 3-1	REV 0

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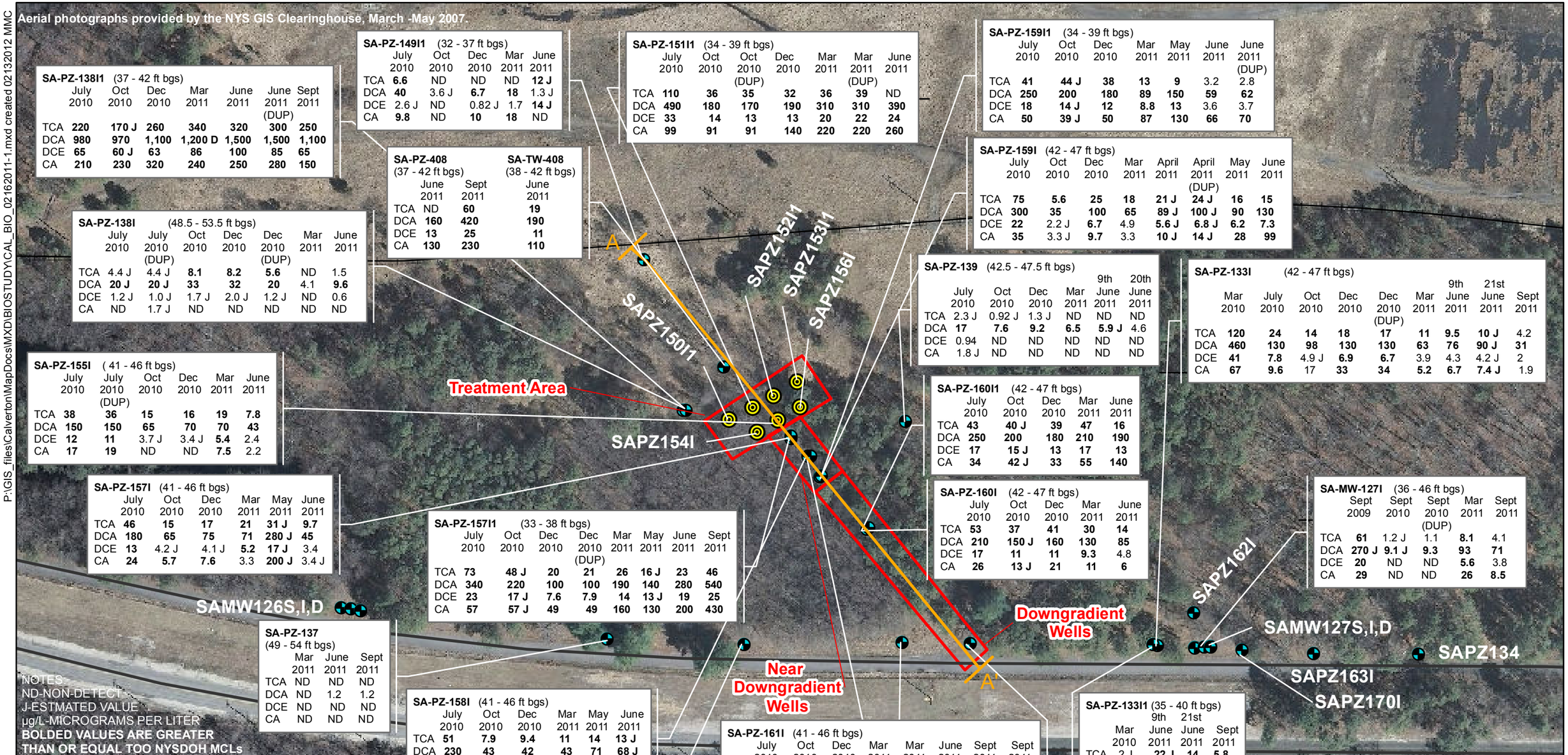

SA-PZ-138I1 (37 - 42 ft bgs)

	July 2010	Oct 2010	Dec 2010	Mar 2011	June 2011	June 2011 (DUP)	Sept 2011
TCA	**220**	**170 J**	**260**	**340**	**320**	**300**	**250**
DCA	**980**	**970**	**1,100**	**1,200 D**	**1,500**	**1,500**	**1,100**
DCE	**65**	**60 J**	**63**	**86**	**100**	**85**	**65**
CA	**210**	**230**	**320**	**240**	**250**	**280**	**150**

SA-PZ-149I1 (32 - 37 ft bgs)

	July 2010	Oct 2010	Dec 2010	Mar 2011	June 2011
TCA	**6.6**	ND	ND	ND	**12 J**
DCA	**40**	3.6 J	**6.7**	**18**	1.3 J
DCE	2.6 J	ND	0.82 J	1.7	**14 J**
CA	**9.8**	ND	**10**	**18**	ND

SA-PZ-151I1 (34 - 39 ft bgs)

	July 2010	Oct 2010	Oct 2010 (DUP)	Dec 2010	Mar 2011	Mar 2011 (DUP)	June 2011
TCA	**110**	**36**	**35**	**32**	**36**	**39**	ND
DCA	**490**	**180**	**170**	**190**	**310**	**310**	**390**
DCE	**33**	**14**	**13**	**13**	**20**	**22**	**24**
CA	**99**	**91**	**91**	**140**	**220**	**220**	**260**

SA-PZ-159I1 (34 - 39 ft bgs)

	July 2010	Oct 2010	Dec 2010	Mar 2011	May 2011	June 2011	June 2011 (DUP)
TCA	**41**	**44 J**	**38**	**13**	**9**	3.2	2.8
DCA	**250**	**200**	**180**	**89**	**150**	**59**	**62**
DCE	**18**	**14 J**	**12**	**8.8**	**13**	3.6	3.7
CA	**50**	**39 J**	**50**	**87**	**130**	**66**	**70**

SA-PZ-408 (37 - 42 ft bgs) / **SA-TW-408** (38 - 42 ft bgs)

	SA-PZ-408 June 2011	SA-PZ-408 Sept 2011	SA-TW-408 June 2011
TCA	ND	**60**	**19**
DCA	**160**	**420**	**190**
DCE	**13**	**25**	**11**
CA	**130**	**230**	**110**

SA-PZ-159I (42 - 47 ft bgs)

	July 2010	Oct 2010	Dec 2010	Mar 2011	April 2011	April 2011 (DUP)	May 2011	June 2011
TCA	**75**	**5.6**	**25**	**18**	**21 J**	**24 J**	**16**	**15**
DCA	**300**	**35**	**100**	**65**	**89 J**	**100 J**	**90**	**130**
DCE	**22**	2.2 J	**6.7**	4.9	**5.6 J**	**6.8 J**	**6.2**	**7.3**
CA	**35**	3.3 J	**9.7**	3.3	**10 J**	**14 J**	**28**	**99**

SA-PZ-138I (48.5 - 53.5 ft bgs)

	July 2010	July 2010 (DUP)	Oct 2010	Dec 2010	Dec 2010 (DUP)	Mar 2011	June 2011
TCA	4.4 J	4.4 J	**8.1**	**8.2**	**5.6**	ND	1.5
DCA	**20 J**	**20 J**	**33**	**32**	**20**	4.1	**9.6**
DCE	1.2 J	1.0 J	1.7 J	2.0 J	1.2 J	ND	0.6
CA	ND	1.7 J	ND	ND	ND	ND	ND

SA-PZ-139 (42.5 - 47.5 ft bgs)

	July 2010	Oct 2010	Dec 2010	Mar 2011	9th June 2011	20th June 2011
TCA	2.3 J	0.92 J	1.3 J	ND	ND	ND
DCA	**17**	**7.6**	**9.2**	**6.5**	**5.9 J**	4.6
DCE	0.94	ND	ND	ND	ND	ND
CA	1.8 J	ND	ND	ND	ND	ND

SA-PZ-133I (42 - 47 ft bgs)

	Mar 2010	July 2010	Oct 2010	Dec 2010	Dec 2010 (DUP)	Mar 2011	9th June 2011	21st June 2011	Sept 2011
TCA	**120**	**24**	**14**	**18**	**17**	**11**	**9.5**	**10 J**	4.2
DCA	**460**	**130**	**98**	**130**	**130**	**63**	**76**	**90 J**	**31**
DCE	**41**	**7.8**	4.9 J	**6.9**	**6.7**	3.9	4.3	4.2 J	2
CA	**67**	**9.6**	17	**33**	**34**	**5.2**	**6.7**	**7.4 J**	1.9

SA-PZ-155I (41 - 46 ft bgs)

	July 2010	July 2010 (DUP)	Oct 2010	Dec 2010	Mar 2011	June 2011
TCA	**38**	**36**	**15**	**16**	**19**	**7.8**
DCA	**150**	**150**	**65**	**70**	**70**	**43**
DCE	**12**	**11**	3.7 J	3.4 J	**5.4**	2.4
CA	**17**	**19**	ND	ND	**7.5**	2.2

SA-PZ-160I1 (42 - 47 ft bgs)

	July 2010	Oct 2010	Dec 2010	Mar 2011	June 2011
TCA	**43**	**40 J**	**39**	**47**	**16**
DCA	**250**	**200**	**180**	**210**	**190**
DCE	**17**	**15 J**	**13**	**17**	**13**
CA	**34**	**42 J**	**33**	**55**	**140**

SA-PZ-157I (41 - 46 ft bgs)

	July 2010	Oct 2010	Dec 2010	Mar 2011	May 2011	June 2011
TCA	**46**	**15**	**17**	**21**	**31 J**	**9.7**
DCA	**180**	**65**	**75**	**71**	**280 J**	**45**
DCE	**13**	4.2 J	4.1 J	**5.2**	**17 J**	3.4
CA	**24**	**5.7**	**7.6**	3.3	**200 J**	3.4 J

SA-PZ-157I1 (33 - 38 ft bgs)

	July 2010	Oct 2010	Dec 2010	Dec 2010 (DUP)	Mar 2011	May 2011	June 2011	Sept 2011
TCA	**73**	**48 J**	**20**	**21**	**26**	**16 J**	**23**	**46**
DCA	**340**	**220**	**100**	**100**	**190**	**140**	**280**	**540**
DCE	**23**	**17 J**	**7.6**	**7.9**	**14**	**13 J**	**19**	**25**
CA	**57**	**57 J**	**49**	**49**	**160**	**130**	**200**	**430**

SA-PZ-160I (42 - 47 ft bgs)

	July 2010	Oct 2010	Dec 2010	Mar 2011	June 2011
TCA	**53**	**37**	**41**	**30**	**14**
DCA	**210**	**150 J**	**160**	**130**	**85**
DCE	**17**	**11**	**11**	**9.3**	4.8
CA	**26**	**13 J**	**21**	**11**	**6**

SA-MW-127I (36 - 46 ft bgs)

	Sept 2009	Sept 2010	Sept 2010 (DUP)	Mar 2011	Sept 2011
TCA	**61**	1.2 J	1.1	**8.1**	4.1
DCA	**270 J**	**9.1 J**	**9.3**	**93**	**71**
DCE	**20**	ND	ND	**5.6**	3.8
CA	**29**	ND	ND	**26**	**8.5**

SA-PZ-137 (49 - 54 ft bgs)

	Mar 2011	June 2011	Sept 2011
TCA	ND	ND	ND
DCA	ND	1.2	1.2
DCE	ND	ND	ND
CA	ND	ND	ND

SA-PZ-158I (41 - 46 ft bgs)

	July 2010	Oct 2010	Dec 2010	Mar 2011	May 2011	June 2011
TCA	**51**	**7.9**	**9.4**	**11**	**14**	**13 J**
DCA	**230**	**43**	**42**	**43**	**71**	**68 J**
DCE	**15**	2.6 J	2.1 J	3.0	**5**	4.6 J
CA	**26**	ND	ND	1.6	**14**	**11 J**

SA-PZ-161I (41 - 46 ft bgs)

	July 2010	Oct 2010	Dec 2010	Mar 2011	Mar 2011 (DUP)	June 2011	Sept 2011	Sept 2011 (DUP)
TCA	**100**	**18**	**16**	**26**	**30**	**35 J**	**6.5**	**6.6**
DCA	**530**	**110**	**97**	**140**	**140**	**290 J**	**88**	**83**
DCE	**31**	**6.9**	**5.9**	**10**	**10**	**13 J**	**5.9**	**5.6**
CA	**51**	**9.5**	**8**	**9.5**	**11**	**16 J**	**8**	**8.2**

SA-PZ-133I1 (35 - 40 ft bgs)

	Mar 2010	9th June 2011	21st June 2011	Sept 2011
TCA	2 J	**22 J**	**14**	**5.8**
DCA	**26**	**120**	**170**	**100**
DCE	1.6 J	**13 J**	**8.3**	**6.4**
CA	4.9 J	**22 J**	**15**	**11**

SA-PZ-136 (44 - 49 ft bgs)

	Mar 2010	Dec 2010	Mar 2011	9th June 2011	20th June 2011	3rd AM Aug 2011	3rd PM Aug 2011	4th Aug 2011	Sept 2011
TCA	ND	ND	ND	ND	ND	**14**	**12**	**23**	ND
DCA	1.5 J	1.5 J	1.8	ND	1.5	**110**	**100**	**130**	1.7
DCE	ND	ND	ND	ND	ND	**6.4**	**5.3**	**8.6**	ND
CA	ND	ND	ND	ND	ND	**9.3**	**8.6**	**12**	ND

SA-PZ-158I1 (33 - 38 ft bgs)

	July 2010	Oct 2010	Dec 2010	Mar 2011	May 2011	June 2011
TCA	**66**	**39**	**49**	**21**	**6.5**	ND
DCA	**340**	**160**	**200**	**140**	**110**	**190**
DCE	**19**	**12**	**15**	**12**	**8.5**	**15**
CA	**52**	**27**	**62**	**130**	**130**	**170**

SA-PZ-135 (41.5 - 46 ft bgs)

	Mar 2010	Dec 2010	Mar 2011	9th June 2011	20th June 2011	3rd PM Aug 2011	3rd AM Aug 2011	4th Aug 2011	Sept 2011
TCA	**70**	**12**	**7.3**	**5.6**	4.6	**6.3**	0.52	4	**14**
DCA	**260**	**54**	**34**	**35**	**27**	**31**	**19**	**29**	**53**
DCE	**22**	3.3 J	2.6	2.8	1.9	2	1.1	1.8	3.5
CA	**15 J**	**5.4**	1.2	1.8	2.1	ND	ND	1.3	2.8

NOTES:
ND-NON-DETECT
J-ESTMATED VALUE
µg/L-MICROGRAMS PER LITER
BOLDED VALUES ARE GREATER THAN OR EQUAL TOO NYSDOH MCLs

Legend

- Monitoring Well
- Piezometer
- Injection Well

0 50 100 200 Feet

TETRA TECH

Enhanced Biodegradation Pilot Study
Chlorinated Volatile Organic Compounds
Southern Area
NWIRP Calverton
Calverton, New York

FILE	112G02750	SCALE	AS NOTED
FIGURE NO.	4-1	REV	DATE 2/13/12

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Aerial photographs provided by the NYS GIS Clearinghouse, March -May 2007.

SA-PZ-151I1 (34 - 39 ft bgs)

	July 2010	Oct 2010	Oct 2010 (DUP)	Dec 2010	Mar 2011	Mar 2011 (DUP)	June 2011
Metals (µg/L)							
Iron	**1,500**	**1,010**	**1,020**	**1,170**	214 J	225 J	**612**
Manganese	**4,680**	**5,460**	**5,550**	**5,580**	**5,460**	**5,750**	**5,270**
Arsenic	ND	NS	NS	7.03 J	NS	NS	ND
Wet Chemistry (mg/L)							
TOC	1.5	1.1	1.33	1.31 J	2.6 J	3.2 J	2.1

SA-PZ-155I (41 - 46 ft bgs)

	July 2010	July 2010 (DUP)	Oct 2010	Dec 2010	Mar 2011	June 2011
Metals (µg/L)						
Iron	**4,320**	**4,230**	**128 J**	**2,080**	**499 J**	205
Manganese	**302**	292	**571**	**484**	**340**	291
Arsenic	ND	NS	NS	**12.1**	NS	ND
Wet Chemistry (mg/L)						
TOC	0.83 J	0.77 J	ND	ND	0.989 J	0.662

SA-PZ-159I1 (34 - 39 ft bgs)

	July 2010	Oct 2010	Dec 2010	Mar 2011	June 2011	June 2011 (DUP)
Metals (µg/L)						
Iron	**2,610**	**1,180**	**2,370**	**5,380 J**	**1,460**	**1,400**
Manganese	**4,150**	**6,430**	**6,480**	**7,910**	**4,690**	**4,560**
Arsenic	NS	NS	3.43 J	NS	ND	ND
Wet Chemistry (mg/L)						
TOC	1.3	43.96	31.3 J	26 J	1.7	1.6

SA-PZ-408 (37 - 42 ft bgs)

	June 2011
Metals (µg/L)	
Iron	**1,400**
Manganese	**5,000**
Arsenic	ND
Wet Chemistry (mg/L)	
TOC	1.6

SA-PZ-159I (42 - 47 ft bgs)

	July 2010	Oct 2010	Dec 2010	Mar 2011	June 2011
Metals (µg/L)					
Iron	ND	**7,990**	**9,680**	**7,440 J**	**7,910**
Manganese	**388**	**799**	**1,090**	**707**	**845**
Arsenic	ND	NS	**13.9**	NS	**11.9**
Wet Chemistry (mg/L)					
TOC	0.69 J	116	4.7 J	1.5 J	1.1

SA-PZ-157I (41 - 46 ft bgs)

	July 2010	Oct 2010	Dec 2010	Mar 2011	June 2011
Metals (µg/L)					
Iron	275	**460 J**	**10,600**	**3,090 J**	**978**
Manganese	293	**889**	**1,400**	**533**	**1,050**
Arsenic	NS	NS	2.97 J	NS	ND
Wet Chemistry (mg/L)					
TOC	0.73 J	ND	122 J	1.1 J	0.599

SA-PZ-160I (42 - 47 ft bgs)

	July 2010	Oct 2010	Dec 2010	Mar 2011	June 2011
Metals (µg/L)					
Iron	**1,520**	38.7 J	**3,340**	**8,060 J**	**11,800**
Manganese	**571**	**615**	**662**	**1,070**	**660**
Arsenic	NS	NS	7.42 J	NS	**19.4**
Wet Chemistry (mg/L)					
TOC	0.81 J	ND	16.8	2.8 J	1.1

SA-PZ-157I1 (33 - 38 ft bgs)

	July 2010	Oct 2010	Dec 2010	Dec 2010 (DUP)	Mar 2011	June 2011
Metals (µg/L)						
Iron	93.4 J	82.4 J	**2,610**	**2,580**	**1,570 J**	**776**
Manganese	**4,430**	**5,210**	**5,540**	**5,510**	**5,580**	**5,200**
Arsenic	NS	NS	5.32 J	3.63 J	NS	ND
Wet Chemistry (mg/L)						
TOC	1.3	0.94 J	107 J	ND	2.5 J	1.9

SAPZ149I1
SAPZ152I1
SAPZ156I
SAPZ153I1
Treatment Area
SAPZ138I&I1
SAPZ150I1
SAPZ154I
SAPZ153I1
Near Downgradient Wells
SAPZ160I1
Downgradient Wells
SAMW126S,I,D
SAPZ162I
SAMW127S,I,D
SAPZ136
SAPZ137
SAPZ135
SAPZ161I
SAPZ133I&I1
SAPZ134
SAPZ163I
SAPZ158I&I1
SAPZ170I

NOTES:
ND-NON-DETECT
NS-NOT SAMPLED
J-ESTMATED VALUE
µg/L-MICROGRAMS PER LITER
BOLDED VALUES ARE GREATER THAN OR EQUAL TOO NYSDOH MCLs

Legend

- Monitoring Well
- Injection Well

0 50 100 200 Feet

TETRA TECH

Enhanced Biodegradation Pilot Study
Iron, Manganese, and TOC
Southern Area
NWIRP Calverton
Calverton, New York

FILE	112G02045	SCALE	AS NOTED
FIGURE NO.	**4-2**	REV / DATE	2/1/12

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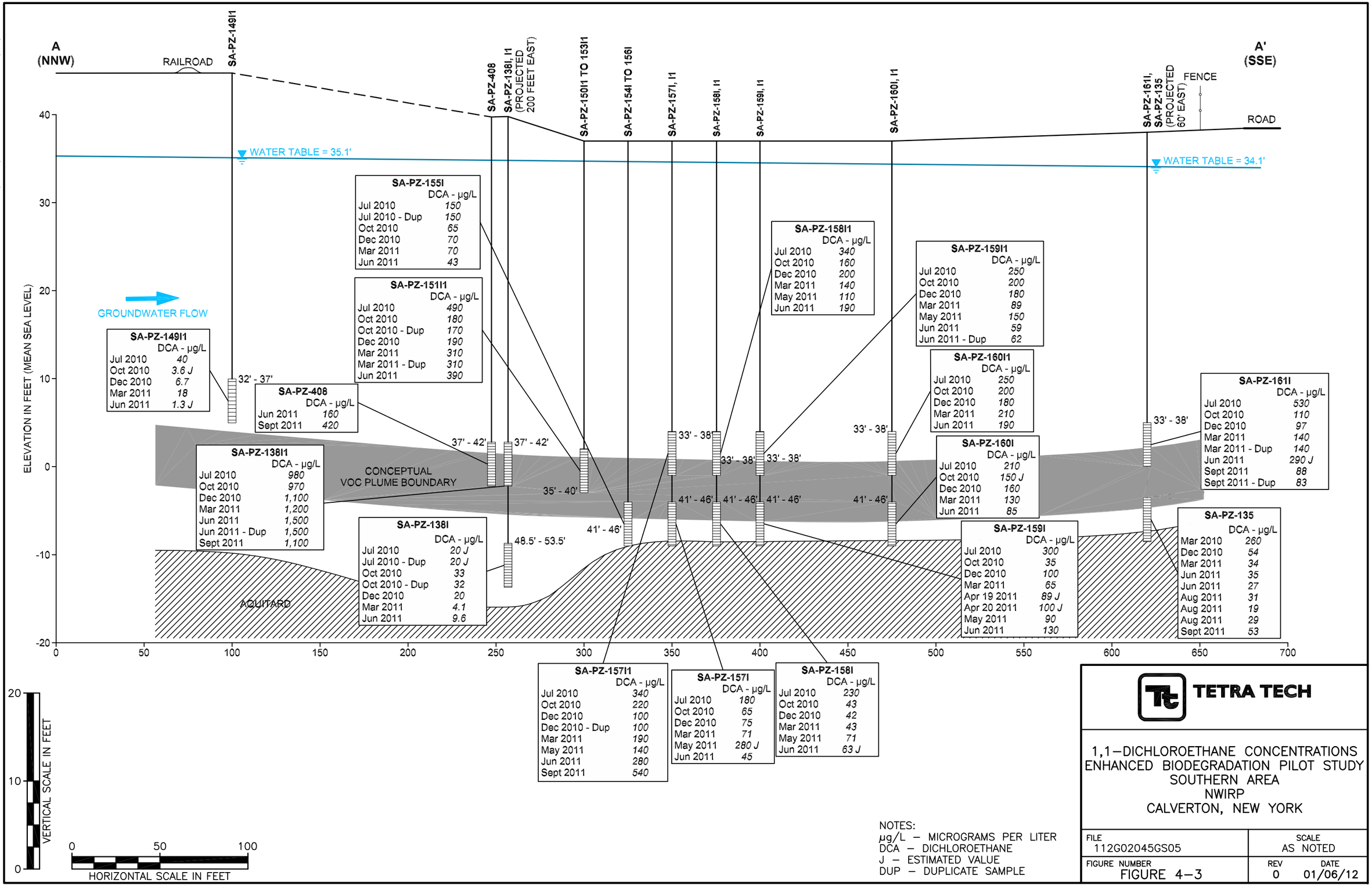


NOTES:
µg/L – MICROGRAMS PER LITER
DCA – DICHLOROETHANE
J – ESTIMATED VALUE
DUP – DUPLICATE SAMPLE

TETRA TECH

1,1–DICHLOROETHANE CONCENTRATIONS
ENHANCED BIODEGRADATION PILOT STUDY
SOUTHERN AREA
NWIRP
CALVERTON, NEW YORK

FILE	SCALE
112G02045GS05	AS NOTED

FIGURE NUMBER	REV	DATE
FIGURE 4–3	0	01/06/12

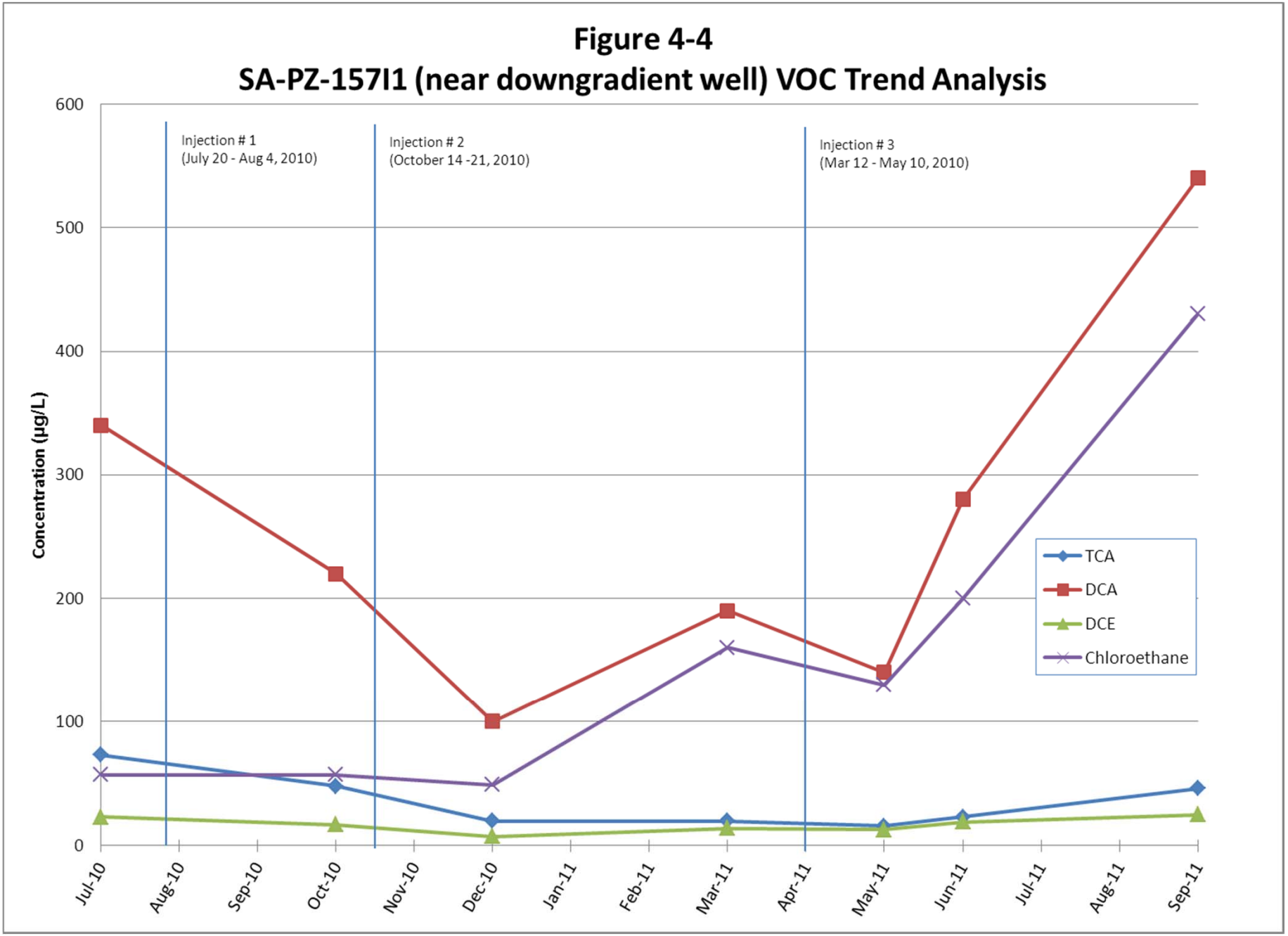
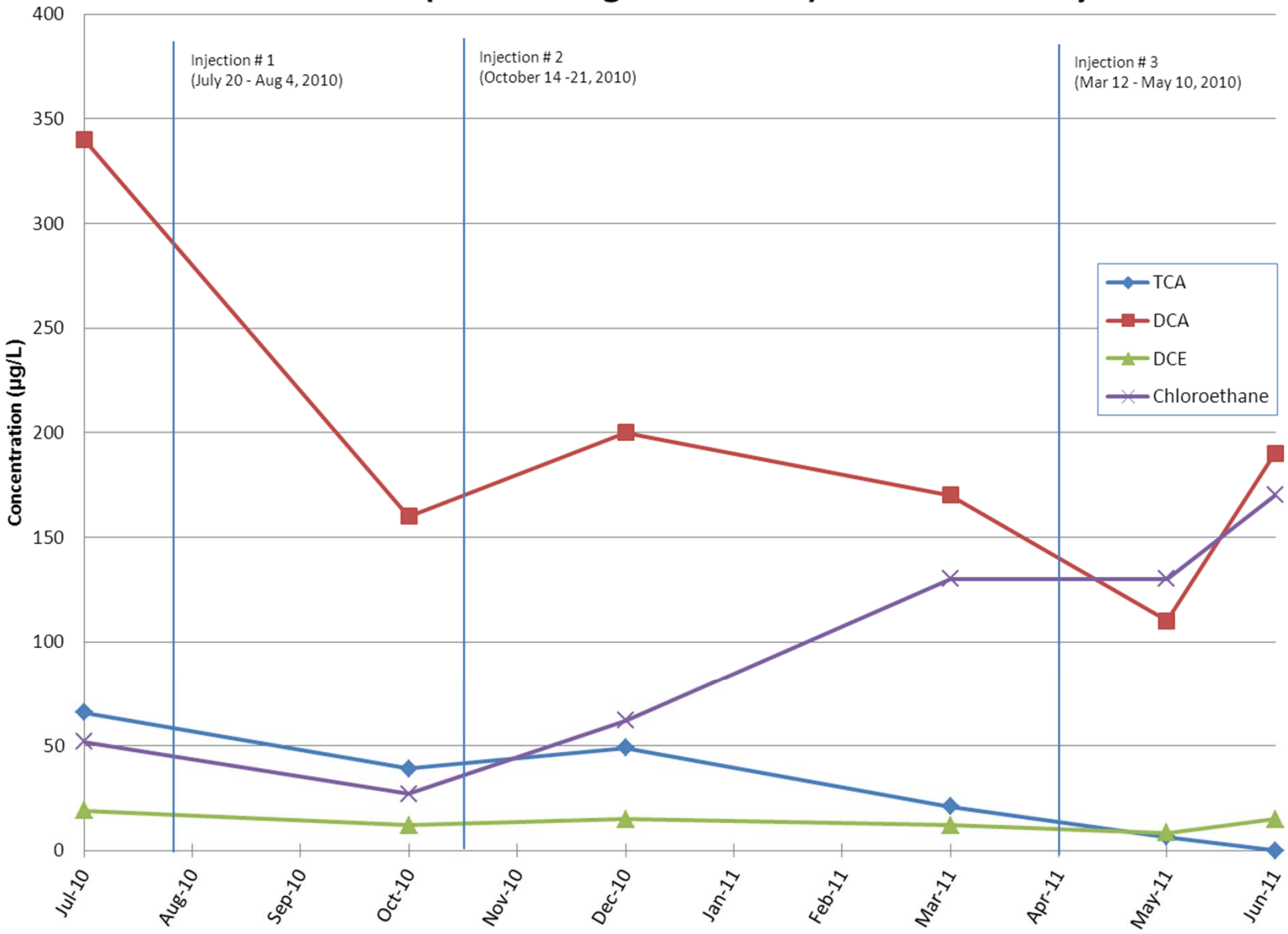


Figure 4-4
SA-PZ-157I1 (near downgradient well) VOC Trend Analysis
Injection # 1
(July 20 - Aug 4, 2010)
Injection # 2
(October 14 -21, 2010)
Injection # 3
(Mar 12 - May 10, 2010)
Concentration (µg/L)
600
500
400
300
200
100
0
Jul-10
Aug-10
Sep-10
Oct-10
Nov-10
Dec-10
Jan-11
Feb-11
Mar-11
Apr-11
May-11
Jun-11
Jul-11
Aug-11
Sep-11
TCA
DCA
DCE
Chloroethane

Figure 4-5
SA-PZ-158I1 (near downgradient well) VOC Trend Analysis



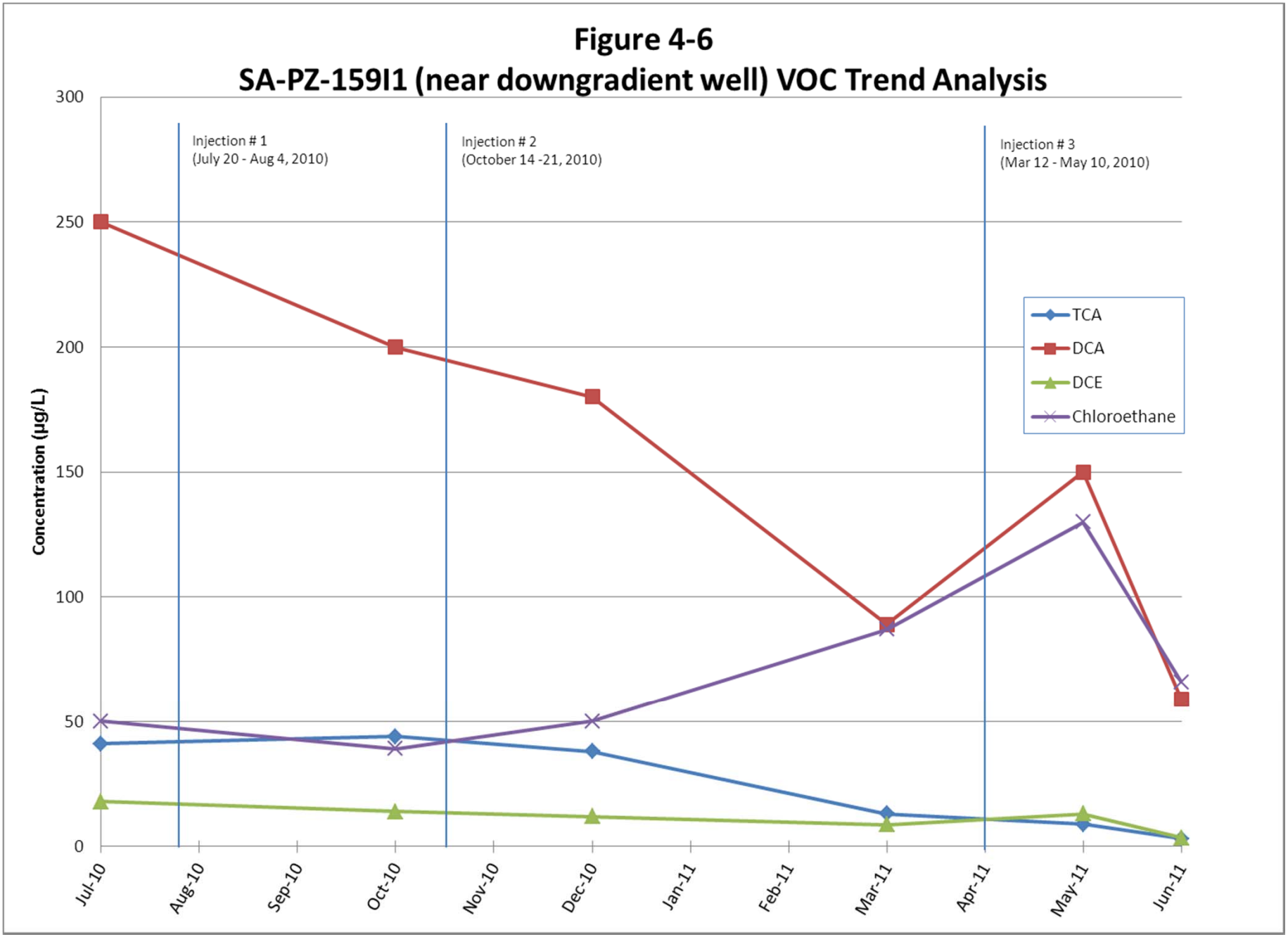


Figure 4-6
SA-PZ-159I1 (near downgradient well) VOC Trend Analysis
Injection # 1
(July 20 - Aug 4, 2010)
Injection # 2
(October 14 -21, 2010)
Injection # 3
(Mar 12 - May 10, 2010)
TCA
DCA
DCE
Chloroethane
Concentration (µg/L)
300
250
200
150
100
50
0
Jul-10
Aug-10
Sep-10
Oct-10
Nov-10
Dec-10
Jan-11
Feb-11
Mar-11
Apr-11
May-11
Jun-11

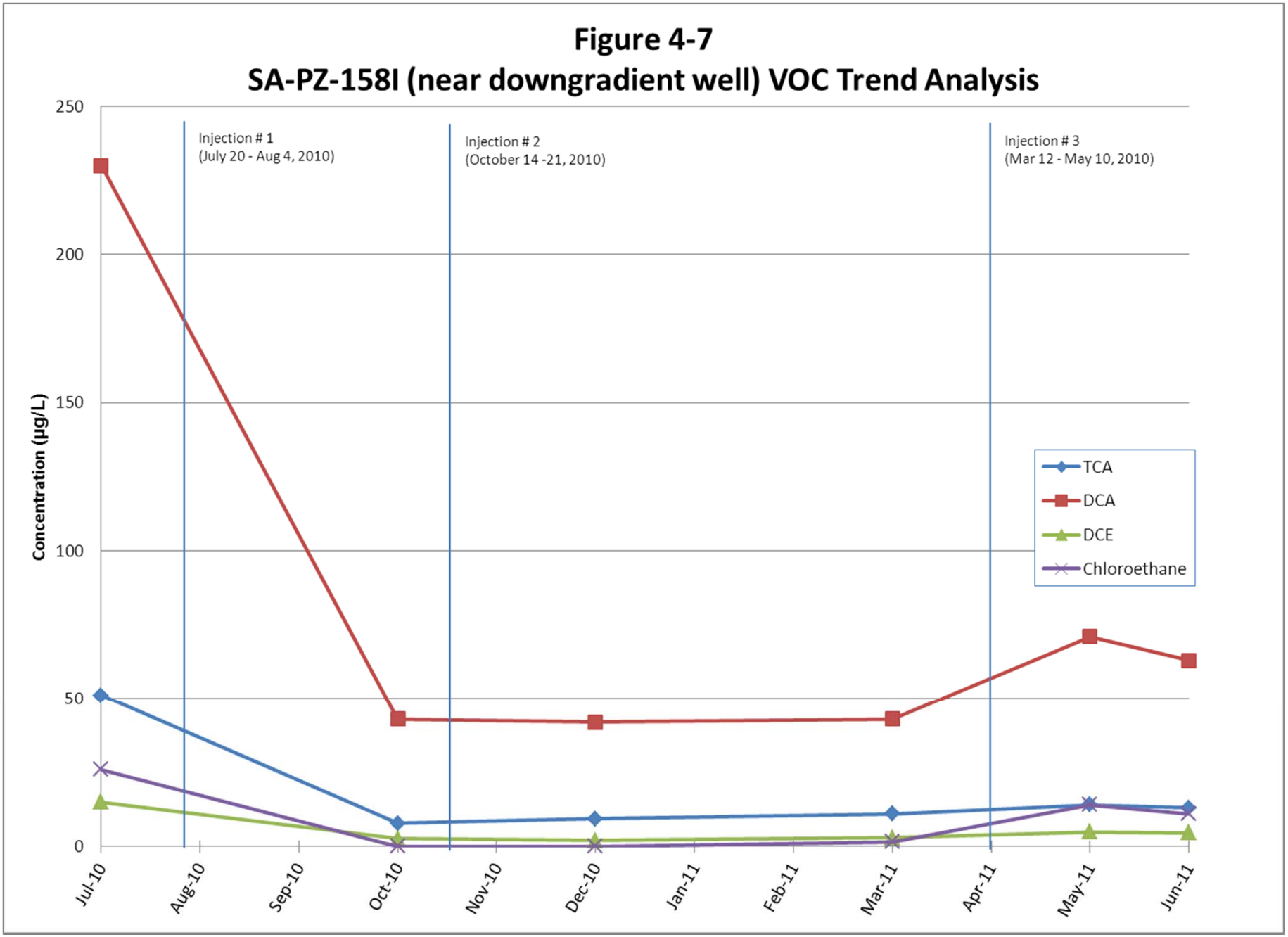
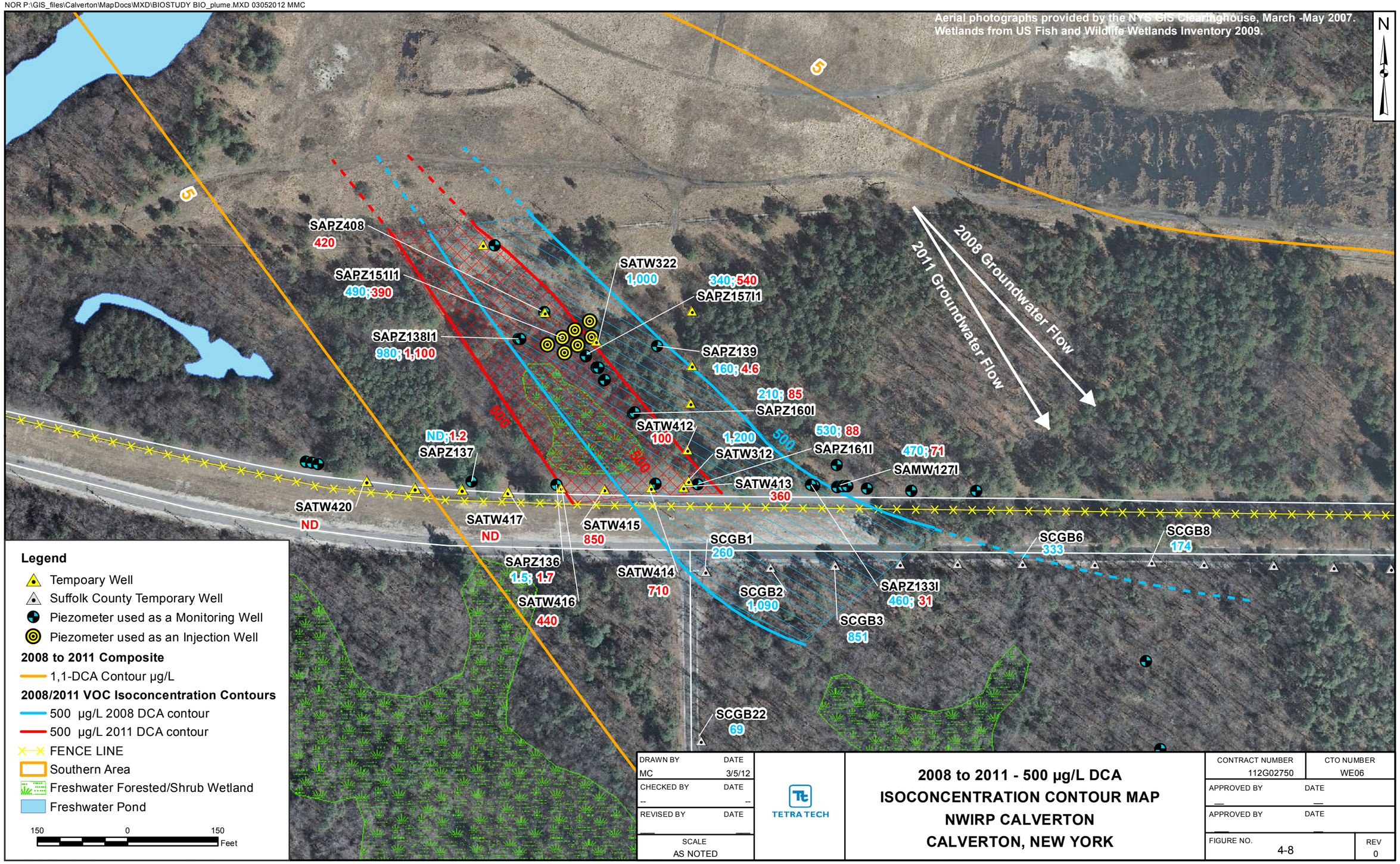


Figure 4-7
SA-PZ-158I (near downgradient well) VOC Trend Analysis
Injection # 1
(July 20 - Aug 4, 2010)
Injection # 2
(October 14 -21, 2010)
Injection # 3
(Mar 12 - May 10, 2010)
Concentration (µg/L)
250
200
150
100
50
0
Jul-10
Aug-10
Sep-10
Oct-10
Nov-10
Dec-10
Jan-11
Feb-11
Mar-11
Apr-11
May-11
Jun-11
TCA
DCA
DCE
Chloroethane

NOR P:\GIS_files\Calverton\MapDocs\MXD\BIOSTUDY BIO_plume.MXD 03052012 MMC



DRAWN BY MC	DATE 3/5/12	TETRA TECH	2008 to 2011 - 500 µg/L DCA ISOCONCENTRATION CONTOUR MAP NWIRP CALVERTON CALVERTON, NEW YORK
CHECKED BY --	DATE --		CONTRACT NUMBER 112G02750 / CTO NUMBER WE06
REVISED BY	DATE		APPROVED BY / DATE
SCALE AS NOTED			APPROVED BY / DATE
			FIGURE NO. 4-8 / REV 0

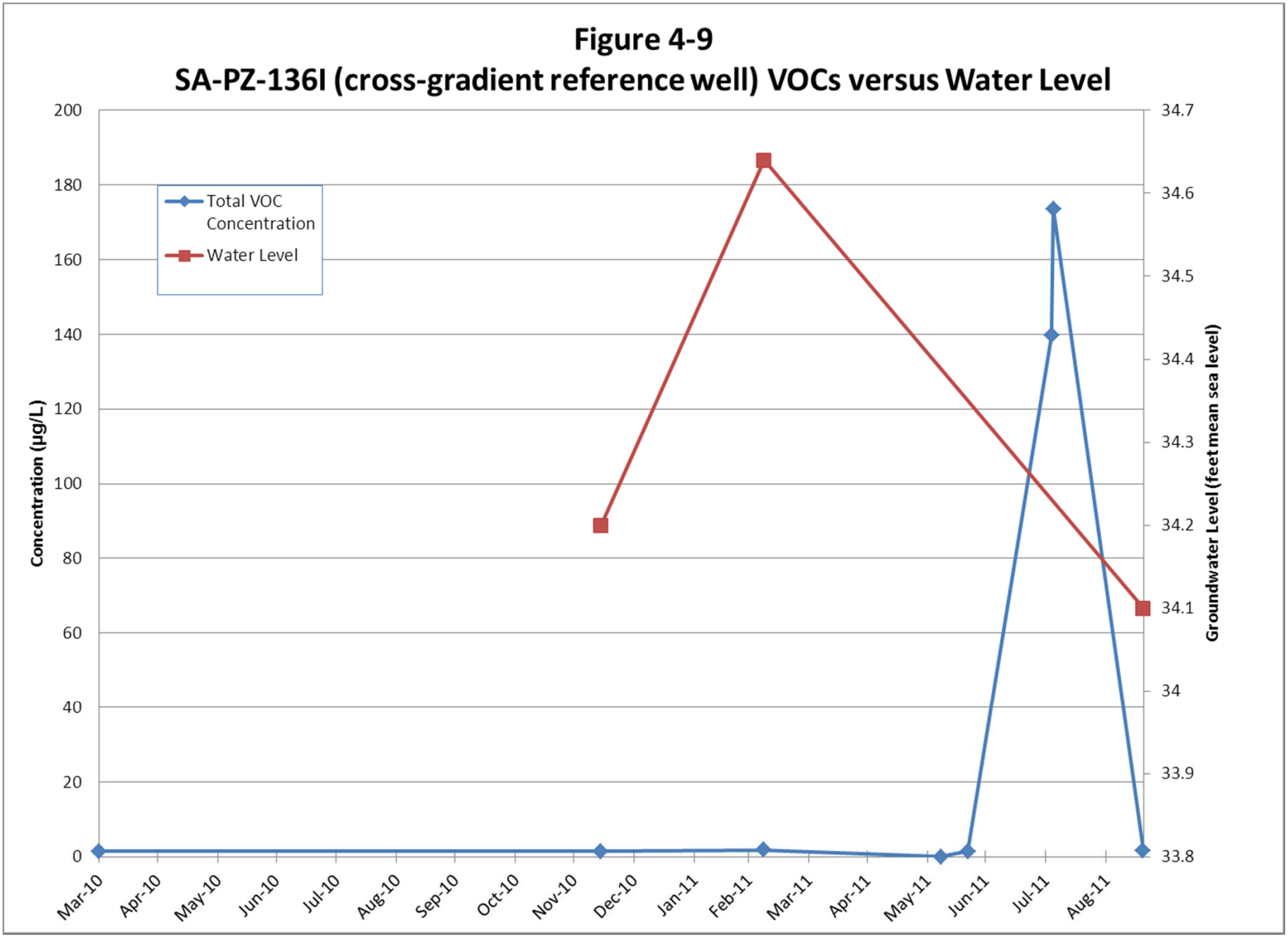


Figure 4-9
SA-PZ-136I (cross-gradient reference well) VOCs versus Water Level
Total VOC Concentration
Water Level
Concentration (µg/L)
Groundwater Level (feet mean sea level)
200
180
160
140
120
100
80
60
40
20
0
34.7
34.6
34.5
34.4
34.3
34.2
34.1
34
33.9
33.8
Mar-10
Apr-10
May-10
Jun-10
Jul-10
Aug-10
Sep-10
Oct-10
Nov-10
Dec-10
Jan-11
Feb-11
Mar-11
Apr-11
May-11
Jun-11
Jul-11
Aug-11

APPENDIX A

LABORATORY COC FORMS

CHEMTECH
CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO. C1497
QUOTE NO.
COC Number 085516

CLIENT INFORMATION (REPORT TO BE SENT TO:)
COMPANY: Tetra Tech
ADDRESS: 5700 Lake Wright Dr. Suite 309
CITY: Norfolk STATE: VA ZIP: 23502
ATTENTION: Dave Brayack
PHONE: 757-461-3824 FAX:

CLIENT PROJECT INFORMATION
PROJECT NAME: NWIRP Calverton
PROJECT NO.: LOCATION:
PROJECT MANAGER: Dave Brayack
e-mail: Dave.Brayack@TetraTech.com
PHONE: 757-461-3824 FAX:

CLIENT BILLING INFORMATION
BILL TO: PO#:
ADDRESS:
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION
FAX: DAYS *
HARD COPY: DAYS *
EDD: DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION
☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other
☐ EDD FORMAT

ANALYSIS

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	1 VOC	2 MEE	3 TOC	4 Metals	5	6	7	8	9	COMMENTS
								PRESERVATIVES A	A	C	B						← Specify Preservatives A-HCl B-HNO3 C-H2SO4 D-NaOH E-ICE F-Other
1.	SA-TB01-20110307	QC			3-7-11	1100	3	3									lab prepared
2.	SA-PZ-157I1-20110307	GW		X	3-7-11	~~1351~~ 1502	~~7~~ 3	3	2	1	1						
3.	SA-PZ-158I-20110307	GW		X	3-7-11	1350	3	3									
4.	SA-PZ-158I1-20110307	GW		X	3-7-11	1500 1351	3	3									
5.	SA-PZ-157I-20110307	GW		X	3-7-11	~~1502~~	7	3	2	1	1						
6.	SA-PZ-159I-20110307	GW		X	3-7-11	1615	7	3	2	1	1						
7.	SA-PZ-155I-20110307	GW		X	3-7-11	1622	7	3	2	1	1						
8.	SA-PZ-151I1-20110308	GW		X	3-8-11	0835	7	3	2	1	1						
9,22,23	SA-PZ-159I1-20110308	GW		X	3-8-11	0840	19	9	6	2	2						
10.	SA-~~DX~~ JB 3-8-11 Dup01-20110308	GW		X	3-8-11	0900	7	3	2	1	1						

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:
1. Jacob Birkell	3-8-11 1730	1.
RELINQUISHED BY: 2.	DATE/TIME:	RECEIVED BY: 2.
RELINQUISHED BY: 3. FED-EX	DATE/TIME: 3/9/11 9:15	RECEIVED FOR LAB BY: 3. Rachel Moran

Conditions of bottles or coolers at receipt: ☒ Compliant ☐ Non Compliant
Cooler Temp. 3°C
Ice in Cooler?: Yes
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments: Original COCs Received on 3/12/11

Page 1 of 3

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☐ OVERNIGHT
CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT

Shipment Complete: ☒ YES ☐ NO

CHEMTECH

CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO. C1497
QUOTE NO.
COC Number 085517

CLIENT INFORMATION

REPORT TO BE SENT TO:
COMPANY: Tetra Tech
ADDRESS: 5700 Lake Wright Dr. Suite 309
CITY: Norfolk STATE: VA ZIP: 23502
ATTENTION: Dave Brayack
PHONE: 757-461-3824 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: NWIRP Calverton
PROJECT NO.: 112G02045 LOCATION:
PROJECT MANAGER: Dave Brayack
e-mail: Dave.Brayack@tetratech.com
PHONE: 757-461-3824 FAX:

CLIENT BILLING INFORMATION

BILL TO: PO#:
ADDRESS:
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX: _____ DAYS *
HARD COPY: _____ DAYS *
EDD: _____ DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other _____
☐ EDD FORMAT _____

ANALYSIS

1 VOC, 2 MEE, 3 TOC, 4 Metals, 5, 6, 7, 8, 9

PRESERVATIVES / COMMENTS

← Specify Preservatives
A – HCl B – HNO_3
C – H_2SO_4 D – NaOH
E – ICE F – Other

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	1 (A)	2 (A)	3 (C)	4 (B)	5	6	7	8	9	COMMENTS
11.	SA-PZ-138I-20110308	GW		X	3-8-11	0957	3	3									
12.	SA-PZ-160I-20110308	GW		X	3-8-11	1015	7	3	2	1	1						
13.	SA-PZ-138I1-20110308	GW		X	3-8-11	1054	3	3									
14.	SA-PZ-160I1-20110308	GW		X	3-8-11	1120	3	3									
15.	SA-PZ-149I1-20110308	GW		X	3-8-11	1207	3	3									
16.	SA-PZ-136I-20110308	GW		X	3-8-11	1230	3	3									
17.	SA-PZ-139I-20110308	GW		X	3-8-11	1317	3	3									
18.	SA-PZ-135I-20110308	GW		X	3-8-11	1340	3	3									
19.	SA-PZ-161I-20110308	GW		X	3-8-11	1440	3	3									
20.	SA-PZ-133I-20110308	GW		X	3-8-11	1442	3	3									

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY
1. Jacob Burkey	3-8-11 1730	1.
RELINQUISHED BY: 2.	DATE/TIME:	RECEIVED BY: 2.
RELINQUISHED BY: 3. FED-EX	DATE/TIME: 3/9/11 9:15	RECEIVED FOR LAB BY: 3. Gwendal McCann

Conditions of bottles or coolers at receipt: ☑ Compliant ☐ Non Compliant
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments: Original COCs Received on 3/12/11

Cooler Temp. 3°C
Ice in Cooler?: YES

Page 2 of 3

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☐ OVERNIGHT
CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT

Shipment Complete: ☑ YES ☐ NO

CHEMTECH

CHAIN OF CUSTODY RECORD

B110290

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www.chemtech.net

CHEMTECH PROJECT NO. C1497
QUOTE NO.
COC Number 085501

CLIENT INFORMATION (REPORT TO BE SENT TO:)

COMPANY: Tetra Tech
ADDRESS: 5700 Lake Wright Dr. Suite 309
CITY: Norfolk STATE: VA ZIP: 23502
ATTENTION: Dave Brayack
PHONE: 757-461-3824 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: NWIRP Calverton
PROJECT NO.: 112G02045 LOCATION:
PROJECT MANAGER: Dave Brayack
e-mail: Dave.Brayack@tetratech.com
PHONE: 757-461-3824 FAX:

CLIENT BILLING INFORMATION

BILL TO: PO#:
ADDRESS:
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX: _____ DAYS *
HARD COPY: _____ DAYS *
EDD: _____ DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other _____
☐ EDD FORMAT _____

ANALYSIS

	1	2	3	4	5	6	7	8	9
	VOC	MEE	TOC	Metals					

PRESERVATIVES

	1	2	3	4	5	6	7	8	9
	A	A	C	B					

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	1	2	3	4	5	6	7	8	9	COMMENTS
1.	SA-Dup02-20110308	GW		X	3-8-11	1600	3	3									
2.																	
3.																	
4.																	
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

← Specify Preservatives
A – HCl B – HNO_3
C – H_2SO_4 D – NaOH
E – ICE F – Other

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:
1. Jacob Birkett	3-8-11 1730	1.
RELINQUISHED BY: 2.	DATE/TIME:	RECEIVED BY: 2.
RELINQUISHED BY: 3. FED-EX	DATE/TIME: 3/9/11 9:15	RECEIVED FOR LAB BY: 3. Sushil Mohan

Conditions of bottles or coolers at receipt: ☑ Compliant ☐ Non Compliant
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments:

Cooler Temp. 3°C
Ice in Cooler?: YES

Page 3 of 3

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☐ OVERNIGHT
CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT

Shipment Complete: ☑ YES ☐ NO

Revision 8/2007

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CHEMTECH

CHAIN OF CUSTODY RECORD

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CHEMTECH PROJECT NO. C1551
QUOTE NO.
COC Number 085509

CLIENT INFORMATION

REPORT TO BE SENT TO:

COMPANY: Tetra Tech
ADDRESS: 5700 Lake Wright Dr. Suite 309
CITY: Norfolk STATE: VA ZIP: 23502
ATTENTION: Dave Brayack
PHONE: 757-461-3824 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: NWIRP Calverton
PROJECT NO.: 112G0204 LOCATION:
PROJECT MANAGER: Dave Brayack
e-mail: David.Brayack@tetratech.com
PHONE: 757-461-3824 FAX:

CLIENT BILLING INFORMATION

BILL TO: PO#:
ADDRESS:
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

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EDD: _____ DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

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☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other _____
☐ EDD FORMAT _____

ANALYSIS

1 VOC 2 TOC 3 4 5 6 7 8 9

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	PRESERVATIVES 1 (A)	2 (C)	3	4	5	6	7	8	9	COMMENTS
1.	Carbon In-20110315	3-15-11		X	3-15-11	1425	4	3	1								
2.																	Note Trip Blank
3.																	included on separate
4.																	COC in same shipment
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

← Specify Preservatives
A – HCl B – HNO_3
C – H_2SO_4 D – NaOH
E – ICE F – Other

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY
1. Jacob Birkett / Jacob Burkett	3-15-11 1700	1.
RELINQUISHED BY: 2.	DATE/TIME:	RECEIVED BY: 2.
RELINQUISHED BY: 3. FedEx	DATE/TIME: 3/16/11 9:20	RECEIVED FOR LAB BY: 3. Ken Rivera

Conditions of bottles or coolers at receipt: ☒ Compliant ☐ Non Compliant
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments:

Cooler Temp. 3°C
Ice in Cooler?: YES

Page 1 of 1

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☒ OVERNIGHT
CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT

Shipment Complete: ☐ YES ☒ NO

298

Revision 8/2007

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CHEMTECH
CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO. C1597
QUOTE NO.
COC Number 085513

CLIENT INFORMATION

REPORT TO BE SENT TO:
COMPANY: Tetra Tech NUS
ADDRESS: 5700 Lake Wright Drive
CITY: Norfolk STATE: VA ZIP: 23502
ATTENTION: Dave Brayack
PHONE: (757) 461-3824 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: NWIRP Calverton
PROJECT NO.: CTO-WE08 LOCATION:
PROJECT MANAGER: Dave Brayack
e-mail:
PHONE: (757) 461-3824 FAX:

CLIENT BILLING INFORMATION

BILL TO: PO#:
ADDRESS:
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX: _____ DAYS *
HARD COPY: _____ DAYS *
EDD: _____ DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other _____
☐ EDD FORMAT _____

ANALYSIS

TOC

PRESERVATIVES

H_2SO_4

COMMENTS

← Specify Preservatives
A – HCl B – HNO_3
C – H_2SO_4 D – NaOH
E – ICE F – Other

CHEMTECH SAMPLE ID (A-5)	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	1	2	3	4	5	6	7	8	9
1.	SA-PZ-157I-20110321	Aq.		X	3/21/11	0900	1	1								
2.	SA-PZ-157II-20110321	Aq		X	3/21/11	0935	1	1								
3.	SA-PZ-158I-20110321	Aq		X	3/21/11	1005	1	1								
4.	SA-PZ-158II-20110321	Aq		X	3/21/11	1040	1	1								
5.	SA-PZ-159I-20110321	Aq		X	3/21/11	1120	1	1								
6.	SA-PZ-159II-20110321	Aq		X	3/21/11	1155	1	1								
7.																
8.																
9.																
10.																

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY
1. [signature]	3/21/11 1600	1.
RELINQUISHED BY	DATE/TIME	RECEIVED BY
2.		2.
RELINQUISHED BY	DATE/TIME	RECEIVED FOR LAB BY
3. Fed Ex	3/22/11 9:20	3. [signature]

Conditions of bottles or coolers at receipt: ☒ Compliant ☐ Non Compliant
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments:

Cooler Temp. 3°C
Ice in Cooler?: yes

Page 1 of 1

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☒ OVERNIGHT
CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT

Shipment Complete: ☒ YES ☐ NO

Revision 8/2007

WHITE - CHEMTECH COPY FOR RETURN TO CLIENT YELLOW - CHEMTECH COPY PINK - SAMPLER COPY

CHEMTECH

CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO. C1664
QUOTE NO.
COC Number 085514

CLIENT INFORMATION

REPORT TO BE SENT TO:
COMPANY: Tetra Tech NUS
ADDRESS: 5700 Lake Wright Drive
CITY: Norfolk STATE: VA ZIP: 23502
ATTENTION: Dave Brayack
PHONE: (757) 461-3824 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: NWIRP Calverton
PROJECT NO. CTO-WE08 LOCATION:
PROJECT MANAGER: Dave Brayack
e-mail:
PHONE: FAX:

CLIENT BILLING INFORMATION

BILL TO: PO#:
ADDRESS:
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX: DAYS *
HARD COPY: DAYS *
EDD: DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other
☐ EDD FORMAT

ANALYSIS

TOC

PRESERVATIVES

CHEMTECH SAMPLE ID (A-6)	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	1 (H_2SO_4)	2	3	4	5	6	7	8	9	COMMENTS
1.	SA-PZ-157II-20110328	Aq		✓	3/28/11	1120	1	1									
2.	SA-PZ-157I-20110328	Aq		✓	3/28/11	1150	1	1									
3.	SA-PZ-158I-20110328	Aq		✓	3/28/11	1220	1	1									
4.	SA-PZ-158II-20110328	Aq		✓	3/28/11	1250	1	1									
5.	SA-PZ-159II-20110328	Aq		✓	3/28/11	1325	1	1									
6.	SA-PZ-159I-20110328	Aq		✓	3/28/11	1400	1	1									
7.																	
8.																	
9.																	
10.																	

← Specify Preservatives
A – HCl B – HNO_3
C – H_2SO_4 D – NaOH
E – ICE F – Other

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY:
1. [signature]	3/28/11 1700	1.
RELINQUISHED BY	DATE/TIME	RECEIVED BY:
2.		2.
RELINQUISHED BY	DATE/TIME	RECEIVED FOR LAB BY:
3. FedEx	3-29-11 9:15	3. [signature]

Conditions of bottles or coolers at receipt: ☐ Compliant ☐ Non Compliant
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments:

Cooler Temp. 5°C
Ice in Cooler?: ✓

Page ____ of ____

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☐ OVERNIGHT
CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT

Shipment Complete: ☐ YES ☐ NO

Revision 8/2007

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CHEMTECH
CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO. C1740
QUOTE NO.
COC Number 085515

CLIENT INFORMATION

REPORT TO BE SENT TO:
COMPANY: Tetra Tech NUS
ADDRESS: 5700 Lake Wright Drive
CITY: Norfolk STATE: PA ZIP: 23502
ATTENTION: Dave Brayack
PHONE (757) 461-3824 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: NWIRP Calverton
PROJECT NO. CTO-WE08 LOCATION:
PROJECT MANAGER: Dave Brayack
e-mail:
PHONE (757) 461-3824 FAX:

CLIENT BILLING INFORMATION

BILL TO: PO#:
ADDRESS:
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX: _____ DAYS *
HARD COPY: _____ DAYS *
EDD: _____ DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other _____
☐ EDD FORMAT _____

ANALYSIS

1 TOC, 2 VOCs, 3, 4, 5, 6, 7, 8, 9

CHEMTECH SAMPLE ID (A-7)	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	PRESERVATIVES 1	2	3	4	5	6	7	8	9	COMMENTS
1.	SA-PZ-159II-20110404	Aq		X	4/4/11	1220	1	1									
2.	SA-PZ-159I-20110404	Aq		X	4/4/11	1245	1	1									
3.	SA-PZ-158II-20110404	Aq		X	4/4/11	1315	1	1									
4.	SA-PZ-158I-20110404	Aq		X	4/4/11	1345	1	1									
5.	SA-PZ-157II-20110404	Aq		X	4/4/11	1415	1	1									
6.	SA-PZ-157I-20110404	Aq		X	4/4/11	1440	1	1									
7.	Carbon1n-20110404	Aq		X	4/4/11	1450	2		2								
8.																	
9.																	
10.																	

← Specify Preservatives
A – HCl B – HNO_3
C – H_2SO_4 D – NaOH
E – ICE F – Other

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY
1. [signature]	4/4/11 1700	1.
RELINQUISHED BY	DATE/TIME	RECEIVED BY
2.		2.
RELINQUISHED BY	DATE/TIME	RECEIVED FOR LAB BY
3. Fed Ex	4/5/11 9:30	3. [signature]

Conditions of bottles or coolers at receipt: ☒ Compliant ☐ Non Compliant
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments:

Cooler Temp. 4°C
Ice in Cooler?: yes

Page 1 of 1

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☒ OVERNIGHT
CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT

Shipment Complete: ☐ YES ☐ NO

Revision 8/2007

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TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER 2694 | PAGE 1 OF 1 C1836

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02045	NWIRP Colverton	Dave Brayack	(757) 461-3824	CHEMTECH
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
[signature]		Vince Shickora	(610) 909-1893	284 Sheffield Street
		CARRIER/WAYBILL NUMBER		CITY, STATE
				Mountainside, NJ 07092

STANDARD TAT ☐
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): P G
PRESERVATIVE USED: H_2SO_4 HCl

	DATE YEAR 2011	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: TOC	VOCs							COMMENTS
1.	4/11	0920	SA-PZ-159I1-20110411	—	—	—	GW	G	1	1								
2.	4/11	0945	SA-PZ-159I-20110411	—	—	—	GW	G	1	1								
3.	4/11	1015	SA-PZ-158I1-20110411	—	—	—	GW	G	1	1								
4.	4/11	1040	SA-PZ-158I-20110411	—	—	—	GW	G	1	1								
5.	4/11	1110	SA-PZ-157I1-20110411	—	—	—	GW	G	1	1								
6.	4/11	1140	SA-PZ-157I-20110411	—	—	—	GW	G	1	1								
7.	4/11	1155	Carbon1-20110411	—	—	—	GW	G	2		2							

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY [signature]	4-11-11	1730	1. RECEIVED BY		
2. RELINQUISHED BY Fed Ex	4/12/11	9:15	2. RECEIVED BY Ken Rivera	4/12/11	9:15
3. RELINQUISHED BY			3. RECEIVED BY		

COMMENTS: Temp: 6°C

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

CHEMTECH
CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO. C1952
QUOTE NO.
COC Number 085931

CLIENT INFORMATION (REPORT TO BE SENT TO)

COMPANY: Tetra Tech
ADDRESS: 5700 Lake Wright Dr- Suite 301
CITY: Norfolk STATE: VA ZIP: 23502
ATTENTION: Dave Brayack
PHONE: 757-461-3824 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: NWIRP Calverton
PROJECT NO.: 112G02045 LOCATION:
PROJECT MANAGER: Dave Brayack
e-mail: David.Brayack@tetratech.com
PHONE: 757-461-3824 FAX:

CLIENT BILLING INFORMATION

BILL TO: PO#:
ADDRESS: See Contract
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX: _____ DAYS *
HARD COPY: _____ DAYS *
EDD: _____ DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other _____
☐ EDD FORMAT _____

ANALYSIS

1 VOC, 2 TOC, 3, 4, 5, 6, 7, 8, 9

PRESERVATIVES / **COMMENTS**

← Specify Preservatives
A – HCl B – HNO_3
C – H_2SO_4 D – NaOH
E – ICE F – Other

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	1	2	3	4	5	6	7	8	9	COMMENTS
								A	C								
1.	SA-TB01-20110411	QA			4-11-11	1700	2	2									Lab prepared
2.	SA-PZ-159I-20110419	GW		X	4-19-11	1550	3	2	1								
3.	SA-PZ-157I1-20110420	GW		X	4-20-11	0830	1		1								
4.	SA-PZ-157I-20110420	GW		X	4-20-11	0857	1		1								
5.	SA-PZ-158I1-20110420	GW		X	4-20-11	0930	1		1								
6.	SA-PZ-158I-20110420	GW		X	4-20-11	0956	1		1								
7.	SA-PZ-159I1-20110420	GW		X	4-20-11	1030	1		1								
8.	SA-PZ-159I-20110420	GW		X	4-20-11	1100	2	2									
9.	Carbon In-20110420	GW	X		4-20-11	1130	3	2	1								
10.																	

A-9

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY:
1. Jacob Birkett	4-20-11 1500	1. FedEx
RELINQUISHED BY: 2.	DATE/TIME:	RECEIVED BY: 2.
RELINQUISHED BY: 3. FedEx	DATE/TIME: 4-21-11 9:20	RECEIVED FOR LAB BY: 3.

Conditions of bottles or coolers at receipt: ☐ Compliant ☐ Non Compliant
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments:

Cooler Temp. 4C
Ice in Cooler?: ✓

Page 1 of 1

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☐ OVERNIGHT
CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT

Shipment Complete: ☐ YES ☐ NO

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CHEMTECH
CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
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www.chemtech.net

CHEMTECH PROJECT NO. C2167
QUOTE NO.
COC Number 085937

CLIENT INFORMATION (REPORT TO BE SENT TO)

COMPANY: Tetra tech
ADDRESS: 5700 Lake Wright Dr
CITY: Norfolk STATE: VA ZIP: 23502
ATTENTION: Dave Brayack
PHONE: 757-461-3824 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: NWIRP Calverton
PROJECT NO.: 112G02045 LOCATION:
PROJECT MANAGER: Dave Brayack
e-mail: David.Brayack@tetratech.com
PHONE: 757-461-3824 FAX:

CLIENT BILLING INFORMATION

BILL TO: See Contract PO#:
ADDRESS:
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX: _____ DAYS *
HARD COPY: _____ DAYS *
EDD: _____ DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other _____
☐ EDD FORMAT _____

ANALYSIS

1 VOC 2 TOC 3 4 5 6 7 8 9

PRESERVATIVES / **COMMENTS**

← Specify Preservatives: A – HCl, B – HNO_3, C – H_2SO_4, D – NaOH, E – ICE, F – Other

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	1	2	3	4	5	6	7	8	9	COMMENTS
								A	C								
1.	SA-TB01-20110411	QC			4-11-11	1700	2	2									Lab prepared
2.	SA-PZ-157I-20110509	GW	X		5-9-11	1218	3	2	1								
3.	SA-PZ-157II-20110509	GW	X		5-9-11	1250	3	2	1								
4.	SA-PZ-158I -20110509	GW	X		5-9-11	1327	3	2	1								
5.	SA-PZ- 158II-20110509	GW	X		5-9-11	1400	3	2	1								
6.	SA-PZ-159I-20110509	GW	X		5-9-11	1442	3	2	1								
7.	SA-PZ-159II-20110509	GW	X		5-9-11	1515	3	2	1								
8.	CarbonIn-20110509	GW		X	5-9-11	1540	3	2	1								
9.																	
10.																	

A-10

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:
1. Jacob Birkett	5-9-11 1730	1.
RELINQUISHED BY: 2.	DATE/TIME:	RECEIVED BY: 2.
RELINQUISHED BY: 3. Fed Ex	DATE/TIME: 5/10/11 9:15	RECEIVED FOR LAB BY: 3. Kim Rivera

Conditions of bottles or coolers at receipt: ☒ Compliant ☐ Non Compliant
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments:

Cooler Temp. 4°C
Ice in Cooler?: yes

Page 1 of 1

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☒ OVERNIGHT
CHEMTECH: ☐ PICKED UP ☒ OVERNIGHT

Shipment Complete: ☐ YES ☐ NO

Revision 8/2007

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CHEMTECH
CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
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www.chemtech.net

CHEMTECH PROJECT NO. C2595
QUOTE NO.
COC Number 082919

CLIENT INFORMATION (REPORT TO BE SENT TO)

COMPANY: Tetra Tech NUS
ADDRESS: 5700 Lake Wright Drive
CITY: Norfolk STATE: VA ZIP: 23502
ATTENTION: Dave Brayack
PHONE (757) 461-3824 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: NWIRP Colverton
PROJECT NO.: WE08 LOCATION:
PROJECT MANAGER: Dave Brayack
e-mail:
PHONE (757) 461-3824 FAX:

CLIENT BILLING INFORMATION

BILL TO: PO#:
ADDRESS:
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX: _____ DAYS *
HARD COPY: _____ DAYS *
EDD: _____ DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other _____
☐ EDD FORMAT _____

ANALYSIS: VOCs

PRESERVATIVES: HCl

COMMENTS: ← Specify Preservatives
A – HCl B – HNO_3
C – H_2SO_4 D – NaOH
E – ICE F – Other

CHEMTECH SAMPLE ID (A-11)	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	1	2	3	4	5	6	7	8	9	COMMENTS
1.	SA-TB03-20110606	QC		X	6/6/11	0700	2	2									Lab supplied Trip Blank
2.	SA-TW405-3135	Aq		X	6/6/11	0950	2	2									
3.	SA-TW405-2125	Aq		X	6/6/11	1015	2	2									
4.	SADUP02-20110606	Aq		X	6/6/11	1800	2	2									
5.	SA-TW407-3135	Aq		X	6/6/11	1105	2	2									
6.	SA-TW407-2125	Aq		X	6/6/11	1135	2	2									
7.	SA-TW406-2125	Aq		X	6/6/11	1245	2	2									
8.	SA-TW406-3135	Aq		X	6/6/11	1310	2	2									
9., 10., 11.	SA-TW416-3337	Aq		X	6/6/11	1500	6	6									Do MS/MSD
12.	SA-TW416-3842	Aq		X	6/6/11	1525	2	2									

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY
1. [signature]	6-8-11 1730	1.
RELINQUISHED BY 2.	DATE/TIME	RECEIVED BY 2.
RELINQUISHED BY 3.	DATE/TIME 9:45 6-9-11	RECEIVED FOR LAB BY 3. [signature]

Conditions of bottles or coolers at receipt: ☐ Compliant ☐ Non Compliant
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments:

Cooler Temp. 4°C
Ice in Cooler?: yes

Page 1 of 4

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☑ OVERNIGHT
CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT

Shipment Complete: ☐ YES ☐ NO

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CHEMTECH
CHAIN OF CUSTODY RECORD

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www.chemtech.net

CHEMTECH PROJECT NO. C2595
QUOTE NO.
COC Number 082920

CLIENT INFORMATION (REPORT TO BE SENT TO)

COMPANY: Tetra Tech NUS
ADDRESS: 5700 Lake Wright Drive
CITY: Norfolk STATE: VA ZIP: 23502
ATTENTION: Dave Brayack
PHONE (757) 461-3824 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: NWIRP Colverton
PROJECT NO.: WE08 LOCATION:
PROJECT MANAGER: Dave Brayack
e-mail:
PHONE: (757) 461-3824 FAX:

CLIENT BILLING INFORMATION

BILL TO: PO#:
ADDRESS:
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX: _____ DAYS *
HARD COPY: _____ DAYS *
EDD: _____ DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other _____
☐ EDD FORMAT _____

ANALYSIS: VOCs

PRESERVATIVES: HCl

CHEMTECH SAMPLE ID (A-12 YR 6/09/11)	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	1	2	3	4	5	6	7	8	9	COMMENTS
1. 13.	SA-TW416-4347	Aq		X	6/6/11	1550	2	2									
2. 14.	SA-RB01-20110607	QC		X	6/7/11	0640	2	2									Rinsate
3. 15.	SA-PZ136I-20110607	Aq		X	6/7/11	0750	2	2									
4. 16.	SA-TW416-4852	Aq		X	6/7/11	0942	2	2									
5. 17.	SA-TW415-3337	Aq		X	6/7/11	1050	2	2									
6. 18.	SA-TW415-3842	Aq		X	6/7/11	1115	2	2									
7. 19.	SA-TW415-4347	Aq		X	6/7/11	1140	2	2									
8. 20.	SA-TW414-3337	Aq		X	6/7/11	1340	2	2									
9. 21.	SA-TW414-3842	Aq		X	6/7/11	1405	2	2									
10. 22.	SA-TW414-4347	Aq		X	6/7/11	1430	2	2									

COMMENTS: ← Specify Preservatives
A – HCl B – HNO_3
C – H_2SO_4 D – NaOH
E – ICE F – Other

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY
1. [signature]	6-8-11 1750	1.
RELINQUISHED BY 2.	DATE/TIME	RECEIVED BY 2.
RELINQUISHED BY 3.	DATE/TIME 9:45 6-9-11	RECEIVED FOR LAB BY 3. J Dotson

Conditions of bottles or coolers at receipt: ☐ Compliant ☐ Non Compliant
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments:

Cooler Temp. 4°C
Ice in Cooler?: yes

Page 2 of 4

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☒ OVERNIGHT
CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT

Shipment Complete: ☐ YES ☐ NO

Revision 8/2007

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CHEMTECH

CHAIN OF CUSTODY RECORD

B1105123

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO. C2596
QUOTE NO.
COC Number 082918

CLIENT INFORMATION

REPORT TO BE SENT TO:
COMPANY: Tetra Tech NUS
ADDRESS: 5700 Lake Wright Drive
CITY: Norfolk STATE: VA ZIP: 23502
ATTENTION: Dave Brayack
PHONE (757) 461-3824 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: NWIRP Colverton
PROJECT NO.: WE08 LOCATION:
PROJECT MANAGER: Dave Brayack
e-mail:
PHONE: (757) 461-3824 FAX:

CLIENT BILLING INFORMATION

BILL TO: PO#.
ADDRESS:
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX: DAYS *
HARD COPY: DAYS *
EDD: DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other
☐ EDD FORMAT

ANALYSIS

VOCs

PRESERVATIVES

HCl

COMMENTS

← Specify Preservatives
A – HCl B – HNO_3
C – H_2SO_4 D – NaOH
E – ICE F – Other

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	1	2	3	4	5	6	7	8	9	COMMENTS
1.	SA-PZ135I-20110607	Aq		X	6/7/11	1635	2	2									
2.	SA-PZ137I-20110608	Aq		X	6/8/11	0755	2	2									
3.	SA-SB01-20110608	Aq		X	6/8/11	0816	2	2									Source Blank
4.	SA-TW413-3337	Aq		X	6/8/11	0935	2	2									
5.	SA-TW413-3842	Aq		X	6/8/11	1000	2	2									
6.	SA-TW413-4347	Aq		X	6/8/11	1025	2	2									
7.	SA-DUP03-20110608	Aq		X	6/8/11	1800	2	2									
8.	SA-TW412-3337	Aq		X	6/8/11	1245	2	2									
9.	SA-TW412-3842	Aq		X	6/8/11	1310	2	2									
10.	SA-TW412-4347	Aq		X	6/8/11	1335	2	2									

A-13

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY:
1. [signature]	6-8-11 1730	1.
RELINQUISHED BY	DATE/TIME	RECEIVED BY:
2.		2.
RELINQUISHED BY	DATE/TIME 9:45 6-9-11	RECEIVED FOR LAB BY:
3.		3. [signature]

Conditions of bottles or coolers at receipt: ☒ Compliant ☐ Non Compliant
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments:

Cooler Temp. 4°C
Ice in Cooler?: yes

Page 3 of 4

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☒ OVERNIGHT
CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT

Shipment Complete: ☒ YES ☐ NO

Revision 8/2007

WHITE - CHEMTECH COPY FOR RETURN TO CLIENT YELLOW - CHEMTECH COPY PINK - SAMPLER COPY

CHEMTECH
CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO. C2596
QUOTE NO.
COC Number 082921

CLIENT INFORMATION (REPORT TO BE SENT TO)

COMPANY: Tetra Tech NUS
ADDRESS: 5700 Lake Wright Drive
CITY: Norfolk STATE: VA ZIP: 23502
ATTENTION: Dave Brayack
PHONE (757) 461-3824 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: NWIRP Colverton
PROJECT NO.: WE08 LOCATION:
PROJECT MANAGER: Dave Brayack
e-mail:
PHONE: (757) 461-3824 FAX:

CLIENT BILLING INFORMATION

BILL TO: PO#:
ADDRESS:
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX: DAYS *
HARD COPY: DAYS *
EDD: DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other
☐ EDD FORMAT

ANALYSIS

VOCs

PRESERVATIVES

HCl

← Specify Preservatives
A – HCl B – HNO_3
C – H_2SO_4 D – NaOH
E – ICE F – Other

CHEMTECH SAMPLE ID (A-14)	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	1	2	3	4	5	6	7	8	9	COMMENTS
1.	SA-TW411-3337	Aq		X	6/8/11	1515	2	2									
2.	SA-TW411-3842	Aq		X	6/8/11	1545	2	2									
3.	SA-TW411-4347	Aq		X	6/8/11	1610	2	2									
4.																	
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY
1. [signature]	6-8-11 1730	1.
RELINQUISHED BY 2.	DATE/TIME	RECEIVED BY 2.
RELINQUISHED BY 3.	DATE/TIME 8:45 6-8-11	RECEIVED FOR LAB BY 3. [signature]

Conditions of bottles or coolers at receipt: ☒ Compliant ☐ Non Compliant
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments:

Cooler Temp. 4°C
Ice in Cooler?: yes

Page 4 of 4

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☒ OVERNIGHT
CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT

Shipment Complete: ☒ YES ☐ NO

Revision 8/2007

WHITE - CHEMTECH COPY FOR RETURN TO CLIENT YELLOW - CHEMTECH COPY PINK - SAMPLER COPY

CHEMTECH
CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO. C2634
QUOTE NO.
COC Number 082922

CLIENT INFORMATION (REPORT TO BE SENT TO)

COMPANY: Tetra Tech NUS
ADDRESS: 5700 Lake Wright Drive
CITY: Norfolk STATE: VA ZIP: 23502
ATTENTION: Dave Brayack
PHONE (757) 461-3824 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: NWIRP Calverton
PROJECT NO.: WE08 LOCATION:
PROJECT MANAGER: Dave Brayack
e-mail:
PHONE: (757) 461-3824 FAX:

CLIENT BILLING INFORMATION

BILL TO: PO#.
ADDRESS:
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX: DAYS *
HARD COPY: DAYS *
EDD: DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other
☐ EDD FORMAT

ANALYSIS — VOCs

PRESERVATIVES — HCl

← Specify Preservatives
A – HCl B – HNO_3
C – H_2SO_4 D – NaOH
E – ICE F – Other

CHEMTECH SAMPLE ID (A-15)	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	HCl 1	2	3	4	5	6	7	8	9	COMMENTS
1.	SA-TB04-20110609	QC		X	6/9/11	0650	2	2									Lab Supplied Trip Blank
2.	SA-PZ133I-20110609	Aq		X	6/9/11	0755	2	2									
3.	SA-TW410-3337	Aq		X	6/9/11	1040	2	2									
4.	SA-TW410-3842	Aq		X	6/9/11	1105	2	2									
5.	SA-TW410-4347	Aq		X	6/9/11	1130	2	2									
6.	SA-DUP04-20110609	Aq		X	6/9/11	1800	2	2									
7.	SA-TW409-3337	Aq		X	6/9/11	1340	2	2									
8, 9, 10	SA-TW409-3842	Aq		X	6/9/11	1410	6	6									Do MS/MSD
11	SA-TW409-4347	Aq		X	6/9/11	1440	2	2									
12	SA-PZ133I1-20110609	Aq		X	6/9/11	1645	2	2									

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY
1. [signature]	6-10-11 1500	1.
RELINQUISHED BY	DATE/TIME	RECEIVED BY
2.		2.
RELINQUISHED BY	DATE/TIME	RECEIVED FOR LAB BY
3. FedEx	6/11/11 10:20	3. Ken Kwan

Conditions of bottles or coolers at receipt: ☒ Compliant ☐ Non Compliant
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments:

Cooler Temp. 4°C
Ice in Cooler?: yes

Page 1 of 2

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☒ OVERNIGHT
CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT

Shipment Complete: ☒ YES ☐ NO

Revision 8/2007

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CHEMTECH
CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO. C2634
QUOTE NO.
COC Number 082923

CLIENT INFORMATION (REPORT TO BE SENT TO)

COMPANY: Tetra Tech NUS
ADDRESS: 5700 Lake Wright Drive
CITY: Norfolk STATE: VA ZIP: 23502
ATTENTION: Dave Brayack
PHONE (757) 461-3824 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: NWIRP Colverton
PROJECT NO. WE08 LOCATION:
PROJECT MANAGER: Dave Brayack
e-mail:
PHONE (757) 461-3824 FAX:

CLIENT BILLING INFORMATION

BILL TO: PO#:
ADDRESS:
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX: _____ DAYS *
HARD COPY: _____ DAYS *
EDD: _____ DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other _____
☐ EDD FORMAT _____

ANALYSIS: VOCs

PRESERVATIVES: HCl

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	1 (HCl)	2	3	4	5	6	7	8	9	COMMENTS
1. 13	SA-PZ139I-20110610	Aq		X	6/10/11	0755	2	2									
2. 14	SA-TW408-3337	Aq		X	6/10/11	0950	2	2									
3. 15	SA-TW408-3842	Aq		X	6/10/11	1015	2	2									
4. 16	SA-TW408-4347	Aq		X	6/10/11	1040	2	2									
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

A-16

← Specify Preservatives
A – HCl B – HNO_3
C – H_2SO_4 D – NaOH
E – ICE F – Other

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY
1. [signature]	6-10-11 1500	1.
RELINQUISHED BY	DATE/TIME	RECEIVED BY
2.		2.
RELINQUISHED BY	DATE/TIME	RECEIVED FOR LAB BY
3. Fed Ex	6/11/11 10:20	3. [signature]

Conditions of bottles or coolers at receipt: ☒ Compliant ☐ Non Compliant
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments:

Cooler Temp. 4°C
Ice in Cooler?: yes

Page 2 of 2

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☒ OVERNIGHT
CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT

Shipment Complete: ☒ YES ☐ NO

Revision 8/2007

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CHEMTECH
CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO. C2797
QUOTE NO.
COC Number 083556

CLIENT INFORMATION (REPORT TO BE SENT TO)

COMPANY: Tetra Tech
ADDRESS: 5700 Lake Wright Dr. Suite 300
CITY: Norfolk STATE: VA ZIP: 23502
ATTENTION: Dave Brayack
PHONE: 757-461-3824 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: Biostudy Area
PROJECT NO.: 112G02750 LOCATION: Culverton NY
PROJECT MANAGER: Dave Brayack
e-mail: David.brayack@tetratech.com
PHONE: 757-461-3824 FAX:

CLIENT BILLING INFORMATION

BILL TO: PO#:
ADDRESS: see PO
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX: _____ DAYS *
HARD COPY: _____ DAYS *
EDD: _____ DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other _____
☐ EDD FORMAT _____

ANALYSIS: 1 VOCs, 2 Iron & Manganese, 3, 4, 5, 6, 7, 8, 9

PRESERVATIVES: 1 A, 2 B, 3, 4, 5, 6, 7, 8, 9

COMMENTS: ← Specify Preservatives
A – HCl B – HNO_3
C – H_2SO_4 D – NaOH
E – ICE F – Other

	CHEMTECH SAMPLE ID (A-17)	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	1	2	3	4	5	6	7	8	9
1.		SA-PZ158I1-20110620	GW		X	6/20/11	1645	4	3	1							
2.		SA-PZ158I-20110620	GW		X	6/2011	1735	4	3	1							
3.		SA-TB20110620	TB		X	6/20/11	~~1835~~ 14	2	2								
4.		SA-PZ149I1-20110620	GW		X	6/20/11	1815	4	3	1							
5.		SA-PZ139I-20110620	GW		X	6/20/11	1900	3	2	1							
6.		SA-PZ161I-20110621	GW		X	6/21/11	0815	3	2	1							
7.		SA-PZ133I-20110621	GW		X	6/21/11	0910	3	2	1							
8.		SA-PZ133I1-20110621	GW		X	6/21/11	0945	3	2	1							
9.		SA-PZ135I-20110621	GW		X	6/21/11	1035	3	2	1							
10.		SA-PZ136I-20110621	GW		X	6/21/11	1118	3	2	1							

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY
1. [signature]	6/21/11	1.
RELINQUISHED BY	DATE/TIME	RECEIVED BY
2.		2.
RELINQUISHED BY	DATE/TIME	RECEIVED FOR LAB BY
3. FedEx	6/23/11 9:30	3. Ken Rivera

Conditions of bottles or coolers at receipt: ☒ Compliant ☐ Non Compliant
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments:

Cooler Temp. 3°C
Ice in Cooler?: Yes

Page _____ of _____

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☒ OVERNIGHT
CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT

Shipment Complete: ☒ YES ☐ NO

Revision 8/2007

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CHEMTECH

CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO. C2798
QUOTE NO.
COC Number 083557

CLIENT INFORMATION

REPORT TO BE SENT TO

COMPANY: Tetra Tech
ADDRESS: 5700 Lake Wright Dr. Suite 309
CITY: Norfolk STATE: VA ZIP: 23502
ATTENTION: Dave Brayack
PHONE: 757-461-3824 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: BioStudy Area
PROJECT NO.: 112002750 LOCATION: Calverton, NY
PROJECT MANAGER: Dave Brayack
e-mail: David.Brayack@tetratech.com
PHONE: 757-461-3824 FAX:

CLIENT BILLING INFORMATION

BILL TO: See PO PO#:
ADDRESS:
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX: _____ DAYS *
HARD COPY: _____ DAYS *
EDD: _____ DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other _____
☐ EDD FORMAT _____

ANALYSIS

1 VOCs
2 MEE
3 TAL Metals
4 Nitrate/Nitrite/Chloride/Sulfate
5 TOC
6 Iron/Manganese only
7
8
9

CHEMTECH SAMPLE ID 6/23/11	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	PRESERVATIVES 1	2	3	4	5	6	7	8	9	COMMENTS
								A	A	B	E	C	B				← Specify Preservatives A-HCl B-HNO_3 C-H_2SO_4 D-NaOH E-ICE F-Other
1.	SA-PZ159I1-20110621	GW		X	6/21/11	1313	7	2	2	1	1	1					
2.	SA-PZ159I-20110621	GW		X	6/21/11	1440	7	2	2	1	1	1					
3. 4,5.	SA-PZ157I-20110621	GW		X	6/21/11	1320	21	6	6	3	3	3					MS/MSD
4. 6.	SA-PZ157I1-20110621	GW		X	6/21/11	1500	7	2	2	1	1	1					
5. 7.	SA-PZ160I-20110621	GW		X	6/21/11	1538	7	2	2	1	1	1					
6. 8.	SA-PZ160I1-20110621	GW		X	6/21/11	1605	3	2					1				
7. 9.	SA-PZ138I-20110621	GW		X	6/21/11	1715	3	2					1				
8. 10.	SA-PZ138I1-20110621	GW		X	6/21/11	1717	3	2					1				
9. 11.	SA-DUP01-20110621	GW		X	6/21/11	1200	7	2	2	1	1	1					
10. 12.	SA-DUP02-20110621	GW		X	6/21/11	1300	3	2					1				

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY
1.	6/22/11	1.
RELINQUISHED BY 2.	DATE/TIME	RECEIVED BY 2.
RELINQUISHED BY 3. Fed Ex	DATE/TIME 6/23/11 9:30	RECEIVED FOR LAB BY 3.

Conditions of bottles or coolers at receipt: ☒ Compliant ☐ Non Compliant
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments:

Cooler Temp. 3 °C
Ice in Cooler?: YES

Page _____ of _____

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☒ OVERNIGHT
CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT

Shipment Complete: ☒ YES ☐ NO

Revision 8/2007

WHITE - CHEMTECH COPY FOR RETURN TO CLIENT YELLOW - CHEMTECH COPY PINK - SAMPLER COPY

CHEMTECH
CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO. C2798
QUOTE NO.
COC Number 083559

CLIENT INFORMATION (REPORT TO BE SENT TO:)

COMPANY: Tetra Tech
ADDRESS: 5700 Lake Wright Dr. Suite 309
CITY: Norfolk STATE: VA ZIP: 23502
ATTENTION: Dave Brayack
PHONE: 757-461-3824 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: Biostudy
PROJECT NO.: 112002750 LOCATION: Calverton NY
PROJECT MANAGER: Dave Brayack
e-mail: David.Brayack@tetratech.com
PHONE: 757-461-3824 FAX:

CLIENT BILLING INFORMATION

BILL TO: PO#:
ADDRESS: See PO
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX: _____ DAYS *
HARD COPY: _____ DAYS *
EDD: _____ DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other _____
☐ EDD FORMAT _____

ANALYSIS / PRESERVATIVES

	1	2	3	4	5	6	7	8	9
ANALYSIS	VOC	MEE	TAL Metals	TOC	Nitrite/Nitrate/Chloride/Sulfate				
PRESERVATIVES	A	A	B	C	B				

COMMENTS: ← Specify Preservatives
A – HCl B – HNO_3
C – H_2SO_4 D – NaOH
E – ICE F – Other

CHEMTECH SAMPLE ID (A-10 PR 6/23/11)	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	1	2	3	4	5	6	7	8	9
1. 13.	SA-PZ151I-20110622	GW		X	6/22/11	0835	7	2	2	1	1	1				
2. 14.	SA-PZ408-20110622	GW		X	6/22/11	0840	7	2	2	1	1	1				
3. 15.	SA-PZ155I-20110622	GW		X	6/22/11	0942	7	2	2	1	1	1				
4.																
5.																
6.																
7.																
8.																
9.																
10.																

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY
1. [signature]	6/22/11	1.
RELINQUISHED BY	DATE/TIME	RECEIVED BY
2.		2.
RELINQUISHED BY	DATE/TIME	RECEIVED FOR LAB BY:
3. Fed Ex	6/23/11 9:30	3. [signature]

Conditions of bottles or coolers at receipt: ☒ Compliant ☐ Non Compliant
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments:

Cooler Temp. 3°C
Ice in Cooler?: YES

Page _____ of _____

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☒ OVERNIGHT
CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT

Shipment Complete: ☒ YES ☐ NO

Revision 8/2007

WHITE - CHEMTECH COPY FOR RETURN TO CLIENT YELLOW - CHEMTECH COPY PINK - SAMPLER COPY

TETRA TECH NUS, INC.

CHAIN OF CUSTODY | NUMBER C3261

PAGE 1 OF 1

PROJECT NO: 112G02045	SITE NAME: NWIRP Calverton
PROJECT MANAGER AND PHONE NUMBER: Dave Biayack 757-461-3824	LABORATORY NAME AND CONTACT: Chemtech Kurt Hummler
SAMPLERS (SIGNATURE): [signature]	FIELD OPERATIONS LEADER AND PHONE NUMBER: Jacob Birkett 757-814-9916
	ADDRESS: 284 Sheffield St.
CARRIER/WAYBILL NUMBER: FedEx 8741-9938 1460	CITY, STATE: Mountainside, NJ 07092

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G

PRESERVATIVE USED: HCl

TYPE OF ANALYSIS: VOCs

	DATE YEAR 2011	TIME	SAMPLE ID	MATRIX	GRAB (G) COMP (C)	No. OF CONTAINERS	VOCs							COMMENTS
1	6-17	1830	SA-TB01-061711	QA	—	2	2							lab prepared
2	8-3	0850	SA-PZ-135-080311-0850	GW	G	2	2							Initial Sample
3	8-3	1115	SA-PZ-136-080311-1115	GW	G	2	2							Initial Sample
4	8-3	1315	SA-PZ-135-080311-1315	GW	G	2	2							Post Mech. Dev. Sample
5	8-3	1435	SA-PZ-136-080311-1435	GW	G	2	2							Post Mech. Dev, Sample
6	8-4	0855	SA-PZ-135-080411-0855	GW	G	2	2							Post Mech. and Chem development sample
7	8-4	1050	SA-PZ-136-080411-1050	GW	G	2	2							Post Mech and Chem development sample

1. RELINQUISHED BY: Jacob Birkett [signature]	DATE 8-4-11	TIME 1300	1. RECEIVED BY	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY: FedEx	DATE 8-5-11	TIME 920	3. RECEIVED BY [signature]	DATE 8-5-11	TIME 920

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

Temp: 6°C

3/99 FORM NO. TtNUS-001

REPORT TO:

Reports will be provided to the contact(s) listed below. Parties other than the contact(s) listed below will require prior approval.

Name: Dave Brayack
Company: Tetra Tech
Address: 5700 Lake Wright Dr. Ste 309
Norfolk VA 23502

email: David.Brayack@tetratech.com
Phone: (757) 461-2324
Fax: ( )

Project Manager: Dave Brayack
Project Name: Site Study Area - Calverton
Project No.: 112002750

INVOICE TO:

For Invoices paid by a third party it is imperative that contact information & corresponding reference No. be provided.

Name:
Company:
Address: See PO

email:
Phone: ( )
Fax: ( )

Purchase Order No.
Subcontract No.

microbialinsights

2340 Stock Creek Blvd.
Rockford, TN 37853-3044
phone (865) 573-8188
fax: (865) 573-8133
email: info@microbe.com
www.microbe.com

Please Check One:

☐ More samples to follow
☒ No Additional Samples

Saturday Delivery

Please see sampling protocol for instructions

Report Type: ☒ Standard (default) ☐ Comprehensive (15% surcharge) ☐ Historical (30% surcharge)

Please contact us prior to submitting samples regarding questions about the analyses you are requesting at (865) 573-8188 (8:00 am to 4:00 pm M-F). After these hours please call (865) 300-8053.

Sample Information											CENSUS: Please select the target organism/gene																							
MI ID (Laboratory Use Only)	Sample Name	Date Sampled	Time Sampled	Matrix	PLFA			DGGE+3ID	DGGE+5ID		qDHC (Dehalococcoides)	DHC Functional genes (bvc, tce, vcr)	qDHB (Dehalobacter)	qDSM (Desulfuromonas)	qDSB (Desulfitobacterium)	qEBAC (Total)	qSRB (SRBs only)	qSRB/IRB	qMGN (methanogens)	qMOB (methanotrophs)	qDNF (Denitrifying)	qAOB (ammonia oxidizing)	qPM1 (MTBE aerobic)	qTOD (total PAHs aerobic)	qPHE (aerobic BTEX)	qBSS (Toluen/Xylene Anaerobic)	qNAH (Naphalene aerobic)	add qPCR:	add qPCR:	add qPCR:	RNA (Expression Option)*	Oil Retention	Other:	Other:	Other:
	[illegible]	[illegible]	1313	Gill							Y		X																					
	[illegible]	[illegible]	1320	Gill							Y		X																					

Relinquished by: Date: 6/13/11 Received by: Date

In order for analysis to be completed correctly, it is vital that chain of custody is filled out correctly & that all relative information is provided. Failure to provide sufficient and/or correct information regarding reporting, invoicing & analyses requested information may result in delays for which MI will not be liable. Most analyses have a 24-48 hour hold time. * additional cost and sample preservation are associated with RNA samples.

APPENDIX B

LOW FLOW PURGE LOG SHEETS (MARCH – MAY 2011 EVENT)

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: Carbon1A-20110315
Sample Location: pre-carbon sample port
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-15-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 1425								
Method: Low Flow	Clear	6.01	0.117	11.74	9.74	10.76	0.0	75

PURGE DATA:

Date: NA	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow	NA							
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type:	see low flow purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL):								
One Casing Volume(gal/L):								
Start Purge (hrs):								
End Purge (hrs):								
Total Purge Time (min):								
Total Vol. Purged (gal/L):								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	Yes
MEE	HCl	2 40-ml clear glass vials	No
TOC	H_2SO_4	1 X 500 ml poly	yes

OBSERVATIONS / NOTES:

- Sample collected from pre-carbon sample port on injection system

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PE-157I-20110321
Sample Location: PE-157I
Sampled By: MS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-21-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Time: 0900								
Method: Peristaltic pump	Clear	5.86	0.108	10.89	1.02	8.71	0.0	65

PURGE DATA:

Date: 3-21-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1 inch PVC								
Total Well Depth (TD):								
Static Water Level (WL): 4.64'			(see Low	Flow	logs)			
One Casing Volume(gal/L):								
Start Purge (hrs): 0845								
End Purge (hrs): 0900								
Total Purge Time (min): 15								
Total Vol. Purged (gal/L): 1.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TOC	H_2SO_4	1 X 500 ml poly	yes

OBSERVATIONS / NOTES:

- Tubing intake set in screened interval of well
- No odors, stains, elevated PID readings observed
- DO Field Kit reading → 0.8 ppm
- Fe Field Kit reading → 2.8 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: PZ-157I
DATE: 3-21-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0825	4.64	–	–	–	–	–	–	–	–	Initial
0845	4.64	400	5.80	0.317	10.56	10.45	10.19	67	0.0	clear
0850	4.64	400	5.83	0.118	4.33	9.78	10.51	70	0.0	clear
0855	4.64	400	5.82	0.113	2.06	9.70	10.96	73	0.0	clear
0900	4.64	400	5.86	0.108	1.02	8.71	10.89	65	0.0	clear - collect sample
										DO Field Kit
										reading → 0.8 ppm
										Fe Field Kit
										reading → 2.8 mg/L

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PAGE 1 OF 1

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-157I1-20110321
Sample Location: PZ-157I1
Sampled By: WAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 3-21-11								
Time: 0935								
Method: Peristaltic pump	clear	6.06	0.147	10.95	1.14	8.07	0.0	53

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3-21-11								
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1 inch PVC								
Total Well Depth (TD):								
Static Water Level (WL):			(see	Low	Flow	logs)		
One Casing Volume(gal/L):								
Start Purge (hrs): 0920								
End Purge (hrs): 0935								
Total Purge Time (min): 15								
Total Vol. Purged (gal/L): 1.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TOC	H_2SO_4	1 X 500 ml poly	yes

OBSERVATIONS / NOTES:

- Tubing intake set in screened interval of well
- No odors, stains or elevated PID readings observed
- DO Field Kit reading → 0.8 ppm
- Fe Field Kit reading → 1.2 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWTRP Colverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ-157I1
DATE: 3-21-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0915	4.93	—	—	—	—	—	—	—	—	Initial
0920	4.93	495	5.89	0.161	8.20	8.33	10.51	57	0.0	clear
0925	4.93	385	5.94	0.156	6.33	8.20	10.67	55	0.0	clear
0930	4.93	385	6.01	0.150	2.47	8.13	10.83	54	0.0	clear
0935	4.93	385	6.06	0.147	1.14	8.07	10.95	53	0.0	clear-collect sample
										DO Field Kit
										reading → 0.8 ppm
										FE Field Kit
										reading → 1.3 mg/L

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PAGE 1 OF 1

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-158I-20110321
Sample Location: PZ-158I
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 3-21-11								
Time: 1005								
Method: Peristaltic pump	Clear	6.37	0.145	10.76	0.98	8.02	0.0	-22

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3-21-11								
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1 inch PVC								
Total Well Depth (TD):			(see	Low	Flow	Logs)		
Static Water Level (WL): 4.97								
One Casing Volume(gal/L):								
Start Purge (hrs): 0950								
End Purge (hrs): 1005								
Total Purge Time (min): 15								
Total Vol. Purged (gal/L): 1.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TOC	H_2SO_4	1 X 500 ml poly	yes

OBSERVATIONS / NOTES:

- Tubing intake set in screened interval of well
- No odors, stains, or elevated PID readings observed.
- DO Field Kit reading → 0.4 ppm
- Fe Field Kit reading → 1.8 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112602045
WELL ID.: SA-PZ-158I
DATE: 3-21-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0945	4.97	—	—	—	—	—	—	—	—	Initial
0950	4.97	400	6.28	0.153	4.49	8.81	10.56	7	0.0	clear
0955	4.97	400	6.32	0.149	1.37	8.49	10.63	-5	0.0	clear
1000	4.97	400	6.35	0.147	1.14	8.18	10.70	-17	0.0	clear
1005	4.97	400	6.37	0.145	0.98	8.02	10.76	-22	0.0	clear-collect sample
										DO Field Kit
										reading → 0.4 ppm
										Fe Field Kit
										reading → 1.8 mg/L

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PAGE 1 OF 1

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-158I1-20110321
Sample Location: PZ-158I1
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-21-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Time: 1040								
Method: Peristaltic pump	Clear	6.14	0.153	11.13	1.09	7.73	0.0	14

PURGE DATA:

Date: 3-21-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1 inch PVC								
Total Well Depth (TD):								
Static Water Level (WL): 4.63'			(See Low Flow logs)					
One Casing Volume(gal/L):								
Start Purge (hrs): 1025								
End Purge (hrs): 1040								
Total Purge Time (min): 15								
Total Vol. Purged (gal/L): 1.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TOC	H_2SO_4	1 x 500 ml poly	yes

OBSERVATIONS / NOTES:

- Tubing intake set in screened interval of well
- No odors, stains, elevated PID readings observed
- DO field kit reading → 0.6 ppm
- Fe field kit reading → 2.8 mg/L

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	
—	—	

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ-158I1
DATE: 3-21-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1020	4.63	—	—	—	—	—	—	—	—	Initial
1025	4.63	400	6.18	0.152	7.74	7.89	10.66	-3	0.0	clear
1030	4.63	400	6.16	0.152	4.27	7.81	10.80	2	0.0	clear
1035	4.63	400	6.15	0.153	2.11	7.76	10.96	10	0.0	clear
1040	4.63	400	6.14	0.153	1.09	7.73	11.13	14	0.0	clear - collect sample
										DO field kit
										reading → 0.6 ppm
										Fe field kit
										reading → 2.8 mg/L

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PAGE 1 OF 1

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112602045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-159I-20110321
Sample Location: PZ-159I
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 3-21-11								
Time: 1120								
Method: Peristaltic pump	Clear	6.31	0.136	10.89	0.65	7.90	0.0	-21

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3-21-11								
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1 inch PVC								
Total Well Depth (TD):								
Static Water Level (WL): 4.41'			(See	Low	Flow	Logs)		
One Casing Volume(gal/L):								
Start Purge (hrs): 1105								
End Purge (hrs): 1120								
Total Purge Time (min): 15								
Total Vol. Purged (gal/L): 1.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TOC	H_2SO_4	1 x 500 ml poly	yes

OBSERVATIONS / NOTES:

- Tubing intake set in screened interval of well
- No odors, stains, or elevated PID readings observed
- NO field kit reading → 0.2 ppm
- Fe field kit reading → 2.6 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Colverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ-159I
DATE: 3-21-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1100	4.41	—	—	—	—	—	—	—	—	Initial
1105	4.41	400	6.33	0.126	3.89	8.45	10.25	-7	0.0	clear
1110	4.41	400	6.32	0.130	1.73	8.19	10.51	-14	0.0	clear
1115	4.41	400	6.32	0.134	0.98	7.97	10.78	-19	0.0	clear
1120	4.41	400	6.31	0.136	0.65	7.90	10.89	-21	0.0	clear-collect sample
										DO Field Kit
										reading → 0.2 ppm
										Fe Field Kit
										reading → 2.6 mg/L

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PAGE 1 OF 1

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-159I1-20110321
Sample Location: PZ-159I1
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 3-21-11 Time: 1155 Method: Peristaltic pump	Clear	5.93	0.147	11.16	1.00	7.98	0.0	30

PURGE DATA:

Date: 3-21-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1 inch PVC								
Total Well Depth (TD):			(see	Low	Flow	logs)		
Static Water Level (WL): 4.56								
One Casing Volume(gal/L):								
Start Purge (hrs): 1140								
End Purge (hrs): 1155								
Total Purge Time (min): 15								
Total Vol. Purged (gal/L): 1.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TOC	H_2SO_4	1 X 500 ML poly	yes

OBSERVATIONS / NOTES:

- Tubing intake set in screened interval of well
- No odors, stains, or elevated PID readings observed
- DO Field Kit reading → 0.6 ppm
- Fe Field Kit reading → 2.0 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112602045

WELL ID.: SA-PZ-159I1
DATE: 3-21-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1135	4.56	—	—	—	—	—	—	—	—	Initial
1140	4.56	400	6.13	0.187	6.06	9.02	10.34	23	0.0	clear
1145	4.56	400	6.03	0.170	3.19	8.20	10.73	27	0.0	clear
1150	4.56	400	5.97	0.154	1.27	8.09	10.99	29	0.0	clear
1155	4.56	400	5.93	0.147	1.00	7.98	11.16	30	0.0	clear - collect sample
										DO Field Kit
										reading → 0.6 ppm
										Fe Field Kit
										reading → 2.0 mg/L

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PAGE 1 OF 1

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-157I-20110328
Sample Location: SA-PZ-157I
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 3-28-11								
Time: 1150								
Method: Peristaltic pump	clear	5.95	0.112	10.84	0.10	8.81	0.0	59

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3-28-11								
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1 inch PVC								
Total Well Depth (TD):								
Static Water Level (WL): 4.75			(see	Low	Flow	Logs)		
One Casing Volume(gal/L):								
Start Purge (hrs): 1135								
End Purge (hrs): 1150								
Total Purge Time (min): 15								
Total Vol. Purged (~~gal~~/L): 1.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TOC	H_2SO_4	1 x 500 ml poly	yes

OBSERVATIONS / NOTES:

- Tubing intake set in screened interval of well
- No odors, stains, or elevated PID readings observed
- No field kit reading → 0.8 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045
WELL ID.: PZ-157I
DATE: 3-28-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1130	4.75	—	—	—	—	—	—	—	—	Initial
1135	4.75	420	6.26	0.157	2.89	10.50	10.05	24	0.0	clear
1140	4.75	400	6.05	0.120	0.73	9.25	10.67	51	0.0	clear
1145	4.75	400	5.96	0.113	0.30	9.03	10.72	57	0.0	clear
1150	4.75	400	5.95	0.112	0.10	8.81	10.84	59	0.0	clear-collect sample
										DO field kit
										reading > 0.8 ppm

SIGNATURE(S): [illegible]

PAGE 1 OF 1

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-157I-20110328
Sample Location: PZ-157I
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 3-28-11								
Time: 1120								
Method: Peristaltic pump	clear	6.11	0.149	10.82	0.20	9.57	0.0	71

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3-28-11								
Method: Low flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1 inch PVC								
Total Well Depth (TD):			(see	Low	Flow	logs)		
Static Water Level (WL): 4.97'								
One Casing Volume(gal/L):								
Start Purge (hrs): 1105								
End Purge (hrs): 1120								
Total Purge Time (min): 15								
Total Vol. Purged (gal/L): 1.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TOC	H_2SO_4	1 X 500 ml poly	yes

OBSERVATIONS / NOTES:

- Tubing intake set in screened interval of well
- No odors, stains, or elevated PID readings observed
- DO field kit reading → 0.6 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045
WELL ID.: PZ-157I1
DATE: 3-28-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1100	4.97	—	—	—	—	—	—	—	—	In. trial
1105	4.97	400	6.90	0.162	3.45	12.02	10.67	115	0.0	clear
1110	4.97	400	6.18	0.152	0.35	10.62	10.80	84	0.0	clear
1115	4.97	400	6.12	0.151	0.15	10.08	10.78	75	0.0	clear
1120	4.97	400	6.11	0.149	0.20	9.57	10.82	71	0.0	clear - collect sample
										DO Field Kit
										reading > 0.6 ppm

SIGNATURE(S): [illegible]

PAGE 1 OF 1

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-~~158II~~ 158I-20110328
Sample Location: PZ-158I well
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 3-28-11 Time: 1220 Method: Peristaltic pump	Clear	6.33	0.142	11.11	0.50	8.84	0.0	-17

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3-28-11								
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1 inch PVC								
Total Well Depth (TD):								
Static Water Level (WL): 5.02'			(See	Low	Flow	Logs)		
One Casing Volume(gal/L):								
Start Purge (hrs): 1205								
End Purge (hrs): 1220								
Total Purge Time (min): 15								
Total Vol. Purged (gal/L): 1.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TOC	H_2SO_4	1 X 500 ml poly	Yes

OBSERVATIONS / NOTES:

- Tubing intake set in screened interval of well
- No odors, stains, or elevated PID readings observed
- Do Field Kit reading → 0.2 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: PZ-158I (TAS)
DATE: 3-28-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1200	5.02	—	—	—	—	—	—	—	—	Initial
1205	5.02	400	6.32	0.165	9.74	10.59	10.53	10	0.0	clear
1210	5.02	400	6.32	0.144	2.17	9.64	10.91	-8	0.0	clear
1215	5.02	400	6.32	0.142	0.84	9.22	11.01	-13	0.0	clear
1220	5.02	400	6.33	0.142	0.50	8.84	11.11	-17	0.0	clear - collect sample
										DO Field Kit
										reading → 0.2 ppm

SIGNATURE(S): [illegible]

PAGE 1 OF 1

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-158I1-20110328
Sample Location: PZ-158I1
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 3-28-11 Time: 1250 Method: Peristaltic pump	clear	6.15	0.154	11.30	0.25	8.78	0.0	29

PURGE DATA:

Date: 3-28-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1 inch PVC								
Total Well Depth (TD):								
Static Water Level (WL): 4.63'			(See Low		Flow	Logs)		
One Casing Volume(gal/L):								
Start Purge (hrs): 1235								
End Purge (hrs): 1250								
Total Purge Time (min): 15								
Total Vol. Purged (gal/L): 1.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TOC	H_2SO_4	1 X 500 ml poly	Yes

OBSERVATIONS / NOTES:

- Tubing intake set in screened interval of well
- No odors, stains, or elevated PID readings
- DO field kit reading → 0.6 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): [signature]

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: PZ-158I1
DATE: 3-28-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1230	4.63	—	—	—	—	—	—	—	—	Initial
1235	4.63	410	6.19	0.155	8.70	10.23	10.62	23	0.0	clear
1240	4.63	400	6.15	0.154	1.44	9.34	11.12	29	0.0	clear
1245	4.63	400	6.14	0.154	0.65	8.95	11.39	30	0.0	clear
1250	4.63	400	6.15	0.154	0.25	8.78	11.30	29	0.0	clear - collect sample
										DO field kit
										reading → 0.6 ppm

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRA Calverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-159I-20110328
Sample Location: PZ-159I
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 3-28-11								
Time: 1400								
Method: Peristaltic pump	clear	6.33	0.143	11.40	0.26	8.90	0.0	-10

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3-28-11								
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 1 inch PVC								
Total Well Depth (TD):								
Static Water Level (WL): 4.48'			(See	Low	Flow	Logs)		
One Casing Volume(gal/L):								
Start Purge (hrs): 1345								
End Purge (hrs): 1400								
Total Purge Time (min): 15								
Total Vol. Purged (gal/L): 1.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TOC	H_2SO_4	1 x 500 ml poly	Yes

OBSERVATIONS / NOTES:

- Tubing intake set in screened interval of well
- No odors, stains, or elevated PID readings
- DO Field Kit reading → 0.3 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): [signature]

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: PZ-159I
DATE: 3-28-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1340	4.48	—	—	—	—	—	—	—	—	Initial
1345	4.48	400	6.26	0.132	2.71	10.43	10.52	32	0.0	clear
1350	4.48	400	6.28	0.137	0.88	9.90	11.16	10	0.0	clear
1355	4.48	400	6.32	0.141	0.46	9.28	11.36	-1	0.0	clear
1400	4.48	400	6.33	0.143	0.26	8.90	11.40	-10	0.0	clear - collect sample
										DO Field Kit
										reading → 0.3 ppm

SIGNATURE(S): [illegible]

PAGE 1 OF 1

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-159I1-20110328
Sample Location: PZ-159I1
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 3-28-11								
Time: 1325								
Method: Peristaltic pump	clear	5.98	0.131	11.40	0.30	9.07	0.0	42

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3-28-11								
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 1 inch PVC								
Total Well Depth (TD):			(See Low Flow Logs)					
Static Water Level (WL): 4.67'								
One Casing Volume(gal/L):								
Start Purge (hrs): 1310								
End Purge (hrs): 1325								
Total Purge Time (min): 15								
Total Vol. Purged (gal/L): 1.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TOC	H_2SO_4	1 X 500 ml poly	Yes

OBSERVATIONS / NOTES:

- Tubing intake set in screened interval of well
- No odors, stains, or elevated PID readings
- DO Field Kit reading → 0.6 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: PZ-159I1
DATE: 3-28-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1305	4.67	—	—	—	—	—	—	—	—	Initial
1310	4.67	415	6.18	0.134	3.75	10.60	10.55	40	0.0	clear
1315	4.67	400	6.02	0.131	0.92	9.84	11.26	42	0.0	clear
1320	4.67	400	5.99	0.131	0.35	9.41	11.42	43	0.0	clear
1325	4.67	400	5.98	0.131	0.30	9.07	11.40	42	0.0	clear - collect sample
										DO Field Kit
										reading → 0.6 ppm

SIGNATURE(S): [illegible]

PAGE 1 OF 1

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Galveston
Project No.: 112G02045

[] Domestic Well Data
[] Monitoring Well Data
[X] Other Well Type: Pre carbon sample port
[] QA Sample Type:

Sample ID No.: Carbon1n-20110404
Sample Location: pre-carbon inlet
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 4-4-11								
Time: 1450								
Method: Direct Grab	Clear	NA	—	—	—	—	—	→

PURGE DATA:

Date: NA	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method:								
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type:								
Total Well Depth (TD):								
Static Water Level (WL):								
One Casing Volume(gal/L):								
Start Purge (hrs): 1449								
End Purge (hrs): 1450								
Total Purge Time (min): 1								
Total Vol. Purged (gal/L):								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 x 40 ml vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings observed

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-157I-20110404
Sample Location: PZ-157I
Sampled By: WAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4-4-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1440	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	ORP
Method: Peristaltic pump	clear	6.05	0.164	11.29	5.13	4.92	0.0	33

PURGE DATA:

Date: 4-4-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1 inch PVC								
Total Well Depth (TD):			(See	Low	Flow	logs)		
Static Water Level (WL): 4.69								
One Casing Volume(gal/L):								
Start Purge (hrs): 1425								
End Purge (hrs): 1440								
Total Purge Time (min): 15								
Total Vol. Purged (gal/L): 1.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TOC	H_2SO_4	1 x 500 ml poly	Yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings observed

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112602045

WELL ID.: PZ-157I
DATE: 4-4-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1420	4.69	—	—	—	—	—	—	—	—	Initial
1425	4.69	400	6.40	0.140	15.77	8.43	10.67	-15	0.0	clear
1430	4.69	400	6.22	0.109	9.35	5.25	11.19	12	0.0	clear
1435	4.69	400	6.08	0.104	6.20	5.01	11.25	26	0.0	clear
1440	4.69	400	6.05	0.104	5.13	4.92	11.29	33	0.0	clear-collect sample
										DO Field Kit
										reading → 0.6 ppm

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-157I1-20110404
Sample Location: PZ-157I1
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 4-4-11 Time: 1415 Method: Peristaltic pump	clear	6.27	0.129	11.44	3.71	4.86	0.0	12

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4-4-11								
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1 inch PVC								
Total Well Depth (TD):			(See Low Flow Logs)					
Static Water Level (WL): 4.99								
One Casing Volume(gal/L):								
Start Purge (hrs): 1400								
End Purge (hrs): 1415								
Total Purge Time (min): 15								
Total Vol. Purged (gal/L): 1.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TOC	H_2SO_4	1 X 500 ml poly	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings observed

Circle if Applicable:

MS/MSD —

Duplicate ID No.: —

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045
WELL ID.: PZ-157I1
DATE: 4-4-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1355	4.99	—	—	—	—	—	—	—	—	Initial
1400	4.99	400	6.46	0.133	16.31	7.43	10.86	-6	0.0	clear
1405	4.99	400	6.28	0.129	7.02	5.13	11.29	5	0.0	clear
1410	4.99	400	6.27	0.129	4.28	4.94	11.38	10	0.0	clear
1415	4.99	400	6.27	0.129	3.71	4.86	11.44	12	0.0	clear - collect sample
										DO Field Kit
										reading → 0.6 ppm

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112602045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-158I-20110404
Sample Location: PZ-158I
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 4-4-11								
Time: 1345								
Method: Peristaltic pump	Clear	6.57	0.128	11.46	4.07	4.84	0.0	-58

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4-4-11								
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1 inch PVC			(See Low	Flow	Logs)			
Total Well Depth (TD):								
Static Water Level (WL): 5.02								
One Casing Volume(gal/L):								
Start Purge (hrs): 1330								
End Purge (hrs): 1345								
Total Purge Time (min): 15								
Total Vol. Purged (gal/L): 1.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TOC	H_2SO_4	1 X 500 Ml Poly	Yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings observed.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): [illegible]

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: PZ-158I
DATE: 4-4-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1325	5.02	–	–	–	–	–	–	–	–	Initial
1330	5.02	400	6.53	0.175	17.00	7.89	10.79	-65	0.0	clear
1335	5.02	400	6.58	0.129	7.16	5.18	11.35	-55	0.0	clear
1340	5.02	400	6.57	0.127	4.03	4.96	11.45	-56	0.0	clear
1345	5.02	400	6.57	0.128	4.07	4.84	11.46	-58	0.0	clear - collect sample
										DO field kit
										reading → 0.3 ppm

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-158I1-20110404
Sample Location: PZ-158I1
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 4-4-11 Time: 1315 Method: Peristaltic pump	clear	6.28	0.140	11.56	3.97	4.92	0.0	-5

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4-4-11								
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1 inch PVC								
Total Well Depth (TD):								
Static Water Level (WL): 4.68			(See Low Flow Logs)					
One Casing Volume(gal/L):								
Start Purge (hrs): 1300								
End Purge (hrs): 1315								
Total Purge Time (min): 15								
Total Vol. Purged (~~gal/L~~): 1.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TOC	H_2SO_4	1 x 500 ml poly	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings observed

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045
WELL ID.: PZ-158I1
DATE: 4-4-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1255	4.68	–	–	–	–	–	–	–	–	Initial
1300	4.68	400	6.40	0.152	18.01	8.58	10.67	-15	0.0	clear
1305	4.68	400	6.28	0.142	11.66	5.24	11.35	-6	0.0	clear
1310	4.68	400	6.28	0.141	6.73	4.96	11.50	-5	0.0	clear
1315	4.68	400	6.28	0.140	3.97	4.92	11.56	-5	0.0	clear-collect sample
										DO Field Kit
										reading → 0.5 ppm

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112602045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-159I-20110404
Sample Location: PZ-159I
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 4-4-11								
Time: 1245								
Method: Peristaltic pump	clear	6.53	0.136	11.41	3.97	4.94	0.0	-60

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4-4-11								
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1 inch PVC								
Total Well Depth (TD):			(See Low Flow logs)					
Static Water Level (WL): 4.47								
One Casing Volume(gal/L):								
Start Purge (hrs): 1230								
End Purge (hrs): 1245								
Total Purge Time (min): 15								
Total Vol. Purged (gal/L): 1.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TOC	H_2SO_4	1 X 500 ml poly	Yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings observed.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: PZ-159I
DATE: 4-4-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1225	4.47	—	—	—	—	—	—	—	—	Initial
1230	4.47	400	6.28	0.176	18.44	7.90	10.70	-44	0.0	clear
1235	4.47	400	6.45	0.142	9.63	5.30	11.19	-53	0.0	clear
1240	4.47	400	6.52	0.136	6.04	5.02	11.36	-57	0.0	clear
1245	4.47	400	6.53	0.136	3.97	4.94	11.41	-60	0.0	clear - collect sample
										DO Field Kit
										reading → 0.2 ppm

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-159I1-20110404
Sample Location: PZ-159I1
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4-4-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1220	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	ORP
Method: Peristaltic pump	clear	6.16	0.130	11.40	8.74	5.25	0.0	10

PURGE DATA:

Date: 4-4-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1 inch PVC								
Total Well Depth (TD):								
Static Water Level (WL): 4.60			(See Low Flow logs)					
One Casing Volume(gal/L):								
Start Purge (hrs): 1205								
End Purge (hrs): 1220								
Total Purge Time (min): 15								
Total Vol. Purged (gal/L): 1.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TOC	H_2SO_4	1 x 500 ml poly	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings observed

Circle if Applicable:

MS/MSD —

Duplicate ID No.: —

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045
WELL ID.: PZ-159I1
DATE: 4-4-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1200	4.60	–	–	–	–	–	–	–	–	Initial
1205	4.60	400	6.20	0.297	18.71	9.47	10.78	32	0.0	clear
1210	4.60	400	6.23	0.189	12.66	5.78	11.26	15	0.0	clear
1215	4.60	400	6.18	0.132	10.08	5.39	11.37	11	0.0	clear
1220	4.60	400	6.16	0.130	8.74	5.25	11.40	10	0.0	clear - collect sample
										DO field kit
										reading → 0.6 ppm

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G0204.5

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-157I-20110411
Sample Location: PZ-157I
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 4-11-11								
Time: 1140								ORP
Method: Peristaltic pump	clear	6.12	0.107	11.25	0.35	4.77	0.0	38

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4-11-11								
Method: Low flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1 inch PVC								
Total Well Depth (TD):								
Static Water Level (WL):			(See	Low	Flow	Logs)		
One Casing Volume(gal/L):								
Start Purge (hrs): 1125								
End Purge (hrs): 1140								
Total Purge Time (min): 15								
Total Vol. Purged (gal/L): 1.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TOC	H_2SO_4	1 x 500 ml poly	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings
- DO Field Kit reading → 0.3 ppm
- Fe Field Kit reading → 2.8 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112602045

WELL ID.: PZ-157I
DATE: 4-11-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1120	4.71	–	–	–	–	–	–	–	–	Initial
1125	4.71	410	6.62	0.137	5.97	7.08	10.77	-13	0.0	clear
1130	4.71	400	6.33	0.120	1.59	5.01	10.99	18	0.0	clear
1135	4.71	400	6.16	0.112	0.46	4.73	11.10	34	0.0	clear
1140	4.71	400	6.12	0.107	0.35	4.77	11.25	38	0.0	clear - collect sample
										DO Field Kit
										reading → 0.3 ppm
										Fe Field Kit
										reading → 2.8 mg/L

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: DWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-157I1-20110411
Sample Location: PZ-157I1
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4-11-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Time: 1110								
Method: Peristaltic pump	Clear	6.36	0.143	11.34	0.85	4.88	0.0	20

PURGE DATA:

Date: 4-11-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1 inch PVC								
Total Well Depth (TD):								
Static Water Level (WL):			(See	Low	Flow	Logs)		
One Casing Volume(gal/L):								
Start Purge (hrs): 1055								
End Purge (hrs): 1110								
Total Purge Time (min): 15								
Total Vol. Purged (gal/L): 1.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TOC	H_2SO_4	1 X 500 ml poly	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings
- DO Field Kit reading → 0.2 ppm
- Fe Field Kit reading → 1.8 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: PZ-157I1
DATE: 4-11-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1050	5.09	—	—	—	—	—	—	—	—	Initial
1055	5.09	400	6.50	0.158	6.77	6.43	10.73	-8	0.0	clear
1100	5.09	400	6.37	0.152	2.04	4.85	11.25	9	0.0	clear
1105	5.09	400	6.36	0.146	0.94	4.90	11.32	15	0.0	clear
1110	5.09	400	6.36	0.143	0.85	4.88	11.34	20	0.0	clear-collect sample
										DO Field Kit
										reading → 0.2 ppm
										Fe Field Kit
										reading → 1.8 mg/L

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-158I-20110411
Sample Location: PZ-158I
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 4-11-11								
Time: 1040								
Method: Peristaltic pump	clear	6.48	0.140	11.28	0.54	4.43	0.1	-51

PURGE DATA:

Date: 4-11-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1 inch PVC								
Total Well Depth (TD):			(See Low	Flow	Logs)			
Static Water Level (WL):								
One Casing Volume(gal/L):								
Start Purge (hrs): 1025								
End Purge (hrs): 1040								
Total Purge Time (min): 15								
Total Vol. Purged (gal/L): 1.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TOC	H_2SO_4	1 X 500 ml poly	yes

OBSERVATIONS / NOTES:

- No stains, odors, or elevated PID readings
- DO Field Kit reading → 0.2 ppm
- Fe Field Kit reading → 1.8 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: PZ-158I
DATE: 4-11-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1020	5.10	—	—	—	—	—	—	—	—	Initial
1025	5.10	415	6.55	0.150	4.42	7.19	10.80	-25	0.0	clear
1030	5.10	400	6.49	0.146	1.12	4.77	11.15	-40	0.0	clear
1035	5.10	400	6.48	0.143	0.66	4.48	11.24	-46	0.1	clear
1040	5.10	400	6.48	0.140	0.54	4.43	11.28	-51	0.1	clear - collect sample
										DO Field Kit
										reading → 0.2 ppm
										Fe Field Kit
										reading → 1.8 mg/L

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NAWIRP Calverton
Project No.: 112602045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-158I1-20110411
Sample Location: PZ-158I1
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 4-11-11								
Time: 1015								
Method: Peristaltic pump	clear	6.25	0.151	11.35	0.57	4.76	0.1	0

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4-11-11								
Method: Low flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1 inch PVC								
Total Well Depth (TD):								
Static Water Level (WL):			(see Low	Flow	Logs)			
One Casing Volume(gal/L):								
Start Purge (hrs): 1000								
End Purge (hrs): 1015								
Total Purge Time (min): 15								
Total Vol. Purged (gal/L): 1.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TOC	H_2SO_4	1 X 500 ml poly	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings
- DO field kit reading → 0.4 ppm
- Fe field kit reading → 2.8 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Colverton
PROJECT NUMBER: 112602045

WELL ID.: PZ-158I1
DATE: 4-11-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0955	4.73	–	–	–	–	–	–	–	–	Initial
1000	4.73	425	6.40	0.150	7.80	6.55	11.07	-1.3	0.0	clear
1005	4.73	400	6.28	0.150	2.41	5.46	11.27	-4	0.1	clear
1010	4.73	400	6.26	0.151	0.64	4.80	11.34	0	0.1	clear
1015	4.73	400	6.25	0.151	0.57	4.76	11.35	0	0.1	clear - collect sample.
										DO Field Kit reading → 0.4 ppm
										Fe Field Kit reading → 2.8 mg/L

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-159I-20110411
Sample Location: PZ-159I
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4-11-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 0945	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP
Method: Peristaltic pump	Clear	6.53	0.130	11.34	0.75	4.40	0.2	-54

PURGE DATA:

Date: 4-11-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1 inch PVC								
Total Well Depth (TD):								
Static Water Level (WL):			(See	Low	Flow	Logs)		
One Casing Volume(gal/L):								
Start Purge (hrs): 0930								
End Purge (hrs): 0945								
Total Purge Time (min): 15								
Total Vol. Purged (gal/L): 1.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TOC	H_2SO_4	1X 500 ml poly	yes

OBSERVATIONS / NOTES:

- No stains, odors, or elevated PID readings
- DO Field Kit reading → 0.0 ppm
- Fe Field Kit reading → 2.6 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: PZ-159I
DATE: 4-11-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0925	4.52	—	—	—	—	—	—	—	—	Initial
0930	4.52	415	6.64	0.122	8.70	6.96	10.90	-36	0.0	clear
0935	4.52	400	6.57	0.125	3.05	5.14	11.20	-45	0.0	clear
0940	4.52	400	6.54	0.128	1.23	4.77	11.28	-50	0.1	clear
0945	4.52	400	6.53	0.130	0.75	4.40	11.34	-54	0.2	clear-collect sample
										DO Field Kit
										reading → 0.0 ppm
										Fe Field Kit
										reading → 2.6 mg/L

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-159I1-20110411
Sample Location: PZ-159I1
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4-11-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 0920	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP
Method: Peristaltic pump	clear	6.30	0.143	11.34	0.55	4.90	0.2	33

PURGE DATA:

Date: 4-11-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1 inch PVC								
Total Well Depth (TD):			(see	Low	Flow	logs)		
Static Water Level (WL):								
One Casing Volume(gal/L):								
Start Purge (hrs): 0905								
End Purge (hrs): 0920								
Total Purge Time (min): 15								
Total Vol. Purged (gal/L): 1.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TOC	H_2SO_4	1 X 500 ml poly	yes

OBSERVATIONS / NOTES:

- No stains, odors, or elevated PID readings
- DO Field Kit reading → 0.4 ppm
- Fe Field Kit reading → 2.0 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: PZ-159 I1
DATE: 4-11-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0900	4.65	—	—	—	—	—	—	—	—	Initial
0905	4.65	425	6.43	0.132	9.75	8.31	10.86	112	0.1	clear
0910	4.65	400	6.38	0.168	2.42	5.79	11.17	60	0.1	clear
0915	4.65	400	6.31	0.150	0.93	4.88	11.26	43	0.2	clear
0920	4.65	400	6.30	0.143	0.55	4.90	11.34	33	0.2	clear - collect sample
										DO Field Kit
										reading → 0.4 ppm
										Fe Field Kit
										reading → 2.0 mg/L

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-157I -20110420
Sample Location: SA-PZ-157I
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4-20-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 0857	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	mV
Method: Low Flow	clear	6.09	0.142	10.14	0.77	1.37	0.0	54

PURGE DATA:

Date: 4-20-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow	see low flow purge sheet for details							
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type: 1" PVC								
Total Well Depth (TD):								
Static Water Level (WL): 4.49								
One Casing Volume(gal/L):								
Start Purge (hrs): 0837								
End Purge (hrs): 0857								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 1 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TOC	H2SO4	500 mL poly bottle	yes
VOC	HCl	40mL glass vial	no

OBSERVATIONS / NOTES:

D.O. field test kit = 0.7 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ- 157I
DATE: 4/20/2011

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0837	4.49	300	6.28	0.175	4.43	3.15	9.61	-7	0.0	clear
0842	4.50	300	6.03	0.143	1.85	2.31	9.80	46	0.0	
0847	4.50	300	6.02	0.142	1.25	1.23	10.01	53	0.0	
0852	4.50	300	6.04	0.142	0.65	1.02	10.06	56	0.0	
0857	4.50	300	6.09	0.142	0.77	1.37	10.14	54	0.0	Collect sample
				D.O	Test Kit	= 0.7ppm				

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-157I-20110420
Sample Location: SA-PZ-157I
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4-20-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 0830	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	mV
Method: Low Flow	clear	6.20	0.149	10.31	3.93	0.77	0.0	64

PURGE DATA:

Date: 4-20-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow	see low flow purge sheet for details							
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type: 1" PVC								
Total Well Depth (TD):								
Static Water Level (WL): 4.74								
One Casing Volume(gal/L):								
Start Purge (hrs): 0810								
End Purge (hrs): 0830								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 1.5gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TOC	H2SO4	500 mL poly bottle	yes
VOC	HCl	40mL glass vial	no

OBSERVATIONS / NOTES:

D.O. field test kit = 0.7 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ-157 I 1
DATE: 4/20/2011

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0810	4.74	350	5.51	0.177	23.0	3.41	9.41	141	0.0	clear
0815	4.75	350	5.53	0.155	10.06	1.93	9.91	113	0.0	clear
0820	4.75	350	6.08	0.157	26.7	1.22	9.99	62	0.0	
0825	4.75	350	6.08	0.150	9.74	0.89	10.32	69	0.0	
0830	4.75	350	6.20	0.149	3.93	0.77	10.31	64	0.0	collect sample

SIGNATURE(S): [signature]

PAGE_1_OF_1_

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-158I-20110420
Sample Location: SA-PZ- 158 I
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4-20-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 0956	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	mV
Method: Low Flow	clear	6.41	0.144	10.36	0.00	0.00	0.0	-17

PURGE DATA:

Date: 4-20-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow	see low flow purge sheet for details							
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type: 1" PVC								
Total Well Depth (TD):								
Static Water Level (WL): 4.75								
One Casing Volume(gal/L):								
Start Purge (hrs): 0936								
End Purge (hrs): 0956								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 1.5gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TOC	H2SO4	500 mL poly bottle	yes
VOC	HCl	40mL glass vial	no

OBSERVATIONS / NOTES:

D.O. field test kit = 0.25 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ- 158I
DATE: 4/20/2011

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0936	4.75	350	6.64	0.199	3.98	0.72	10.18	-49	0.0	clear
0941	4.75	350	6.42	0.156	1.16	0.15	10.14	-33	0.0	
0946	4.75	350	6.36	0.146	0.00	0.08	10.17	-15	0.0	
0951	4.75	350	6.41	0.144	0.06	0.00	10.26	-17	0.0	
0956	4.75	350	6.41	0.144	0.00	0.00	10.36	-17	0.0	Collect sample
					D.O. Test Kit=		0.25 ppm			

SIGNATURE(S): [signature]

PAGE_1_OF_1_

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-158I1-20110420
Sample Location: SA-PZ-158I1
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4-20-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 0930	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	mV
Method: Low Flow	clear	5.94	0.168	10.62	0.25	0.08	0.0	56

PURGE DATA:

Date: 4-20-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow	see low flow purge sheet for details							
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type: 1" PVC								
Total Well Depth (TD):								
Static Water Level (WL): 4.41								
One Casing Volume(gal/L):								
Start Purge (hrs): 0909								
End Purge (hrs): 0930								
Total Purge Time (min): 21								
Total Vol. Purged (gal/L): 1.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TOC	H2SO4	500 mL poly bottle	yes
VOC	HCl	40mL glass vial	no

OBSERVATIONS / NOTES:

D.O. field test kit = 0.4 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ- 158 I
DATE: 4/20/2011

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0909	4.41	350	6.28	0.179	8.51	0.69	9.75	21	0.0	clear
0915	4.42	350	6.08	0.173	2.79	0.65	9.78	48	0.0	
0920	4.42	350	6.18	0.172	1.18	0.24	9.84	44	0.0	
0925	4.42	350	5.98	0.169	4.36	0.12	10.49	55	0.0	
0930	4.42	350	5.94	0.168	0.25	0.08	10.62	56	0.0	Collect sample
					D.O	Test Kit	= 0.4 ppm			

SIGNATURE(S): [signature]

PAGE_1_OF_1_

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.:

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-159I-20110419
Sample Location: SA-PZ-159I
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 4-19-11								
Time: 1550								ORP
Method: Low Flow	Clear	5.73	0.148	10.99	0.00	3.88	0.0	23

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4-19-11								
Method: Low Flow	See low flow purge sheet for details							
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type: 1" PVC								
Total Well Depth (TD):								
Static Water Level (WL): 4.21								
One Casing Volume(gal/L):								
Start Purge (hrs): 1530								
End Purge (hrs): 1550								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 1.5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	2 40mL glass vials	yes
TOC	H_2SO_4	1 500 mL poly bottle	yes

OBSERVATIONS / NOTES:

Field Test Kit
D.O. = 0.4 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ-159I
DATE: 4-19-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1530	4.21	350	5.57	0.176	1.63	9.58	11.32	149	0.0	clear
1535	4.22	350	5.53	0.165	0.05	6.58	11.24	76	0.0	" "
1540	4.22	350	5.76	0.151	0.00	5.14	11.03	39	0.0	
1545	4.22	350	5.75	0.148	0.00	4.45	10.99	29	0.0	
1550	4.22	350	5.73	0.148	0.00	3.88	10.99	23	0.0	
1550	Collect sample									1 1/2 gal
				D.O	Test Kit	0.4	ppm			

SIGNATURE(S): [signature]

PAGE 1 OF 1

Tetra Tech NUS, Inc.

MONITORING WELL DEVELOPMENT RECORD

Well: SA-PZ-159T
Site: NWIRP Calverton SA
Date Installed: ____
Date Developed: 4-19-11
Dev. Method: Hand surge w/checkvalve
Pump Type: Hand surge w/check valve

Depth to Bottom (ft.): ____
Static Water Level Before (ft.): 4.21
Static Water Level After (ft.): 4.23
Screen Length (ft.): 5'
Specific Capacity: ____
Casing ID (in.): 1"

Responsible Personnel: J. Birkett
Drilling Co.: —
Project Name: NWIRP Calverton
Project Number: 112G02045

Time	Estimated Sediment Thickness (Ft.)	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Temperature (Degrees C)	pH	Specific Conductance (Units mS/cm)	Turbidity (NTU)	Remarks (odor, color, etc.) ORP	
1607	Start	dev.	—						
1612		5 gal	—	11.74	6.64	0.160	42.6	-10	light gray-brown color
1618		10 gal	—	11.73	6.77	0.159	32.7	-25	slight lightbrown-gray tint
1623		15	—	11.70	6.73	0.155	150	-28	" "
1628		20	—	11.74	6.55	0.155	102.1	-20	" "
1633		25	—	11.65	6.75	0.151	74.7	-32	" "

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-159I-20110420
Sample Location: SA-PZ-159I
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4-20-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1100	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	mV
Method: Low Flow	Clear	6.34	0.144	10.87	0.33	0.00	0.0	-1

PURGE DATA:

Date: 4-20-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow	see low flow purge sheet for details							
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type: 1" PVC								
Total Well Depth (TD):								
Static Water Level (WL): 4.23								
One Casing Volume(gal/L):								
Start Purge (hrs): 1039								
End Purge (hrs): 1100								
Total Purge Time (min): 21								
Total Vol. Purged (gal/L): 1.5gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TOC	H2SO4	500 mL poly bottle	no
VOC	HCl	40mL glass vial	yes

OBSERVATIONS / NOTES:

D.O. field test kit = 0.4 ppm

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s): J. Birkett

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ- 159I
DATE: 4/20/2011

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1039	4.23	350	6.44	0.141	7.45	0.91	10.47	-14	0.0	clear
1044	4.23	350	6.21	0.143	0.75	0.43	10.69	11	0.0	
1050	4.23	350	6.28	0.143	0.41	0.00	10.72	6	0.0	
1055	4.23	350	6.31	0.144	0.22	0.00	10.82	2	0.0	
1100	4.23	350	6.34	0.144	0.33	0.00	10.87	-1	0.0	Collect sample
					D.O. Test Kit = 0.4 ppm					

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-159I20110420
Sample Location: SA-PZ- 159I
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4-20-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1030	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	mV
Method: Low Flow	Clear	6.16	0.149	10.75	0.00	0.00	0.0	47

PURGE DATA:

Date: 4-20-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow	see low flow purge sheet for details							
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type: 1" PVC								
Total Well Depth (TD):								
Static Water Level (WL): 4.43								
One Casing Volume(gal/L):								
Start Purge (hrs): 1010								
End Purge (hrs): 1030								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 1.5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TOC	H2SO4	500 mL poly bottle	yes
VOC	HCl	40mL glass vial	no

OBSERVATIONS / NOTES:

D.O. field test kit = 0.4 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): Jack Birkett

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ- 159 I 1
DATE: 4/20/2011

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1010	4.43	350	6.02	0.150	238	0.04	10.49	44	0.0	clear
1015	4.44	350	5.99	0.148	1.07	0.00	10.51	52	0.0	
1020	4.44	350	6.08	0.148	0.32	0.00	10.60	51	0.0	
1025	4.44	350	6.16	0.149	0.00	0.00	10.68	47	0.0	
1030	4.44	350	6.16	0.149	0.00	0.00	10.75	47	0.0	Collect sample
					D.O Test Kit		0.4 ppm			

SIGNATURE(S):

PAGE_1_OF_1_

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: CarbonIn-20110420
Sample Location:
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 4-20-11								
Time: 1130								
Method: Sample Port	clear	5.93	0.131	11.37	27.6	4.64	0.0	67

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date:								
Method:								
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type:								
Total Well Depth (TD):								
Static Water Level (WL):								
One Casing Volume(gal/L):								
Start Purge (hrs):								
End Purge (hrs):								
Total Purge Time (min):								
Total Vol. Purged (gal/L):								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	2 40mL glass vials	yes
TOC	H_2SO_4	1 500mL poly bottle	yes

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): [signature]

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton SA Bio Area
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-157I-20110509
Sample Location: SA-PZ-157I
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5-9-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1218	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow	clear	5.97	0.156	12.21	0.75	0.37	0.0	24

PURGE DATA:

Date: 5-9-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1" PVC		See Low Flow Purge Sheet for Details						
Total Well Depth (TD):								
Static Water Level (WL): 4.87								
One Casing Volume(gal/L):								
Start Purge (hrs): 1158								
End Purge (hrs): 1218								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 1.5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	2 40-mL glass vials	yes
TOC	H2SO4	1 500-mL poly bottle	yes

OBSERVATIONS / NOTES:

D.O Test Kit = 0.70 ppm
Dup = 0.80 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton SA Bio Area
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ - 157I
DATE: 5-9-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1158	4.87	300	5.91	0.233	2.07	3.63	14.08	90	0.0	clear
1203	4.87	300	6.04	0.162	2.04	1.00	12.48	14	0.0	
1208	4.87	300	5.98	0.157	1.63	0.21	12.17	23	0.0	
1213	4.87	300	5.98	0.157	1.03	0.07	12.21	24	0.0	
1218	4.87	300	5.97	0.156	0.75	0.37	12.21	24	0.0	Collect sample
				D.O. Test Kit =		0.76	ppm			
					Dup =	0.80	ppm			

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton SA Bio Area
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-157I1-20110509
Sample Location: SA-PZ- 157I1
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5-9-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1250	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow	Clear	6.11	0.154	12.08	0.71	0.00	0.0	42

PURGE DATA:

Date: 5-9-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1" PVC		See Low Flow Purge Sheet for Details						
Total Well Depth (TD):								
Static Water Level (WL): 5.08								
One Casing Volume(gal/L):								
Start Purge (hrs): 1230								
End Purge (hrs): 1250								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 1.75 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	2 40-mL glass vials	Yes
TOC	H2SO4	1 500-mL poly bottle	Yes

OBSERVATIONS / NOTES:

D.O Field Test Kit = 0.6 ppm

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton SA Bio Area
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ-157I1
DATE: 5-9-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1230	5.08	350	6.13	0.164	5.13	0.68	12.34	7	0.0	clear
1235	5.08	350	6.10	0.155	1.86	0.00	11.97	34	0.0	
1240	5.08	350	6.10	0.155	0.94	0.00	12.03	40	0.0	
1245	5.08	350	6.10	0.154	0.57	0.00	12.04	42	0.0	
1250	5.08	350	6.11	0.154	0.71	0.00	12.08	42	0.0	Collect sample
				D.O Field Test Kit = 0.6 ppm						

SIGNATURE(S):

PAGE_1_OF_1_

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton SA Bio Area
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-158I-20110509
Sample Location: SA-PZ-158I
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5-9-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1327	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow	clear	6.19	0.137	12.06	2.44	0.00	0.0	-29

PURGE DATA:

Date: 5-9-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type: 1" PVC		See Low Flow Purge Sheet for Details						
Total Well Depth (TD):								
Static Water Level (WL): 5.12								
One Casing Volume(gal/L):								
Start Purge (hrs): 1307								
End Purge (hrs): 1327 1B 5-9-11								
Total Purge Time (min): ~~175~~ 20								
Total Vol. Purged (gal/L): 1.75 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	2 40-mL glass vials	yes
TOC	H2SO4	1 500-mL poly bottle	yes

OBSERVATIONS / NOTES:

D.O Field Test Kit 0.3 ppm

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton SA Bio Area
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ-158I
DATE: 5-9-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1307	5.12	300	6.50	0.184	23.3	2.00	12.39	-91	0.0	clear
1312	5.12	300	6.21	0.138	3.03	0.01	12.07	-34	0.0	
1317	5.12	300	6.18	0.137	2.62	0.00	12.12	-28	0.0	
1322	5.12	300	6.20	0.136	14.2	0.00	12.10	-29	0.0	
1327	5.12	300	6.19	0.137	2.44	0.00	12.06	-29	0.0	Collect sample
				D.O.	Test Kit=	0.3 ppm				

SIGNATURE(S):

PAGE_1_OF_1_

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton SA Bio Area
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ- 158J1-20110507
Sample Location: SA-PZ- 158I1
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5-9-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1400	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow	clear	6.11	0.158	12.23	4.15	0.00	0.0	16

PURGE DATA:

Date: 5-9-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1" PVC		See Low Flow Purge Sheet for Details						
Total Well Depth (TD):								
Static Water Level (WL): 4.77								
One Casing Volume(gal/L):								
Start Purge (hrs): 1340								
End Purge (hrs): 1400								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 2 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	2 40-mL glass vials	yes
TOC	H2SO4	1 500-mL poly bottle	yes

OBSERVATIONS / NOTES:

D.O. Test Kit 0.6 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton SA Bio Area
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ-158I1
DATE: 5-9-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1340	4.77	300	6.25	0.157	150	0.68	15.67	-7	0.0	clear
1345	4.77	300	6.11	0.158	35.4	0.00	12.55	20	0.0	
1350	4.77	300	6.14	0.158	14.9	0.00	12.23	18	0.0	
1355	4.77	300	6.12	0.158	5.29	0.00	12.26	16	0.0	
1400	4.77	300	6.11	0.158	4.15	0.00	12.23	16	0.0	Collect sample
				D.O Test Kit		= 0.6	ppm			

SIGNATURE(S): [signature]

PAGE_1_OF_1_

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton SA Bio Area
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-159I-20110509
Sample Location: SA-PZ-159I
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5-9-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1442	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow	Clear	6.36	0.140	14.19	4.04	0.00	0.0	-24

PURGE DATA:

Date: 5-9-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1" PVC		See Low Flow Purge Sheet for Details						
Total Well Depth (TD):								
Static Water Level (WL): 4.60								
One Casing Volume(gal/L):								
Start Purge (hrs): 1422								
End Purge (hrs): 1442								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 2 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	2 40-mL glass vials	yes
TOC	H2SO4	1 500-mL poly bottle	yes

OBSERVATIONS / NOTES:

D.O Test Kit 0.8 ppm

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton SA Bio Area
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ -159I
DATE: 5-9-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1422	4.60	300	6.25	0.128	6.66	2.02	14.99	-4	0.0	Clear
1427	4.60	300	6.27	0.137	2.32	0.00	14.23	-13	0.0	
1432	4.60	300	6.29	0.139	1.79	0.00	14.12	-18	0.0	
1437	4.60	300	6.30	0.140	1.99	0.00	14.18	-22	0.0	
1442	4.60	300	6.30	0.140	4.09	0.00	14.19	-24	0.0	Collect sample
				D.O.	Test Kit	0.8	ppm			

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton SA Bio Area
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-159I-20110509
Sample Location: SA-PZ-159I
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5-9-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1515	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow	Clear	6.13	0.149	14.07	0.35	0.00	0.0	44

PURGE DATA:

Date: 5-9-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1" PVC		See Low Flow Purge Sheet for Details						
Total Well Depth (TD):								
Static Water Level (WL): 4.82								
One Casing Volume(gal/L):								
Start Purge (hrs): 1455								
End Purge (hrs): 1515								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 2 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	2 40-mL glass vials	yes
TOC	H2SO4	1 500-mL poly bottle	yes

OBSERVATIONS / NOTES:

D.O Test kit = 0.5 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton SA Bio Area
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ-159I1
DATE: 5-9-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1455	4.82	300	6.17	0.146	12.0	2.19	15.86	38	0.0	clear
1500	4.82	300	6.14	0.149	3.52	0.00	14.17	46	0.0	
1505	4.82	300	6.17	0.148	4.05	0.00	14.21	44	0.0	
1510	4.82	300	6.14	0.149	0.77	0.00	14.02	44	0.0	
1515	4.82	300	6.13	0.149	0.35	0.00	14.07	44	0.0	Collect sample
				D.O Test Kit 0.5ppm						

SIGNATURE(S):

PAGE_1_OF_1_

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton SA Bio Area
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: ~~SA-PZ-~~ CarbonIn-20110509
Sample Location: ~~SA-PZ-~~ Carbon In
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5-9-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1540	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow	Clear	6.34	0.113	22.94	39.2	4.23	0.0	124

PURGE DATA:

Date: 5-9-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type: 1" PVC		See Low Flow Purge Sheet for Details						
Total Well Depth (TD):								
Static Water Level (WL): —								
One Casing Volume(gal/L):								
Start Purge (hrs): 1535								
End Purge (hrs): 1540								
Total Purge Time (min): 5								
Total Vol. Purged (gal/L): 1 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	2 40-mL glass vials	yes
TOC	H2SO4	1 500-mL poly bottle	yes

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): J. Birkett

APPENDIX C

GROUNDWATER LOW FLOW PURGE LOG SHEETS

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-133I-20110308
Sample Location: SA-PZ-133I
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 3-8-11								
Time: 1442								
Method: Low Flow	Clear	5.79	0.107	7.18	0.35	19.0	0.0	125

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3-8-11								
Method: Low Flow	See low flow purge sheet for details							
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type: 1" PVC								
Total Well Depth (TD):								
Static Water Level (WL): 7.30								
One Casing Volume(gal/L):								
Start Purge (hrs): 1355								
End Purge (hrs): 1442								
Total Purge Time (min): 47								
Total Vol. Purged (gal/L): 4.5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40mL glass vials	yes

OBSERVATIONS / NOTES:

Field Test Kits
D.O. = 0.6 ppm
Fe^{2+} = 0.0 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): [signature]

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045
WELL ID.: SA-PZ-133I
DATE: 3-8-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1353	7.30									
1355	7.32	325	6.02	0.106	6.46	9.79	7.49	109	0.0	clear
1400	7.32	325	5.86	0.112	1.64	10.27	7.46	115	0.0	
1405	7.32	325	5.84	0.108	0.71	12.93	7.52	118	0.0	
1410	7.32	325	5.83	0.107	0.59	14.50	7.72	120	0.0	
1416	7.32	325	5.81	0.107	1.50	16.80	7.40	123	0.0	
1421	7.32	325	5.80	0.107	0.33	17.36	7.32	123	0.0	
1426	7.32	325	5.80	0.107	0.40	17.88	7.25	123	0.0	
1431	7.32	325	5.79	0.107	0.33	18.40	7.22	124	0.0	
1435	7.32	325	5.79	0.107	0.15	18.71	7.19	124	0.0	
1440	7.32	325	5.79	0.107	0.35	19.08	7.18	125	0.0	
1442	Collect sample									

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112602045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-135I-20110308
Sample Location: PZ-135I
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 3-8-11 Time: 1340 Method: Peristaltic pump	clear	5.77	0.109	11.14	0.77	9.13	0.0	116

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3-8-11								
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 1 inch PVC								
Total Well Depth (TD):								
Static Water Level (WL): 4.21'			(See	Low	Flow	logs)		
One Casing Volume(gal/L):								
Start Purge (hrs): 1255								
End Purge (hrs): 1340								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 x 40 ml vials	yes

OBSERVATIONS / NOTES:

- Tubing intake set in screened interval of well
- No odors, stains, or elevated PID readings observed
- DO Field Kit reading → 1.0 ppm
- Fe Field Kit reading → 0.0 mg/L

Circle if Applicable:

MS/MSD — Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045
WELL ID.: SA-PZ-135I
DATE: 3-8-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1245	4.21	–	–	–	–	–	–	–	–	Initial
1255	4.22	375	5.97	0.110	6.93	11.64	10.35	134	0.0	clear
1300	4.22	375	5.82	0.109	4.88	10.40	10.87	130	0.0	clear
1305	4.22	375	5.76	0.110	3.14	9.86	11.06	125	0.0	clear
1310	4.22	375	5.78	0.110	2.24	9.61	11.09	123	0.0	clear
1315	4.22	375	5.78	0.110	1.06	9.50	11.02	121	0.0	clear
1320	4.22	375	5.78	0.110	0.94	9.38	11.10	120	0.0	clear
1325	4.22	375	5.79	0.110	0.90	9.26	11.12	118	0.0	clear
1330	4.22	375	5.78	0.110	0.86	9.21	11.13	117	0.0	clear
1335	4.22	375	5.77	0.109	0.79	9.16	11.12	117	0.0	clear ~~collect~~ KAS
1340	4.22	375	5.77	0.109	0.77	9.13	11.14	116	0.0	clear - collect sample
										DO Field Kit
										reading → 1.0 ppm
										Fe Field Kit
										reading → 0.0 mg/L

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-136I-20110303
Sample Location: PZ-136I
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 3-8-11 Time: 1230 Method: Peristaltic pump	clear	5.95	0.118	10.81	1.96	9.37	0.0	98

PURGE DATA:

Date: 3-8-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 1 inch PVC								
Total Well Depth (TD):								
Static Water Level (WL): 4.85			(see	Low	Flow	logs	for details)	
One Casing Volume(gal/L):								
Start Purge (hrs): 1145								
End Purge (hrs): 1230								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 x 40 ml vials	yes

OBSERVATIONS / NOTES:

- Tubing intake set in screened interval of well
- No odors, stains, or elevated PID readings observed
- DO Field Kit reading → 0.8 ppm
- Fe Field Kit reading → 1.2 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Colverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ-136I
DATE: 3-8-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1140	4.85	–	–	–	–	–	–	–	–	Initial
1145	4.87	400	6.28	0.129	138	11.65	10.57	117	0.0	Tinted (Gray-Tan)
1150	4.86	375	6.19	0.123	45.3	11.52	10.59	110	0.0	slight Tint (Tan)
1155	4.86	375	6.04	0.119	12.10	10.39	10.68	105	0.0	clear
1200	4.86	375	6.02	0.119	7.69	9.93	10.66	104	0.0	clear
1205	4.86	375	5.98	0.119	7.03	9.64	10.80	102	0.0	clear
1210	4.86	375	5.96	0.118	6.43	9.60	10.83	103	0.0	clear
1215	4.86	375	5.94	0.118	6.00	9.63	10.69	101	0.0	clear
1220	4.86	375	5.94	0.118	4.95	9.51	10.77	101	0.0	clear
1225	4.86	375	5.95	0.118	3.22	9.43	10.72	99	0.0	clear
1230	4.86	375	5.95	0.118	1.96	9.37	10.81	98	0.0	clear - collect sample
										DO Field Kit
										reading → 0.8 ppm
										Fe Field Kit
										reading → 1.2 mg/L

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-138I-20110308
Sample Location: SA-PZ-138I
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 3-8-11								
Time: 0957								
Method: Low Flow	clear	5.62	0.114	6.57	0.30	17.29	0.0	144

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3-8-11								
Method: Low Flow	see low flow purge sheet for details							
Monitor Reading (ppm): —								
Well Casing Diameter & Material								
Type: 1" PVC								
Total Well Depth (TD):								
Static Water Level (WL): 4.67								
One Casing Volume(gal/L):								
Start Purge (hrs): 0910								
End Purge (hrs): 0957								
Total Purge Time (min): 47								
Total Vol. Purged (gal/L): 4.5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40mL glass vials	yes

OBSERVATIONS / NOTES:

Field Test kits
DO_2 = 1.5 ppm
Fe^{2+} = 0.0 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045
WELL ID.: SA-PZ-138I
DATE: 3-8-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0908	4.67									
0910	4.71	300	6.02	0.127	1.59	9.92	6.71	105	0.0	clear
0915	4.71	300	5.78	0.117	0.61	9.62	6.56	124	0.0	
0920	4.71	300	5.70	0.116	0.60	10.26	6.64	132	0.0	
0925	4.71	300	5.65	0.116	0.33	10.86	6.63	137	0.0	
0930	4.71	300	5.64	0.114	0.38	15.45	6.68	139	0.0	
0935	4.71	300	5.63	0.115	0.37	15.70	6.63	141	0.0	
0940	4.71	300	5.62	0.114	0.36	16.33	6.64	142	0.0	
0945	4.71	300	5.61	0.114	0.34	16.81	6.47	143	0.0	
0950	4.71	300	5.62	0.114	0.35	17.19	6.51	144	0.0	
0955	4.71	300	5.62	0.114	0.30	17.29	6.57	144	0.0	
0957	Collect sample									

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-138I1-20110308
Sample Location: SA-PZ-138I1
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 3-8-11								
Time: 1054								
Method: Low Flow	clear	5.74	0.181	6.31	0.31	12.51	0.0	ORP 130

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3-8-11								
Method: Low Flow	See low flow purge sheet for details							
Monitor Reading (ppm): –								
Well Casing Diameter & Material Type: 1" PVC								
Total Well Depth (TD):								
Static Water Level (WL): 4.54								
One Casing Volume(gal/L):								
Start Purge (hrs): 1007								
End Purge (hrs): 1054								
Total Purge Time (min): 47								
Total Vol. Purged (gal/L): 4.5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40 mL glass vials	yes

OBSERVATIONS / NOTES:

Field Test kit
D.O. = 1.0 ppm
Fe^{2+} = 0.0 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045
WELL ID.: SA-PZ-138 I1
DATE: 3-8-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1005	4.54									
1007	4.55	280	5.75	0.180	0.87	9.93	6.13	147	0.0	clear
1012	4.55	280	5.71	0.181	0.40	8.46	6.23	143	0.0	
1017	4.55	280	5.72	0.181	0.36	10.04	6.24	140	0.0	
1022	4.55	280	5.72	0.181	0.32	10.77	6.16	135	0.0	
1027	4.55	280	5.73	0.181	0.34	11.21	6.13	133	0.0	
1032	4.55	280	5.73	0.181	0.40	11.58	6.21	131	0.0	
1037	4.55	280	5.72	0.181	0.32	11.92	6.27	132	0.0	
1042	4.55	280	5.73	0.181	0.35	11.99	6.31	131	0.0	
1047	4.55	280	5.73	0.181	0.27	12.55	6.31	130	0.0	
1052	4.55	280	5.74	0.181	0.31	12.51	6.31	130	0.0	
1054	Collect sample									

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

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Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-139I-20110308
Sample Location: SA-PZ-139J
Sampled By: J. Birkelt
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 3-8-11								
Time: 1317								ORP
Method: Low Flow	clear	5.71	0.108	6.68	0.29	13.19	0.0	127

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3-8-11								
Method: Low Flow	See low	Flow	purge	sheet	for details			
Monitor Reading (ppm): —								
Well Casing Diameter & Material								
Type: 1" PVC								
Total Well Depth (TD):								
Static Water Level (WL): ~~9.27~~ 7.51								
One Casing Volume(gal/L): NB								
Start Purge (hrs): ~~1120~~ ~~1317~~	1232							
End Purge (hrs): 1317								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40mL glass vials	yes

OBSERVATIONS / NOTES:

Field Test kits
D.O. = 0.6 ppm
Fe^{2+} = 0.0 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045
WELL ID.: SA-PZ-139I
DATE: 3-8-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1230	7.51									
1232	7.53	300	5.99	0.119	3.65	12.70	7.65	88	0.0	clear, swampy odor
1239	7.53	300	5.84	0.110	2.44	10.68	6.57	108	0.0	
1244	7.53	300	5.82	0.109	2.87	11.13	6.52	111	0.0	
1249	7.53	300	5.78	0.109	0.99	11.72	6.53	116	0.0	
1254	7.53	300	5.76	0.109	0.62	12.09	6.57	118	0.0	
1259	7.53	300	5.75	0.103	0.93	12.45	6.61	121	0.0	
1304	7.53	300	5.73	0.109	0.34	12.71	6.64	123	0.0	
1309	7.53	300	5.71	0.108	0.38	12.93	6.59	124	0.0	
1315	7.53	300	5.71	0.108	0.29	13.19	6.68	127	0.0	
1317	Collect	Sample								

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-149I-20110308
Sample Location: SA-PZ-149I
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 3-8-11								
Time: 1207								
Method: Low Flow	clear	5.78	0.102	6.98	0.28	17.81	0.0	98

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3-8-11								
Method: Low Flow	See low flow purge sheet for details							
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type: 1" PVC								
Total Well Depth (TD):								
Static Water Level (WL): 9.21								
One Casing Volume(gal/L):								
Start Purge (hrs): 1120								
End Purge (hrs): 1207								
Total Purge Time (min): 47								
Total Vol. Purged (gal/L): 4.5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40mL glass vials	yes

OBSERVATIONS / NOTES:

Field Test Kits
D.O. = 1.0 ppm
Fe^{2+} = 0.2 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045
WELL ID.: SA-PZ-149I)
DATE: 3-8-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1118	9.21									
1120	9.21	320	6.07	0.113	2.64	8.71	7.44	132	0.0	clear ✓
1125	9.21	320	5.87	0.108	1.76	8.38	7.13	117	0.0	
1130	9.21	320	5.89	0.104	0.62	10.24	6.97	105	0.0	
1135	9.21	320	5.88	0.103	0.60	11.00	6.95	106	0.0	
1140	9.21	320	5.88	0.103	0.42	11.63	7.08	102	0.0	
1145	9.21	320	5.87	0.102	0.47	11.96	7.11	99	0.0	
1150	9.21	320	5.86	0.102	0.33	12.30	7.18	97	0.0	
1155	9.21	320	5.79	0.101	0.34	17.43	7.10	96	0.0	
1200	9.21	320	5.79	0.101	0.27	17.67	7.02	97	0.0	
1205	9.21	320	5.78	0.102	0.28	17.81	6.98	98	0.0	
1207	Collect sample									

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

JB 4-7-11 Page 1 of 1

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: ~~BPS1~~ SA-PZ-151I-20110308
Sample Location: ~~BPS1~~ SA-PZ-151I
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-8-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Time: 0835								
Method: Low Flow	~~5.66 clear~~	5.66	0.161	7.03	0.82	11.47	0.0	109

PURGE DATA:

Date: 3-8-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow	See low flow purge sheets for details							
Monitor Reading (ppm):								
Well Casing Diameter & Material Type: 1" PVC								
Total Well Depth (TD):								
Static Water Level (WL): 3.68								
One Casing Volume(gal/L):								
Start Purge (hrs): 0750								
End Purge (hrs): 0835								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4.5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40 mL glass vials	yes
MEE	HCl	2 40mL glass vials	yes
TOC	H_2SO_4	1 500mL poly bottle	yes
Metals	HNO_3	1 500mL poly bottle	yes

OBSERVATIONS / NOTES:

Field test kits
DO = 1.0 ppm
Fe^{2+} = 0.4 mg/L

Circle if Applicable:

MS/MSD —

Duplicate ID No.: SA-Dup 01-20110308 0900

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045
WELL ID.: SA-PZ-151I1
DATE: 3-8-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0742	3.68									
0750	3.70	300	5.38	0.225	14.0	7.44	7.09	150	0.0	clear
0755	3.70	300	5.62	0.178	3.79	6.79	7.54	132	0.0	
0800	3.70	300	5.64	0.175	1.25	8.50	7.50	129	0.0	
0805	3.70	300	5.64	0.169	0.63	9.22	7.40	124	0.0	
0810	3.70	300	5.64	0.167	0.42	9.75	7.33	120	0.0	
0815	3.70	300	5.65	0.165	0.38	10.04	7.28	118	0.0	
0820	3.70	300	5.65	0.164	0.31	10.61	7.25	115	0.0	
0825	3.70	300	5.65	0.162	0.39	10.72	7.06	113	0.0	
0830	3.70	300	5.65	0.162	0.34	11.01	7.08	111	0.0	
0835	Collect	sample	5.66	0.161	0.82	11.47	7.03	109	0.0	4.5 gal

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-155I-20110307
Sample Location: SA-PZ-155I
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 3-7-11								
Time: 1622								
Method: Low Flow	clear	5.69	0.128	6.94	0.56	14.40	0.0	88

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3-7-11								
Method: Low Flow	see low flow purge sheet for details							
Monitor Reading (ppm): —								
Well Casing Diameter & Material								
Type: 1.5" PVC								
Total Well Depth (TD):								
Static Water Level (WL): 4.93								
One Casing Volume(gal/L):								
Start Purge (hrs): 1535								
End Purge (hrs): 1622								
Total Purge Time (min): 47								
Total Vol. Purged (gal/L): 5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40 mL glass vials	yes
TOC	H_2SO_4	1 500mL poly bottle	yes
MEE	HCl	2 40mL glass vial	yes
Metals	HNO_3	1 500mL poly vial	yes

OBSERVATIONS / NOTES:

Field Test Kits
DO = 1.0 ppm
Fe^{2+} = 0.6 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045
WELL ID.: SA-PZ-155I
DATE: 3-7-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1533	4.93									
1535	4.98	350	5.79	0.140	22.4	8.14	8.38	62	0.0	orange suspended particulate
1540	4.98	350	5.83	0.128	1.81	11.06	7.30	65	0.0	
1545	4.98	300	5.80	0.127	0.95	11.74	7.25	70	0.0	
1550	4.98	300	5.78	0.126	0.60	12.40	7.18	76	0.0	
1555	4.98	300	5.76	0.126	0.59	12.82	7.16	79	0.0	
1600	4.98	300	5.74	0.127	1.15	13.45	7.06	81	0.0	
1605	4.98	300	5.72	0.127	0.80	13.84	7.01	83	0.0	
1610	4.98	300	5.71	0.128	1.12	14.23	6.98	86	0.0	
1615	4.98	300	5.70	0.128	1.45	14.22	6.94	87	0.0	
1620	4.98	300	5.69	0.128	0.56	14.40	6.94	88	0.0	
1622	Collect Sample									

SIGNATURE(S):

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-157I-20110307
Sample Location: SA-PZ-157I
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 3-7-11								
Time: 1351								
Method: Low Flow	clear	5.69	0.133	7.75	0.57	10.15	0.0	73

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3-7-11								
Method: Low Flow	see low flow purge sheet							
Monitor Reading (ppm):								
Well Casing Diameter & Material Type: 1.5" PVC								
Total Well Depth (TD):								
Static Water Level (WL): 4.36								
One Casing Volume(gal/L):								
Start Purge (hrs): 1304								
End Purge (hrs): 1351								
Total Purge Time (min): 47								
Total Vol. Purged (gal/L): 3 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40 mL glass vials	yes
TOC	H_2SO_4	1 500 mL poly bottle	yes
MEE	HCl	2 40 mL glass vials	yes
Metals	HNO_3	1 500 mL poly bottle	yes

OBSERVATIONS / NOTES:

Chemets DO (K-7512 or K-7502) = 0.8 ppm
Hach Fe^{2+} (IR-18C) = 2.2 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G01655 2045
WELL ID.: SA-PZ-157I
DATE: 3-7-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1302	4.36									
1304	4.38	250	5.62	0.187	7.43	4.68	10.80	156	0.0	clear
1309	4.38	250	5.71	0.214	2.58	5.93	9.36	132	0.0	" "
1314	4.38	250	5.71	0.131	2.58	8.35	8.77	114	0.0	
1319	4.38	250	5.72	0.126	2.55	8.45	8.45	103	0.0	" "
1324	4.38	250	5.72	0.129	2.08	9.16	8.31	92	0.0	
1329	4.38	250	5.71	0.131	1.45	9.26	7.99	87	0.0	
1334	4.38	250	5.71	0.130	0.97	9.46	8.01	84	0.0	
1339	4.38	250	5.70	0.133	0.69	9.83	7.95	78	0.0	
1344	4.38	250	5.70	0.132	0.65	9.95	7.73	77	0.0	
1349	4.38	250	5.69	0.133	0.57	10.15	7.75	73	0.0	3 gal
1351	Collect sample									

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-157I1-20110307
Sample Location: SA-PZ-157I1
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 3-7-11								
Time: 1502								
Method: Low Flow	clear	5.79	0.182	7.43	0.47	13.2	0.0	52

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3-7-11								
Method: Low Flow	see low Flow purge sheet for details							
Monitor Reading (ppm): —								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD):								
Static Water Level (WL): 4.61								
One Casing Volume(gal/L):								
Start Purge (hrs): 1407								
End Purge (hrs): 1502								
Total Purge Time (min): 55								
Total Vol. Purged (gal/L): 5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40mL glass vial	yes
MEE	HCl	2 40mL glass vials	yes
TOC	H_2SO_4	1 500mL poly bottle	yes
Metals	HNO_3	1 500mL poly bottle	yes

OBSERVATIONS / NOTES:

DO = 0.8 ppm
Fe^{2+} = 1.4 µg/L
> Field Test kits

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): [signature]

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045
WELL ID.: SA-PZ-157I1
DATE: 3-7-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1407	4.61									
1409	4.62	350	5.68	0.184		7.99	8.32	74	0.0	clear
1415	4.62	350	5.75	0.176	3.64	8.85	7.93	69	0.0	
1426	4.62	300	5.79	0.175	1.29	9.58	7.99	67	0.0	
1425	4.62	300	5.76	0.177	1.08	10.63	7.77	65	0.0	
1430	4.62	300	5.78	0.179	0.38	11.01	7.76	64	0.0	
1435	4.62	300	5.80	0.183	0.65	11.52	7.66	63	0.0	
1440	4.62	300	5.77	0.184	0.43	11.90	7.58	62	0.0	
1445	4.62	300	5.79	0.183	0.51	12.18	7.53	61	0.0	
1450	4.62	300	5.79	0.183	0.35	12.42	7.47	60	0.0	
1455	4.62	300	5.80	0.183	0.55	12.71	7.42	59	0.0	
1500	4.62	300	5.79	0.182	0.47	13.2	7.43	58	0.0	
1502	Collect sample									

SIGNATURE(S):

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Page___ of ___

Project Site Name: NWIRP Calverton
Project No.:

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-158I-20110307
Sample Location: PZ-158I
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-7-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1350	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	ORP
Method: Peristaltic pump	clear	6.29	0.161	11.11	0.63	9.18	0.0	32

PURGE DATA:

Date: 3-7-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1 inch PVC								
Total Well Depth (TD):			(see Low flow logs for details)					
Static Water Level (WL): 4.65								
One Casing Volume(gal/L):								
Start Purge (hrs): 1305								
End Purge (hrs): 1350								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 x 40 ml vials	yes

OBSERVATIONS / NOTES:

- Tubing intake set in screened interval of well
- No stains, odors, or elevated PID readings observed
- DO Field Test Kit reading → 6 ppm
- Fe Field Test Kit reading → 2.6 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112602045

WELL ID.: PZ-158I
DATE: 3-7-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1300	4.65	–	–	–	–	–	–	–	–	Initial
1305	4.65	400	6.20	0.234	16.8	12.12	10.23	123	0.0	clear
1310	4.65	375	6.27	0.243	9.99	11.54	10.59	98	0.0	clear
1315	4.65	375	6.23	0.179	3.48	10.51	10.87	76	0.0	clear
1320	4.66	375	6.25	0.174	1.23	9.80	11.01	59	0.0	clear
1325	4.66	375	6.26	0.168	1.02	9.68	11.06	52	0.0	clear
1330	4.66	375	6.27	0.169	0.92	9.56	11.03	48	0.0	clear
1335	4.66	375	6.27	0.167	0.74	9.35	10.98	43	0.0	clear
1340	4.66	375	6.28	0.163	0.61	9.21	11.02	38	0.0	clear
1345	4.66	375	6.28	0.162	0.68	9.23	11.08	35	0.0	clear
1350	4.66	375	6.29	0.161	0.63	9.18	11.11	32	0.0	clear - collect sample
										DO Field Kit
										reading → 6ppm
										Fe Field Kit
										reading → 2.6 mg/L

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-158I-20110307
Sample Location: PZ-158I
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 3-7-11								
Time: 1500								
Method: Peristaltic pump	clear	6.01	0.139	10.95	0.83	9.24	0.0	69

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3-7-11								
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1 inch PVC								
Total Well Depth (TD):								
Static Water Level (WL): 4.30			(see Low Flow logs for details)					
One Casing Volume(gal/L):								
Start Purge (hrs): 1415								
End Purge (hrs): 1500								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 x 40 ml vials	yes

OBSERVATIONS / NOTES:

- Tubing intake set in screened interval of well
- No odors, stains, or elevated PID readings observed
- DO Field Kit reading → 2 ppm
- Fe Field Kit reading → 2.4 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: DWIRP Calverton
PROJECT NUMBER: 112602045

WELL ID.: SA-PZ-153I1
DATE: 3-7-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1410	4.30	–	–	–	–	–	–	–	–	Initial
1415	4.30	375	6.05	0.120	8.24	11.60	10.56	100	0.0	clear
1420	4.30	375	6.01	0.129	2.57	10.37	10.86	89	0.0	clear
1425	4.30	375	6.01	0.135	1.22	9.79	10.85	85	0.0	clear
1430	4.30	375	6.00	0.137	1.01	9.42	10.87	81	0.0	clear
1435	4.30	375	6.01	0.133	0.96	9.34	10.86	79	0.0	clear
1440	4.30	375	6.00	0.138	0.81	9.25	10.87	78	0.0	clear
1445	4.30	375	6.01	0.138	0.86	9.20	10.89	75	0.0	clear
1450	4.30	375	6.01	0.139	0.91	9.16	10.95	73	0.0	clear
1455	4.30	375	6.01	0.138	0.87	9.18	10.98	70	0.0	clear
1500	4.30	375	6.01	0.139	0.83	9.24	10.95	69	0.0	clear - collect sample
										DO Field Kit
										reading → 2 ppm
										Fe Field Kit
										reading → 2.4 mg/L

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Colverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-159I-20110307
Sample Location: PZ-159I
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-7-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1615	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP
Method: Peristaltic pump	clear	6.12	0.129	11.02	0.35	9.02	0.0	46

PURGE DATA:

Date: 3-7-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1 inch PVC								
Total Well Depth (TD):								
Static Water Level (WL): 4.13'		(see	Low	Flow	purge	sheets)		
One Casing Volume(gal/L):								
Start Purge (hrs): 1530								
End Purge (hrs): 1615								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 X 40 ml vials	yes
TOC	H_2SO_4	1 X 500 ml Poly	yes
MEE	HCl	2 X 40 ml vials	yes
Metals	HNO_3	1 X 500 ml Poly	yes

OBSERVATIONS / NOTES:

- Tubing intake set in screened interval of well
- No odors, stains, or elevated PID readings observed
- DO Field Kit reading → 1 ppm
- Fe Field Kit reading → 2.2 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ-159I
DATE: 3-7-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1525	4.13	—	—	—	—	—	—	—	—	Initial
1530	4.13	375	6.43	0.153	7.14	11.65	10.32	90	0.0	clear
1535	4.13	375	6.20	0.134	2.30	10.52	10.79	79	0.0	clear
1540	4.13	375	6.17	0.132	1.16	10.16	10.84	73	0.0	clear
1545	4.13	375	6.14	0.131	1.20	9.68	10.93	66	0.0	clear
1550	4.13	375	6.14	0.131	1.13	9.39	10.89	60	0.0	clear
1555	4.13	375	6.13	0.131	1.02	9.26	10.94	57	0.0	clear
1600	4.13	375	6.13	0.130	0.97	9.18	11.00	54	0.0	clear
1605	4.13	375	6.12	0.130	0.92	9.13	10.98	51	0.0	clear
1610	4.13	375	6.13	0.130	0.88	9.04	11.01	48	0.0	clear
1615	4.13	375	6.12	0.129	0.85	9.02	11.02	46	0.0	clear - collect sample
										DO field kit
										reading → 1.0 ppm
										Fe field kit
										reading → 2.2 mg/L

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: DWIRP Calverton
Project No.: 112602045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-159II-20110308
Sample Location: PZ-159II
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 3-8-11								
Time: 0840								
Method: Peristaltic pump	Clear	5.84	0.183	10.55	0.80	8.96	0.0	119

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3-8-11								
Method: Low flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1 inch PVC								
Total Well Depth (TD):								
Static Water Level (WL): 4.30			(See Low Flow purge logs)					
One Casing Volume(gal/L):								
Start Purge (hrs): 0755								
End Purge (hrs): 0840								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 x 40 ml vials	yes
MEE	HCl	2 x 40 ml vials	yes
TOC	H_2SO_4	1 x 500 ml poly	yes
Metals	HNO_3	1 x 500 ml poly	yes

OBSERVATIONS / NOTES:

- Tubing intake set in screened interval of well
- No odors, stains, or elevated PID readings observed
- DO field kit reading → 0.6 ppm
- Fe field kit reading → 2.6 mg/L

Circle if Applicable:

MS/MSD: YES

Duplicate ID No.: —

Signature(s): [signature]

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112602045

WELL ID.: SA-PZ-159I1
DATE: 3-8-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0745	4.40	–	–	–	–	–	–	–	–	Initial
0755	4.41	375	5.68	0.198	4.02	10.82	10.02	208	0.0	clear
0800	4.41	375	5.79	0.192	3.24	10.48	10.21	172	0.0	clear
0805	4.41	375	5.82	0.188	2.04	9.80	10.39	156	0.0	clear
0810	4.41	375	5.84	0.186	1.35	9.49	10.44	144	0.0	clear
0815	4.41	375	5.84	0.186	1.03	9.44	10.48	137	0.0	clear
0820	4.41	375	5.84	0.184	0.97	9.23	10.51	132	0.0	clear
0825	4.41	375	5.84	0.183	0.92	8.99	10.54	127	0.0	clear
0830	4.41	375	5.84	0.183	0.87	8.97	10.51	124	0.0	clear
0835	4.41	375	5.84	0.183	0.84	8.98	10.54	121	0.0	clear
0840	4.41	375	5.84	0.183	0.80	8.96	10.55	119	0.0	clear - collect sample
										DO Field Kit
										reading → 0.6 ppm
										Fe Field Kit
										reading → 2.6 mg/L

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-160I-20110308
Sample Location: PZ-160I
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-8-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1015	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	ORP
Method: Peristaltic pump	Clear	6.36	0.155	10.80	0.82	9.13	0.0	49

PURGE DATA:

Date: 3-8-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1 inch PVC								
Total Well Depth (TD):								
Static Water Level (WL): 4.47			(see	Low	Flow	purge	sheets)	
One Casing Volume(gal/L):								
Start Purge (hrs): 0930								
End Purge (hrs): 1015								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 X 40 ml vials	yes
MEE	HCl	2 X 40 ml vials	yes
TOC	H_2SO_4	1 X 500 ml poly	yes
Metals	HNO_3	1 X 500 ml poly	yes

OBSERVATIONS / NOTES:

- Tubing intake set in screened interval of well
- No odors, stains, or elevated PID readings observed
- DO Field Kit reading → 0.3 ppm
- Fe Field Kit reading → 2.6 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112602045

WELL ID.: SA-PZ-160I
DATE: 3-8-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0925	4.47	—	—	—	—	—	—	—	—	Initial
0930	4.47	380	6.13	0.193	3.50	10.90	10.18	162	0.0	clear
0935	4.47	375	6.33	0.157	1.79	10.36	10.56	112	0.0	clear
0940	4.47	375	6.35	0.155	1.21	9.97	10.64	101	0.0	clear
0945	4.47	375	6.36	0.155	1.14	9.89	10.72	87	0.0	clear
0950	4.47	375	6.36	0.156	0.98	9.35	10.74	73	0.0	clear
0955	4.47	375	6.36	0.156	0.87	9.23	10.77	63	0.0	clear
1000	4.47	375	6.36	0.156	0.83	9.20	10.75	59	0.0	clear
1005	4.47	375	6.36	0.155	0.77	9.23	10.81	54	0.0	clear
1010	4.47	375	6.36	0.156	0.80	9.16	10.78	51	0.0	clear
1015	4.47	375	6.36	0.155	0.32	9.13	10.80	49	0.0	clear - collect sample
										DO Field Kit
										reading → 0.3 ppm
										Fe Field Kit
										reading → 2.6 mg/L

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112602045

[] Domestic Well Data
[✓] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-160I1-20110303
Sample Location: PZ-160I1
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[✓] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-8-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1120	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	ORP
Method: Peristaltic pump	Clear	6.08	0.157	11.03	0.85	9.14	0.0	78

PURGE DATA:

Date: 3-8-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1 inch PVC								
Total Well Depth (TD):								
Static Water Level (WL): 4.14'			(see Low	Flow	purge	sheets)		
One Casing Volume(gal/L):								
Start Purge (hrs): 1035								
End Purge (hrs): 1120								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 X 40 ML Vials	yes

OBSERVATIONS / NOTES:

- Tubing intake set in screened interval of well
- No odors, stains, or elevated PID readings observed
- DO Field Kit reading → 0.6 ppm
- Fe Field Kit reading → 2.2 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): VAR

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045
WELL ID.: SA-PZ-160I1
DATE: 3-8-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1030	4.14	—	—	—	—	—	—	—	—	Initial
1035	4.15	375	6.20	0.149	2.28	11.28	10.62	107	0.0	clear
1040	4.15	375	6.11	0.156	1.98	10.43	10.87	96	0.0	clear
1045	4.15	375	6.08	0.158	1.24	10.12	10.98	92	0.0	clear
1050	4.15	375	6.08	0.159	1.16	9.70	11.03	89	0.0	clear
1055	4.15	375	6.08	0.159	1.05	9.57	10.98	86	0.0	clear
1100	4.15	375	6.08	0.158	0.96	9.26	11.05	83	0.0	clear
1105	4.15	375	6.08	0.158	0.91	9.28	11.10	81	0.0	clear
1110	4.15	375	6.08	0.157	0.87	9.16	11.02	80	0.0	clear
1115	4.15	375	6.08	0.157	0.86	9.20	10.98	79	0.0	clear
1120	4.15	375	6.08	0.157	0.85	9.14	11.03	78	0.0	clear - collect sample
										DO Field Kit
										reading → 0.6 ppm
										Fe field Kit
										reading → 2.2 mg/L

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-161I-20110308
Sample Location: PZ-161I
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-8-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1440	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP
Method: Peristaltic pump	Clear	5.72	0.114	10.99	0.52	9.02	0.0	128

PURGE DATA:

Date: 3-8-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1 inch PVC								
Total Well Depth (TD):								
Static Water Level (WL): 5.89			(See	Low	Flow	logs)		
One Casing Volume(gal/L):								
Start Purge (hrs): 1355								
End Purge (hrs): 1440								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 X 40 ml vials	Yes

OBSERVATIONS / NOTES:

- Tubing intake set in screened interval of well
- No odors, stains, or elevated PID readings observed
- DO Field Kit readings → 1.0 ppm
- Fe Field Kit readings → 0.0 Mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	SA-DUP02-20110308 (1600 hrs)

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112602045
WELL ID.: SA-PZ-161I
DATE: 3-8-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1350	5.89	—	—	—	—	—	—	—	—	Initial
1355	5.90	375	6.00	0.118	3.98	11.26	10.66	147	0.0	clear
1400	5.90	375	5.81	0.117	1.37	10.96	10.86	143	0.0	clear
1405	5.90	375	5.74	0.115	0.92	10.24	11.05	140	0.0	clear
1410	5.90	375	5.72	0.115	0.83	9.71	10.97	135	0.0	clear
1415	5.90	375	5.71	0.115	0.76	9.51	11.02	134	0.0	clear
1420	5.90	375	5.71	0.115	0.69	9.30	11.06	133	0.0	clear
1425	5.90	375	5.71	0.114	0.66	9.13	11.03	131	0.0	clear
1430	5.90	375	5.72	0.115	0.60	9.09	11.07	129	0.0	clear
1435	5.90	375	5.71	0.114	0.56	9.04	11.05	129	0.0	clear
1440	5.90	375	5.72	0.114	0.52	9.02	10.99	128	0.0	clear - collect sample
										DO Field Kit
										reading → 1.0 ppm
										Fe Field Kit
										reading → 0.0 mg/L

SIGNATURE(S): HAR

PAGE 1 OF 1

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[] Monitoring Well Data
[X] Other Well Type: Temporary Well
[] QA Sample Type:

Sample ID No.: SA-TW401-1115
Sample Location: TW-401
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-3-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 0940	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	clear	5.35	0.056	11.97	26.0	3.83	0.0	88

PURGE DATA: *(Gallons)*

Date: 6-3-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	5.68	0.067	12.95	343	4.12	0.0	53
Monitor Reading (ppm): 0.0	2	5.54	0.059	12.16	168	3.77	0.0	80
Well Casing Diameter & Material	3.5	5.45	0.059	12.15	140	3.81	0.0	77
Type: 1" Stainless	5	5.35	0.056	11.97	26.0	3.83	0.0	88
Total Well Depth (TD): 15'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 0920								
End Purge (hrs): 0940								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2X 40ML vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings observed.

Temporary well point screen zone 11 ft to 15 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.:

[] Domestic Well Data
[] Monitoring Well Data
[X] Other Well Type: Temporary Well
[] QA Sample Type:

Sample ID No.: SA-TW401-2125
Sample Location: TW-401
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-3-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1005	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	Brn Tint	6.31	0.133	12.13	50.2		0.0	

PURGE DATA: *(Gallons)*

Date: 6-3-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.01	0.132	12.24	993	3.39	0.0	-72
Monitor Reading (ppm): 0.0	2	6.22	0.133	12.19	180	3.26	0.0	-87
Well Casing Diameter & Material	3.5	6.29	0.133	12.09	112	3.35	0.0	-91
Type: 1" Stainless	5	6.31	0.133	12.13	50.2		0.0	
Total Well Depth (TD): 25'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 0945								
End Purge (hrs): 1005								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2X 40ML vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings observed

Temporary well point screen zone 21 ft to 25 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): [signature]

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[] Monitoring Well Data
[X] Other Well Type: Temporary Well
[] QA Sample Type:

Sample ID No.: SA-TW401-2630
Sample Location: TW-401
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-3-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1030	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	clear	5.90	0.126	12.91	10.9		0.0	

PURGE DATA: *(Gallons)*

Date: 6-3-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.05	0.145	13.12	2730	4.12	0.0	-9
Monitor Reading (ppm): 0.0	2	5.98	0.127	12.94	43.8	4.09	0.0	30
Well Casing Diameter & Material	3.5	5.92	0.125	13.00	15.2	4.23	0.0	49
Type: 1" Stainless	5	5.90	0.126	12.91	10.9		0.0	53
Total Well Depth (TD): 30'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1010								
End Purge (hrs): 1030								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2X 40ML vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings observed.

Temporary well point screen zone 26 ft to 30 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G0204.5

[] Domestic Well Data
[] Monitoring Well Data
[X] Other Well Type: Temporary Well
[] QA Sample Type:

Sample ID No.: SA-TW401-3135
Sample Location: TW-401
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-3-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP
Time: 1055								
Method: Peristaltic pump	clay. Gry	5.99	0.153	13.14	380	2.90	0.0	24

PURGE DATA: *(Gallons)*

Date: 6-3-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.08	0.176	13.27	2429	3.16	0.0	-42
Monitor Reading (ppm): 0.0	2	6.00	0.155	13.14	440	2.97	0.0	8
Well Casing Diameter & Material	3.5	6.00	0.154	13.18	470	2.82	0.0	16
Type: 1" Stainless	5	5.99	0.153	13.14	380	2.90	0.0	24
Total Well Depth (TD): 35'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1035								
End Purge (hrs): 1055								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2X 40ML vials	yes

OBSERVATIONS / NOTES:

Temporary well point screen zone 31 ft to 35 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[] Monitoring Well Data
[X] Other Well Type: Temporary Well
[] QA Sample Type:

Sample ID No.: SA-TW402-1115
Sample Location: TW-402
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-2-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1455	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	clear	4.72	0.044	13.81	4.0	7.35	0.0	188

PURGE DATA: *(Gallons)*

Date: 6-2-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.08	0.057	15.41	303	6.90	0.0	80
Monitor Reading (ppm):	2	5.63	0.047	14.83	5.2	7.19	0.0	128
Well Casing Diameter & Material	3.5	5.00	0.045	13.90	3.6	7.26	0.0	170
Type: 1" Stainless	5	4.72	0.044	13.81	4.0	7.35	0.0	188
Total Well Depth (TD): 15'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1435								
End Purge (hrs): 1455								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2X 40ML vials	yes

OBSERVATIONS / NOTES:

Temporary well point screen zone 11 ft to 15 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[] Monitoring Well Data
[X] Other Well Type: Temporary Well
[] QA Sample Type:

Sample ID No.: SA-TW402-2125
Sample Location: TW-402
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-2-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP
Time: 1520								
Method: Peristaltic pump	6m Tint	5.80	0.127	12.99	49.2	3.62	0.0	-61

PURGE DATA: *(Gallons)*

Date: 6-2-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	5.41	0.128	13.63	740	3.46	0.0	-55
Monitor Reading (ppm):	2	5.64	0.128	13.16	129	3.49	0.0	-66
Well Casing Diameter & Material	3.5	5.76	0.127	12.97	70.5	3.54	0.0	-63
Type: 1" Stainless	5	5.80	0.127	12.99	49.2	3.62	0.0	-61
Total Well Depth (TD): 25'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1500								
End Purge (hrs): 1520								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2X 40ML vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings

Temporary well point screen zone 21 ft to 25 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
–	–

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112602045

[] Domestic Well Data
[] Monitoring Well Data
[X] Other Well Type: Temporary Well
[] QA Sample Type:

Sample ID No.: SA-TW402-2630
Sample Location: TW-402
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-2-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1545	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	Brn Tint	6.04	0.119	13.67	90.4	4.07	0.0	5

PURGE DATA: *(Gallons)*

Date: 6-2-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.25	0.134	14.17	1773	3.60	0.0	-45
Monitor Reading (ppm): 0.0	2	6.17	0.126	13.60	811	3.87	0.0	-17
Well Casing Diameter & Material	3.5	6.06	0.120	13.62	180	4.01	0.0	-2
Type: 1" Stainless	5	6.04	0.119	13.67	90.4	4.07	0.0	5
Total Well Depth (TD): 30'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1525								
End Purge (hrs): 1545								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2X 40ML vials	yes (4)

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings

Temporary well point screen zone 26 ft to 30 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	SA-DUP01-20110602

Signature(s): [signature]

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.:

[] Domestic Well Data
[] Monitoring Well Data
[X] Other Well Type: Temporary Well
[] QA Sample Type:

Sample ID No.: SA-TW402-3135
Sample Location: TW-402
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-2-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1615	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	Cldy-Gry	5.92	0.163	13.70	201	3.88	0.0	29

PURGE DATA: *(Gallons)*

Date: 6-2-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.10	0.187	14.13	2247	2.94	0.0	-30
Monitor Reading (ppm): 0.0	2	6.04	0.165	13.89	2050	3.15	0.0	2
Well Casing Diameter & Material	3.5	5.94	0.166	13.65	1305	3.40	0.0	15
Type: 1" Stainless	5	5.92	0.163	13.70	201	3.88	0.0	29
Total Well Depth (TD): 35'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1555								
End Purge (hrs): 1615								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2X 40ML vials	yes (6)

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings

Temporary well point screen zone 31 ft to 35 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
yes	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[] Monitoring Well Data
[X] Other Well Type: Temporary Well
[] QA Sample Type:

Sample ID No.: SA-TW403-2125
Sample Location: TW-403
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-2-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1240	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	clear	6.20	0.199	15.38	18.0	3.25	0.0	-54

PURGE DATA: *(Gallons)*

Date: 6-2-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.45	0.224	16.09	1285	3.65	0.0	-84
Monitor Reading (ppm): 0.0	2	6.31	0.208	15.55	175	3.44	0.0	-65
Well Casing Diameter & Material	3.5	6.25	0.200	15.54	39.2	3.31	0.0	-60
Type: 1" Stainless	5	6.20	0.199	15.38	18.0	3.25	0.0	-54
Total Well Depth (TD): 25'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1220								
End Purge (hrs): 1240								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3X 40ML vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings

Temporary well point screen zone 21 ft to 25 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 11260 2045

[] Domestic Well Data
[] Monitoring Well Data
[X] Other Well Type: Temporary Well
[] QA Sample Type:

Sample ID No.: SA-TW403-2630
Sample Location: TW-403
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-2-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1305	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	Brn Tint	5.89	0.147	15.74	186	5.87	0.0	67

PURGE DATA: *(Gallons)*

Date: 6-2-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.14	0.179	16.53	2071	3.63	0.0	-40
Monitor Reading (ppm): 0.0	2	6.07	0.157	15.98	871	4.89	0.0	22
Well Casing Diameter & Material	3.5	5.95	0.150	15.68	306	5.64	0.0	56
Type: 1" Stainless	5	5.89	0.147	15.74	186	5.87	0.0	67
Total Well Depth (TD): 30'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1245								
End Purge (hrs): 1305								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2X 40ML vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings

Temporary well point screen zone 26 ft to 30 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[] Monitoring Well Data
[X] Other Well Type: Temporary Well
[] QA Sample Type:

Sample ID No.: SA-TW403-3135
Sample Location: TW-403
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-2-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1330	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	Brn Tint	5.85	0.154	15.92	52.0	3.80	0.0	58

PURGE DATA: *(Gallons)*

Date: 6-2-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.05	0.177	16.20	2053	3.09	0.0	-16
Monitor Reading (ppm): 0.0	2	6.00	0.161	16.10	209	3.35	0.0	28
Well Casing Diameter & Material	3.5	5.91	0.154	15.99	94.2	3.67	0.0	47
Type: 1" Stainless	5	5.85	0.154	15.92	52.0	3.80	0.0	58
Total Well Depth (TD): 35'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1310								
End Purge (hrs): 1330								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2X 40ML vials	yes

OBSERVATIONS / NOTES:

Temporary well point screen zone 31 ft to 35 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
–	–

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[] Monitoring Well Data
[X] Other Well Type: Temporary Well
[] QA Sample Type:

Sample ID No.: SA-TW404-2125
Sample Location: TW-404
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-3-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1210	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	cldy Brn	6.19	0.213	12.43	202			

PURGE DATA: *(Gallons)*

Date: 6-3-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.31	0.214	13.24	350	6.05	0.0	8
Monitor Reading (ppm):	2	6.35	0.215	12.52	235	6.18	0.0	16
Well Casing Diameter & Material	3.5	6.22	0.214	12.39	216	6.11	0.0	24
Type: 1" Stainless	5	6.19	0.213	12.43	202		0.0	28
Total Well Depth (TD): 25'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1150								
End Purge (hrs): 1210								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3X 40ML vials	Yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings observed

Temporary well point screen zone 21 ft to 25 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[] Monitoring Well Data
[X] Other Well Type: Temporary Well
[] QA Sample Type:

Sample ID No.: SA-TW404-3135
Sample Location: TW-404
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-3-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1235	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	Cldy Gry	6.16	0.212	12.80	225	4.07	0.0	28

PURGE DATA: *(Gallons)*

Date: 6-3-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.25	0.235	13.10	1715	3.44	0.0	-56
Monitor Reading (ppm):	2	6.22	0.215	12.92	357	3.68	0.0	4
Well Casing Diameter & Material	3.5	6.18	0.214	12.72	296	3.90	0.0	22
Type: 1" Stainless	5	6.16	0.212	12.80	225	4.02	0.0	28
Total Well Depth (TD): 35'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1215								
End Purge (hrs): 1235								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3X 40ML vials	Yes

OBSERVATIONS / NOTES:

Temporary well point screen zone 31 ft to 35 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[] Monitoring Well Data
[X] Other Well Type: Temporary Well
[] QA Sample Type:

Sample ID No.: SA-TW405-2125
Sample Location: TW-405
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-6-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1015	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	Clear	6.26	0.206	12.29	6.1	7.39	0.0	48

PURGE DATA: *(Gallons)*

Date: 6-6-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.40	0.221	12.76	398	5.49	0.0	-20
Monitor Reading (ppm):	2	6.28	0.208	12.31	12.9	6.97	0.0	24
Well Casing Diameter & Material	3.5	6.25	0.206	12.35	7.6	7.31	0.0	41
Type: 1" Stainless	5	6.26	0.206	12.29	6.1	7.39	0.0	48
Total Well Depth (TD): 25'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 0955								
End Purge (hrs): 1015								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3X 40ML vials	yes (4)

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings

Temporary well point screen zone 21 ft to 25 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	SA-DUP02-20110606 (1800 hrs)

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[] Monitoring Well Data
[X] Other Well Type: Temporary Well
[] QA Sample Type:

Sample ID No.: SA-TW405-3135
Sample Location: TW-405
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-6-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 0956	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	Cldy-Gry	6.27	0.290	13.03	1450	3.02	0.0	-11.3

PURGE DATA: *(Gallons)*

Date: 6-6-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.35	0.377	13.89	2444	3.80	0.0	-90
Monitor Reading (ppm): 0.0	2	6.58	0.306	13.20	1971	3.39	0.0	-122
Well Casing Diameter & Material	3.5	6.45	0.295	13.01	1508	3.20	0.0	-109
Type: 1" Stainless	5	6.27	0.290	13.03	1450	3.02	0.0	-113
Total Well Depth (TD): 35'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 0930								
End Purge (hrs): 0950								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2X 40ML vials	Yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings

Temporary well point screen zone 31 ft to 35 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112602045

[] Domestic Well Data
[] Monitoring Well Data
[X] Other Well Type: Temporary Well
[] QA Sample Type:

Sample ID No.: SA-TW406-2125
Sample Location: TW-406
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP
Date: 6-6-11								
Time: 1245								
Method: Peristaltic pump	Brn Tint	6.02	0.189	12.66	90.3	6.67	0.0	28

PURGE DATA: *(Gallons)*

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date: 6-6-11								
Method: Peristaltic pump	0.5	6.49	0.203	14.55	1184	6.32	0.0	-38
Monitor Reading (ppm): 0.0	2	6.38	0.195	13.20	740	6.44	0.0	-6
Well Casing Diameter & Material	3.5	6.16	0.192	12.97	318	6.53	0.0	11
Type: 1" Stainless	5	6.02	0.189	12.66	90.3	6.67	0.0	28
Total Well Depth (TD): 25'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1225								
End Purge (hrs): 1245								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2X 40ML vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings observed

Temporary well point screen zone 21 ft to 25 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[] Monitoring Well Data
[X] Other Well Type: Temporary Well
[] QA Sample Type:

Sample ID No.: SA-TW406-31.35
Sample Location: TW-406
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP
Date: 6-6-11								
Time: 1310								
Method: Peristaltic pump	Cldy-Gry	6.04	0.214	13.38	770	3.25	0.0	14

PURGE DATA: *(Gallons)*

Date: 6-6-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.11	0.233	13.35	2471	3.00	0.0	-80
Monitor Reading (ppm):	2	6.03	0.224	13.31	1700	2.92	0.0	-29
Well Casing Diameter & Material	3.5	6.04	0.219	13.34	1151	3.19	0.0	-3
Type: 1" Stainless	5	6.04	0.214	13.38	770	3.25		14
Total Well Depth (TD): 35'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1250								
End Purge (hrs): 1310								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2X 40ML vials	Yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings

Temporary well point screen zone 31 ft to 35 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112602045

[] Domestic Well Data
[] Monitoring Well Data
[X] Other Well Type: Temporary Well
[] QA Sample Type:

Sample ID No.: SA-TW407-2125
Sample Location: TW-407
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP
Date: 6-6-11								
Time: 1135								
Method: Peristaltic pump	Brn Tint	6.33	0.176	12.69	42.0	7.12	0.0	27

PURGE DATA: *(Gallons)*

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date: 6-6-11								
Method: Peristaltic pump	0.5	6.58	0.186	13.05	1563	6.17	0.0	-30
Monitor Reading (ppm): 0.0	2	6.52	0.181	12.59	290	6.75	0.0	6
Well Casing Diameter & Material	3.5	6.38	0.175	12.65	135	7.04	0.0	19
Type: 1" Stainless	5	6.33	0.176	12.69	42.0	7.12	0.0	27
Total Well Depth (TD): 25'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1115								
End Purge (hrs): 1135								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3X 40ML vials	Yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings

Temporary well point screen zone 21 ft to 25 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[] Monitoring Well Data
[X] Other Well Type: Temporary Well
[] QA Sample Type:

Sample ID No.: SA-TW407-31.35
Sample Location: TW-407
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-6-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1105	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	clay Brn	6.56	0.281	13.31	814	2.73	0.0	-141

PURGE DATA: *(Gallons)*

Date: 6-6-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.52	0.288	14.51	2563	3.60	0.0	-125
Monitor Reading (ppm): 0.0	2	6.57	0.282	13.68	1605	3.01	0.0	-134
Well Casing Diameter & Material	3.5	6.57	0.281	13.27	1316	2.90	0.0	-140
Type: 1" Stainless	5	6.56	0.281	13.31	814	2.73	0.0	-141
Total Well Depth (TD): 35'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1045								
End Purge (hrs): 1105								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3X 40ML vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings

Temporary well point screen zone 31 ft to 35 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[] Monitoring Well Data
[X] Other Well Type: Temporary Well
[] QA Sample Type:

Sample ID No.: SA-TW408-3337
Sample Location: TW-408
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP
Date: 6-10-11								
Time: 0950								
Method: Peristaltic pump	Cly-Brn	5.75	0.157	13.63	874		0.0	15

PURGE DATA: *(Gallons)*

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date: 6-10-11								
Method: Peristaltic pump	0.5	6.05	0.173	14.36	2692	3.70	0.0	-22
Monitor Reading (ppm): 0.0	2	5.94	0.160	13.54	1365	3.38	0.0	-9
Well Casing Diameter & Material	3.5	5.75	0.159	13.59	1160	3.20	0.0	8
Type: 1" Stainless	5	5.75	0.157	13.63	874		0.0	15
Total Well Depth (TD): 37'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 0930								
End Purge (hrs): 0950								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2 X 40 ml vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings observed

Temporary well point screen zone 33 ft to 37 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[] Monitoring Well Data
[X] Other Well Type: Temporary Well
[] QA Sample Type:

Sample ID No.: SA-TW408-3842
Sample Location: TW-408
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP
Date: 6-10-11								
Time: 1015								
Method: Peristaltic pump	Tint-Brn	5.87	0.171	13.91	247	2.99	0.0	29

PURGE DATA: *(Gallons)*

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date: 6-10-11								
Method: Peristaltic pump	0.5	5.91	0.198	13.80	1763	3.17	0.0	-35
Monitor Reading (ppm): 0.0	2	5.90	0.173	13.84	461	3.06	0.0	3
Well Casing Diameter & Material	3.5	5.86	0.174	13.87	405	3.02	0.0	18
Type: 1" Stainless	5	5.87	0.171	13.91	247	2.99	0.0	29
Total Well Depth (TD): 42'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 0955								
End Purge (hrs): 1015								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2 X 40 ml vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings observed

Temporary well point screen zone 38 ft to 42 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[] Monitoring Well Data
[X] Other Well Type: Temporary Well
[] QA Sample Type:

Sample ID No.: SA-TW408-4347
Sample Location: TW-408
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-10-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1040	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	clay-Brn	5.91	0.133	14.04	870	2.55	0.0	19

PURGE DATA: *(Gallons)*

Date: 6-10-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.15	0.164	14.28	2281	2.93	0.0	-4
Monitor Reading (ppm): 0.0	2	6.09	0.137	14.13	1708	2.60	0.0	-18
Well Casing Diameter & Material	3.5	5.92	0.133	14.10	1004	2.52	0.0	10
Type: 1" Stainless	5	5.91	0.133	14.04	870	2.55	0.0	19
Total Well Depth (TD): 47'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1020								
End Purge (hrs): 1040								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2 X 40 ml vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings.

Temporary well point screen zone 43 ft to 47 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[] Monitoring Well Data
[X] Other Well Type: Temporary Well
[] QA Sample Type:

Sample ID No.: SA-TW409-3337
Sample Location: TW-409
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP
Date: 6-9-11								
Time: 1340								
Method: Peristaltic pump	clay-Brn	5.32	0.131	14.18	916	2.89	0.0	30

PURGE DATA: *(Gallons)*

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date: 6-9-11								
Method: Peristaltic pump	0.5	6.06	0.155	15.01	2895	3.31	0.0	-40
Monitor Reading (ppm): 0.0	2	5.80	0.135	14.62	1907	3.20	0.0	-8
Well Casing Diameter & Material	3.5	5.40	0.130	14.24	1261	2.98	0.0	24
Type: 1" Stainless	5	5.32	0.131	14.18	916	2.89	0.0	30
Total Well Depth (TD): 37'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1320								
End Purge (hrs): 1340								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2 X 40 ml vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings observed.

Temporary well point screen zone 33 ft to 37 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[] Monitoring Well Data
[X] Other Well Type: Temporary Well
[] QA Sample Type:

Sample ID No.: SA-TW409-3842
Sample Location: TW-409
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP
Date: 6-9-11								
Time: 1410								
Method: Peristaltic pump	Clear	5.22	0.122	14.09	40.0	4.55	0.0	108

PURGE DATA: *(Gallons)*

Date: 6-9-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	5.36	0.130	14.92	387	4.21	0.0	73
Monitor Reading (ppm): 0.0	2	5.29	0.124	14.47	66.1	4.43	0.0	87
Well Casing Diameter & Material	3.5	5.21	0.123	14.31	44.2	4.51	0.0	102
Type: 1" Stainless	5	5.22	0.122	14.09	40.0	4.55	0.0	108
Total Well Depth (TD): 42'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1350								
End Purge (hrs): 1410								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2 X 40 ml vials	yes (6)

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings observed.

Temporary well point screen zone 38 ft to 42 ft.

Circle if Applicable:

MS/MSD (Yes)

Duplicate ID No.: —

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[] Monitoring Well Data
[X] Other Well Type: Temporary Well
[] QA Sample Type:

Sample ID No.: SA-TW 409-4347
Sample Location: TW-409
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-9-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1440	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	cldy-Gry	5.94	0.155	14.63	3062	2.50	0.0	-70

PURGE DATA: *(Gallons)*

Date: 6-9-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.29	0.171	15.21	3088	2.91	0.0	-81
Monitor Reading (ppm): 0.0	2	6.08	0.163	14.90	3130	2.79	0.0	-75
Well Casing Diameter & Material	3.5	5.99	0.158	14.78	3075	2.63	0.0	-72
Type: 1" Stainless	5	5.94	0.155	14.63	3062	2.50	0.0	-70
Total Well Depth (TD): 47'								
Static Water Level (WL): pA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1420								
End Purge (hrs): 1440								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2 X 40 ml vials	Yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings observed

Temporary well point screen zone 43 ft to 47 ft.

- water was very cloudy (Gray) with much silt particles

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[] Monitoring Well Data
[X] Other Well Type: Temporary Well
[] QA Sample Type:

Sample ID No.: SA-TW410-3337
Sample Location: TW-410
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-9-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1040	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	cldy-Gy	5.42	0.119	14.20	844	2.49	0.0	22

PURGE DATA: *(Gallons)*

Date: 6-9-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.12	0.133	14.87	2078	3.37	0.0	-33
Monitor Reading (ppm): 0.0	2	5.99	0.121	14.60	1602	2.93	0.0	-18
Well Casing Diameter & Material	3.5	5.60	0.121	14.16	1670	2.74	0.0	9
Type: 1" Stainless	5	5.42	0.119	14.20	844	2.49	0.0	22
Total Well Depth (TD): 37'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1020								
End Purge (hrs): 1040								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2 X 40 ml vials	yes

OBSERVATIONS / NOTES:

No odors, stains, or elevated PID readings observed.

Temporary well point screen zone 33 ft to 37 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[] Monitoring Well Data
[X] Other Well Type: Temporary Well
[] QA Sample Type:

Sample ID No.: SA-TW410-3842
Sample Location: TW-410
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP
Date: 6-9-11								
Time: 1105								
Method: Peristaltic pump	Cldy-Brn	5.81	0.143	14.21	523	3.15	0.0	16

PURGE DATA: *(Gallons)*

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date: 6-9-11								
Method: Peristaltic pump	0.5	5.74	0.161	14.81	1813	3.19	0.0	-12
Monitor Reading (ppm): 0.0	2	5.80	0.150	14.12	951	3.27	0.0	-1
Well Casing Diameter & Material	3.5	5.75	0.145	14.18	877	3.22	0.0	10
Type: 1" Stainless	5	5.81	0.143	14.21	523	3.15	0.0	16
Total Well Depth (TD): 42'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1045								
End Purge (hrs): 1105								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2 X 40 ml vials	yes (4)

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings.

Temporary well point screen zone 38 ft to 42 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:	
—	SA-DUP04-20110609	1800 hrs

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[] Monitoring Well Data
[X] Other Well Type: Temporary Well
[] QA Sample Type:

Sample ID No.: SA-TW410-4347
Sample Location: TW-410
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-9-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1130	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	Tint Brn	5.75	0.135	14.31	93	3.60	0.0	58

PURGE DATA: *(Gallons)*

Date: 6-9-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.12	0.148	14.92	2215	3.41	0.0	-8
Monitor Reading (ppm): 0.0	2	5.99	0.139	14.48	296	3.53	0.0	14
Well Casing Diameter & Material	3.5	5.83	0.135	14.29	182	3.69	0.0	42
Type: 1" Stainless	5	5.75	0.135	14.31	93	3.60	0.0	58
Total Well Depth (TD): 47'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1110								
End Purge (hrs): 1130								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2 X 40 ml vials	yes

OBSERVATIONS / NOTES:

No odors, stains, or elevated PID readings

Temporary well point screen zone 43 ft to 47 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[] Monitoring Well Data
[X] Other Well Type: Temporary Well
[] QA Sample Type:

Sample ID No.: SA-TW411-3337
Sample Location: TW-411
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP
Date: 6-8-11 Time: 1515 Method: Peristaltic pump	Cldy-Brn	5.94	0.114	14.23	1407	3.51	0.0	-14

PURGE DATA: *(Gallons)*

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date: 6-8-11								
Method: Peristaltic pump	0.5	6.17	0.173	14.60	2919	3.19	0.0	-64
Monitor Reading (ppm):	2	6.15	0.129	14.31	2229	3.24	0.0	-45
Well Casing Diameter & Material	3.5	5.97	0.115	14.20	2004	3.39	0.0	-23
Type: 1" Stainless	5	5.94	0.114	14.23	1407	3.51	0.0	-14
Total Well Depth (TD): 37'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1455								
End Purge (hrs): 1515								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2 X 40 ml vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings

Temporary well point screen zone 33 ft to 37 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[] Monitoring Well Data
[X] Other Well Type: Temporary Well
[] QA Sample Type:

Sample ID No.: SA-TW411-3842
Sample Location: TW-411
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-8-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP
Time: 1545								
Method: Peristaltic pump	Brn Tint	5.50	0.130	14.06	302	3.04	0.0	44

PURGE DATA: *(Gallons)*

Date: 6-8-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	5.65	0.147	14.81	3003	3.53	0.0	-17
Monitor Reading (ppm): 0.0	2	5.69	0.132	14.40	330	3.40	0.0	4
Well Casing Diameter & Material	3.5	5.56	0.133	14.08	374	3.29	0.0	37
Type: 1" Stainless	5	5.50	0.130	14.06	302	3.04	0.0	44
Total Well Depth (TD): 42'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1525								
End Purge (hrs): 1545								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2 X 40 ml vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings

Temporary well point screen zone 38 ft to 42 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[] Monitoring Well Data
[X] Other Well Type: Temporary Well
[] QA Sample Type:

Sample ID No.: SA-TW411-4347
Sample Location: TW-411
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-8-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1610	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	Cldy-Gry	6.43	0.164	14.53	1403	2.70	0.0	-103

PURGE DATA: *(Gallons)*

Date: 6-8-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.09	0.180	14.90	3378	3.52	0.0	-68
Monitor Reading (ppm):	2	6.31	0.183	14.73	3120	3.16	0.0	-91
Well Casing Diameter & Material	3.5	6.40	0.168	14.68	2870	2.92	0.0	-98
Type: 1" Stainless	5	6.43	0.164	14.53	1403	2.70	0.0	-103
Total Well Depth (TD): 47'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1550								
End Purge (hrs): 1610								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2 X 40 ml vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings

Temporary well point screen zone 43 ft to 47 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[] Monitoring Well Data
[X] Other Well Type: Temporary Well
[] QA Sample Type:

Sample ID No.: SA-TW412-3337
Sample Location: TW-412
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-8-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1245	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	Tint-Brn	5.35	0.123	14.36	280		0.0	38

PURGE DATA: *(Gallons)*

Date: 6-8-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.35	0.132	15.30	1366	4.40	0.0	-34
Monitor Reading (ppm): 0.0	2	5.85	0.123	14.90	267	3.72	0.0	14
Well Casing Diameter & Material	3.5	5.44	0.123	14.59	304	3.40	0.0	37
Type: 1" Stainless	5	5.35	0.123	14.36	280		0.0	38
Total Well Depth (TD): 37'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1225								
End Purge (hrs): 1245								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2 X 40 ml vials	yes

OBSERVATIONS / NOTES:

No odors, stains, or elevated PID readings

Temporary well point screen zone 33 ft to 37 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[] Monitoring Well Data
[X] Other Well Type: Temporary Well
[] QA Sample Type:

Sample ID No.: SA-TW412-3842
Sample Location: TW-412
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP
Date: 6-8-11								
Time: 1310								
Method: Peristaltic pump	Cldy-brn	5.73	0.151	14.18	960	2.90	0.0	12

PURGE DATA: *(Gallons)*

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date: 6-8-11								
Method: Peristaltic pump	0.5	5.82	0.179	14.91	1845	3.11	0.0	-50
Monitor Reading (ppm): 0.0	2	5.79	0.156	14.65	1630	3.23	0.0	-11
Well Casing Diameter & Material	3.5	5.71	0.154	14.26	1409	2.97	0.0	6
Type: 1" Stainless	5	5.73	0.151	14.18	960	2.90	0.0	12
Total Well Depth (TD): 42'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1250								
End Purge (hrs): 1310								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2 X 40 ml vials	yes

OBSERVATIONS / NOTES:

No odors, stains, or elevated PID readings

Temporary well point screen zone 38 ft to 42 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): [illegible]

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[] Monitoring Well Data
[X] Other Well Type: Temporary Well
[] QA Sample Type:

Sample ID No.: SA-TW412-4347
Sample Location: TW-412
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP
Date: 6-8-11								
Time: 1335								
Method: Peristaltic pump	clear	5.74	0.129	14.21	30.3	3.90	0.0	68

PURGE DATA: *(Gallons)*

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date: 6-8-11								
Method: Peristaltic pump	0.5	6.12	0.148	14.92	2875	~~20.0~~	0.0	-12
Monitor Reading (ppm): 0.0	2	5.95	0.131	14.50	128	3.74	0.0	36
Well Casing Diameter & Material	3.5	5.76	0.129	14.29	68.2	3.85	0.0	59
Type: 1" Stainless	5	5.74	0.129	14.21	30.3	3.90	0.0	68
Total Well Depth (TD): 47'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1315								
End Purge (hrs): 1335								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2 X 40 ml vials	yes

OBSERVATIONS / NOTES:

No odors, stains, or elevated PID readings

Temporary well point screen zone 43 ft to 47 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[] Monitoring Well Data
[X] Other Well Type: Temporary Well
[] QA Sample Type:

Sample ID No.: SA-TW413-3337
Sample Location: TW-413
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP
Date: 6-8-11								
Time: 0935								
Method: Peristaltic pump	cldy-Brn	5.35	0.181	13.89	488	2.98	0.0	39

PURGE DATA: *(Gallons)*

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date: 6-8-11								
Method: Peristaltic pump	0.5	6.07	0.212	15.30	538	4.21	0.0	-20
Monitor Reading (ppm): 0.0	2	5.71	0.184	14.05	437	3.49	0.0	14
Well Casing Diameter & Material	3.5	5.40	0.180	14.00	472	3.22	0.0	37
Type: 1" Stainless	5	5.35	0.181	13.89	488	2.98	0.0	39
Total Well Depth (TD): 37'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 0915								
End Purge (hrs): 0935								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3X 40ML vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings

Temporary well point screen zone 33 ft to 37 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[] Monitoring Well Data
[X] Other Well Type: Temporary Well
[] QA Sample Type:

Sample ID No.: SA-TW413-3842
Sample Location: TW-413
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-8-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1000	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	cldy-Brn	5.97	0.200	14.00	1540	2.19	0.0	-29

PURGE DATA: *(Gallons)*

Date: 6-8-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	5.88	0.277	14.58	2973	2.99	0.0	-81
Monitor Reading (ppm): 0.0	2	6.07	0.224	14.10	2788	2.36	0.0	-56
Well Casing Diameter & Material	3.5	5.98	0.207	13.97	2590	2.27	0.0	-36
Type: 1" Stainless	5	5.97	0.200	14.00	1540	2.19	0.0	-29
Total Well Depth (TD): 42'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 0940								
End Purge (hrs): 1000								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2X 40ML vials	yes (4)

OBSERVATIONS / NOTES:

No odors, stains, or elevated PID readings

Temporary well point screen zone 38 ft to 42 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	SA-DUP03-20110608 1800 hrs

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[] Monitoring Well Data
[X] Other Well Type: Temporary Well
[] QA Sample Type:

Sample ID No.: SA-TW413-4347
Sample Location: TW-413
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP
Date: 6-8-11								
Time: 1025								
Method: Peristaltic pump		6.31	0.305	14.09	190	2.80	0.0	-95

PURGE DATA: *(Gallons)*

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date: 6-8-11								
Method: Peristaltic pump	0.5	6.51	0.360	14.61	2997	3.27	0.0	-119
Monitor Reading (ppm): 0.0	2	6.53	0.334	14.30	2861	2.84	0.0	-124
Well Casing Diameter & Material	3.5	6.37	0.315	14.05	1485	2.73	0.0	-109
Type: 1" Stainless	5	6.31	0.305	14.09	190	2.80	0.0	-95
Total Well Depth (TD): 47'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1005								
End Purge (hrs): 1025								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2 X 40 ml vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings

Temporary well point screen zone 43 ft to 47 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112602045

[] Domestic Well Data
[] Monitoring Well Data
[X] Other Well Type: Temporary Well
[] QA Sample Type:

Sample ID No.: SA-TW414-3337
Sample Location: TW-414
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP
Date: 6-7-11								
Time: 1340								
Method: Peristaltic pump	Oldy-Gry	5.41	0.192	14.02	1205	3.08	0.0	41

PURGE DATA: *(Gallons)*

Date: 6-7-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.18	0.208	14.80	1560	3.41	0.0	-17
Monitor Reading (ppm):	2	5.96	0.196	14.42	1398	3.35	0.0	12
Well Casing Diameter & Material	3.5	5.50	0.192	14.13	1402	3.02	0.0	37
Type: 1" Stainless	5	5.41	0.192	14.02	1205	3.08	0.0	41
Total Well Depth (TD): 37'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): 4								
Start Purge (hrs): 1320								
End Purge (hrs): 1340								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2X 40ML vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings observed.

Temporary well point screen zone 33ft to 37 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112602045

[] Domestic Well Data
[] Monitoring Well Data
[X] Other Well Type: Temporary Well
[] QA Sample Type:

Sample ID No.: SA-TW414-3842
Sample Location: TW-414
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-7-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1405	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	cldy-Gry	5.56	0.142	13.86	1484	2.51	0.0	50

PURGE DATA: *(Gallons)*

Date: 6-7-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	5.92	0.187	14.69	2997	3.22	0.0	-80
Monitor Reading (ppm): 0.0	2	5.87	0.155	13.74	2750	2.90	0.0	-7
Well Casing Diameter & Material	3.5	5.60	0.146	13.80	2263	2.67	0.0	34
Type: 1" Stainless	5	5.56	0.142	13.86	1484	2.51	0.0	50
Total Well Depth (TD): 42'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1345								
End Purge (hrs): 1405								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2X 40ML vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings

Temporary well point screen zone 38 ft to 42 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112602045

[] Domestic Well Data
[] Monitoring Well Data
[X] Other Well Type: Temporary Well
[] QA Sample Type:

Sample ID No.: SA-TW414-4347
Sample Location: TW-414
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-7-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1430	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	Cldy-Gry	6.05	0.161	14.50	1613	3.60	0.0	-10

PURGE DATA: *(Gallons)*

Date: 6-7-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.46	0.221	15.03	3314	4.21	0.0	-110
Monitor Reading (ppm): 0.0	2	6.52	0.196	14.87	3117	4.06	0.0	-80
Well Casing Diameter & Material	3.5	6.24	0.168	14.61	2685	3.91	0.0	-22
Type: 1" Stainless	5	6.05	0.161	14.50	1613	3.60	0.0	-10
Total Well Depth (TD): 47'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1410								
End Purge (hrs): 1430								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2X 40ML vials	Yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings.

Temporary well point screen zone 43 ft to 47 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[] Monitoring Well Data
[X] Other Well Type: Temporary Well
[] QA Sample Type:

Sample ID No.: SA-TW414-4852
Sample Location: TW-414
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-7-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP
Time:								
Method: Peristaltic pump								

PURGE DATA: *(Gallons)*

Date: 6-7-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5							
Monitor Reading (ppm):	2							
Well Casing Diameter & Material	3.5							
Type: 1" Stainless	5							
Total Well Depth (TD): 52								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs):								
End Purge (hrs):								
Total Purge Time (min):								
Total Vol. Purged (gal/L):								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2X 40ML vials	Yes

OBSERVATIONS / NOTES:

Temporary well point screen zone 48 ft to 52 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[] Monitoring Well Data
[X] Other Well Type: Temporary Well
[] QA Sample Type:

Sample ID No.: SA-TW415-3337
Sample Location: TW-415
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP
Date: 6-7-11								
Time: 1050								
Method: Peristaltic pump	Tint Brn	5.59	0.208	13.45	255		0.0	47

PURGE DATA: *(Gallons)*

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date: 6-7-11								
Method: Peristaltic pump	0.5	6.01	0.226	14.92	1438	2.84	0.0	-4
Monitor Reading (ppm): 0.0	2	5.89	0.214	14.06	296	2.77	0.0	27
Well Casing Diameter & Material	3.5	5.68	0.209	13.65	307	2.81	0.0	43
Type: 1" Stainless	5	5.59	0.208	13.45	255	2.73	0.0	47
Total Well Depth (TD): 37'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1030								
End Purge (hrs): 1050								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2X 40ML vials	Yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings

Temporary well point screen zone 33 ft to 37 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112602045

[] Domestic Well Data
[] Monitoring Well Data
[X] Other Well Type: Temporary Well
[] QA Sample Type:

Sample ID No.: SA-TW415-3842
Sample Location: TW-415
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP
Date: 6-7-11								
Time: 1115								
Method: Peristaltic pump	cldy-Gry	5.77	0.138	13.40	1611		0.0	17

PURGE DATA: *(Gallons)*

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date: 6-7-11								
Method: Peristaltic pump	0.5	6.07	0.166	13.70	2384	2.39	0.0	-55
Monitor Reading (ppm): 0.0	2	5.98	0.145	13.26	1947	2.30	0.0	-10
Well Casing Diameter & Material	3.5	5.88	0.141	13.33	1796	2.41	0.0	8
Type: 1" Stainless	5	5.87	0.138	13.40	1611		0.0	17
Total Well Depth (TD): 42'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1055								
End Purge (hrs): 1115								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3X 40ML vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings observed.

Temporary well point screen zone 38 ft to 42 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[] Monitoring Well Data
[X] Other Well Type: Temporary Well
[] QA Sample Type:

Sample ID No.: SA-TW415-4347
Sample Location: TW-415
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-7-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1140	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	Clay-Gry	5.89	0.132	13.94	501	2.88	0.0	43

PURGE DATA: *(Gallons)*

Date: 6-7-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.21	0.157	14.00	2936	2.40	0.0	-35
Monitor Reading (ppm): 0.0	2	6.05	0.135	13.87	2005	2.57	0.0	16
Well Casing Diameter & Material	3.5	5.92	0.134	13.90	805	2.80	0.0	34
Type: 1" Stainless	5	5.89	0.132	13.94	501	2.88	0.0	43
Total Well Depth (TD): 47'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1120								
End Purge (hrs): 1140								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2X 40ML vials	Yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings

Temporary well point screen zone 43 ft to 47 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[] Monitoring Well Data
[X] Other Well Type: Temporary Well
[] QA Sample Type:

Sample ID No.: SA-TW416-3337
Sample Location: TW-416
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-6-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP
Time: 1500								
Method: Peristaltic pump	cldy Brn	5.51	0.183	13.90	316		0.0	34

PURGE DATA:

Date: 6-6-11	(Gallons) Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.29	0.210	14.79	897	4.21	0.0	-50
Monitor Reading (ppm):	2	5.88	0.188	14.37	307	3.90	0.0	-1
Well Casing Diameter & Material	3.5	5.50	0.182	14.02	303	3.81	0.0	22
Type: 1" Stainless	5	5.51	0.183	13.90	316		0.0	34
Total Well Depth (TD): 37'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1440								
End Purge (hrs): 1500								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2X 40ML vials	yes (6)

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings

Temporary well point screen zone 33 ft to 37 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
Yes	—

Signature(s): [signature]

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[] Monitoring Well Data
[X] Other Well Type: Temporary Well
[] QA Sample Type:

Sample ID No.: SA-TW416-3842
Sample Location: TW-416
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-6-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1525	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	cldy-Brn	5.62	0.178	13.64	817	3.28	0.0	21

PURGE DATA: *(Gallons)*

Date: 6-6-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	5.63	0.199	14.11	2475	4.20	0.0	-22
Monitor Reading (ppm): 0.0	2	5.62	0.187	13.66	2006	3.82	0.0	4
Well Casing Diameter & Material	3.5	5.61	0.178	13.70	1434	3.55	0.0	23
Type: 1" Stainless	5	5.62	0.178	13.64	817	3.28	0.0	21
Total Well Depth (TD): 42'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1505								
End Purge (hrs): 1525								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2X 40ML vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings

Temporary well point screen zone 38 ft to 42 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
–	–

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[] Monitoring Well Data
[X] Other Well Type: Temporary Well
[] QA Sample Type:

Sample ID No.: SA-TW416-4347
Sample Location: TW-416
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-6-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP
Time: 1550								
Method: Peristaltic pump	Tan Tint	6.11	0.155	13.49	87	4.09	0.0	-14

PURGE DATA: *(Gallons)*

Date: 6-6-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.31	0.178	14.60	1347	4.31	0.0	-63
Monitor Reading (ppm): 0.0	2	6.22	0.162	13.85	217	4.25	0.0	-38
Well Casing Diameter & Material	3.5	6.13	0.156	13.51	152	4.18	0.0	-19
Type: 1" Stainless	5	6.11	0.155	13.49	87	4.09	0.0	-14
Total Well Depth (TD): 47'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1530								
End Purge (hrs): 1550								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3X 40ML vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings.

Temporary well point screen zone 43 ft to 47 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): [signature]

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[] Monitoring Well Data
[X] Other Well Type: Temporary Well
[] QA Sample Type:

Sample ID No.: SA-TW416-4852
Sample Location: TW-416
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-7-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 0942	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	cldy-Gry	5.44	0.132	13.23	247	3.08	0.0	70

PURGE DATA: *(Gallons)*

Date: 6-7-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	5.86	0.148	15.75	1142	4.12	0.0	40
Monitor Reading (ppm): 0.0	2	5.80	0.133	13.92	362	3.23	0.0	57
Well Casing Diameter & Material	3.5	5.55	0.132	13.31	219	3.20	0.0	68
Type: 1" Stainless	5	5.44	0.132	13.23	247	3.08	0.0	70
Total Well Depth (TD): 52'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 0922								
End Purge (hrs): 0942								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2X 40ML vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings

Temporary well point screen zone 48 ft to 52 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NW IRP Colverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ133I1-20110609
Sample Location: PZ-133I1
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 6-9-11								
Time: 1645								
Method: peristaltic pump	Clear	5.92	0.107	12.44	0.5	1.40	0.0	70

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 6-9-11								
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1 inch PVC								
Total Well Depth (TD): 40'			(see	Low	Flow	purge	logs)	
Static Water Level (WL): 8.07'								
One Casing Volume(gal/L):								
Start Purge (hrs): 1555								
End Purge (hrs): 1645								
Total Purge Time (min): 50								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 x 40 ml vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings observed

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): [illegible]

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ133I1
DATE: 6-9-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1550	8.06	–	–	–	–	–	–	–	–	Initial
1555	8.07	450	5.90	0.114	2.3	2.87	12.44	40.0	0.0	clear
1600	8.07	450	5.89	0.109	1.1	1.64	12.22	73	0.0	clear
1605	8.07	450	5.87	0.108	1.0	1.51	12.29	79	0.0	clear
1610	8.07	450	5.88	0.107	1.3	1.49	12.39	77	0.0	clear
1615	8.07	450	5.90	0.107	1.1	1.50	12.34	76	0.0	clear
1620	8.07	450	5.90	0.106	0.9	1.46	12.38	74	0.0	clear
1625	8.07	450	5.91	0.106	0.8	1.42	12.42	73	0.0	clear
1630	8.07	450	5.92	0.107	0.7	1.43	12.41	72	0.0	clear
1635	8.07	450	5.92	0.107	0.5	1.42	12.40	71	0.0	clear
1640	8.07	450	5.92	0.107	0.6	1.41	12.42	71	0.0	
1645	8.07	450	5.92	0.107	0.5	1.40	12.44	70	0.0	clear - collect sample

SIGNATURE(S): [illegible]

PAGE 1 OF 1

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 1126-02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ133I-20110609
Sample Location: PZ-133I
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 6-9-11 Time: 0755 Method: peristaltic pump	clear	5.68	0.119	12.16	1.4	1.49	0.0	116

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 6-9-11								
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1 inch PVC								
Total Well Depth (TD): 47'			(see	Low	Flow	purge	logs)	
Static Water Level (WL): 8.02'								
One Casing Volume(gal/L):								
Start Purge (hrs): 0705								
End Purge (hrs): 0755								
Total Purge Time (min): 50								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 x 40 ml vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ133I
DATE: 6-9-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0700	8.02	–	–	–	–	–	–	–	–	Initial
0705	8.03	450	5.77	0.177	8.4	4.10	12.52	69	0.0	clear
0710	8.03	450	5.47	0.132	3.1	2.73	12.08	118	0.0	clear
0715	8.03	450	5.15	0.126	2.3	2.09	12.00	148	0.0	clear
0720	8.03	450	5.13	0.121	1.4	1.85	12.03	152	0.0	clear
0725	8.03	450	5.17	0.121	2.0	1.76	12.04	149	0.0	clear
0730	8.03	450	5.26	0.121	2.2	1.67	12.09	144	0.0	clear
0735	8.03	450	5.45	0.121	1.8	1.59	12.13	132	0.0	clear
0740	8.03	450	5.56	0.121	1.6	1.56	12.16	126	0.0	clear
0745	8.03	450	5.63	0.120	1.4	1.53	12.15	124	0.0	clear
0750	8.03	450	5.66	0.120	1.5	1.51	12.14	120	0.0	clear
0755	8.03	450	5.68	0.119	1.4	1.49	12.16	116	0.0	clear - collect sample

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-135I-20110607
Sample Location: PZ-135I
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 6-7-11								
Time: 1635								
Method: Peristaltic pump	Clear	4.99	0.122	13.01	0.5	1.56	0.0	160

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 6-7-11								
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 1 inch PVC			(See	Low	Flow	Purge	Logs)	
Total Well Depth (TD): 46.5								
Static Water Level (WL): 4.90'								
One Casing Volume(gal/L):								
Start Purge (hrs): 1545								
End Purge (hrs): 1635								
Total Purge Time (min): 50								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 X 40 ml Vials	Yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings observed

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): [illegible]

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ-135I
DATE: 6-7-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1540	4.90	—	—	—	—	—	—	—	—	Initial
~~1545~~	~~4.90~~	~~5.57~~	~~6.126~~	VAS						
1545	4.90	450	5.57	0.126	35.2	3.01	13.18	146	0.0	clear
1550	4.90	450	5.18	0.124	2.5	2.37	13.02	159	0.0	clear
1555	4.90	450	5.03	0.123	1.2	2.12	12.98	162	0.0	clear
1600	4.90	450	4.97	0.122	0.8	1.82	13.02	163	0.0	clear
1605	4.90	450	4.96	0.122	0.6	1.80	12.96	163	0.0	clear
1610	4.90	450	4.96	0.122	0.5	1.73	12.91	163	0.0	clear
1615	4.90	450	4.96	0.122	0.5	1.64	12.94	162	0.0	clear
1620	4.90	450	4.98	0.122	0.6	1.63	12.96	161	0.0	clear
1625	4.90	450	5.00	0.122	0.5	1.60	12.98	161	0.0	clear
1630	4.90	450	4.99	0.122	0.4	1.58	13.00	160	0.0	clear
1635	4.90	450	4.99	0.122	0.5	1.56	13.01	160	0.0	clear - collect sample

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112602045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ136I-20110607
Sample Location: PZ-136I
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 6-7-11								
Time: 0750								
Method: Peristaltic pump	Tint-Brn	5.60	0.130	11.56	38.5	1.41	0.0	65

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 6-7-11								
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 1 inch PVC								
Total Well Depth (TD): 49'			(See	Low	Flow	Purge	Logs)	
Static Water Level (WL): 5.45'								
One Casing Volume(gal/L):								
Start Purge (hrs): 0700								
End Purge (hrs): 0750								
Total Purge Time (min): 50								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 x 40 ml vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, elevated PID readings

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Colverton
PROJECT NUMBER: 112602045

WELL ID.: SA-PZ136I
DATE: 6-7-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0655	5.45	—	—	—	—	—	—	—	—	Initial
0700	5.45	450	5.93	0.169	202	4.17	11.50	-7	0.0	cloudy - Brown
0705	5.46	450	5.41	0.135	130	1.98	11.41	58	0.0	Brown Tint
0710	5.46	450	5.32	0.133	112	1.80	11.42	65	0.0	" "
0715	5.46	450	5.37	0.132	124	1.68	11.43	65	0.0	" "
0720	5.46	450	5.46	0.131	110	1.55	11.47	64	0.0	" "
0725	5.46	450	5.52	0.131	95.3	1.50	11.48	64	0.0	" "
0730	5.46	450	5.54	0.131	85.2	1.48	11.48	64	0.0	Slight Tint - Brown
0735	5.46	450	5.57	0.130	60.9	1.45	11.50	65	0.0	" " "
0740	5.46	450	5.58	0.130	63.1	1.42	11.54	65	0.0	" " "
0745	5.46	450	5.60	0.130	40.9	1.41	11.57	65	0.0	" " "
0750	5.46	450	5.60	0.130	38.5	1.41	11.56	65	0.0	collect sample

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ137I-20110608
Sample Location: PZ-137I
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 6-8-11								
Time: 0755								
Method: peristaltic pump	Clear	5.78	0.134	11.39	2.1	1.64	0.0	47

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 6-8-11								
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 1 inch PVC								
Total Well Depth (TD): 54'			(see	Low	Flow	Purge	logs)	
Static Water Level (WL): 7.53								
One Casing Volume(gal/L):								
Start Purge (hrs): 0655								
End Purge (hrs): 0755								
Total Purge Time (min): 60								
Total Vol. Purged (gal/L): 5.25								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2x 40 ml vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings observed

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ-137I
DATE: 6-8-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0650	7.53	—	—	—	—	—	—	—	—	Initial
0655	7.54	450	5.65	0.163	3.4	4.81	11.42	180	0.0	clear
0700	7.54	450	5.34	0.158	2.2	2.63	11.35	108	0.0	clear
0705	7.54	450	5.25	0.144	2.7	2.18	11.37	95	0.0	clear
0710	7.54	450	5.32	0.140	2.0	1.91	11.36	84	0.0	clear
0715	7.54	450	5.41	0.138	1.8	1.98	11.37	77	0.0	clear
0720	7.54	450	5.53	0.137	2.1	1.92	11.38	69	0.0	clear
0725	7.54	450	5.62	0.136	2.4	1.85	11.40	62	0.0	clear
0730	7.54	450	5.68	0.136	2.6	1.78	11.40	58	0.0	clear
0735	7.54	450	5.73	0.135	2.5	1.74	11.38	53	0.0	clear
0740	7.54	450	5.77	0.134	2.8	1.70	11.37	52	0.0	clear
0745	7.54	450	5.77	0.134	2.3	1.66	11.40	50	0.0	clear
0750	7.54	450	5.78	0.134	2.4	1.65	11.38	48	0.0	clear
0755	7.54	450	5.78	0.134	2.1	1.64	11.39	47	0.0	clear - collect sample

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ139I-20110610
Sample Location: PZ-139I
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 6-10-11								
Time: 0755								
Method: peristaltic pump	clear	5.58	0.126	12.26	0.5	1.52	0.0	144

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 6-10-11								
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1 inch PVC								
Total Well Depth (TD): 47.5'								
Static Water Level (WL): 8.19'								
One Casing Volume(gal/L):								
Start Purge (hrs): 0700								
End Purge (hrs): 0755								
Total Purge Time (min): 55								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 X 40 ml vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: [redacted] NWIRP Calverton
PROJECT NUMBER: [redacted] 112602045

WELL ID.: SA-PZ-139I
DATE: 6-10-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0655	8.19	—	—	—	—	—	—	—	—	Initial
0700	8.19	450	5.66	0.172	4.2	4.04	12.10	111	0.0	clear
0705	8.20	450	5.20	0.143	1.3	2.45	12.05	153	0.0	clear
0710	8.20	450	5.12	0.138	0.7	2.13	12.08	167	0.0	clear
0715	8.20	450	5.18	0.132	0.4	1.89	12.05	165	0.0	clear
0720	8.20	450	5.26	0.129	0.2	1.78	12.07	161	0.0	clear
0725	8.20	450	5.35	0.125	0.5	1.69	12.10	157	0.0	clear
0730	8.20	450	5.42	0.128	0.7	1.66	12.10	154	0.0	clear
0735	8.20	450	5.50	0.125	0.8	1.58	12.13	150	0.0	clear
0740	8.20	450	5.54	0.126	0.6	1.57	12.16	148	0.0	clear
0745	8.20	450	5.56	0.127	0.5	1.54	12.20	146	0.0	clear
0750	8.20	450	5.57	0.126	0.6	1.53	12.23	145	0.0	clear
0755	8.20	450	5.58	0.126	0.5	1.52	12.26	144	0.0	clear - collect sample

SIGNATURE(S): [signature]

PAGE 1 OF 1

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Biostudy
Project No.: 112G02750

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ 133I-20110621
Sample Location: SA-PZ133I
Sampled By: SK, KF
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 6/21/2011								
Time: 0910								
Method: low flow	clear	6.62	0.0820	12.63	35.5	0.0	0.0	81

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 6/21/2011								
Method: low flow								
Monitor Reading (ppm):								
Well Casing Diameter & Material Type:		See low flow Purge sheet						
Total Well Depth (TD):								
Static Water Level (WL): 8.05								
One Casing Volume(gal/L):								
Start Purge (hrs): 0825								
End Purge (hrs): 0910								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40 ml VOA	Y
Fe, Mn	HNO3	1 500ml poly	Y

OBSERVATIONS / NOTES:

Chemets - 1.0 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON, BIO STUDY
PROJECT NUMBER: 112G02750
WELL ID.: SA-PZ133I
DATE: 6-21-2011

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
08:25	~~8.50~~ 8.05	350	6.73	0.084	81.5	0.00	12.60	~~[illegible]~~ 45	0.0	
08:30	~~8.50~~ 8.05	350	6.62	0.082	39.1	0.00	12.57	68	0.0	
08:35	~~8.50~~ 8.05	350	6.62	0.082	40.3	0.00	12.58	69	0.0	
08:40	~~8.50~~ 8.05	350	6.63	0.082	37.8	0.00	12.66	70	0.0	clear
08:45	8.05	350	6.61	0.082	36.0	0.00	12.59	73	0.0	
08:50	8.05	350	6.59	0.082	33.8	0.00	12.68	75	0.0	
08:55	8.05	350	6.58	0.083	34.4	0.00	12.76	78	0.0	
09:00	8.05	350	6.59	0.083	33.7	0.00	12.82	80	0.0	
09:05	8.06	350	6.61	0.083	38.5	0.00	12.66	80	0.0	
09:10	8.06	350	6.62	0.082	35.5	0.00	12.63	81	0.0	

SIGNATURE(S): SMK

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Biostudy Area
Project No.: 112G02750

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA ~~SEL~~-P2133IZ-20110620
Sample Location: SA ~~SEL~~-P2133IZ
Sampled By: KF, SK
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 6/21/11								
Time: 0945								ORP
Method: low flow	Clear	6.92	0.075	13.38	44.9	0.00	0	24

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 6/21/11								
Method: low flow								
Monitor Reading (ppm):								
Well Casing Diameter & Material			see	log	sheet			
Type:								
Total Well Depth (TD):								
Static Water Level (WL): 8.11								
One Casing Volume(gal/L):								
Start Purge (hrs): 0912								
End Purge (hrs): 0942								
Total Purge Time (min): 30								
Total Vol. Purged (gal/L): 2.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCL	2 40mL VOA	Y
Iron and Manganese	HNO_3	1 500mL poly	Y

OBSERVATIONS / NOTES:

CHEMETS 00! 1.0 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Biostudy Area
PROJECT NUMBER: 112G02750

WELL ID.: KF ~~SGA~~ SA-PZ133I1
DATE: 6/21/11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0912	8.11	300	6.70	0.083	50.7	5.30	13.23	23	0	
0917	8.19	300	6.79	0.078	57.0	0.00	13.21	4	0	
0922	8.16	300	6.86	0.077	52.3	0.00	13.27	16	0	clear - Horiba
0927	8.16	300	6.90	0.075	48.9	0.00	13.30	25	0	reading is high
0932	8.16	300	6.91	0.075	49.3	0.00	13.12	27	0	
0937	8.16	300	6.92	0.075	44.4	0.00	13.51	29	0	
0942	8.16	300	6.92	0.075	44.9	0.00	13.38	29	0	

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP CALVERTON BIO STUDY
Project No.:

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: ~~SGA~~ - SA-PZ135I-2011062
Sample Location: ~~SGA~~-SA-PZ135I
Sampled By: SK, KF
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 6-21-2011								
Time: 10:35								ORP
Method: LOW FLOW	clear	~~6.77~~ 7.02	~~0.089~~ 0.088	14.12	85.6	0.00	0	75

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 6-21-2011								
Method: LOW FLOW								
Monitor Reading (ppm):								
Well Casing Diameter & Material Type:			See Low Flow Purge Sheet					
Total Well Depth (TD):								
Static Water Level (WL): 4.92								
One Casing Volume(gal/L):								
Start Purge (hrs): 09:50								
End Purge (hrs): 10:35								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2 50 mL vials	Yes
Fe, Mn	HNO_3	1 500 mL poly bottle	Yes

OBSERVATIONS / NOTES:

D.O. Field Test Kit (Chemets) = 1.8 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): SMK

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON BIO STUDY
PROJECT NUMBER: 112G02750

WELL ID.: ~~SGA~~ KE JA - SA-PZ135I
DATE: 6-21-2011

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
09:50	4.92	350	6.70	0.091	125.	2.32	14.63	49	0.0	
09:55	4.92	350	6.77	0.089	109.	0.00	14.20	71	0.0	
10:00	4.92	350	6.79	0.089	112	0.00	14.14	72	0.0	
10:05	4.92	350	6.81	0.088	96.5	0.00	14.14	79	0.0	
10:10	4.92	350	6.89	0.088	97.3	0.00	14.22	76	0.0	
10:15	4.92	350	6.89	0.088	102.	0.00	14.08	76	0.0	
10:20	4.93	350	6.99	0.088	89.3	0.00	14.23	76	0.0	
10:25	4.93	350	7.02	0.088	89.2	0.00	14.13	76	0.0	
10:30	4.93	350	7.01	0.088	85.9	0.00	14.15	75	0.0	Clear - Turbidity
10:35	4.93	350	7.02	0.088	85.6	0.00	14.12	75	0.0	high - using Horiba reading

SIGNATURE(S): JMK

PAGE 2 OF 2

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Biostudy
Project No.: 112G02750

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ136I-20110621
Sample Location: SA-PZ136I
Sampled By: SK KF
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 6/21/2011								
Time: 1118								
Method: Low Flow	Clear	7.12	0.096	13.49	3.38	0.00	0	4

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 6/21/2011								
Method: Low Flow								
Monitor Reading (ppm):								
Well Casing Diameter & Material Type:		See	Low	Flow	Purge	log		
Total Well Depth (TD):								
Static Water Level (WL): 5.89								
One Casing Volume(gal/L):								
Start Purge (hrs): 1038								
End Purge (hrs): 1118								
Total Purge Time (min): 40								
Total Vol. Purged (gal/L): 3.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2 40 mL VOA	Y
Fe, MN	HNO_3	1 500 ml poly	Y

OBSERVATIONS / NOTES:

Chemets = 1.0 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton Bio Study
PROJECT NUMBER: 112G02750

WELL ID.: ~~SOA~~ SA-PZ 136I
DATE: 6-21-2011

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1038	6.29	350	7.04	0.106	4.14	2.42	14.21	6	0	
1043	6.29	350	7.31	0.102	2.65	0.00	13.56	-3.5	0	clear
1048	6.29	350	7.25	0.099	8.40	0.00	13.45	-16	0	-start of using turb
1053	6.29	350	7.19	0.099	6.05	0.00	13.54	-11	0	meter
1058	6.29	350	7.13	0.098	8.80	0.00	13.73	-5	0	
1103	6.29	350	7.10	0.097	1.20	0.00	13.67	-1	0	
1108	6.29	350	7.11	0.096	0.00	0.00	13.39	1	0	
1113	6.29	350	7.12	0.096	3.01	0.00	13.49	4	0	
1118	6.29	350	7.12	0.096	3.38	0.00	13.49	4	0	sample taken

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

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Project Site Name: Biostudy Area
Project No.: 112G02750

[] Domestic Well Data
[x] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-138I-20110621
Sample Location: SA-138I
Sampled By: RF, SK
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 6/21/11								
Time: 1715								
Method: Low Flow	Clear	5.67	.094	15.32	0.0	0.0	0	161

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 6/21/11								
Method: Low Flow								
Monitor Reading (ppm):								
Well Casing Diameter & Material Type:		See Log Sheet						
Total Well Depth (TD):								
Static Water Level (WL): 5.51								
One Casing Volume(gal/L):								
Start Purge (hrs): 1630								
End Purge (hrs): 1715								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 3.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCL	2 40mL VOA	Y
Fe, Mn	HNO_3	1 500ml poly	Y

OBSERVATIONS / NOTES:

Chemets = 0.3 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Bio Study
PROJECT NUMBER: 112G02750

WELL ID.: SA-PZ138I
DATE: 4/21/11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1630	5.52	350	6.19	.101	0.73	2.68	16.62	85	0	
1635	5.56	350	5.92	.099	0.00	1.41	15.64	106	0	
1640	5.56	350	5.73	.096	0.63	0.00	15.46	121	0	
1645	5.56	350	5.61	0.095	0.81	0.87	15.35	137	0	
1650	5.56	350	5.60	0.096	0.0	0.81	15.22	144	0	
1655	5.56	350	5.62	0.095	0.0	0.63	15.36	149	0	
1700	5.56	350	5.62	0.095	0.0	0.73	15.38	152	0	
1705	5.56	350	5.64	0.094	0.0	0.66	15.41	154	0	
1710	5.56	350	5.66	0.095	0.0	0.62	15.35	158	0	
1715	5.56	350	5.67	0.094	0.0	0.40	15.32	161	0	sample taken

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: BIO STUDY
Project No.: 112G02750

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ138I1-20110621
Sample Location: SA-PZ138I1
Sampled By: SK, KF
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 6-21-2011								
Time: 17:17								
Method: LOW FLOW	clear	6.98	0.135	15.49	0.0	0.0	0	82

PURGE DATA:

Date: 6-21-2011	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: LOW FLOW								
Monitor Reading (ppm):								
Well Casing Diameter & Material Type:			See Low Flow Sheet					
Total Well Depth (TD):								
Static Water Level (WL): 5.34								
One Casing Volume(gal/L):								
Start Purge (hrs): 16:32								
End Purge (hrs): 17:17								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 3								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 50 mL vials	Yes
Fe, Mn	HNO_3	1 500 mL poly bottle	Yes

OBSERVATIONS / NOTES:

D.O. Field Kit = 0.8 mg/L
clear

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	~~SA-DUP02-20110621~~ SK

SA-DUP02-20110621

Signature(s): SMK

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: BioStudy
PROJECT NUMBER: 112G02350

WELL ID.: SA-PZ138F1
DATE: 6/21/14

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1632	5.39	350	7.11	0.142	0.0	0.00	14.04	52	0	
1637	5.39	350	7.18	0.139	0.0	0.00	13.82	62	0	
1642	5.39	350	7.17	0.137	0.0	0.00	13.81	65	0	
1647	5.39	350	7.11	0.137	0.0	0.00	13.78	71	0	
1652	5.39	350	7.07	0.136	0.0	0.00	13.80	74	0	
1657	5.39	350	7.05	0.135	0.0	0.00	14.01	78	0	
1702	5.40	350	7.05	0.135	0.0	0.0	14.07	79	0	
1707	5.40	350	7.05	0.135	0.0	0.0	14.55	81	0	
1712	5.40	350	7.00	0.135	0.0	0.0	15.26	83	0	
1717	5.40	350	6.98	0.135	0.0	0.0	15.49	82	0	sample taken

SIGNATURE(S): AMK

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

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Project Site Name: BioStudy
Project No.: 112027.30

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ139I-20110620
Sample Location: SA-PZ139I
Sampled By: KF, SK
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 6/20/2011								
Time: 1900								ORP
Method: low flow	clear	6.47	0.083	12.67	20.0	0.00	0.0	66

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 6/20/2011								
Method: low flow								
Monitor Reading (ppm):								
Well Casing Diameter & Material			See low flow Purge sheet					
Type:								
Total Well Depth (TD):								
Static Water Level (WL): 8.30								
One Casing Volume(gal/L):								
Start Purge (hrs): 18:20								
End Purge (hrs): 1900								
Total Purge Time (min): 40								
Total Vol. Purged (gal/L): 3								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	40 mL VOA	Y
Fe, Mn	HNO_3	500 mL Poly	Y

OBSERVATIONS / NOTES:

Chemets = 0.8 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Bio Study Area
PROJECT NUMBER: 112G02750

WELL ID.: K-~~S6A~~ SA-PZ139I
DATE: 6-20-2011

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
18:20	8.30	350	6.58	0.085	61.6	2.24	12.94	57	0.0	
18:25	8.30	350	6.61	0.085	65.6	0.68	12.82	52	0.0	
18:30	8.30	350	6.61	0.085	56.9	0.00	12.60	59	0.0	
18:35	8.30	350	6.59	0.084	42.4	0.00	12.63	62	0.0	
18:40	8.30	350	6.57	0.084	29.1	0.00	12.59	64	0.0	
18:45	8.30	350	6.54	0.084	24.3	0.00	12.62	65	0.0	water is clear
18:50	8.30	350	6.51	0.084	20.7	0.00	12.68	66	0.0	Horiba Turbidity
18:55	8.30	350	6.48	0.084	19.8	0.00	12.66	66	0.0	reading is high
19:00	8.30	350	6.47	0.083	20.0	0.00	12.67	66	0.0	

SIGNATURE(S): BMK

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Bio Study
Project No.: 112G02750

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: ~~SLA~~ SA-PZ149II-20110620
Sample Location: ~~BioSLA-PZ149II~~
Sampled By: SK, KF
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 6/20/11								
Time: 1815								
Method: Low Flow	Clear	6.69	.063	12.126	31.9	0.00	0	18

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 6/20/11								
Method: Low Flow								
Monitor Reading (ppm):								
Well Casing Diameter & Material		see	log	sheet				
Type:								
Total Well Depth (TD):								
Static Water Level (WL): 9.98								
One Casing Volume(gal/L):								
Start Purge (hrs): 1740								
End Purge (hrs): 1815								
Total Purge Time (min): 35								
Total Vol. Purged (gal/L): 2.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3 40ml VOA	Yes
Iron, Manganese	HNO3	1 500 ml Poly	Yes

OBSERVATIONS / NOTES:

CHEMETS DO: 0.8 mg/L

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Biostudy Area
PROJECT NUMBER: 112G027 50

WELL ID.: KK ~~SSA~~ - PZ149I7
DATE: 6/20/11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1740	10.12	350	6.46	.064	52.5	0.25	12.96	-4	0	
1745	10.12	350	6.51	.0606	62.2	0.00	12.76	12	0	
1750	10.12	350	6.58	.064	60.0	0.00	12.58	15	0	
1755	10.12	350	6.62	.064	49.4	0.00	12.72	17	0	Turbidity reading
1800	10.12	350	6.64	.064	44.7	0.00	12.60	17	0	from Horriba -
1805	10.12	350	6.68	.063	32.1	0.00	12.66	18	0	water is clear
1810	10.12	350	6.69	.063	30.5	0.00	12.67	18	0	
1815	10.12	350	6.69	.063	31.4	0.00	12.64	18	0	

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: BIO STUDY
Project No.: 112G02750

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ151I1-20110622
Sample Location: SA-PZ151I1
Sampled By: SK, KF
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 6-22-2011								
Time: 08:35								
Method: LOW FLOW	clear	6.42	6.123	12.54	0.0	0.0	0.	-51

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 6-22-2011								
Method: LOW FLOW								
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type:								
Total Well Depth (TD):								
Static Water Level (WL): 3.65'								
One Casing Volume(gal/L):								
Start Purge (hrs): 07:50								
End Purge (hrs): 08:35								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 3								

See Low Flow Sheet

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 50 mL vials	Yes
MEF	HCl	"	Yes
TAL metals	HNO_3	1 500 mL poly bottle	Yes
TOC	H_2SO_4	"	Yes
Anions	4°C	"	Yes

OBSERVATIONS / NOTES:

clear
D.O. Field Kit (Chemets) = 1.2 mg/L

Circle if Applicable:

MS/MSD —
Duplicate ID No.: —

Signature(s): SMK

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: BIO STUDY
PROJECT NUMBER: 112G02750

WELL ID.: SA-PZ151II-20110622
DATE: 6-22-2011

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
07:50	3.65'	350	6.24	0.132	0.27	0.0	12.42	-26	0.0	clear
07:55	3.65'	350	6.25	0.131	0.0	0.0	12.42	-27	0.0	using turbidity
08:00	3.65'	350	6.27	0.128	0.0	0.0	12.27	-37	0.0	meter (LaMotte)
08:05	3.65'	350	6.27	0.127	0.10	0.0	12.31	-39	0.0	
08:10	3.65'	350	6.28	0.125	0.0	0.0	12.30	-43	0.0	
08:15	3.65'	350	6.30	0.125	0.0	0.0	12.37	-44	0.0	
08:20	3.65'	350	6.33	0.124	0.0	0.0	12.54	-46	0.0	
08:25	3.65'	350	6.36	0.124	0.0	0.0	12.62	-48	0.0	
08:30	3.65'	350	6.40	0.124	0.0	0.0	~~15.~~ 12.52	-50	0.0	~~te~~
08:35	3.65'	350	6.42	0.123	0.0	0.0	12.54	-51	0.0	take sample

SIGNATURE(S): SMK

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: BIO STUDY
Project No.: 112G02750

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ155I-20110622
Sample Location: SA-PZ155I
Sampled By: SK, KF
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 6-22-2011								
Time: 09:42								
Method: Low Flow	clear	5.69	0.100	15.60	0.0	0.55	0	54

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 6-22-2011								
Method: Low Flow								
Monitor Reading (ppm):								
Well Casing Diameter & Material			See Low Flow Sheet					
Type:								
Total Well Depth (TD):								
Static Water Level (WL): 5.79'								
One Casing Volume(gal/L):								
Start Purge (hrs): 08:57								
End Purge (hrs): 09:42								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 3								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 50 mL vials	Yes
MEE	HCl	"	
TAL Metals	HNO_3	1 500 mL poly bottle	
TOC	H_2SO_4	"	
Anions	4°C	"	

OBSERVATIONS / NOTES:

Clear

D.O. Field Kit = 1.0mg/L

Circle if Applicable:

MS/MSD —

Duplicate ID No.: —

Signature(s): SMK

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: BIO STUDY
PROJECT NUMBER: 112G02750

WELL ID.: SA-PZ155I
DATE: 6-22-2011

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
08:57	5.79'	350	5.77	0.172	2.24	6.17	15.92	-56	0.0	clear
09:02	5.79'	350	5.81	0.163	1.76	4.57	15.62	-64	0.0	using turbidity
09:07	5.79'	350	5.84	0.126	1.97	1.42	15.46	-40	0.0	meter
09:12	5.79'	350	5.74	0.106	0.41	0.87	15.41	4	0.0	
09:17	5.79'	350	5.69	0.102	0.0	0.76	15.55	26	0.0	
09:22	5.79'	350	5.67	0.102	0.0	0.67	15.27	39	0.0	
09:27	5.79'	350	5.68	0.101	0.0	0.60	15.51	46	0.0	
09:32	5.79'	350	5.68	0.100	0.0	0.54	15.52	51	0.0	
09:37	5.79'	350	5.68	0.099	0.0	0.52	15.51	53	0.0	
09:42	5.79'	350	5.69	0.100	0.0	0.55	15.50	54	0.0	take sample

SIGNATURE(S): SMK

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: CALVERTON BIO STUDY
Project No.: 112G02750

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ157I-20110621
Sample Location: SA-PZ157I
Sampled By: SK, KF
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 6-21-2011								
Time: 13:20								
Method: LOW FLOW	Clear	5.31	0.096	16.39	0.0	1.99	0%	106

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 6-21-2011								
Method: LOW FLOW								
Monitor Reading (ppm):								
Well Casing Diameter & Material Type:								
Total Well Depth (TD):			See LOW FLOW PURGE SHEET					
Static Water Level (WL): 5.24'								
One Casing Volume(gal/L):								
Start Purge (hrs): 12:35								
End Purge (hrs): 13:20								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 50 mL vial	Yes
MEE	HCl	2 "	Yes
TAL Metals	HNO_3	1 500 mL poly	Yes
TOC	H_2SO_4	1 "	Yes
Anions	4°C	1 "	Yes
DHC, DHB	Filter	1 Filter	Yes

OBSERVATIONS / NOTES:

D.O. Field Kit = 1.0 mg/L
Clear

Circle if Applicable:

MS/MSD (YES)

Duplicate ID No.:

Signature(s): Sarah Kirn

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02750
WELL ID.: SA-PZ157I
DATE: 6-20-2011

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
SK ~~12:00~~	~~5.24'~~		~~6.09~~	~~0.100~~	~~300.~~	~~11.17~~	~~14.67~~	~~17~~	~~0%~~	using turbidity meter
12:35	5.21'	350	5.77	0.098	0.64	6.00	17.10	151	0%	
12:40	5.21'	350	5.50	0.092	0.00	4.61	16.52	176	0%	
12:45	5.21'	350	5.23	0.094	0.00	3.73	16.20	147	0%	
12:50	5.21'	350	5.16	0.095	0.00	3.23	16.09	144	0%	
12:55	5.21'	350	5.20	0.096	0.41	2.78	16.09	142	0%	
13:00	5.21'	350	5.26	0.097	0.00	2.30	16.17	111	0%	
13:05	5.21'	350	5.29	0.098	0.00	2.27	16.04	106	0%	
13:10	5.21'	350	5.28	0.097	0.00	2.15	15.97	111	0%	
13:15	5.21'	350	5.30	0.096	0.00	2.05	16.37	110	0%	
13:20	5.21'	350	5.31	0.096	0.00	1.99	16.39	106	0%	Sample taken

SIGNATURE(S): Sarah Kiva

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Calverton Bio Study
Project No.: 112602760

[] Domestic Well Data
[✓] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ157I1-20110621
Sample Location: SA-PZ157I1
Sampled By: SK, KF
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 6-21-2011								
Time: 15:00								
Method: Low Flow	clear	5.37	0.129	15.42	0.07	1.41	0	0

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 6-21-2011								
Method: Low Flow								
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type:								
Total Well Depth (TD):		See low Flow purge sheet						
Static Water Level (WL):								
One Casing Volume(gal/L):								
Start Purge (hrs): 14:15								
End Purge (hrs): 15:00								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 3								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 50 mL vial	Yes
MEE	HCl	2 50 mL vial	
TAL Metals	HNO_3	1 500 mL poly bottle	
TOC	H_2SO_4	"	
Anions	4°C	"	

OBSERVATIONS / NOTES:

Eclear D.O. Field Kit = 0.8 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): AMK

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton Bio Study
PROJECT NUMBER: 112G02750
WELL ID.: SA-PZ-157I1
DATE: 6-21-2011

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
14:15	5.47'	350	4.53	~~0.004~~	~~9~~ 18.8	12.62	16.77	-40	0%	clear
14:20	5.47'	350	5.73	~~0.129~~ ~~0.138~~	14.8	7.04	16.29	-26	0%	using turbidity
14:25	5.47'	350	5.34	0.134	8.72	~~2.70~~	15.86	-5	0%	meter
14:30	5.47'	350	5.34	0.133	1.84	~~3.34~~ ~~3.77~~	15.82	-4	0%	
14:35	5.47'	350	5.26	0.131	0.52	2.20	15.62	7	0%	
14:40	5.47'	350	5.26	0.130	2.27	2.01	15.55	9	0%	
14:45	5.47'	350	5.28	0.130	~~17~~ 2.82	1.77	15.60	7	0%	
14:50	5.47'	350	5.35	0.129	1.20	1.66	15.56	6	0%	
14:55	5.47'	350	5.34	0.129	0.09	1.48	15.49	3	0%	
15:00	5.47'	350	5.37	0.129	0.07	1.41	15.42	0	0%	take sample

SIGNATURE(S): SMK

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Bro Study Area
Project No.: 112G02750

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: 56A-P2158I-20110620
Sample Location: ~~PTO Study~~ 56A-P2158I
Sampled By: RF, SK
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 6/20/11								
Time: 17:35								
Method: Low Flow	Clear	6.53	0.093	12.59	83.3	0.0	0.0	-76

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 6/20/2011								
Method: Low Flow								
Monitor Reading (ppm):		See	Sheet		log	Sheet		
Well Casing Diameter & Material								
Type:								
Total Well Depth (TD):								
Static Water Level (WL): 5.51								
One Casing Volume(gal/L):								
Start Purge (hrs): 16:50								
End Purge (hrs): 17:35								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 3								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	40 ml	Yes, 3
Iron & Manganese	HNO_3	500 ml poly	Yes, 1

OBSERVATIONS / NOTES:

~~D.O. Test Kit = 1.0 mg/L (Chemets)~~
Clear

D.O. Test Kit = 0.8 mg/L (Chemets)

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): SMK

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Bio study
PROJECT NUMBER: 112G02750

WELL ID.: SG1-PZ158I
DATE: 6/20/11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1650	~~4.45~~ 5.59	350	6.40	0.086	103	0.35	12.60	-47	0.0	
1655	5.59	350	6.44	0.091	62.8	0.00	12.70	-58	0.0	
17:00	5.59	350	6.45	0.093	97.6	0.00	12.80	-64	0.0	
17:05	5.59	350	6.49	0.092	93.7	0.00	12.72	-69	0.0	
17:10	5.59	350	6.50	0.092	87.3	0.00	12.78	-70	0.0	
17:15	5.59	350	6.52	0.092	83.8	0.00	12.63	-72	0.0	
17:20	5.59	350	6.51	0.093	92.4	0.00	12.80	-73	0.0	water is clear
17:25	5.59	350	6.53	0.092	86.7	0.00	12.69	-74	0.0	Horiba used
17:30	5.59	350	6.53	0.093	83.1	0.00	12.64	-74	0.0	to record turbidity
17:35	5.59	350	6.53	0.093	83.3	0.00	12.59	-76	0.0	reading is high

SIGNATURE(S): JMK

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

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Project Site Name: NWIRP Calverton
Project No.: 112G02750

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-158I1-20110620
Sample Location: SA-PZ158I1
Sampled By: SK KEI
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-20-2011	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Time: 1645								
Method: Low Flow	clear	6.35	0.123	12.95	220	0.0	0.0	-30

PURGE DATA:

Date: 6-20-2011	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type:								
Total Well Depth (TD):		See	Low	Flow	Purge	Sheet		
Static Water Level (WL): 5.19								
One Casing Volume(gal/L):								
Start Purge (hrs): 1600								
End Purge (hrs): 1645								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3 40ml VOA	Y
Fe, Mn	HNO_3	1 500ml poly	Y

OBSERVATIONS / NOTES:

Clear
D.O. Test Kit = 1.0 mg/L (Chemets)

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Biostudy Area
PROJECT NUMBER: 112602750

WELL ID.: SGA-PZ158II
DATE: 6/20/11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1600	5.19	356	6.10	0.122	226	4.71	13.02	-27	0.0	
1605	5.19	356	6.12	0.125	245	2.10	12.91	-25	0.0	
1610	5.19	350	6.13	0.133	206	0.32	12.86	-19	0.0	
16:15	~~6~~ 5.17	350	6.16	0.144	185	0.00	12.87	-16	0.0	
16:20	5.17	350	6.19	0.141	185	0.00	12.83	-17	0.0	
16:25	5.16	350	6.26	0.130	313	0.00	12.75	-21	0.0	
16:30	5.15	350	6.28	0.127	201	0.00	12.82	-23	0.0	
16:35	5.15	350	6.33	0.125	205	0.00	12.79	-26	0.0	
16:40	5.15	350	6.34	0.124	208	0.00	12.85	-28	0.0	USING HORIBA U-22
16:45	5.15	350	6.35	0.123	220	0.00	12.95	-30	0.0	* WATER CLEAR

SIGNATURE(S): Sarah Kirino

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

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Project Site Name: Biostudy Area
Project No.: 112G0275

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ159I-20110621
Sample Location: SA-PZ159I
Sampled By: KF
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 06/21/2011								
Time: 1440								ORP
Method: Low flow	clear	7.54	.109	13.41	0.72	0.00	0	-68

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 6/21/11								
Method: Low flow								
Monitor Reading (ppm):		see log sheet						
Well Casing Diameter & Material								
Type:								
Total Well Depth (TD):								
Static Water Level (WL): 5.08								
One Casing Volume(gal/L):								
Start Purge (hrs): 1349								
End Purge (hrs): 1440								
Total Purge Time (min): 51								
Total Vol. Purged (gal/L): 4								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCL	2 40 mL VOA	Y
MEE	HCL	2 40 mL VOA	Y
TOC	H_2SO_4	1 500 mL poly	Y
Nitrate, Nitrite, Sulfide, chloride	none	1 500 mL poly	Y
TAL Metals	HNO_3	1 500 mL poly	

OBSERVATIONS / NOTES:

CHEMETS DO: 1.0 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Biostudy Area
PROJECT NUMBER: 1200 2750

WELL ID.: SA-PZ159 I
DATE: 6/21/11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1350	5.10	300	7.46	.100	2.31	1.13	12.62	-25	0	
1355	5.10	300	7.50	.107	1.09	0.00	12.97	-40	0	
1400	5.10	300	7.47	.107	1.37	0.00	12.92	-52	0	
1405	5.10	350	7.46	.109	2.14	0.00	12.95	-52	0	
1410	5.10	350	7.47	.109	3.41	0.00	13.14	-54	0	
1415	5.10	350	7.44	.109	2.45	0.00	13.11	-57	0	
1420	5.10	350	7.47	.109	2.11	0.00	13.09	-58	0	
1425	5.10	350	7.49	.109	1.40	0.00	13.11	-59	0	
1430	5.10	350	7.53	.109	1.07	0.00	13.10	-61	0	clear
1435	5.10	350	7.54	0.109	0.81	0.00	13.03	-61	0	
1440	5.10	350	7.54	.109	0.72	0.00	13.41	-60	0	

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

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Project Site Name: Biostudy Area
Project No.: 112G01750

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ169I1-20110621
Sample Location: SA-PZ169I1
Sampled By: NLF
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 6/21/11								
Time: 1313								
Method: Low Flow	clear	7.30	0.010	13.09	0.87	0.00	0	-18

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 6/21/11								
Method: Low Flow								
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type:			See log sheet					
Total Well Depth (TD):								
Static Water Level (WL): 5.21								
One Casing Volume(gal/L):								
Start Purge (hrs): 1228								
End Purge (hrs): 1313								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCL	2 VOA (40 ml)	Y
MEE	HCN	2 VOA (40 ml)	Y
TOC	H_2SO_4	1 500 ml poly	Y
Nitrate, Nitrite, Chloride, Sulfate	none	1 500 ml poly	N
TAL Metals	HNO_3	1 500 ml poly	Y
DHC, DHB	Filter	1 Filter	Y

OBSERVATIONS / NOTES:

CHEMETS 00: 1.0 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
	SA-564-DUP01-20110621

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Bio Study Area
PROJECT NUMBER: 4320 2750

WELL ID.: SKA-PZ159I1-20110021
DATE: 4/21/11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1227	5.28	375	7.39	0.121	0.59	3.02	13.89	-23	0	clear
1232	5.25	375	7.65	0.116	0.55	0.00	13.20	-14	0	
1237	5.25	375	7.61	0.113	1.24	0.00	13.14	-14	0	
1243	5.25	375	7.57	0.111	1.53	0.00	13.01	-12	0	
1247	5.25	375	7.38	0.111	1.10	0.00	13.42	-13	0	
1253	5.25	375	7.35	0.111	1.56	0.00	13.31	-15	0	
1257	5.25	375	7.29	0.111	2.22	0.00	13.29	-16	0	
1303	5.25	375	7.30	0.111	1.41	0.00	13.03	-17	0	
1307	5.25	375	7.30	0.110	1.30	0.00	13.10	-18	0	clear
1313	5.25	375	7.30	0.110	0.87	0.00	13.09	-18	0	

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

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Project Site Name: Bio Study
Project No.: 112-G02-750

[] Domestic Well Data
[x] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ160I-20110621
Sample Location: SA-PZ160I
Sampled By: KF
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 6/21/11								
Time: 1638								ORP
Method: Low Flow	Clear	7.74	.119	13.26	0.71	0.00	0	-114

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 6/21/11								
Method: Low Flow								
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type:		See Purge Log						
Total Well Depth (TD):								
Static Water Level (WL): 5.26								
One Casing Volume(gal/L):								
Start Purge (hrs): 1458								
End Purge (hrs): 1538								
Total Purge Time (min): 40								
Total Vol. Purged (gal/L): 3.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCL	2 40 ml VOA	Y
MEE	HCL	3 40 ml VOA	Y
TOC	H_2SO_4	1 500 ml poly	Y
Nitrate, Nitrite, Chloride	None	1 500 ml poly	Y
Sulfide		1	Y
TAL Metals	HNO_3	1 500 ml poly	Y

OBSERVATIONS / NOTES:

CHEMETS DO 1.0 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Bio Study
PROJECT NUMBER: 112027560

WELL ID.: SA-PZ160I
DATE: 6/21/11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1458	~~350~~ 5.28	350	7.62	.114	0.62	0.72	12.93	-82	0	
1503	5.28	350	7.79	.116	0.42	0.00	12.96	-87	0	
1508	5.28	350	7.81	.116	0.43	0.00	13.00	-98	0	
1513	5.28	350	7.85	.117	0.72	0.00	12.97	-103	0	
1518	5.28	350	7.79	.118	0.81	0.00	13.04	-108	0	
1523	5.28	350	7.74	.119	0.73	0.00	13.10	-110	0	clear
1528	5.28	350	7.75	.119	0.91	0.00	13.17	-111	0	
1533	5.28	350	7.74	.119	0.87	0.00	13.16	-114	0	
1538	5.28	350	7.74	.119	0.71	0.00	13.26	-114	0	

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Biostudy
Project No.: 112G02750

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ16OT1-20110621
Sample Location: SA-PZ16OT1
Sampled By: SK
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 6/21/11								
Time: 16:03								
Method: Low Flow	Clear	5.70	0.106	15.30	0.27	0.54	0	-20

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 6/21/11								
Method: Low Flow								
Monitor Reading (ppm):								
Well Casing Diameter & Material		See purge log						
Type:								
Total Well Depth (TD):								
Static Water Level (WL): 4.98								
One Casing Volume(gal/L):								
Start Purge (hrs): 15:18								
End Purge (hrs): 16:03								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 3								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 50 mL vials	Yes
Fe, Mn	HNO_3	1 500 mL Poly bottle	Yes

OBSERVATIONS / NOTES:

D.O. Field Kit = 0.4 mg/L
clear

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s): SMK

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Biostudy
PROJECT NUMBER: 112602750

WELL ID.: SA-PZ160I.1
DATE: 6/21/11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1518	4.98'	300	6.21	.131	1.25	6.70	12.27	-27	0	Clear
1523	4.98'	300	5.79	0.108	0.50	1.95	15.51	-23	0	
1528	4.98'	300	5.58	0.106	0.13	1.55	15.39	-11	0	
1533	4.98'	300	5.49	0.106	1.34	1.09	15.32	-11	0	
1538	4.98'	300	5.55	0.106	0.60	0.89	15.31	-15	0	
1543	4.98'	300	5.56	0.106	0.08	0.86	15.35	-16	0	
1548	4.98'	300	5.61	0.106	0.54	0.74	15.35	-18	0	
1553	4.98'	300	5.65	0.106	0.23	0.70	15.33	-19	0	
1558	4.98'	300	5.69	0.106	0.31	0.55	15.30	-20	0	
1603	4.98'	300	5.70	0.106	0.27	0.54	15.30	-20	0	

SIGNATURE(S): SMK

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Page___ of ___

Project Site Name: BioStudy
Project No.: 112G02750

[] Domestic Well Data
[P] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ161I-20110621
Sample Location: SA-PZ161I
Sampled By: KF, SK
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 6/21/11								
Time: 0815								ORP
Method: Low Flow	clear	6.76	0.182	12.80	58.7	0.0	0	-110

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 6/21/11								
Method: low flow								
Monitor Reading (ppm):								
Well Casing Diameter & Material Type:		See	log	Sheet				
Total Well Depth (TD):								
Static Water Level (WL): 6.65								
One Casing Volume(gal/L):								
Start Purge (hrs): 730								
End Purge (hrs): 815								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 3								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCL	2 40 ml VOA	Y
Fe, MN	HNO_3	1 500 ml Poly	Y

OBSERVATIONS / NOTES:

Chemets DO: 0.2 mg/L

clear

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Biostudy Area
PROJECT NUMBER: 112902-7.50
WELL ID.: SLA-PZ161I
DATE: 6/21/11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0730	6.67	350	5.48	0.120	171	4.27	12.77	112	0	
0735	6.67	350	5.48	0.183	170	0.68	12.94	-9	0	
0740	6.67	350	6.46	0.189	143	0.00	12.79	-87	0	
0745	6.67	350	6.60	0.187	129	0.00	12.87	-98	0	
0750	6.67	350	6.68	0.185	109	0.00	12.81	-105	0	
0755	6.67	350	6.71	0.189	93.8	0.00	12.77	-107	0	
0800	6.67	350	6.73	0.183	77.0	0.00	12.92	-109	0	
0805	6.67	350	6.75	0.184	72.6	0.00	13.00	-110	0	water is clear
0810	6.67	350	6.76	0.182	61.3	0.00	12.95	-110	0	- Horiba reading
0815	6.67	350	6.76	0.182	58.7	0.00	12.80	-110	0	is high

SIGNATURE(S):

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

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Project Site Name: Bio study
Project No.: 112802790

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ408-20110622
Sample Location: SA-PZ408
Sampled By: KE, SK
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 6/22/11								
Time: 0890								ORP
Method: Low Flow	Clear	5.99	0.136	15.60	223	0.98	0	14

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 6/22/11								
Method: Low Flow								
Monitor Reading (ppm):								
Well Casing Diameter & Material Type:			See	purge	log.			
Total Well Depth (TD):								
Static Water Level (WL): 7.11								
One Casing Volume(gal/L):								
Start Purge (hrs): 0740								
End Purge (hrs): 0890								
Total Purge Time (min): 60								
Total Vol. Purged (gal/L): 5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCL	2 40ml VOA	Y
MEE	HCL	2 40ml VOA	Y
Nitrate, Nitrite, Chloride, Sulfide	none	1 500 ml Poly	Y
TOC	H_2SO_4	1 500 ml poly	Y
TAL Metals	HNO_3	1 500 ml poly	Y

OBSERVATIONS / NOTES:

CHEMETS 00: 1.0 mg/L

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Biostudy
PROJECT NUMBER: 112002750

WELL ID.: SA-PZ408-20100422
DATE: 4/22/10

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0740	7.29	300	5.91	.215	14.1	10.09	15.98	115	0	
0745	7.29	300	5.91	.203	14.5	7.21	15.53	102	0	
0750	7.29	300	5.92	.173	22.4	4.06	15.22	97	0	clear
0755	7.29	300	5.47	0.143	18.16	2.08	15.14	102	0	
0800	7.29	300	5.52	0.140	9.23	1.96	15.01	83	0	
0805	7.29	300	5.63	0.140	4.21	1.88	15.03	71	0	
0810	7.29	300	5.72	0.139	4.86	1.43	14.85	56	0	
0815	7.29	300	5.77	0.136	5.21	1.07	14.95	44	0	
0820	7.29	300	5.85	0.136	4.48	0.99	15.10	36	0	
0825	7.29	300	5.92	0.136	3.21	0.99	15.18	27	0	
0830	7.29	300	5.98	0.136	3.26	0.98	15.31	18	0	clear
0835	7.29	300	5.99	0.136	2.34	0.97	15.59	15	0	
0840	7.29	300	5.99	0.136	2.20	0.98	15.60	14	0	

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Initial Sample

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-135-080311-0850
Sample Location: SA-PZ-135
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 8-3-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 0850	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	ORP
Method: Low Flow-peristaltic	clear	5.28	0.108	13.41	0.00	0.00	0.1	226

PURGE DATA:

Date: 8-3-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow-peristaltic								
Monitor Reading (ppm):								
Well Casing Diameter & Material Type: 1" PVC	See low Flow Purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 5.42								
One Casing Volume(gal/L):								
Start Purge (hrs): 0800								
End Purge (hrs): 0850								
Total Purge Time (min): 50								
Total Vol. Purged (gal/L): 4.5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	2 40mL glass vials	yes

OBSERVATIONS / NOTES:

Tubing intake pulled 2' off bottom
Initial Sampling

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): J. Birkett

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ-135
DATE: 8-3-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0757	5.42									
0800	Start up	pump								intake on tubing 2' off bottom
0805	5.44	320	5.14	0.113	29.2	1.09	13.90	129	0.1	slight tan tint
0810	5.45	300	5.11	0.109	3.36	0.36	13.39	171	0.1	clear
0815	5.45	300	5.09	0.109	1.00	0.19	13.38	198	0.1	clear
0820	5.45	300	5.08	0.109	0.20	0.10	13.24	214	0.1	clear
0825	5.45	300	5.10	0.109	0.15	0.04	13.17	219	0.1	clear
0830	5.45	300	5.16	0.108	0.00	0.02	13.32	220	0.1	clear
0835	5.45	300	5.23	0.108	0.35	0.00	13.26	220	0.1	clear
0840	5.45	300	5.23	0.109	0.00	0.00	13.29	223	0.1	clear
0845	5.45	300	5.25	0.108	0.00	0.00	13.38	224	0.1	clear
0850	Collect sample	300	5.28	0.108	0.00	0.00	13.41	226	0.1	clear

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Intial Sample

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-136-080311-1115
Sample Location: SA-PZ-136
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 8-3-11 Time: 1115 Method: Low Flow-Peristaltic	clear	6.52	0.317	13.93	4.19	0.00	0.2	-55

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 8-3-11								
Method: Low Flow-Peristaltic								
Monitor Reading (ppm):								
Well Casing Diameter & Material Type: 1" PVC								
Total Well Depth (TD):	See low flow purge sheet for details							
Static Water Level (WL): 7.12								
One Casing Volume(gal/L):								
Start Purge (hrs): 1035								
End Purge (hrs): 1115								
Total Purge Time (min): 40 min								
Total Vol. Purged (gal/L): 4.5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40mL glass vials	yes

OBSERVATIONS / NOTES:

Tubing intake pulled 1' off bottom
Initial Sampling

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045
WELL ID.: SA-PZ-136
DATE: 8-3-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1006	7.12									
1010	Start purge									
1015		300	6.61	0.163	3.88	0.49	21.98	-70	0.1	
		Stop pump - Tubing probably not in screened interval								
1018	Restart pump with an extension to tubing									
1020		300	6.76	0.340	4.08	0.23	21.49	-115	0.2	Temp. seems way off
	Stop pump pull out old tubing put in thicker tubing to be sure intake is in screen									
1035	7.20'	300	6.73	0.151	1332	7.21	21.19	-22	0.1	tan color
1040	7.20	300	6.76	0.304	143	0.10	15.02	-73	0.1	Pull intake up 2'
1045	7.20	300	6.68	0.319	37.1	0.00	14.44	-71	0.2	clear
1050	7.20	300	6.68	0.323	12.2	0.00	14.08	-69	0.2	clear
1055	7.20	300	6.66	0.320	8.67	000	13.93	-66	0.2	clear
1100	7.20	300	6.59	0.320	4.98	0.00	13.95	-62	0.2	clear
1105	7.20	300	6.56	0.319	4.54	0.00	13.95	-61	0.2	clear
1110	7.20	300	6.53	0.318	4.54	0.00	13.91	-58	0.2	clear
1115	Collect sample		6.52	0.317	4.19	0.00	13.93	-55	0.2	clear

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-135-080311-1315
Sample Location: SA-PZ-135
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 8-3-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1315	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP
Method: Low Flow Peristaltic	clear	6.18	0.105	14.55	0.55	0.00	0.0	-219

PURGE DATA:

Date: 8-3-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Peristaltic								
Monitor Reading (ppm):								
Well Casing Diameter & Material Type: 1" PVC								
Total Well Depth (TD):	See low flow purge sheet for details							
Static Water Level (WL): 5.42								
One Casing Volume(gal/L):								
Start Purge (hrs): 1235								
End Purge (hrs): 1315								
Total Purge Time (min): 40								
Total Vol. Purged (gal/L): 4 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40mL glass vials	yes

OBSERVATIONS / NOTES:

Pull tubing intake 2' off bottom
Post mechanical development

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): [signature]

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045
WELL ID.: SA-PZ-135
DATE: 8-3-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1230	5.42									
1235	Start up pump									
1240	5.45	300	6.35	0.102	18.1	0.51	18.50	149	0.0	clear
1245	5.47	300	6.27	0.101	3.32	0.23	17.69	181	0.0	clear
1250	5.47	300	6.21	0.101	1.37	0.05	17.11	195	0.0	clear
1255	5.47	300	6.20	0.105	1.74	0.00	15.24	206	0.0	clear
1300	5.47	300	6.19	0.106	0.63	0.06	14.95	211	0.0	clear
1305	5.47	300	6.18	0.106	0.60	0.00	14.63	216	0.0	clear
1310	5.47	300	6.18	0.105	0.49	0.00	14.50	218	0.0	clear
1315	Collect sample	300	6.18	0.105	0.55	0.00	14.55	219	0.0	clear 4 gal purged

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-136-080311-1435
Sample Location: SA-PZ-136
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 8-3-11								
Time: 1435								
Method: Low Flow-Peristaltic	clear	6.61	0.309	15.32	8.47	0.00	0.1	-92

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 8-3-11								
Method: Low Flow-Peristaltic								
Monitor Reading (ppm):								
Well Casing Diameter & Material Type: 1" PVC								
Total Well Depth (TD):	See low Flow purge sheet for details							
Static Water Level (WL): 7.12								
One Casing Volume(gal/L):								
Start Purge (hrs): 1355								
End Purge (hrs): 1435								
Total Purge Time (min): 40								
Total Vol. Purged (gal/L): 4 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40mL glass vials	yes

OBSERVATIONS / NOTES:

Tubing intake 1' off bottom
Post mechanical dev. sampling

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ-136
DATE: 8-3-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1350	7.12									
1355	Start purge				~~342~~					
1400	7.14	300	6.65	0.303	342	1.43	17.80	-95	0.1	tan color
1405	7.14	300	6.76	0.324	101	0.41	16.51	-102	0.2	slight tan color
1410	7.14	300	6.78	0.310	27.5	0.05	15.18	-104	0.1	clear
1415	7.14	300	6.70	0.306	20.1	0.00	15.03	-99	0.1	clear
1420	7.14	300	6.61	0.307	10.55	0.00	15.56	-96	0.1	clear
1425	7.14	300	6.63	0.313	13.7	0.00	15.76	-97	0.1	clear
1430	7.14	300	6.62	0.311	12.7	0.00	15.55	-96	0.1	clear
1435	Collect sample	300	6.61	0.304	8.47	0.00	15.32	-92	0.1	clear

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-135-080411-0855
Sample Location: SA-PZ-135
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 8-4-11								
Time: 0855*								
Method: Low Flow - Peristaltic	clear	4.99	0.098	13.56	0.32	0.13	0.0	338

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 8-4-11								
Method: Low Flow - Peristaltic								
Monitor Reading (ppm):								
Well Casing Diameter & Material Type: 1" PVC								
Total Well Depth (TD):	See low flow purge sheet for details							
Static Water Level (WL): 5.42								
One Casing Volume(gal/L):								
Start Purge (hrs): 0755								
End Purge (hrs): ~~0855~~ JB 0906								
Total Purge Time (min): ~~60~~ JB 71								
Total Vol. Purged (gal/L): 8 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40 mL glass vials	yes

OBSERVATIONS / NOTES:

Pull tubing intake 2' off bottom
*Sample time left as 0855

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045
WELL ID.: SA-PZ-135
DATE: 8-4-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0750	5.42									
0755	Start pump									
0800	5.45	300	4.03	0.117	16.3	1.71	15.49	406	0.1	clear, no odor
0805	5.45	300	4.27	0.102	2.72	0.71	14.01	384	0.0	clear, no odor
0810	5.45	300	4.36	0.099	1.02	0.51	13.58	376	0.0	" "
0815	5.45	300	4.39	0.098	0.85	0.42	13.60	374	0.0	" "
0820	5.45	300	4.44	0.097	0.47	0.38	13.58	371	0.0	" "
0825	5.45	300	4.49	0.097	0.15	0.32	13.56	368	0.0	" "
0830	5.45	300	4.51	0.097	0.15	0.32	13.53	367	0.0	" "
0835	5.45	300	4.53	0.097	0.46	0.31	13.48	365	0.0	" "
0840	5.45	300	4.56	0.097	0.50	0.31	13.55	362	0.0	" "
0845	5.45	300	4.59	0.097	0.51	0.31	13.53	363	0.0	" "
0850	5.45	300	4.64	0.097	0.33	0.23	13.58	359	0.0	" "
0855	5.45	300	4.95	0.098	0.14	0.14	13.47	344	0.0	~~Collect sample~~
0901	5.45	300	4.94	0.098	0.71	0.12	13.59	341	0.0	" "
0900*	5.45	300	4.99	0.098	0.32	0.13	13.56	338	0.0	Collect sample
		Sample time	left as	0855*						

SIGNATURE(S): [signature]

PAGE 1 OF 1

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: SA-PZ-136080411-1050
Sample Location: SA-PZ-136
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 8-4-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1050	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP
Method: Low Flow-Peristaltic	Clear	6.05	0.246	13.92	4.67	0.14	0.1	-5

PURGE DATA:

Date: 8-4-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow-Peristaltic								
Monitor Reading (ppm):								
Well Casing Diameter & Material Type: 1" PVC								
Total Well Depth (TD):	See low flow purge sheet for details							
Static Water Level (WL): 7.12								
One Casing Volume(gal/L):								
Start Purge (hrs): 0920								
End Purge (hrs): 1050								
Total Purge Time (min): 90								
Total Vol. Purged (gal/L): 9 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40 mL glass vials	yes

OBSERVATIONS / NOTES:

Pull tubing intake 1' off bottom
Post mech+chem development sampling

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): [signature]

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045
WELL ID.: SA-PZ-136
DATE: 8-4-11

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0915	7.12									
0920	Start purge									
0925	7.14	300	4.42	0.225	70.7	8.40	16.74	399	0.1	clear w/ tan tint
0930	7.14	300	4.83	0.214	24.2	6.77	14.42	372	0.1	clear no odor
0935	7.14	300	5.47	0.205	21.2	3.00	13.86	184	0.1	" "
0940	7.14	300	5.52	0.204	22.5	1.74	14.09	159	0.1	" "
0945	7.14	300	5.70	0.217	10.91	1.13	14.05	90	0.1	" "
0950	7.14	300	5.81	0.225	8.98	0.86	14.03	63	0.1	" "
0955	7.14	300	5.82	0.224	6.83	0.79	14.05	55	0.1	" "
1000	7.14	300	5.84	0.226	10.41	0.63	14.05	51	0.1	" "
1005	7.14	300	5.87	0.228	10.18	0.62	14.01	45	0.1	" "
1010	7.14	300	5.89	0.231	9.50	0.84	14.09	34	0.1	" "
1015	7.14	300	5.91	0.233	8.35	0.46	14.15	31	0.1	" "
1020	7.14	300	5.94	0.236	7.30	0.36	14.19	22	0.1	" "
1025	7.14	300	5.95	0.237	6.69	0.30	14.21	17	0.1	" "
1030	7.14	300	5.99	0.239	5.65	0.29	14.14	12	0.1	" "
1035	7.14	300	6.01	0.241	5.90	0.24	14.25	6	0.1	" "
1040	~~Collect sample~~	300	6.04	0.243	4.60	0.19	14.00	1	0.1	" "
1045	7.14	300	6.05	0.244	5.06	0.18	14.01	-3	0.1	" "
1050	Collect sample	300	6.05	0.246	4.67	0.14	13.92	-5	0.1	" "

SIGNATURE(S): [signature]

PAGE 1 OF 1

APPENDIX D

QA/QC SAMPLE LOG SHEETS

Tetra Tech NUS, Inc.

QA SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project Number: 112G02045
Sample Location:
QA Sample Type:

Sample ID Number: SA-TB01-20110307
Sampled By: J. Birkett
C.O.C. Number:

[X] Trip Blank
[] Source Water Blank
[] Rinsate Blank
[] Other Blank

SAMPLING DATA:

Date: 3-7-11
Time: 1100
Method: Lab prepared

WATER SOURCE:

[X] Laboratory Prepared
[] Purchased
[] Other
[] Tap
[] Fire Hydrant

PURCHASED WATER INFORMATION (If Applicable as Source or Rinsate Water):

Product Name:
Supplier:
Manufacturer:
Order Number:
Lot Number:
Expiration Date:

RINSATE INFORMATION (If Applicable):

Media Type:
Equipment Used:
Equipment Type:
[] Dedicated
[] Reusable

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Volatiles	Cool 4°C & HCl	3 40 mL glass vials	YES / NO
Semivolatiles	Cool 4°C		YES / NO
Pesticide / PCB	Cool 4°C		YES / NO
Metals	Cool 4°C & HNO_3		YES / NO
Cyanide	Cool 4°C & NaOH		YES / NO

OBSERVATIONS / NOTES:

Signature(s):

Tetra Tech NUS, Inc.

QA SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project Number: 112G02045
Sample Location:
QA Sample Type:

Sample ID Number: SA-TB01-20110411
Sampled By: J. Birkett
C.O.C. Number:

[X] Trip Blank
[] Source Water Blank
[] Rinsate Blank
[] Other Blank

SAMPLING DATA:

Date: 4-11-11
Time: 1700
Method: Lab prepared

WATER SOURCE:

[X] Laboratory Prepared
[] Purchased
[] Other
[] Tap
[] Fire Hydrant

PURCHASED WATER INFORMATION (If Applicable as Source or Rinsate Water):

Product Name:
Supplier:
Manufacturer:
Order Number:
Lot Number:
Expiration Date:

RINSATE INFORMATION (If Applicable):

Media Type:
Equipment Used:
Equipment Type:
[] Dedicated
[] Reusable

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Volatiles	Cool 4°C & HCl	2 40 mL glass vial	YES / NO
Semivolatiles	Cool 4°C		YES / NO
Pesticide / PCB	Cool 4°C		YES / NO
Metals	Cool 4°C & HNO_3		YES / NO
Cyanide	Cool 4°C & NaOH		YES / NO

OBSERVATIONS / NOTES:

Signature(s):

Tetra Tech NUS, Inc.

QA SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project Number: 112G02045
Sample Location: Field Trailer
Sample ID Number: SA-SB01-20110608
Sampled By: VAS
C.O.C. Number:

QA Sample Type:

[] Trip Blank
[X] Source Water Blank
[] Rinsate Blank
[] Other Blank

SAMPLING DATA:

Date: 6-8-11
Time: 0816
Method: Grab

WATER SOURCE:

[] Laboratory Prepared
[] Purchased
[X] Other Drillers decon water
[] Tap
[] Fire Hydrant

PURCHASED WATER INFORMATION (If Applicable as Source or Rinsate Water):

Product Name:
Supplier:
Manufacturer:
Order Number:
Lot Number:
Expiration Date:

RINSATE INFORMATION (If Applicable):

Media Type:
Equipment Used:
Equipment Type:
[] Dedicated
[] Reusable

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Volatiles	Cool 4°C & HCl	2 x 40 ml Vials	YES / NO
Semivolatiles	Cool 4°C		YES / NO
Pesticide / PCB	Cool 4°C		YES / NO
Metals	Cool 4°C & HNO_3		YES / NO
Cyanide	Cool 4°C & NaOH		YES / NO

OBSERVATIONS / NOTES:

- Drillers decon water - Potable water from Zebra office

Signature(s):

Tetra Tech NUS, Inc.

QA SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project Number: 112602045
Sample Location: Field Trailer
QA Sample Type:

[] Trip Blank
[] Source Water Blank
[X] Rinsate Blank
[] Other Blank

Sample ID Number: SA-RB01-20110607
Sampled By: VAS
C.O.C. Number:

SAMPLING DATA:

Date: 6-7-11
Time: 0640
Method: Direct pour

WATER SOURCE:

[] Laboratory Prepared
[X] Purchased
[] Other
[] Tap
[] Fire Hydrant

PURCHASED WATER INFORMATION (If Applicable as Source or Rinsate Water):

Product Name: ~~Giant~~ Distilled H_2O
Supplier: Giant Markets
Manufacturer:
Order Number: —
Lot Number:
Expiration Date: 4-25-11

RINSATE INFORMATION (If Applicable):

Media Type: Temporary well point screen
Equipment Used: for Aqueous samples
Equipment Type:
[] Dedicated
[X] Reusable

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Volatiles	Cool 4°C & HCl	2 X 40 ml vials	YES / NO
Semivolatiles	Cool 4°C		YES / NO
Pesticide / PCB	Cool 4°C		YES / NO
Metals	Cool 4°C & HNO_3		YES / NO
Cyanide	Cool 4°C & NaOH		YES / NO

OBSERVATIONS / NOTES:

- water poured over cleaned well point screen directly into sample vials

Signature(s):

Tetra Tech NUS, Inc.

QA SAMPLE LOG SHEET

Page___ of ___

Project Site Name: NWIRP Calverton
Project Number: 112602045
Sample Location: Field Trailer / Lab
QA Sample Type:

Sample ID Number: SA-TB03-20110606
Sampled By: Lab
C.O.C. Number:

[X] Trip Blank
[] Source Water Blank
[] Rinsate Blank
[] Other Blank

SAMPLING DATA:

Date: 6-6-11
Time: 0700
Method: Grab

WATER SOURCE:

[X] Laboratory Prepared
[] Purchased
[] Other
[] Tap
[] Fire Hydrant

PURCHASED WATER INFORMATION (If Applicable as Source or Rinsate Water):

Product Name:
Supplier:
Manufacturer:
Order Number:
Lot Number:
Expiration Date:

RINSATE INFORMATION (If Applicable):

Media Type:
Equipment Used:
Equipment Type:
[] Dedicated
[] Reusable

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Volatiles	Cool 4°C & HCl	2 X 40 ml vials	YES / NO
Semivolatiles	Cool 4°C		YES / NO
Pesticide / PCB	Cool 4°C		YES / NO
Metals	Cool 4°C & HNO_3		YES / NO
Cyanide	Cool 4°C & NaOH		YES / NO

OBSERVATIONS / NOTES:

Signature(s):

Tetra Tech NUS, Inc.

QA SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Sample ID Number: SA-TB04-20110609
Project Number: 112602045
Sampled By: Lab / VAS
Sample Location: Field Trailer
C.O.C. Number:
QA Sample Type:

[X] Trip Blank
[] Rinsate Blank
[] Source Water Blank
[] Other Blank

SAMPLING DATA:

Date: 6-9-11
Time: 0655
Method: Grab

WATER SOURCE:

[X] Laboratory Prepared
[] Tap
[] Purchased
[] Fire Hydrant
[] Other

PURCHASED WATER INFORMATION (If Applicable as Source or Rinsate Water):

Product Name:
Supplier:
Manufacturer:
Order Number:
Lot Number:
Expiration Date:

RINSATE INFORMATION (If Applicable):

Media Type:
Equipment Used:
Equipment Type:
[] Dedicated
[] Reusable

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Volatiles	Cool 4°C & HCl	2 x 40 ml vials	YES / NO
Semivolatiles	Cool 4°C		YES / NO
Pesticide / PCB	Cool 4°C		YES / NO
Metals	Cool 4°C & HNO_3		YES / NO
Cyanide	Cool 4°C & NaOH		YES / NO

OBSERVATIONS / NOTES:

Signature(s):

Tetra Tech NUS, Inc.

QA SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project Number: 112G02045
Sample Location: S.A. trailer/Lab
QA Sample Type:

Sample ID Number: SA-TB01-~~080311~~ 061711 JB 8-3-11
Sampled By: JB/Lab
C.O.C. Number:

[X] Trip Blank
[] Source Water Blank
[] Rinsate Blank
[] Other Blank

SAMPLING DATA:

Date: 6-17-11
Time: 1830
Method: Lab prepared

WATER SOURCE:

[X] Laboratory Prepared
[] Purchased
[] Other
[] Tap
[] Fire Hydrant

PURCHASED WATER INFORMATION (If Applicable as Source or Rinsate Water):

Product Name:
Supplier:
Manufacturer:
Order Number:
Lot Number:
Expiration Date:

RINSATE INFORMATION (If Applicable):

Media Type:
Equipment Used:
Equipment Type:
[] Dedicated
[] Reusable

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Volatiles	Cool 4°C & HCl	2 40mL glass vials	YES / NO
Semivolatiles	Cool 4°C		YES / NO
Pesticide / PCB	Cool 4°C		YES / NO
Metals	Cool 4°C & HNO_3		YES / NO
Cyanide	Cool 4°C & NaOH		YES / NO

OBSERVATIONS / NOTES:

pea sized bubble in both vials
-came from lab like this

Signature(s):

APPENDIX E

LABORATORY FORM Is

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-133I-20110308	SDG No.:	C1497
Lab Sample ID:	C1497-20	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033641.D	1		03/16/11	VG031511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	3.9		0.47	0.5	1	ug/L
67-64-1	Acetone	2.5	U	0.5	2.5	5	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	63		0.36	0.5	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	2.5	5	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	11		0.4	0.5	1	ug/L
71-43-2	Benzene	0.5	U	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	0.5	1	ug/L
108-88-3	Toluene	0.5	U	0.37	0.5	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	0.5	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	1	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	0.5	1	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	54		70 - 120		108%	SPK: 50
1868-53-7	Dibromofluoromethane	55.3		85 - 115		111%	SPK: 50
2037-26-5	Toluene-d8	50.2		85 - 120		100%	SPK: 50
460-00-4	4-Bromofluorobenzene	54.6		75 - 120		109%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	672731	3.87				
540-36-3	1,4-Difluorobenzene	1254000	4.68				
3114-55-4	Chlorobenzene-d5	1085130	9.64				

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-133I-20110308	SDG No.:	C1497
Lab Sample ID:	C1497-20	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033641.D	1		03/16/11	VG031511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
3855-82-1	1,4-Dichlorobenzene-d4	422249	13.34				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-135I-20110308	SDG No.:	C1497
Lab Sample ID:	C1497-18	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033675.D	1		03/17/11	VG031611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	2.6		0.47	0.5	1	ug/L
67-64-1	Acetone	2.5	U	0.5	2.5	5	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	34		0.36	0.5	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	2.5	5	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	7.3		0.4	0.5	1	ug/L
71-43-2	Benzene	0.5	U	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	0.5	1	ug/L
108-88-3	Toluene	0.5	U	0.37	0.5	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	0.5	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	1	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	0.5	1	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	46.8		70 - 120		94%	SPK: 50
1868-53-7	Dibromofluoromethane	50		85 - 115		100%	SPK: 50
2037-26-5	Toluene-d8	47.3		85 - 120		95%	SPK: 50
460-00-4	4-Bromofluorobenzene	54.6		75 - 120		109%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	607263	3.87				
540-36-3	1,4-Difluorobenzene	1134980	4.68				
3114-55-4	Chlorobenzene-d5	1030600	9.64				

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-135I-20110308	SDG No.:	C1497
Lab Sample ID:	C1497-18	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033675.D	1		03/17/11	VG031611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
3855-82-1	1,4-Dichlorobenzene-d4	424434	13.35				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-136I-20110308	SDG No.:	C1497
Lab Sample ID:	C1497-16	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033691.D	1		03/17/11	VG031711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	0.5	U	0.47	0.5	1	ug/L
67-64-1	Acetone	2.5	U	0.5	2.5	5	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	1.8		0.36	0.5	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	2.5	5	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.4	0.5	1	ug/L
71-43-2	Benzene	0.5	U	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	0.5	1	ug/L
108-88-3	Toluene	0.5	U	0.37	0.5	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	0.5	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	1	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	0.5	1	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	46.4		70 - 120		93%	SPK: 50
1868-53-7	Dibromofluoromethane	51		85 - 115		102%	SPK: 50
2037-26-5	Toluene-d8	47.4		85 - 120		95%	SPK: 50
460-00-4	4-Bromofluorobenzene	57.4		75 - 120		115%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	616138	3.87				
540-36-3	1,4-Difluorobenzene	1094790	4.68				
3114-55-4	Chlorobenzene-d5	1013520	9.65				

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-136I-20110308	SDG No.:	C1497
Lab Sample ID:	C1497-16	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033691.D	1		03/17/11	VG031711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
3855-82-1	1,4-Dichlorobenzene-d4	444732	13.35				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-138I-20110308	SDG No.:	C1497
Lab Sample ID:	C1497-11	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033636.D	1		03/15/11	VG031511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	0.5	U	0.47	0.5	1	ug/L
67-64-1	Acetone	2.5	U	0.5	2.5	5	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	4.1		0.36	0.5	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	2.5	5	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.4	0.5	1	ug/L
71-43-2	Benzene	0.5	U	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	0.5	1	ug/L
108-88-3	Toluene	0.5	U	0.37	0.5	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	0.5	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	1	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	0.5	1	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	50.1		70 - 120		100%	SPK: 50
1868-53-7	Dibromofluoromethane	54.1		85 - 115		108%	SPK: 50
2037-26-5	Toluene-d8	48.4		85 - 120		97%	SPK: 50
460-00-4	4-Bromofluorobenzene	53.8		75 - 120		108%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	672625	3.87				
540-36-3	1,4-Difluorobenzene	1264310	4.67				
3114-55-4	Chlorobenzene-d5	1123480	9.64				

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-138I-20110308	SDG No.:	C1497
Lab Sample ID:	C1497-11	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033636.D	1		03/15/11	VG031511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
3855-82-1	1,4-Dichlorobenzene-d4	434939	13.34				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-138I1-20110308	SDG No.:	C1497
Lab Sample ID:	C1497-13	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033670.D	1		03/16/11	VG031611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	86		0.47	0.5	1	ug/L
67-64-1	Acetone	2.5	U	0.5	2.5	5	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	690	E	0.36	0.5	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	2.5	5	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	330	E	0.4	0.5	1	ug/L
71-43-2	Benzene	2.6		0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	1		0.48	0.5	1	ug/L
79-01-6	Trichloroethene	0.97	J	0.28	0.5	1	ug/L
108-88-3	Toluene	0.5	U	0.37	0.5	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	0.5	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	1	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	0.5	1	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	46.8		70 - 120		94%	SPK: 50
1868-53-7	Dibromofluoromethane	47.2		85 - 115		94%	SPK: 50
2037-26-5	Toluene-d8	47		85 - 120		94%	SPK: 50
460-00-4	4-Bromofluorobenzene	59.1		75 - 120		118%	SPK: 50

INTERNAL STANDARDS				
363-72-4	Pentafluorobenzene		590789	3.87
540-36-3	1,4-Difluorobenzene	E-9	1096910	4.68
3114-55-4	Chlorobenzene-d5		1004400	9.65

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-138I1-20110308	SDG No.:	C1497
Lab Sample ID:	C1497-13	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033670.D	1		03/16/11	VG031611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
3855-82-1	1,4-Dichlorobenzene-d4	430974	13.35				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-138I1-20110308DL	SDG No.:	C1497
Lab Sample ID:	C1497-13DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033690.D	20		03/17/11	VG031711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	10	U	4	10	20	ug/L
75-01-4	Vinyl Chloride	10	U	6.8	10	20	ug/L
75-69-4	Trichlorofluoromethane	10	U	7	10	20	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	10	U	9	10	20	ug/L
75-35-4	1,1-Dichloroethene	82	D	9.4	10	20	ug/L
67-64-1	Acetone	50	U	10	50	100	ug/L
75-09-2	Methylene Chloride	10	U	8.2	10	20	ug/L
156-60-5	trans-1,2-Dichloroethene	10	U	8.2	10	20	ug/L
75-34-3	1,1-Dichloroethane	1200	D	7.2	10	20	ug/L
78-93-3	2-Butanone	50	U	26	50	100	ug/L
156-59-2	cis-1,2-Dichloroethene	10	U	7	10	20	ug/L
71-55-6	1,1,1-Trichloroethane	340	D	8	10	20	ug/L
71-43-2	Benzene	10	U	6.4	10	20	ug/L
107-06-2	1,2-Dichloroethane	10	U	9.6	10	20	ug/L
79-01-6	Trichloroethene	10	U	5.6	10	20	ug/L
108-88-3	Toluene	10	U	7.4	10	20	ug/L
127-18-4	Tetrachloroethene	10	U	5.4	10	20	ug/L
100-41-4	Ethyl Benzene	10	U	4	10	20	ug/L
179601-23-1	m/p-Xylenes	20	U	19	20	40	ug/L
95-47-6	o-Xylene	10	U	8.6	10	20	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	46.2		70 - 120		92%	SPK: 50
1868-53-7	Dibromofluoromethane	49.7		85 - 115		99%	SPK: 50
2037-26-5	Toluene-d8	46.9		85 - 120		94%	SPK: 50
460-00-4	4-Bromofluorobenzene	55.8		75 - 120		112%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	632218	3.87				
540-36-3	1,4-Difluorobenzene	1145930	4.67				
3114-55-4	Chlorobenzene-d5	1043800	9.64				

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-138I1-20110308DL	SDG No.:	C1497
Lab Sample ID:	C1497-13DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033690.D	20		03/17/11	VG031711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
3855-82-1	1,4-Dichlorobenzene-d4	432676	13.34				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-139I-20110308	SDG No.:	C1497
Lab Sample ID:	C1497-17	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033674.D	1		03/17/11	VG031611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	0.5	U	0.47	0.5	1	ug/L
67-64-1	Acetone	2.5	U	0.5	2.5	5	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	6.5		0.36	0.5	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	2.5	5	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.4	0.5	1	ug/L
71-43-2	Benzene	0.5	U	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	0.5	1	ug/L
108-88-3	Toluene	0.5	U	0.37	0.5	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	0.5	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	1	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	0.5	1	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	45.5		70 - 120		91%	SPK: 50
1868-53-7	Dibromofluoromethane	49.5		85 - 115		99%	SPK: 50
2037-26-5	Toluene-d8	48.7		85 - 120		97%	SPK: 50
460-00-4	4-Bromofluorobenzene	58.5		75 - 120		117%	SPK: 50

INTERNAL STANDARDS				
363-72-4	Pentafluorobenzene		605063	3.87
540-36-3	1,4-Difluorobenzene	E-13	1093230	4.68
3114-55-4	Chlorobenzene-d5		1032760	9.64

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-139I-20110308	SDG No.:	C1497
Lab Sample ID:	C1497-17	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033674.D	1		03/17/11	VG031611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
3855-82-1	1,4-Dichlorobenzene-d4	429154	13.35				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-149I1-20110308	SDG No.:	C1497
Lab Sample ID:	C1497-15	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033692.D	1		03/17/11	VG031711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	1.7		0.47	0.5	1	ug/L
67-64-1	Acetone	2.5	U	0.5	2.5	5	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	18		0.36	0.5	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	2.5	5	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.4	0.5	1	ug/L
71-43-2	Benzene	0.5	U	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	0.5	1	ug/L
108-88-3	Toluene	0.5	U	0.37	0.5	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	0.5	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	1	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	0.5	1	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	47.1		70 - 120		94%	SPK: 50
1868-53-7	Dibromofluoromethane	49.4		85 - 115		99%	SPK: 50
2037-26-5	Toluene-d8	46.7		85 - 120		93%	SPK: 50
460-00-4	4-Bromofluorobenzene	57.6		75 - 120		115%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	620879	3.87				
540-36-3	1,4-Difluorobenzene	1143520	4.67				
3114-55-4	Chlorobenzene-d5	1076710	9.64				

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-149I1-20110308	SDG No.:	C1497
Lab Sample ID:	C1497-15	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033692.D	1		03/17/11	VG031711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
3855-82-1	1,4-Dichlorobenzene-d4	440067	13.35				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-151I1-20110308	SDG No.:	C1497
Lab Sample ID:	C1497-08	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033600.D	1		03/14/11	VG031411

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	20		0.47	0.5	1	ug/L
67-64-1	Acetone	2.5	U	0.5	2.5	5	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	230	E	0.36	0.5	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	2.5	5	ug/L
156-59-2	cis-1,2-Dichloroethene	0.76	J	0.35	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	36		0.4	0.5	1	ug/L
71-43-2	Benzene	2.1		0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	0.53	J	0.28	0.5	1	ug/L
108-88-3	Toluene	0.5	U	0.37	0.5	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	0.5	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	1	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	0.5	1	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	43.2		70 - 120		86%	SPK: 50
1868-53-7	Dibromofluoromethane	43.4		85 - 115		87%	SPK: 50
2037-26-5	Toluene-d8	40.2	*	85 - 120		80%	SPK: 50
460-00-4	4-Bromofluorobenzene	42.6		75 - 120		85%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	694800	3.86				
540-36-3	1,4-Difluorobenzene	1311470	4.65				
3114-55-4	Chlorobenzene-d5	1126110	9.63				

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-151I1-20110308	SDG No.:	C1497
Lab Sample ID:	C1497-08	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033600.D	1		03/14/11	VG031411

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
3855-82-1	1,4-Dichlorobenzene-d4	444734	13.33				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-151I1-20110308DL	SDG No.:	C1497
Lab Sample ID:	C1497-08DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033634.D	10		03/15/11	VG031511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	5	U	2	5	10	ug/L
75-01-4	Vinyl Chloride	5	U	3.4	5	10	ug/L
75-69-4	Trichlorofluoromethane	5	U	3.5	5	10	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	5	U	4.5	5	10	ug/L
75-35-4	1,1-Dichloroethene	21	D	4.7	5	10	ug/L
67-64-1	Acetone	25	U	5	25	50	ug/L
75-09-2	Methylene Chloride	5	U	4.1	5	10	ug/L
156-60-5	trans-1,2-Dichloroethene	5	U	4.1	5	10	ug/L
75-34-3	1,1-Dichloroethane	310	D	3.6	5	10	ug/L
78-93-3	2-Butanone	25	U	13	25	50	ug/L
156-59-2	cis-1,2-Dichloroethene	5	U	3.5	5	10	ug/L
71-55-6	1,1,1-Trichloroethane	41	D	4	5	10	ug/L
71-43-2	Benzene	5	U	3.2	5	10	ug/L
107-06-2	1,2-Dichloroethane	5	U	4.8	5	10	ug/L
79-01-6	Trichloroethene	5	U	2.8	5	10	ug/L
108-88-3	Toluene	5	U	3.7	5	10	ug/L
127-18-4	Tetrachloroethene	5	U	2.7	5	10	ug/L
100-41-4	Ethyl Benzene	5	U	2	5	10	ug/L
179601-23-1	m/p-Xylenes	10	U	9.5	10	20	ug/L
95-47-6	o-Xylene	5	U	4.3	5	10	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	47.8		70 - 120		96%	SPK: 50
1868-53-7	Dibromofluoromethane	50.5		85 - 115		101%	SPK: 50
2037-26-5	Toluene-d8	45.2		85 - 120		90%	SPK: 50
460-00-4	4-Bromofluorobenzene	50.2		75 - 120		100%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	713991	3.86				
540-36-3	1,4-Difluorobenzene	1317310	4.66				
3114-55-4	Chlorobenzene-d5	1116650	9.63				

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-151I1-20110308DL	SDG No.:	C1497
Lab Sample ID:	C1497-08DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033634.D	10		03/15/11	VG031511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
3855-82-1	1,4-Dichlorobenzene-d4	444707	13.34				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

Tabulated Analytical Results
Gases

CLIENT: Tetra Tech NUS, Inc.
PROJECT: CTO WE08
SAMPLE ID: SA-PZ-151I1-20110308
LAB ID: C1497-08
FILENAME: FA000025.D
LAB PROJECT: C1497

MATRIX: AQUEOUS
ANALYST: UA
DILUTION: 1
DATE ANALYZED: 3/18/2011

CAS #	COMPOUNDS	RESULTS (ug/l)	QUALIFIER	LOQ (ug/l)	MDL (u/l)	LOD (ug/l)
74-84-0	ETHANE	< 3.0	U	5.0	2.6	3.0
74-85-1	ETHYLENE	< 3.0	U	5.0	2.6	3.0
74-82-8	METHANE	203.50	E	5.0	2.6	3.0

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL/LOD
B = PRESENT IN THE ASSOCIATED BLANK
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW
D = DILUTION
.... J = ESTIMATED VALUE
..... LOD = LIMIT OF DETECTION
..... LOQ = LIMIT OF QUANTITATION

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GC Volatiles
DETECTOR: FID

Tabulated Analytical Results
Gases

CLIENT: Tetra Tech NUS, Inc.
PROJECT: CTO WE08
SAMPLE ID: SA-PZ-151I1-20110308DL
LAB ID: C1497-08DL
FILENAME: FA000032.D
LAB PROJECT: C1497

MATRIX: AQUEOUS
ANALYST: UA
DILUTION: 10
DATE ANALYZED: 3/18/2011

CAS #	COMPOUNDS	RESULTS (ug/l)	QUALIFIER	LOQ (ug/l)	MDL (u/l)	LOD (ug/l)
74-84-0	ETHANE	< 30.0	UD	50.0	26.0	30.0
74-85-1	ETHYLENE	< 30.0	UD	50.0	26.0	30.0
74-82-8	METHANE	402.20	D	50.0	26.0	30.0

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL/LOD
B = PRESENT IN THE ASSOCIATED BLANK
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW
D = DILUTION
.... J = ESTIMATED VALUE
..... LOD = LIMIT OF DETECTION
..... LOQ = LIMIT OF QUANTITATION

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-15111-20110308	SDG No.:	C1497
Lab Sample ID:	C1497-08	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ	Units	Prep Date	Date Ana.	Ana Met.
7439-89-6	Iron	214	N	1	20.4	25	50	ug/L	03/11/11	03/11/11	SW6010B
7439-96-5	Manganese	5460		1	1.7	5	10	ug/L	03/11/11	03/11/11	SW6010B

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	Metals Group3				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-151I1-20110308	SDG No.:	C1497
Lab Sample ID:	C1497-08	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ	Units	Prep Date	Date Ana.	Ana Met.
TOC	2.6		1	0.097	0.25	0.5	mg/L	03/16/11	03/16/11	SW9060

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-DUP01-20110308	SDG No.:	C1497
Lab Sample ID:	C1497-10 SA-PZ-151I1-20110308	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033601.D	1		03/14/11	VG031411

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	22		0.47	0.5	1	ug/L
67-64-1	Acetone	2.5	U	0.5	2.5	5	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	250	E	0.36	0.5	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	2.5	5	ug/L
156-59-2	cis-1,2-Dichloroethene	0.85	J	0.35	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	39		0.4	0.5	1	ug/L
71-43-2	Benzene	2.3		0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	0.58	J	0.28	0.5	1	ug/L
108-88-3	Toluene	0.5	U	0.37	0.5	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	0.5	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	1	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	0.5	1	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	44		70 - 120		88%	SPK: 50
1868-53-7	Dibromofluoromethane	44.2		85 - 115		89%	SPK: 50
2037-26-5	Toluene-d8	41.7	*	85 - 120		83%	SPK: 50
460-00-4	4-Bromofluorobenzene	42.8		75 - 120		86%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	628252	3.86				
540-36-3	1,4-Difluorobenzene	1175640	4.65				
3114-55-4	Chlorobenzene-d5	997827	9.64				

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-DUP01-20110308	SDG No.:	C1497
Lab Sample ID:	C1497-10 SA-PZ-151I 1-20110308	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033601.D	1		03/14/11	VG031411

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
3855-82-1	1,4-Dichlorobenzene-d4	395200	13.34				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-DUP01-20110308DL	SDG No.:	C1497
Lab Sample ID:	C1497-10DL SA-PZ-151I1-20110308	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033635.D	10		03/15/11	VG031511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	5	U	2	5	10	ug/L
75-01-4	Vinyl Chloride	5	U	3.4	5	10	ug/L
75-69-4	Trichlorofluoromethane	5	U	3.5	5	10	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	5	U	4.5	5	10	ug/L
75-35-4	1,1-Dichloroethene	22	D	4.7	5	10	ug/L
67-64-1	Acetone	25	U	5	25	50	ug/L
75-09-2	Methylene Chloride	5	U	4.1	5	10	ug/L
156-60-5	trans-1,2-Dichloroethene	5	U	4.1	5	10	ug/L
75-34-3	1,1-Dichloroethane	310	D	3.6	5	10	ug/L
78-93-3	2-Butanone	25	U	13	25	50	ug/L
156-59-2	cis-1,2-Dichloroethene	5	U	3.5	5	10	ug/L
71-55-6	1,1,1-Trichloroethane	39	D	4	5	10	ug/L
71-43-2	Benzene	5	U	3.2	5	10	ug/L
107-06-2	1,2-Dichloroethane	5	U	4.8	5	10	ug/L
79-01-6	Trichloroethene	5	U	2.8	5	10	ug/L
108-88-3	Toluene	5	U	3.7	5	10	ug/L
127-18-4	Tetrachloroethene	5	U	2.7	5	10	ug/L
100-41-4	Ethyl Benzene	5	U	2	5	10	ug/L
179601-23-1	m/p-Xylenes	10	U	9.5	10	20	ug/L
95-47-6	o-Xylene	5	U	4.3	5	10	ug/L

SURROGATES					
17060-07-0	1,2-Dichloroethane-d4	48.8	70 - 120	98%	SPK: 50
1868-53-7	Dibromofluoromethane	51.6	85 - 115	103%	SPK: 50
2037-26-5	Toluene-d8	47	85 - 120	94%	SPK: 50
460-00-4	4-Bromofluorobenzene	51	75 - 120	102%	SPK: 50

INTERNAL STANDARDS			
363-72-4	Pentafluorobenzene	681635	3.86
540-36-3	1,4-Difluorobenzene	1260190	4.66
3114-55-4	Chlorobenzene-d5	1089380	9.64

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-DUP01-20110308DL	SDG No.:	C1497
Lab Sample ID:	C1497-10DL SA-PZ-151I I-20110308	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033635.D	10		03/15/11	VG031511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
3855-82-1	1,4-Dichlorobenzene-d4	436919	13.34				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

CHEMTECH

GC Volatiles
DETECTOR: FID

Tabulated Analytical Results
Gases

CLIENT: Tetra Tech NUS, Inc.
PROJECT: CTO WE08
SAMPLE ID: SA-DUP01-20110308
LAB ID: C1497-10 SA-PZ-151I1-20110308
FILENAME: FA000027.D
LAB PROJECT: C1497

MATRIX: AQUEOUS
ANALYST: UA
DILUTION: 1
DATE ANALYZED: 3/18/2011

CAS #	COMPOUNDS	RESULTS (ug/l)	QUALIFIER	LOQ (ug/l)	MDL (u/l)	LOD (ug/l)
74-84-0	ETHANE	< 3.0	U	5.0	2.6	3.0
74-85-1	ETHYLENE	< 3.0	U	5.0	2.6	3.0
74-82-8	METHANE	274.00	E	5.0	2.6	3.0

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL/LOD
B = PRESENT IN THE ASSOCIATED BLANK
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW
D = DILUTION
.... J = ESTIMATED VALUE
..... LOD = LIMIT OF DETECTION
..... LOQ = LIMIT OF QUANTITATION

CHEMTECH

GC Volatiles
DETECTOR: FID

Tabulated Analytical Results
Gases

CLIENT: Tetra Tech NUS, Inc.
MATRIX: AQUEOUS
PROJECT: CTO WE08
SAMPLE ID: SA-DUP01-20110308DL
ANALYST: UA
LAB ID: C1497-10DL SA-PZ-151I-20110308
DILUTION: 10
FILENAME: FA000034.D
DATE ANALYZED: 3/18/2011
LAB PROJECT: C1497

CAS #	COMPOUNDS	RESULTS (ug/l)	QUALIFIER	LOQ (ug/l)	MDL (u/l)	LOD (ug/l)
74-84-0	ETHANE	< 30.0	UD	50.0	26.0	30.0
74-85-1	ETHYLENE	< 30.0	UD	50.0	26.0	30.0
74-82-8	METHANE	319.50	D	50.0	26.0	30.0

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL/LOD
B = PRESENT IN THE ASSOCIATED BLANK
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW
D = DILUTION
.... J = ESTIMATED VALUE
..... LOD = LIMIT OF DETECTION
..... LOQ = LIMIT OF QUANTITATION

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-DUP01-20110308	SDG No.:	C1497
Lab Sample ID:	C1497-10 SA-PZ-151I1-20110308	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ	Units	Prep Date	Date Ana.	Ana Met.
7439-89-6	Iron	225	N	1	20.4	25	50	ug/L	03/11/11	03/11/11	SW6010B
7439-96-5	Manganese	5750		1	1.7	5	10	ug/L	03/11/11	03/11/11	SW6010B

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	Metals Group3				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-DUP01-20110308	SDG No.:	C1497
Lab Sample ID:	C1497-10 SA-PZ-151I-20110308	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ	Units	Prep Date	Date Ana.	Ana Met.
TOC	3.2		1	0.097	0.25	0.5	mg/L	03/16/11	03/16/11	SW9060

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/07/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-155I-20110307	SDG No.:	C1497
Lab Sample ID:	C1497-07	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033640.D	1		03/16/11	VG031511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	5.4		0.47	0.5	1	ug/L
67-64-1	Acetone	2.5	U	0.5	2.5	5	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	70		0.36	0.5	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	2.5	5	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	19		0.4	0.5	1	ug/L
71-43-2	Benzene	0.5	U	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	0.5	1	ug/L
108-88-3	Toluene	0.5	U	0.37	0.5	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	0.5	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	1	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	0.5	1	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	50		70 - 120		100%	SPK: 50
1868-53-7	Dibromofluoromethane	50.7		85 - 115		101%	SPK: 50
2037-26-5	Toluene-d8	45.7		85 - 120		91%	SPK: 50
460-00-4	4-Bromofluorobenzene	50.3		75 - 120		101%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	663928	3.87				
540-36-3	1,4-Difluorobenzene	1277440	4.67				
3114-55-4	Chlorobenzene-d5	1085720	9.64				

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/07/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-155I-20110307	SDG No.:	C1497
Lab Sample ID:	C1497-07	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033640.D	1		03/16/11	VG031511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
3855-82-1	1,4-Dichlorobenzene-d4	425387	13.35				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

Tabulated Analytical Results
Gases

CLIENT: Tetra Tech NUS, Inc.
PROJECT: CTO WE08
SAMPLE ID: SA-PZ-155I-20110307
LAB ID: C1497-07
FILENAME: FA000024.D
LAB PROJECT: C1497

MATRIX: AQUEOUS
ANALYST: UA
DILUTION: 1
DATE ANALYZED: 3/18/2011

CAS #	COMPOUNDS	RESULTS (ug/l)	QUALIFIER	LOQ (ug/l)	MDL (u/l)	LOD (ug/l)
74-84-0	ETHANE	< 3.0	U	5.0	2.6	3.0
74-85-1	ETHYLENE	< 3.0	U	5.0	2.6	3.0
74-82-8	METHANE	8.10		5.0	2.6	3.0

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL/LOD
B = PRESENT IN THE ASSOCIATED BLANK
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW
D = DILUTION
.... J = ESTIMATED VALUE
..... LOD = LIMIT OF DETECTION
..... LOQ = LIMIT OF QUANTITATION

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/07/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-155I-20110307	SDG No.:	C1497
Lab Sample ID:	C1497-07	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ	Units	Prep Date	Date Ana.	Ana Met.
7439-89-6	Iron	499	N	1	20.4	25	50	ug/L	03/11/11	03/11/11	SW6010B
7439-96-5	Manganese	340		1	1.7	5	10	ug/L	03/11/11	03/11/11	SW6010B

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	Metals Group3				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/07/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-155I-20110307	SDG No.:	C1497
Lab Sample ID:	C1497-07	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ	Units	Prep Date	Date Ana.	Ana Met.
TOC	0.989		1	0.097	0.25	0.5	mg/L	03/16/11	03/16/11	SW9060

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/07/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-157I-20110307	SDG No.:	C1497
Lab Sample ID:	C1497-02	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Test:	VOCMS Group1		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033637.D	1		03/16/11	VG031511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	5.2		0.47	0.5	1	ug/L
67-64-1	Acetone	2.5	U	0.5	2.5	5	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	71		0.36	0.5	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	2.5	5	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	21		0.4	0.5	1	ug/L
71-43-2	Benzene	0.5	U	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	0.5	1	ug/L
108-88-3	Toluene	0.5	U	0.37	0.5	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	0.5	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	1	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	0.5	1	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	51		70 - 120		102%	SPK: 50
1868-53-7	Dibromofluoromethane	50.9		85 - 115		102%	SPK: 50
2037-26-5	Toluene-d8	44.4		85 - 120		89%	SPK: 50
460-00-4	4-Bromofluorobenzene	49.9		75 - 120		100%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	673243	3.86				
540-36-3	1,4-Difluorobenzene	1309260	4.67				
3114-55-4	Chlorobenzene-d5	1098250	9.64				
3855-82-1	1,4-Dichlorobenzene-d4	428075	13.34				

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/07/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-157I-20110307	SDG No.:	C1497
Lab Sample ID:	C1497-02	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Test:	VOCMS Group1		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033637.D	1		03/16/11	VG031511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

Tabulated Analytical Results
Gases

CLIENT: Tetra Tech NUS, Inc.
PROJECT: CTO WE08
SAMPLE ID: SA-PZ-157I-20110307
LAB ID: C1497-02
FILENAME: FA000021.D
LAB PROJECT: C1497

MATRIX: AQUEOUS
ANALYST: UA
DILUTION: 1
DATE ANALYZED: 3/18/2011

CAS #	COMPOUNDS	RESULTS (ug/l)	QUALIFIER	LOQ (ug/l)	MDL (u/l)
74-84-0	ETHANE	< 3.0	U	5.0	2.6
74-85-1	ETHYLENE	< 3.0	U	5.0	2.6
74-82-8	METHANE	< 3.0	U	5.0	2.6

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL/LOD
B = PRESENT IN THE ASSOCIATED BLANK
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW
D = DILUTION
.... J = ESTIMATED VALUE
..... LOD = LIMIT OF DETECTION
..... LOQ = LIMIT OF QUANTITATION

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/07/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-157I-20110307	SDG No.:	C1497
Lab Sample ID:	C1497-02	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ	Units	Prep Date	Date Ana.	Ana Met.
7439-89-6	Iron	3090	N	1	20.4	25	50	ug/L	03/11/11	03/11/11	SW6010B
7439-96-5	Manganese	533		1	1.7	5	10	ug/L	03/11/11	03/11/11	SW6010B

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	Metals Group3				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/07/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-157I-20110307	SDG No.:	C1497
Lab Sample ID:	C1497-02	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ	Units	Prep Date	Date Ana.	Ana Met.
TOC	1.1		1	0.097	0.25	0.5	mg/L	03/16/11	03/16/11	SW9060

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/07/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-157I1-20110307	SDG No.:	C1497
Lab Sample ID:	C1497-05	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033597.D	1		03/14/11	VG031411

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	14		0.47	0.5	1	ug/L
67-64-1	Acetone	2.5	U	0.5	2.5	5	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	150	E	0.36	0.5	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	2.5	5	ug/L
156-59-2	cis-1,2-Dichloroethene	0.59	J	0.35	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	20		0.4	0.5	1	ug/L
71-43-2	Benzene	1.7		0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	0.5	1	ug/L
108-88-3	Toluene	0.5	U	0.37	0.5	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	0.5	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	1	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	0.5	1	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	40.5		70 - 120		81%	SPK: 50
1868-53-7	Dibromofluoromethane	42.1	*	85 - 115		84%	SPK: 50
2037-26-5	Toluene-d8	39.3	*	85 - 120		79%	SPK: 50
460-00-4	4-Bromofluorobenzene	40		75 - 120		80%	SPK: 50

INTERNAL STANDARDS			
363-72-4	Pentafluorobenzene	699137	3.86
540-36-3	1,4-Difluorobenzene	1301660	4.65
3114-55-4	Chlorobenzene-d5	1100340	9.62

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/07/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-15711-20110307	SDG No.:	C1497
Lab Sample ID:	C1497-05	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033597.D	1		03/14/11	VG031411

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
3855-82-1	1,4-Dichlorobenzene-d4	428144	13.33				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/07/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-15711-20110307DL	SDG No.:	C1497
Lab Sample ID:	C1497-05DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033633.D	5		03/15/11	VG031511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	2.5	U	1	2.5	5	ug/L
75-01-4	Vinyl Chloride	2.5	U	1.7	2.5	5	ug/L
75-69-4	Trichlorofluoromethane	2.5	U	1.8	2.5	5	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	2.5	U	2.2	2.5	5	ug/L
75-35-4	1,1-Dichloroethene	15	D	2.4	2.5	5	ug/L
67-64-1	Acetone	12.5	U	2.5	12.5	25	ug/L
75-09-2	Methylene Chloride	2.5	U	2	2.5	5	ug/L
156-60-5	trans-1,2-Dichloroethene	2.5	U	2	2.5	5	ug/L
75-34-3	1,1-Dichloroethane	190	D	1.8	2.5	5	ug/L
78-93-3	2-Butanone	12.5	U	6.6	12.5	25	ug/L
156-59-2	cis-1,2-Dichloroethene	2.5	U	1.8	2.5	5	ug/L
71-55-6	1,1,1-Trichloroethane	26	D	2	2.5	5	ug/L
71-43-2	Benzene	2.5	U	1.6	2.5	5	ug/L
107-06-2	1,2-Dichloroethane	2.5	U	2.4	2.5	5	ug/L
79-01-6	Trichloroethene	2.5	U	1.4	2.5	5	ug/L
108-88-3	Toluene	2.5	U	1.8	2.5	5	ug/L
127-18-4	Tetrachloroethene	2.5	U	1.4	2.5	5	ug/L
100-41-4	Ethyl Benzene	2.5	U	1	2.5	5	ug/L
179601-23-1	m/p-Xylenes	5	U	4.8	5	10	ug/L
95-47-6	o-Xylene	2.5	U	2.2	2.5	5	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	49.1		70 - 120	98%	SPK: 50	
1868-53-7	Dibromofluoromethane	51.5		85 - 115	103%	SPK: 50	
2037-26-5	Toluene-d8	46.8		85 - 120	94%	SPK: 50	
460-00-4	4-Bromofluorobenzene	52.2		75 - 120	104%	SPK: 50	

INTERNAL STANDARDS			
363-72-4	Pentafluorobenzene	692928	3.86
540-36-3	1,4-Difluorobenzene	1285160	4.66
3114-55-4	Chlorobenzene-d5	1087650	9.64

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/07/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-15711-20110307DL	SDG No.:	C1497
Lab Sample ID:	C1497-05DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033633.D	5		03/15/11	VG031511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
3855-82-1	1,4-Dichlorobenzene-d4	432690	13.34				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

Tabulated Analytical Results
Gases

CLIENT: Tetra Tech NUS, Inc.
PROJECT: CTO WE08
SAMPLE ID: SA-PZ-157I1-20110307
LAB ID: C1497-05
FILENAME: FA000022.D
LAB PROJECT: C1497

MATRIX: AQUEOUS
ANALYST: UA
DILUTION: 1
DATE ANALYZED: 3/18/2011

CAS #	COMPOUNDS	RESULTS (ug/l)	QUALIFIER	LOQ (ug/l)	MDL (u/l)	LOD (ug/l)
74-84-0	ETHANE	< 3.0	U	5.0	2.6	3.0
74-85-1	ETHYLENE	< 3.0	U	5.0	2.6	3.0
74-82-8	METHANE	226.90	E	5.0	2.6	3.0

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL/LOD
B = PRESENT IN THE ASSOCIATED BLANK
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW
D = DILUTION
.... J = ESTIMATED VALUE
..... LOD = LIMIT OF DETECTION
..... LOQ = LIMIT OF QUANTITATION

Tabulated Analytical Results
Gases

CLIENT: Tetra Tech NUS, Inc.
PROJECT: CTO WE08
SAMPLE ID: SA-PZ-157I1-20110307DL
LAB ID: C1497-05DL
FILENAME: FA000031.D
LAB PROJECT: C1497

MATRIX: AQUEOUS
ANALYST: UA
DILUTION: 10
DATE ANALYZED: 3/18/2011

CAS #	COMPOUNDS	RESULTS (ug/l)	QUALIFIER	LOQ (ug/l)	MDL (u/l)	LOD (ug/l)
74-84-0	ETHANE	< 30.0	UD	50.0	26.0	30.0
74-85-1	ETHYLENE	< 30.0	UD	50.0	26.0	30.0
74-82-8	METHANE	258.40	D	50.0	26.0	30.0

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL/LOD
B = PRESENT IN THE ASSOCIATED BLANK
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW
D = DILUTION
.... J = ESTIMATED VALUE
..... LOD = LIMIT OF DETECTION
..... LOQ = LIMIT OF QUANTITATION

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/07/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-157I1-20110307	SDG No.:	C1497
Lab Sample ID:	C1497-05	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ	Units	Prep Date	Date Ana.	Ana Met.
7439-89-6	Iron	1150	N	1	20.4	25	50	ug/L	03/11/11	03/11/11	SW6010B
7439-96-5	Manganese	5580		1	1.7	5	10	ug/L	03/11/11	03/11/11	SW6010B

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	Metals Group3				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/07/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-15711-20110307	SDG No.:	C1497
Lab Sample ID:	C1497-05	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ	Units	Prep Date	Date Ana.	Ana Met.
TOC	2.5		1	0.097	0.25	0.5	mg/L	03/16/11	03/16/11	SW9060

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/07/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-158I-20110307	SDG No.:	C1497
Lab Sample ID:	C1497-03	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033595.D	1		03/14/11	VG031411

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	2.4		0.47	0.5	1	ug/L
67-64-1	Acetone	2.5	U	0.5	2.5	5	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	37		0.36	0.5	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	2.5	5	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	7.4		0.4	0.5	1	ug/L
71-43-2	Benzene	0.5	U	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	0.5	1	ug/L
108-88-3	Toluene	0.5	U	0.37	0.5	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	0.5	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	1	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	0.5	1	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	41.7		70 - 120		83%	SPK: 50
1868-53-7	Dibromofluoromethane	42.1	*	85 - 115		84%	SPK: 50
2037-26-5	Toluene-d8	34.7	*	85 - 120		69%	SPK: 50
460-00-4	4-Bromofluorobenzene	38.8		75 - 120		78%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	640307	3.85				
540-36-3	1,4-Difluorobenzene	1194970	4.65				
3114-55-4	Chlorobenzene-d5	1019000	9.63				

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/07/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-158I-20110307	SDG No.:	C1497
Lab Sample ID:	C1497-03	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033595.D	1		03/14/11	VG031411

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
3855-82-1	1,4-Dichlorobenzene-d4	406405	13.33				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/07/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-158I-20110307RE	SDG No.:	C1497
Lab Sample ID:	C1497-03RE	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033638.D	1		03/16/11	VG031511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	3		0.47	0.5	1	ug/L
67-64-1	Acetone	2.5	U	0.5	2.5	5	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	43		0.36	0.5	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	2.5	5	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	11		0.4	0.5	1	ug/L
71-43-2	Benzene	0.5	U	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	0.5	1	ug/L
108-88-3	Toluene	0.5	U	0.37	0.5	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	0.5	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	1	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	0.5	1	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	50.8		70 - 120		102%	SPK: 50
1868-53-7	Dibromofluoromethane	53.3		85 - 115		107%	SPK: 50
2037-26-5	Toluene-d8	42	*	85 - 120		84%	SPK: 50
460-00-4	4-Bromofluorobenzene	49.7		75 - 120		99%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	661926	3.87				
540-36-3	1,4-Difluorobenzene	1238220	4.66				
3114-55-4	Chlorobenzene-d5	1052470	9.64				

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/07/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-158I-20110307RE	SDG No.:	C1497
Lab Sample ID:	C1497-03RE	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033638.D	1		03/16/11	VG031511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
3855-82-1	1,4-Dichlorobenzene-d4	408538	13.34				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/07/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-15811-20110307	SDG No.:	C1497
Lab Sample ID:	C1497-04	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033596.D	1		03/14/11	VG031411

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	12		0.47	0.5	1	ug/L
67-64-1	Acetone	2.5	U	0.5	2.5	5	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	140	E	0.36	0.5	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	2.5	5	ug/L
156-59-2	cis-1,2-Dichloroethene	0.63	J	0.35	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	21		0.4	0.5	1	ug/L
71-43-2	Benzene	1.4		0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	0.5	1	ug/L
108-88-3	Toluene	0.5	U	0.37	0.5	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	0.5	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	1	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	0.5	1	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	44.7		70 - 120		89%	SPK: 50
1868-53-7	Dibromofluoromethane	44.2		85 - 115		88%	SPK: 50
2037-26-5	Toluene-d8	38.4	*	85 - 120		77%	SPK: 50
460-00-4	4-Bromofluorobenzene	42		75 - 120		84%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	617881	3.86				
540-36-3	1,4-Difluorobenzene	1183090	4.65				
3114-55-4	Chlorobenzene-d5	1038190	9.63				

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/07/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-15811-20110307	SDG No.:	C1497
Lab Sample ID:	C1497-04	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033596.D	1		03/14/11	VG031411

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
3855-82-1	1,4-Dichlorobenzene-d4	409953	13.33				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/07/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-158I1-20110307DL	SDG No.:	C1497
Lab Sample ID:	C1497-04DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033632.D	5		03/15/11	VG031511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	2.5	U	1	2.5	5	ug/L
75-01-4	Vinyl Chloride	2.5	U	1.7	2.5	5	ug/L
75-69-4	Trichlorofluoromethane	2.5	U	1.8	2.5	5	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	2.5	U	2.2	2.5	5	ug/L
75-35-4	1,1-Dichloroethene	14	D	2.4	2.5	5	ug/L
67-64-1	Acetone	12.5	U	2.5	12.5	25	ug/L
75-09-2	Methylene Chloride	2.5	U	2	2.5	5	ug/L
156-60-5	trans-1,2-Dichloroethene	2.5	U	2	2.5	5	ug/L
75-34-3	1,1-Dichloroethane	170	D	1.8	2.5	5	ug/L
78-93-3	2-Butanone	12.5	U	6.6	12.5	25	ug/L
156-59-2	cis-1,2-Dichloroethene	2.5	U	1.8	2.5	5	ug/L
71-55-6	1,1,1-Trichloroethane	29	D	2	2.5	5	ug/L
71-43-2	Benzene	2.5	U	1.6	2.5	5	ug/L
107-06-2	1,2-Dichloroethane	2.5	U	2.4	2.5	5	ug/L
79-01-6	Trichloroethene	2.5	U	1.4	2.5	5	ug/L
108-88-3	Toluene	2.5	U	1.8	2.5	5	ug/L
127-18-4	Tetrachloroethene	2.5	U	1.4	2.5	5	ug/L
100-41-4	Ethyl Benzene	2.5	U	1	2.5	5	ug/L
179601-23-1	m/p-Xylenes	5	U	4.8	5	10	ug/L
95-47-6	o-Xylene	2.5	U	2.2	2.5	5	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	47.1		70 - 120		94%	SPK: 50
1868-53-7	Dibromofluoromethane	50.9		85 - 115		102%	SPK: 50
2037-26-5	Toluene-d8	46.2		85 - 120		92%	SPK: 50
460-00-4	4-Bromofluorobenzene	52		75 - 120		104%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	697274	3.86				
540-36-3	1,4-Difluorobenzene	1290470	4.66				
3114-55-4	Chlorobenzene-d5	1091230	9.63				

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/07/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-15811-20110307DL	SDG No.:	C1497
Lab Sample ID:	C1497-04DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033632.D	5		03/15/11	VG031511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
3855-82-1	1,4-Dichlorobenzene-d4	434074	13.34				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/07/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-159I-20110307	SDG No.:	C1497
Lab Sample ID:	C1497-06	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033639.D	1		03/16/11	VG031511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	4.9		0.47	0.5	1	ug/L
67-64-1	Acetone	2.5	U	0.5	2.5	5	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	65		0.36	0.5	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	2.5	5	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	18		0.4	0.5	1	ug/L
71-43-2	Benzene	0.5	U	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	0.5	1	ug/L
108-88-3	Toluene	0.5	U	0.37	0.5	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	0.5	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	1	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	0.5	1	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	50.9		70 - 120		102%	SPK: 50
1868-53-7	Dibromofluoromethane	53.2		85 - 115		106%	SPK: 50
2037-26-5	Toluene-d8	44.5		85 - 120		89%	SPK: 50
460-00-4	4-Bromofluorobenzene	52.8		75 - 120		106%	SPK: 50

INTERNAL STANDARDS			
363-72-4	Pentafluorobenzene	674311	3.86
540-36-3	1,4-Difluorobenzene	1209930	4.67
3114-55-4	Chlorobenzene-d5	1056340	9.64

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/07/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-159I-20110307	SDG No.:	C1497
Lab Sample ID:	C1497-06	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033639.D	1		03/16/11	VG031511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
3855-82-1	1,4-Dichlorobenzene-d4	430071	13.35				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

Tabulated Analytical Results
Gases

CLIENT: Tetra Tech NUS, Inc.
PROJECT: CTO WE08
SAMPLE ID: SA-PZ-159I-20110307
LAB ID: C1497-06
FILENAME: FA000023.D
LAB PROJECT: C1497

MATRIX: AQUEOUS
ANALYST: UA
DILUTION: 1
DATE ANALYZED: 3/18/2011

CAS #	COMPOUNDS	RESULTS (ug/l)	QUALIFIER	LOQ (ug/l)	MDL (u/l)	LOD (ug/l)
74-84-0	ETHANE	< 3.0	U	5.0	2.6	3.0
74-85-1	ETHYLENE	< 3.0	U	5.0	2.6	3.0
74-82-8	METHANE	< 3.0	U	5.0	2.6	3.0

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL/LOD
B = PRESENT IN THE ASSOCIATED BLANK
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW
D = DILUTION
.... J = ESTIMATED VALUE
..... LOD = LIMIT OF DETECTION
..... LOQ = LIMIT OF QUANTITATION

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/07/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-159I-20110307	SDG No.:	C1497
Lab Sample ID:	C1497-06	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ	Units	Prep Date	Date Ana.	Ana Met.
7439-89-6	Iron	7440	N	1	20.4	25	50	ug/L	03/11/11	03/11/11	SW6010B
7439-96-5	Manganese	707		1	1.7	5	10	ug/L	03/11/11	03/11/11	SW6010B

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	Metals Group3				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/07/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-159I-20110307	SDG No.:	C1497
Lab Sample ID:	C1497-06	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ	Units	Prep Date	Date Ana.	Ana Met.
TOC	1.5		1	0.097	0.25	0.5	mg/L	03/16/11	03/16/11	SW9060

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-159I1-20110308	SDG No.:	C1497
Lab Sample ID:	C1497-09	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033642.D	1		03/16/11	VG031511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	8.8		0.47	0.5	1	ug/L
67-64-1	Acetone	48		0.5	2.5	5	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	89		0.36	0.5	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	2.5	5	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	13		0.4	0.5	1	ug/L
71-43-2	Benzene	0.98	J	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	0.5	1	ug/L
108-88-3	Toluene	0.5	U	0.37	0.5	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	0.5	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	1	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	0.5	1	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	52.1		70 - 120		104%	SPK: 50
1868-53-7	Dibromofluoromethane	51.9		85 - 115		104%	SPK: 50
2037-26-5	Toluene-d8	44.6		85 - 120		89%	SPK: 50
460-00-4	4-Bromofluorobenzene	50.2		75 - 120		101%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	649685	3.87				
540-36-3	1,4-Difluorobenzene	1233590	4.68				
3114-55-4	Chlorobenzene-d5	1071660	9.64				

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-15911-20110308	SDG No.:	C1497
Lab Sample ID:	C1497-09	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033642.D	1		03/16/11	VG031511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
3855-82-1	1,4-Dichlorobenzene-d4	396993	13.35				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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GC Volatiles
DETECTOR: FID

Tabulated Analytical Results
Gases

CLIENT: Tetra Tech NUS, Inc.
PROJECT: CTO WE08
SAMPLE ID: SA-PZ-159I1-20110308
LAB ID: C1497-09
FILENAME: FA000026.D
LAB PROJECT: C1497

MATRIX: AQUEOUS
ANALYST: UA
DILUTION: 1
DATE ANALYZED: 3/18/2011

CAS #	COMPOUNDS	RESULTS (ug/l)	QUALIFIER	LOQ (ug/l)	MDL (u/l)	LOD (ug/l)
74-84-0	ETHANE	< 3.0	U	5.0	2.6	3.0
74-85-1	ETHYLENE	< 3.0	U	5.0	2.6	3.0
74-82-8	METHANE	129.40	E	5.0	2.6	3.0

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL/LOD
B = PRESENT IN THE ASSOCIATED BLANK
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW
D = DILUTION
.... J = ESTIMATED VALUE
..... LOD = LIMIT OF DETECTION
..... LOQ = LIMIT OF QUANTITATION

CHEMTECH

GC Volatiles
DETECTOR: FID

Tabulated Analytical Results
Gases

CLIENT: Tetra Tech NUS, Inc.
PROJECT: CTO WE08
SAMPLE ID: SA-PZ-159I1-20110308DL
LAB ID: C1497-09DL
FILENAME: FA000033.D
LAB PROJECT: C1497

MATRIX: AQUEOUS
ANALYST: UA
DILUTION: 5
DATE ANALYZED: 3/18/2011

CAS #	COMPOUNDS	RESULTS (ug/l)	QUALIFIER	LOQ (ug/l)	MDL (u/l)	LOD (ug/l)
74-84-0	ETHANE	< 15.0	UD	25.0	13.0	15.0
74-85-1	ETHYLENE	< 15.0	UD	25.0	13.0	15.0
74-82-8	METHANE	195.40	D	25.0	13.0	15.0

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL/LOD
B = PRESENT IN THE ASSOCIATED BLANK
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW
D = DILUTION
.... J = ESTIMATED VALUE
..... LOD = LIMIT OF DETECTION
..... LOQ = LIMIT OF QUANTITATION

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-159I1-20110308	SDG No.:	C1497
Lab Sample ID:	C1497-09	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ	Units	Prep Date	Date Ana.	Ana Met.
7439-89-6	Iron	5380	N	1	20.4	25	50	ug/L	03/11/11	03/11/11	SW6010B
7439-96-5	Manganese	7910		1	1.7	5	10	ug/L	03/11/11	03/11/11	SW6010B

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	Metals Group3				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-159I1-20110308	SDG No.:	C1497
Lab Sample ID:	C1497-09	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ	Units	Prep Date	Date Ana.	Ana Met.
TOC	25	OR	1	0.097	0.25	0.5	mg/L	03/16/11	03/16/11	SW9060

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-159I1-20110308DL	SDG No.:	C1497
Lab Sample ID:	C1497-09DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ	Units	Prep Date	Date Ana.	Ana Met.
TOC	26	D	10	0.97	2.5	5	mg/L	03/16/11	03/16/11	SW9060

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-160I-20110308	SDG No.:	C1497
Lab Sample ID:	C1497-12	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033603.D	1		03/14/11	VG031411

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	9.3		0.47	0.5	1	ug/L
67-64-1	Acetone	7		0.5	2.5	5	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	110	E	0.36	0.5	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	2.5	5	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	30		0.4	0.5	1	ug/L
71-43-2	Benzene	0.5	U	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	0.5	1	ug/L
108-88-3	Toluene	0.5	U	0.37	0.5	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	0.5	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	1	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	0.5	1	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	42.1		70 - 120		84%	SPK: 50
1868-53-7	Dibromofluoromethane	43		85 - 115		86%	SPK: 50
2037-26-5	Toluene-d8	36.4	*	85 - 120		73%	SPK: 50
460-00-4	4-Bromofluorobenzene	39.7		75 - 120		79%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	696706	3.86				
540-36-3	1,4-Difluorobenzene	1279400	4.66				
3114-55-4	Chlorobenzene-d5	1097190	9.63				

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-160I-20110308	SDG No.:	C1497
Lab Sample ID:	C1497-12	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033603.D	1		03/14/11	VG031411

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
3855-82-1	1,4-Dichlorobenzene-d4	430551	13.34				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-160I-20110308DL	SDG No.:	C1497
Lab Sample ID:	C1497-12DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033628.D	5		03/15/11	VG031511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	2.5	U	1	2.5	5	ug/L
75-01-4	Vinyl Chloride	2.5	U	1.7	2.5	5	ug/L
75-69-4	Trichlorofluoromethane	2.5	U	1.8	2.5	5	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	2.5	U	2.2	2.5	5	ug/L
75-35-4	1,1-Dichloroethene	10	D	2.4	2.5	5	ug/L
67-64-1	Acetone	12.5	U	2.5	12.5	25	ug/L
75-09-2	Methylene Chloride	2.5	U	2	2.5	5	ug/L
156-60-5	trans-1,2-Dichloroethene	2.5	U	2	2.5	5	ug/L
75-34-3	1,1-Dichloroethane	130	D	1.8	2.5	5	ug/L
78-93-3	2-Butanone	12.5	U	6.6	12.5	25	ug/L
156-59-2	cis-1,2-Dichloroethene	2.5	U	1.8	2.5	5	ug/L
71-55-6	1,1,1-Trichloroethane	31	D	2	2.5	5	ug/L
71-43-2	Benzene	2.5	U	1.6	2.5	5	ug/L
107-06-2	1,2-Dichloroethane	2.5	U	2.4	2.5	5	ug/L
79-01-6	Trichloroethene	2.5	U	1.4	2.5	5	ug/L
108-88-3	Toluene	2.5	U	1.8	2.5	5	ug/L
127-18-4	Tetrachloroethene	2.5	U	1.4	2.5	5	ug/L
100-41-4	Ethyl Benzene	2.5	U	1	2.5	5	ug/L
179601-23-1	m/p-Xylenes	5	U	4.8	5	10	ug/L
95-47-6	o-Xylene	2.5	U	2.2	2.5	5	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	44.9		70 - 120		90%	SPK: 50
1868-53-7	Dibromofluoromethane	50		85 - 115		100%	SPK: 50
2037-26-5	Toluene-d8	45.6		85 - 120		91%	SPK: 50
460-00-4	4-Bromofluorobenzene	50.7		75 - 120		101%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	754259	3.86				
540-36-3	1,4-Difluorobenzene	1353350	4.66				
3114-55-4	Chlorobenzene-d5	1151530	9.62				

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-160I-20110308DL	SDG No.:	C1497
Lab Sample ID:	C1497-12DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033628.D	5		03/15/11	VG031511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
3855-82-1	1,4-Dichlorobenzene-d4	434854	13.34				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

Tabulated Analytical Results
Gases

CLIENT: Tetra Tech NUS, Inc.
PROJECT: CTO WE08
SAMPLE ID: SA-PZ-160I-20110308
LAB ID: C1497-12
FILENAME: FA000028.D
LAB PROJECT: C1497

MATRIX: AQUEOUS
ANALYST: UA
DILUTION: 1
DATE ANALYZED: 3/18/2011

CAS #	COMPOUNDS	RESULTS (ug/l)	QUALIFIER	LOQ (ug/l)	MDL (u/l)	LOD (ug/l)
74-84-0	ETHANE	< 3.0	U	5.0	2.6	3.0
74-85-1	ETHYLENE	< 3.0	U	5.0	2.6	3.0
74-82-8	METHANE	4.20		5.0	2.6	3.0

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL/LOD
B = PRESENT IN THE ASSOCIATED BLANK
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW
D = DILUTION
.... J = ESTIMATED VALUE
..... LOD = LIMIT OF DETECTION
..... LOQ = LIMIT OF QUANTITATION

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-160I-20110308	SDG No.:	C1497
Lab Sample ID:	C1497-12	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ	Units	Prep Date	Date Ana.	Ana Met.
7439-89-6	Iron	8060	N	1	20.4	25	50	ug/L	03/11/11	03/11/11	SW6010B
7439-96-5	Manganese	1070		1	1.7	5	10	ug/L	03/11/11	03/11/11	SW6010B

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	Metals Group3				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-160I-20110308	SDG No.:	C1497
Lab Sample ID:	C1497-12	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ	Units	Prep Date	Date Ana.	Ana Met.
TOC	2.8		1	0.097	0.25	0.5	mg/L	03/16/11	03/16/11	SW9060

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-16011-20110308	SDG No.:	C1497
Lab Sample ID:	C1497-14	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033671.D	1		03/17/11	VG031611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	17		0.47	0.5	1	ug/L
67-64-1	Acetone	2.5	U	0.5	2.5	5	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	180	E	0.36	0.5	1	ug/L
78-93-3	2-Butanone	1.5	J	1.3	2.5	5	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	47		0.4	0.5	1	ug/L
71-43-2	Benzene	0.82	J	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	0.5	1	ug/L
108-88-3	Toluene	0.5	U	0.37	0.5	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	0.5	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	1	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	0.5	1	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	46		70 - 120		92%	SPK: 50
1868-53-7	Dibromofluoromethane	50.6		85 - 115		101%	SPK: 50
2037-26-5	Toluene-d8	45.9		85 - 120		92%	SPK: 50
460-00-4	4-Bromofluorobenzene	56.8		75 - 120		114%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	611071	3.87				
540-36-3	1,4-Difluorobenzene	1117170	4.68				
3114-55-4	Chlorobenzene-d5	1029840	9.65				

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-160I1-20110308	SDG No.:	C1497
Lab Sample ID:	C1497-14	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033671.D	1		03/17/11	VG031611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
3855-82-1	1,4-Dichlorobenzene-d4	428308	13.35				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-16011-20110308DL	SDG No.:	C1497
Lab Sample ID:	C1497-14DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033689.D	10		03/17/11	VG031711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	5	U	2	5	10	ug/L
75-01-4	Vinyl Chloride	5	U	3.4	5	10	ug/L
75-69-4	Trichlorofluoromethane	5	U	3.5	5	10	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	5	U	4.5	5	10	ug/L
75-35-4	1,1-Dichloroethene	17	D	4.7	5	10	ug/L
67-64-1	Acetone	25	U	5	25	50	ug/L
75-09-2	Methylene Chloride	5	U	4.1	5	10	ug/L
156-60-5	trans-1,2-Dichloroethene	5	U	4.1	5	10	ug/L
75-34-3	1,1-Dichloroethane	210	D	3.6	5	10	ug/L
78-93-3	2-Butanone	25	U	13	25	50	ug/L
156-59-2	cis-1,2-Dichloroethene	5	U	3.5	5	10	ug/L
71-55-6	1,1,1-Trichloroethane	42	D	4	5	10	ug/L
71-43-2	Benzene	5	U	3.2	5	10	ug/L
107-06-2	1,2-Dichloroethane	5	U	4.8	5	10	ug/L
79-01-6	Trichloroethene	5	U	2.8	5	10	ug/L
108-88-3	Toluene	5	U	3.7	5	10	ug/L
127-18-4	Tetrachloroethene	5	U	2.7	5	10	ug/L
100-41-4	Ethyl Benzene	5	U	2	5	10	ug/L
179601-23-1	m/p-Xylenes	10	U	9.5	10	20	ug/L
95-47-6	o-Xylene	5	U	4.3	5	10	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	46.4		70 - 120		93%	SPK: 50
1868-53-7	Dibromofluoromethane	50.9		85 - 115		102%	SPK: 50
2037-26-5	Toluene-d8	48		85 - 120		96%	SPK: 50
460-00-4	4-Bromofluorobenzene	58		75 - 120		116%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	607567	3.87				
540-36-3	1,4-Difluorobenzene	1108500	4.68				
3114-55-4	Chlorobenzene-d5	1024100	9.64				

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-160I1-20110308DL	SDG No.:	C1497
Lab Sample ID:	C1497-14DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033689.D	10		03/17/11	VG031711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
3855-82-1	1,4-Dichlorobenzene-d4	435304	13.35				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-161I-20110308	SDG No.:	C1497
Lab Sample ID:	C1497-19	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033676.D	1		03/17/11	VG031611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	10		0.47	0.5	1	ug/L
67-64-1	Acetone	2.5	U	0.5	2.5	5	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	120	E	0.36	0.5	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	2.5	5	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	26		0.4	0.5	1	ug/L
71-43-2	Benzene	0.5	U	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	0.5	1	ug/L
108-88-3	Toluene	0.5	U	0.37	0.5	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	0.5	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	1	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	0.5	1	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	45.9		70 - 120		92%	SPK: 50
1868-53-7	Dibromofluoromethane	49.7		85 - 115		99%	SPK: 50
2037-26-5	Toluene-d8	47.2		85 - 120		95%	SPK: 50
460-00-4	4-Bromofluorobenzene	56.4		75 - 120		113%	SPK: 50

INTERNAL STANDARDS			
363-72-4	Pentafluorobenzene	620256	3.88
540-36-3	1,4-Difluorobenzene	1136020	4.68
3114-55-4	Chlorobenzene-d5	1024450	9.64

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-1611-20110308	SDG No.:	C1497
Lab Sample ID:	C1497-19	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033676.D	1		03/17/11	VG031611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
3855-82-1	1,4-Dichlorobenzene-d4	442665	13.35				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-161I-20110308DL	SDG No.:	C1497
Lab Sample ID:	C1497-19DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033688.D	5		03/17/11	VG031711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	2.5	U	1	2.5	5	ug/L
75-01-4	Vinyl Chloride	2.5	U	1.7	2.5	5	ug/L
75-69-4	Trichlorofluoromethane	2.5	U	1.8	2.5	5	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	2.5	U	2.2	2.5	5	ug/L
75-35-4	1,1-Dichloroethene	9.7	D	2.4	2.5	5	ug/L
67-64-1	Acetone	12.5	U	2.5	12.5	25	ug/L
75-09-2	Methylene Chloride	2.5	U	2	2.5	5	ug/L
156-60-5	trans-1,2-Dichloroethene	2.5	U	2	2.5	5	ug/L
75-34-3	1,1-Dichloroethane	140	D	1.8	2.5	5	ug/L
78-93-3	2-Butanone	12.5	U	6.6	12.5	25	ug/L
156-59-2	cis-1,2-Dichloroethene	2.5	U	1.8	2.5	5	ug/L
71-55-6	1,1,1-Trichloroethane	27	D	2	2.5	5	ug/L
71-43-2	Benzene	2.5	U	1.6	2.5	5	ug/L
107-06-2	1,2-Dichloroethane	2.5	U	2.4	2.5	5	ug/L
79-01-6	Trichloroethene	2.5	U	1.4	2.5	5	ug/L
108-88-3	Toluene	2.5	U	1.8	2.5	5	ug/L
127-18-4	Tetrachloroethene	2.5	U	1.4	2.5	5	ug/L
100-41-4	Ethyl Benzene	2.5	U	1	2.5	5	ug/L
179601-23-1	m/p-Xylenes	5	U	4.8	5	10	ug/L
95-47-6	o-Xylene	2.5	U	2.2	2.5	5	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	46.5		70 - 120		93%	SPK: 50
1868-53-7	Dibromofluoromethane	50.2		85 - 115		100%	SPK: 50
2037-26-5	Toluene-d8	47.7		85 - 120		95%	SPK: 50
460-00-4	4-Bromofluorobenzene	57.2		75 - 120		114%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	617985	3.86				
540-36-3	1,4-Difluorobenzene	1145980	4.66				
3114-55-4	Chlorobenzene-d5	1086310	9.64				

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-PZ-161I-20110308DL	SDG No.:	C1497
Lab Sample ID:	C1497-19DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033688.D	5		03/17/11	VG031711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
3855-82-1	1,4-Dichlorobenzene-d4	449055	13.34				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-DUP02--20110308	SDG No.:	C1497
Lab Sample ID:	C1497-21 SA-PZ-161I-20110308	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033677.D	1		03/17/11	VG031611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	10		0.47	0.5	1	ug/L
67-64-1	Acetone	2.5	U	0.5	2.5	5	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	130	E	0.36	0.5	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	2.5	5	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	30		0.4	0.5	1	ug/L
71-43-2	Benzene	0.5	U	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	0.5	1	ug/L
108-88-3	Toluene	0.5	U	0.37	0.5	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	0.5	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	1	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	0.5	1	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	46.3		70 - 120		93%	SPK: 50
1868-53-7	Dibromofluoromethane	51.3		85 - 115		103%	SPK: 50
2037-26-5	Toluene-d8	49.3		85 - 120		99%	SPK: 50
460-00-4	4-Bromofluorobenzene	57.5		75 - 120		115%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	596735	3.87				
540-36-3	1,4-Difluorobenzene	1075650	4.68				
3114-55-4	Chlorobenzene-d5	1006740	9.65				

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-DUP02--20110308	SDG No.:	C1497
Lab Sample ID:	C1497-21 SA-PZ-161I-20110308	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033677.D	1		03/17/11	VG031611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
3855-82-1	1,4-Dichlorobenzene-d4	432406	13.35				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-DUP02--20110308DL SA-PZ-161I-20110308	SDG No.:	C1497
Lab Sample ID:	C1497-21DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033687.D	5		03/17/11	VG031711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	2.5	U	1	2.5	5	ug/L
75-01-4	Vinyl Chloride	2.5	U	1.7	2.5	5	ug/L
75-69-4	Trichlorofluoromethane	2.5	U	1.8	2.5	5	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	2.5	U	2.2	2.5	5	ug/L
75-35-4	1,1-Dichloroethene	10	D	2.4	2.5	5	ug/L
67-64-1	Acetone	12.5	U	2.5	12.5	25	ug/L
75-09-2	Methylene Chloride	2.5	U	2	2.5	5	ug/L
156-60-5	trans-1,2-Dichloroethene	2.5	U	2	2.5	5	ug/L
75-34-3	1,1-Dichloroethane	140	D	1.8	2.5	5	ug/L
78-93-3	2-Butanone	12.5	U	6.6	12.5	25	ug/L
156-59-2	cis-1,2-Dichloroethene	2.5	U	1.8	2.5	5	ug/L
71-55-6	1,1,1-Trichloroethane	26	D	2	2.5	5	ug/L
71-43-2	Benzene	2.5	U	1.6	2.5	5	ug/L
107-06-2	1,2-Dichloroethane	2.5	U	2.4	2.5	5	ug/L
79-01-6	Trichloroethene	2.5	U	1.4	2.5	5	ug/L
108-88-3	Toluene	2.5	U	1.8	2.5	5	ug/L
127-18-4	Tetrachloroethene	2.5	U	1.4	2.5	5	ug/L
100-41-4	Ethyl Benzene	2.5	U	1	2.5	5	ug/L
179601-23-1	m/p-Xylenes	5	U	4.8	5	10	ug/L
95-47-6	o-Xylene	2.5	U	2.2	2.5	5	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	45.6		70 - 120		91%	SPK: 50
1868-53-7	Dibromofluoromethane	48.7		85 - 115		97%	SPK: 50
2037-26-5	Toluene-d8	45.6		85 - 120		91%	SPK: 50
460-00-4	4-Bromofluorobenzene	54		75 - 120		108%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	625669	3.87				
540-36-3	1,4-Difluorobenzene	1186140	4.67				
3114-55-4	Chlorobenzene-d5	1052820	9.64				

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/08/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-DUP02--20110308DL SA-PZ-161I-20110308	SDG No.:	C1497
Lab Sample ID:	C1497-21DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033687.D	5		03/17/11	VG031711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
3855-82-1	1,4-Dichlorobenzene-d4	449551	13.34				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/07/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-TB01-20110307	SDG No.:	C1497
Lab Sample ID:	C1497-01	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033630.D	1		03/15/11	VG031511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	0.5	U	0.47	0.5	1	ug/L
67-64-1	Acetone	2.5	U	0.5	2.5	5	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	0.5	U	0.36	0.5	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	2.5	5	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.4	0.5	1	ug/L
71-43-2	Benzene	0.5	U	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	0.5	1	ug/L
108-88-3	Toluene	0.5	U	0.37	0.5	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	0.5	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	1	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	0.5	1	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	49.2		70 - 120		98%	SPK: 50
1868-53-7	Dibromofluoromethane	52.3		85 - 115		105%	SPK: 50
2037-26-5	Toluene-d8	47.2		85 - 120		94%	SPK: 50
460-00-4	4-Bromofluorobenzene	53		75 - 120		106%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	692286	3.86				
540-36-3	1,4-Difluorobenzene	1281530	4.66				
3114-55-4	Chlorobenzene-d5	1115370	9.63				

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/07/11
Project:	CTO WE08	Date Received:	03/09/11
Client Sample ID:	SA-TB01-20110307	SDG No.:	C1497
Lab Sample ID:	C1497-01	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033630.D	1		03/15/11	VG031511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
3855-82-1	1,4-Dichlorobenzene-d4	454967	13.34				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/10/11
Project:	CTO WE08	Date Received:	03/12/11
Client Sample ID:	SA-PZ-133I1-20110310	SDG No.:	C1519
Lab Sample ID:	C1519-18	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Test:	VOCMS Group1		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033817.D	1		03/24/11	VG032311

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	0.5	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	0.5	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	0.5	1	ug/L
75-00-3	Chloroethane	12		0.2	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	6.6		0.47	0.5	1	ug/L
67-64-1	Acetone	2.5	U	0.5	2.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	0.5	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	0.5	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	0.5	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	120	E	0.36	0.5	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	0.5	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	2.5	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	0.5	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	0.5	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	0.5	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	11		0.4	0.5	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	0.5	1	ug/L
71-43-2	Benzene	0.5	U	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	0.5	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	0.5	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	0.5	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	2.5	5	ug/L
108-88-3	Toluene	0.5	U	0.37	0.5	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	0.5	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	0.5	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	0.5	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	2.5	5	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/10/11
Project:	CTO WE08	Date Received:	03/12/11
Client Sample ID:	SA-PZ-133I1-20110310	SDG No.:	C1519
Lab Sample ID:	C1519-18	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Test:	VOCMS Group1		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033817.D	1		03/24/11	VG032311

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
124-48-1	Dibromochloromethane	0.5	U	0.2	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	0.5	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	0.5	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	0.5	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	1	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	0.5	1	ug/L
100-42-5	Styrene	0.5	U	0.36	0.5	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	0.5	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	0.5	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	0.5	1	ug/L
123-91-1	1,4-Dioxane	20	U	20	20	20	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	49		70 - 120		98%	SPK: 50
1868-53-7	Dibromofluoromethane	51.2		85 - 115		102%	SPK: 50
2037-26-5	Toluene-d8	47.6		85 - 120		95%	SPK: 50
460-00-4	4-Bromofluorobenzene	52.4		75 - 120		105%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	606188	3.92				
540-36-3	1,4-Difluorobenzene	1142830	4.73				
3114-55-4	Chlorobenzene-d5	1066320	9.68				
3855-82-1	1,4-Dichlorobenzene-d4	443418	13.38				

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/10/11
Project:	CTO WE08	Date Received:	03/12/11
Client Sample ID:	SA-PZ-13311-20110310DL	SDG No.:	C1519
Lab Sample ID:	C1519-18DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Test:	VOCMS Group1		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033836.D	5		03/24/11	VG032411

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	2.5	U	1	2.5	5	ug/L
74-87-3	Chloromethane	2.5	U	1	2.5	5	ug/L
75-01-4	Vinyl Chloride	2.5	U	1.7	2.5	5	ug/L
74-83-9	Bromomethane	2.5	U	1	2.5	5	ug/L
75-00-3	Chloroethane	12	D	1	2.5	5	ug/L
75-69-4	Trichlorofluoromethane	2.5	U	1.8	2.5	5	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	2.5	U	2.2	2.5	5	ug/L
75-35-4	1,1-Dichloroethene	2.5	U	2.4	2.5	5	ug/L
67-64-1	Acetone	12.5	U	2.5	12.5	25	ug/L
75-15-0	Carbon Disulfide	2.5	U	1	2.5	5	ug/L
1634-04-4	Methyl tert-butyl Ether	2.5	U	1.8	2.5	5	ug/L
79-20-9	Methyl Acetate	2.5	U	1	2.5	5	ug/L
75-09-2	Methylene Chloride	2.5	U	2	2.5	5	ug/L
156-60-5	trans-1,2-Dichloroethene	2.5	U	2	2.5	5	ug/L
75-34-3	1,1-Dichloroethane	130	D	1.8	2.5	5	ug/L
110-82-7	Cyclohexane	2.5	U	1	2.5	5	ug/L
78-93-3	2-Butanone	12.5	U	6.6	12.5	25	ug/L
56-23-5	Carbon Tetrachloride	2.5	U	1	2.5	5	ug/L
156-59-2	cis-1,2-Dichloroethene	2.5	U	1.8	2.5	5	ug/L
74-97-5	Bromochloromethane	2.5	U	1	2.5	5	ug/L
67-66-3	Chloroform	2.5	U	1.7	2.5	5	ug/L
71-55-6	1,1,1-Trichloroethane	2.5	U	2	2.5	5	ug/L
108-87-2	Methylcyclohexane	2.5	U	1	2.5	5	ug/L
71-43-2	Benzene	2.5	U	1.6	2.5	5	ug/L
107-06-2	1,2-Dichloroethane	2.5	U	2.4	2.5	5	ug/L
79-01-6	Trichloroethene	2.5	U	1.4	2.5	5	ug/L
78-87-5	1,2-Dichloropropane	2.5	U	2.3	2.5	5	ug/L
75-27-4	Bromodichloromethane	2.5	U	1.8	2.5	5	ug/L
108-10-1	4-Methyl-2-Pentanone	12.5	U	10	12.5	25	ug/L
108-88-3	Toluene	2.5	U	1.8	2.5	5	ug/L
10061-02-6	t-1,3-Dichloropropene	2.5	U	1.4	2.5	5	ug/L
10061-01-5	cis-1,3-Dichloropropene	2.5	U	1.6	2.5	5	ug/L
79-00-5	1,1,2-Trichloroethane	2.5	U	1.9	2.5	5	ug/L
591-78-6	2-Hexanone	12.5	U	9.7	12.5	25	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/10/11
Project:	CTO WE08	Date Received:	03/12/11
Client Sample ID:	SA-PZ-13311-20110310DL	SDG No.:	C1519
Lab Sample ID:	C1519-18DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Test:	VOCMS Group1		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033836.D	5		03/24/11	VG032411

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
124-48-1	Dibromochloromethane	2.5	U	1	2.5	5	ug/L
106-93-4	1,2-Dibromoethane	2.5	U	2	2.5	5	ug/L
127-18-4	Tetrachloroethene	2.5	U	1.4	2.5	5	ug/L
108-90-7	Chlorobenzene	2.5	U	2.4	2.5	5	ug/L
100-41-4	Ethyl Benzene	2.5	U	1	2.5	5	ug/L
179601-23-1	m/p-Xylenes	5	U	4.8	5	10	ug/L
95-47-6	o-Xylene	2.5	U	2.2	2.5	5	ug/L
100-42-5	Styrene	2.5	U	1.8	2.5	5	ug/L
75-25-2	Bromoform	2.5	U	2.4	2.5	5	ug/L
98-82-8	Isopropylbenzene	2.5	U	2.2	2.5	5	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U	1.6	2.5	5	ug/L
541-73-1	1,3-Dichlorobenzene	2.5	U	2.2	2.5	5	ug/L
106-46-7	1,4-Dichlorobenzene	2.5	U	1.6	2.5	5	ug/L
95-50-1	1,2-Dichlorobenzene	2.5	U	2.2	2.5	5	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	2.5	U	2.3	2.5	5	ug/L
120-82-1	1,2,4-Trichlorobenzene	2.5	U	1	2.5	5	ug/L
87-61-6	1,2,3-Trichlorobenzene	2.5	U	1	2.5	5	ug/L
123-91-1	1,4-Dioxane	100	U	100	100	100	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	48.2		70 - 120		96%	SPK: 50
1868-53-7	Dibromofluoromethane	48.8		85 - 115		98%	SPK: 50
2037-26-5	Toluene-d8	48.9		85 - 120		98%	SPK: 50
460-00-4	4-Bromofluorobenzene	52.9		75 - 120		106%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	593699	3.89				
540-36-3	1,4-Difluorobenzene	1101100	4.69				
3114-55-4	Chlorobenzene-d5	1032030	9.65				
3855-82-1	1,4-Dichlorobenzene-d4	420770	13.36				

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/10/11
Project:	CTO WE08	Date Received:	03/12/11
Client Sample ID:	SA-MW-127I-20110310	SDG No.:	C1520
Lab Sample ID:	C1520-02	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Test:	VOCMS Group1		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033821.D	1		03/24/11	VG032311

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	0.5	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	0.5	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	0.5	1	ug/L
75-00-3	Chloroethane	26		0.2	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	5.6		0.47	0.5	1	ug/L
67-64-1	Acetone	2.5	U	0.5	2.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	0.5	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	0.5	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	0.5	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	93		0.36	0.5	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	0.5	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	2.5	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	0.5	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	0.5	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	0.5	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	8.1		0.4	0.5	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	0.5	1	ug/L
71-43-2	Benzene	0.5	U	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	0.5	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	0.5	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	0.5	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	2.5	5	ug/L
108-88-3	Toluene	0.5	U	0.37	0.5	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	0.5	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	0.5	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	0.5	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	2.5	5	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/10/11
Project:	CTO WE08	Date Received:	03/12/11
Client Sample ID:	SA-MW-127I-20110310	SDG No.:	C1520
Lab Sample ID:	C1520-02	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Test:	VOCMS Group1		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG033821.D	1		03/24/11	VG032311

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
124-48-1	Dibromochloromethane	0.5	U	0.2	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	0.5	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	0.5	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	0.5	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	1	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	0.5	1	ug/L
100-42-5	Styrene	0.5	U	0.36	0.5	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	0.5	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	0.5	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	0.5	1	ug/L
123-91-1	1,4-Dioxane	20	U	20	20	20	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	48.9		70 - 120		98%	SPK: 50
1868-53-7	Dibromofluoromethane	49.6		85 - 115		99%	SPK: 50
2037-26-5	Toluene-d8	47.9		85 - 120		96%	SPK: 50
460-00-4	4-Bromofluorobenzene	54.1		75 - 120		108%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	596099	3.92				
540-36-3	1,4-Difluorobenzene	1111760	4.72				
3114-55-4	Chlorobenzene-d5	1038040	9.68				
3855-82-1	1,4-Dichlorobenzene-d4	430883	13.38				

Tabulated Analytical Results
Gases

CLIENT: Tetra Tech NUS, Inc.
PROJECT: CTO WE08
SAMPLE ID: SA-MW-127I-20110310
LAB ID: C1520-02
FILENAME: FA000053.D
LAB PROJECT: C1520

MATRIX: AQUEOUS
ANALYST: UA
DILUTION: 1
DATE ANALYZED: 3/24/2011

CAS #	COMPOUNDS	RESULTS (ug/l)	QUALIFIER	LOQ (ug/l)	MDL (u/l)	LOD (ug/l)
74-84-0	ETHANE	< 3.0	U	5.0	2.6	3.0
74-85-1	ETHYLENE	< 3.0	U	5.0	2.6	3.0
74-82-8	METHANE	6.10		5.0	2.6	3.0

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL/LOD
B = PRESENT IN THE ASSOCIATED BLANK
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW
D = DILUTION
.... J = ESTIMATED VALUE
..... LOD = LIMIT OF DETECTION
..... LOQ = LIMIT OF QUANTITATION

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/15/11
Project:	CTO WE08	Date Received:	03/16/11
Client Sample ID:	CARBONIN-20110315	SDG No.:	c1551
Lab Sample ID:	C1551-01	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF026188.D	1		03/28/11	VF032811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	0.5	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	0.5	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	0.5	1	ug/L
75-00-3	Chloroethane	80		0.2	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	0.5	U	0.47	0.5	1	ug/L
67-64-1	Acetone	2.5	U	0.5	2.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	0.5	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	0.5	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	0.5	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	140	E	0.36	0.5	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	0.5	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	2.5	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	0.5	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	0.5	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	0.5	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	24		0.4	0.5	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	0.5	1	ug/L
71-43-2	Benzene	0.69	J	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	0.5	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	0.5	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	0.5	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	2.5	5	ug/L
108-88-3	Toluene	0.5	U	0.37	0.5	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	0.5	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/15/11
Project:	CTO WE08	Date Received:	03/16/11
Client Sample ID:	CARBONIN-20110315	SDG No.:	c1551
Lab Sample ID:	C1551-01	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF026188.D	1		03/28/11	VF032811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	0.5	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	0.5	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	2.5	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	0.5	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	0.5	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	0.5	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	1	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	0.5	1	ug/L
100-42-5	Styrene	0.5	U	0.36	0.5	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	0.5	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.72	J	0.43	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	3.6		0.32	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	1	J	0.45	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	2.5		0.2	0.5	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.85	J	0.2	0.5	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	20	ug/L

SURROGATES

17060-07-0	1,2-Dichloroethane-d4	52.5	70 - 120	105%	SPK: 50
1868-53-7	Dibromofluoromethane	47.8	85 - 115	96%	SPK: 50
2037-26-5	Toluene-d8	49.1	85 - 120	98%	SPK: 50
460-00-4	4-Bromofluorobenzene	49.9	75 - 120	100%	SPK: 50

INTERNAL STANDARDS

363-72-4	Pentafluorobenzene	1735760	3.19
540-36-3	1,4-Difluorobenzene	3306970	3.8
3114-55-4	Chlorobenzene-d5	3200840	7.15
3855-82-1	1,4-Dichlorobenzene-d4	1678220	9.02

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/15/11
Project:	CTO WE08	Date Received:	03/16/11
Client Sample ID:	CARBONIN-20110315DL	SDG No.:	c1551
Lab Sample ID:	C1551-01DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF026189.D	5		03/28/11	VF032811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	2.5	U	1	2.5	5	ug/L
74-87-3	Chloromethane	2.5	U	1	2.5	5	ug/L
75-01-4	Vinyl Chloride	2.5	U	1.7	2.5	5	ug/L
74-83-9	Bromomethane	2.5	U	1	2.5	5	ug/L
75-00-3	Chloroethane	59	D	1	2.5	5	ug/L
75-69-4	Trichlorofluoromethane	2.5	U	1.8	2.5	5	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	2.5	U	2.2	2.5	5	ug/L
75-35-4	1,1-Dichloroethene	2.5	U	2.4	2.5	5	ug/L
67-64-1	Acetone	12.5	U	2.5	12.5	25	ug/L
75-15-0	Carbon Disulfide	2.5	U	1	2.5	5	ug/L
1634-04-4	Methyl tert-butyl Ether	2.5	U	1.8	2.5	5	ug/L
79-20-9	Methyl Acetate	2.5	U	1	2.5	5	ug/L
75-09-2	Methylene Chloride	2.5	U	2	2.5	5	ug/L
156-60-5	trans-1,2-Dichloroethene	2.5	U	2	2.5	5	ug/L
75-34-3	1,1-Dichloroethane	120	D	1.8	2.5	5	ug/L
110-82-7	Cyclohexane	2.5	U	1	2.5	5	ug/L
78-93-3	2-Butanone	12.5	U	6.6	12.5	25	ug/L
56-23-5	Carbon Tetrachloride	2.5	U	1	2.5	5	ug/L
156-59-2	cis-1,2-Dichloroethene	2.5	U	1.8	2.5	5	ug/L
74-97-5	Bromochloromethane	2.5	U	1	2.5	5	ug/L
67-66-3	Chloroform	2.5	U	1.7	2.5	5	ug/L
71-55-6	1,1,1-Trichloroethane	17	D	2	2.5	5	ug/L
108-87-2	Methylcyclohexane	2.5	U	1	2.5	5	ug/L
71-43-2	Benzene	2.5	U	1.6	2.5	5	ug/L
107-06-2	1,2-Dichloroethane	2.5	U	2.4	2.5	5	ug/L
79-01-6	Trichloroethene	2.5	U	1.4	2.5	5	ug/L
78-87-5	1,2-Dichloropropane	2.5	U	2.3	2.5	5	ug/L
75-27-4	Bromodichloromethane	2.5	U	1.8	2.5	5	ug/L
108-10-1	4-Methyl-2-Pentanone	12.5	U	10	12.5	25	ug/L
108-88-3	Toluene	2.5	U	1.8	2.5	5	ug/L
10061-02-6	t-1,3-Dichloropropene	2.5	U	1.4	2.5	5	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/15/11
Project:	CTO WE08	Date Received:	03/16/11
Client Sample ID:	CARBONIN-20110315DL	SDG No.:	c1551
Lab Sample ID:	C1551-01DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF026189.D	5		03/28/11	VF032811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
10061-01-5	cis-1,3-Dichloropropene	2.5	U	1.6	2.5	5	ug/L
79-00-5	1,1,2-Trichloroethane	2.5	U	1.9	2.5	5	ug/L
591-78-6	2-Hexanone	12.5	U	9.7	12.5	25	ug/L
124-48-1	Dibromochloromethane	2.5	U	1	2.5	5	ug/L
106-93-4	1,2-Dibromoethane	2.5	U	2	2.5	5	ug/L
127-18-4	Tetrachloroethene	2.5	U	1.4	2.5	5	ug/L
108-90-7	Chlorobenzene	2.5	U	2.4	2.5	5	ug/L
100-41-4	Ethyl Benzene	2.5	U	1	2.5	5	ug/L
179601-23-1	m/p-Xylenes	5	U	4.8	5	10	ug/L
95-47-6	o-Xylene	2.5	U	2.2	2.5	5	ug/L
100-42-5	Styrene	2.5	U	1.8	2.5	5	ug/L
75-25-2	Bromoform	2.5	U	2.4	2.5	5	ug/L
98-82-8	Isopropylbenzene	2.5	U	2.2	2.5	5	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U	1.6	2.5	5	ug/L
541-73-1	1,3-Dichlorobenzene	2.5	U	2.2	2.5	5	ug/L
106-46-7	1,4-Dichlorobenzene	2.5	U	1.6	2.5	5	ug/L
95-50-1	1,2-Dichlorobenzene	2.5	U	2.2	2.5	5	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	2.5	U	2.3	2.5	5	ug/L
120-82-1	1,2,4-Trichlorobenzene	2.5	U	1	2.5	5	ug/L
87-61-6	1,2,3-Trichlorobenzene	2.5	U	1	2.5	5	ug/L
123-91-1	1,4-Dioxane	50	U	100	100	100	ug/L

SURROGATES

17060-07-0	1,2-Dichloroethane-d4	52.6	70 - 120	105% SPK: 50
1868-53-7	Dibromofluoromethane	48	85 - 115	96% SPK: 50
2037-26-5	Toluene-d8	48.8	85 - 120	98% SPK: 50
460-00-4	4-Bromofluorobenzene	48.8	75 - 120	98% SPK: 50

INTERNAL STANDARDS

363-72-4	Pentafluorobenzene	1801700	3.2
540-36-3	1,4-Difluorobenzene	3481370	3.8
3114-55-4	Chlorobenzene-d5	3386390	7.15
3855-82-1	1,4-Dichlorobenzene-d4	1761240	9.02

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ANALYTICAL RESULTS SUMMARY

PROJECT NAME : CTO WE08

TETRA TECH NUS, INC.
661 Anderson Drive

Pittsburgh , Pennsylvania - 15220-2745
Phone No: 4129218361

ORDER ID : C1597
ATTENTION : David Brayack

ACCREDITED IN ACCORDANCE WITH nelac

LABORATORY ACCREDITATION BUREAU ACCREDITED ISO/IEC 17025

DoD ELAP

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Cover Page

Order ID : C1597

Project ID : CTO WE08

Client : Tetra Tech NUS, Inc.

Lab Sample Number	Client Sample Number
C1597-01	SA-PZ-157I-20110321
C1597-02	SA-PZ-157I1-20110321
C1597-03	SA-PZ-158I-20110321
C1597-04	SA-PZ-158I1-20110321
C1597-05	SA-PZ-159I-20110321
C1597-06	SA-PZ-159I1-20110321

I certify that the data package is in compliance with the terms and conditions of the contract,both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : Mildred V Reyes

Mildred V. Reyes, QA/QC Supervisor
2011.04.12 13:52:19 -04'00'

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

CHEMTECH

CASE NARRATIVE

Tetra Tech NUS, Inc.
Project Name: CTO WE08
Project # N/A
Chemtech Project # C1597

A. Number of Samples and Date of Receipt:
6 Water samples were received on 03/22/2011.

B. Parameters:
According to the Chain of Custody document, the following analyses were requested: TOC. This data package contains results for TOC.

C. Analytical Techniques:
The analysis of TOC was based on method 9060.

D. QA/ QC Samples:
The Holding Times were met for all analysis.
The Blank Spike met requirements for all samples.
The Duplicate analysis met criteria for all samples.
The Matrix Spike analysis met criteria for all samples.
The Matrix Spike Duplicate analysis met criteria for all samples.
The Blank analysis did not indicate the presence of lab contamination.
The Calibration met the requirements.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature____ Mildred V Reyes

Mildred V. Reyes, QA/QC Supervisor
2011.04.12 13:52:42 -04'00'

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/21/11
Project:	CTO WE08	Date Received:	03/22/11
Client Sample ID:	SA-PZ-157I-20110321	SDG No.:	C1597
Lab Sample ID:	C1597-01	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ	Units	Prep Date	Date Ana.	Ana Met.
TOC	1		1	0.097	0.25	0.5	mg/L	03/31/11	03/31/11	SW9060

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/21/11
Project:	CTO WE08	Date Received:	03/22/11
Client Sample ID:	SA-PZ-157I1-20110321	SDG No.:	C1597
Lab Sample ID:	C1597-02	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ	Units	Prep Date	Date Ana.	Ana Met.
TOC	3		1	0.097	0.25	0.5	mg/L	03/31/11	03/31/11	SW9060

CHEMTECH

Duplicate Sample Summary

Client:	Tetra Tech NUS, Inc.	**SDG No.:**	C1597
Project:	CTO WE08	**Sample ID:**	C1664-01
Client ID:	SA-PZ-157I1-20110328D	**Percent Solids for Spike Sample:**	0

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	Dilution Factor	RPD/ AD	Qual	Analysis Date
TOC	**mg/L**	**+/-20**	**3.60**		**3.40**		**1**	**5.7**		**03/31/2011**

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/21/11
Project:	CTO WE08	Date Received:	03/22/11
Client Sample ID:	SA-PZ-158I-20110321	SDG No.:	C1597
Lab Sample ID:	C1597-03	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ	Units	Prep Date	Date Ana.	Ana Met.
TOC	1.2		1	0.097	0.25	0.5	mg/L	03/31/11	03/31/11	SW9060

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/21/11
Project:	CTO WE08	Date Received:	03/22/11
Client Sample ID:	SA-PZ-158I1-20110321	SDG No.:	C1597
Lab Sample ID:	C1597-04	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ	Units	Prep Date	Date Ana.	Ana Met.
TOC	3.2		1	0.097	0.25	0.5	mg/L	03/31/11	03/31/11	SW9060

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/21/11
Project:	CTO WE08	Date Received:	03/22/11
Client Sample ID:	SA-PZ-159I-20110321	SDG No.:	C1597
Lab Sample ID:	C1597-05	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ	Units	Prep Date	Date Ana.	Ana Met.
TOC	1.4		1	0.097	0.25	0.5	mg/L	03/31/11	03/31/11	SW9060

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/21/11
Project:	CTO WE08	Date Received:	03/22/11
Client Sample ID:	SA-PZ-159I1-20110321	SDG No.:	C1597
Lab Sample ID:	C1597-06	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ	Units	Prep Date	Date Ana.	Ana Met.
TOC	11		1	0.097	0.25	0.5	mg/L	03/31/11	03/31/11	SW9060

CHEMTECH 284 Sheffield Street, Mountainside, New Jersey 07092 Phone : 908 789 8900 Fax : 908 789 8922

ANALYTICAL RESULTS SUMMARY

PROJECT NAME : CTO WE08

TETRA TECH NUS, INC.
661 Anderson Drive

Pittsburgh , Pennsylvania - 15220-2745
Phone No: 4129218361

ORDER ID : C1664
ATTENTION : David Brayack

ACCREDITED IN ACCORDANCE WITH nelac
LABORATORY ACCREDITATION BUREAU ACCREDITED ISO/IEC 17025
DoD ELAP

284 Sheffield Street, Mountainside, New Jersey 07092 Phone : 908 789 8900 Fax : 908 789 8922

Cover Page

Order ID : C1664

Project ID : CTO WE08

Client : Tetra Tech NUS, Inc.

Lab Sample Number	Client Sample Number
C1664-01	SA-PZ-157I1-20110328
C1664-02	SA-PZ-157I-20110328
C1664-03	SA-PZ-158I-20110328
C1664-04	SA-PZ-158I1-20110328
C1664-05	SA-PZ-159I1-20110328
C1664-06	SA-PZ-159I-20110328

I certify that the data package is in compliance with the terms and conditions of the contract,both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : Mildred V Reyes

Mildred V. Reyes, QA/QC Supervisor
2011.04.18 14:02:30 -04'00'

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

CHEMTECH

CASE NARRATIVE

Conti Environment And Infrastructure, Inc.
Project Name: Imperial Oil
Project # N/A
Chemtech Project # C1824

A. Number of Samples and Date of Receipt:
20 Solid samples were received on 4/11/11.

B. Parameters:
According to the Chain of Custody document, the following analyses were requested: Metals Group6. This data package contains results for Metals Group6.

C. Analytical Techniques:
The analysis and Digestion of Metals Group6 was based on method ILM05.4

D. QA/ QC Samples:
The Holding Times were met for all analysis.
The Blank Spike met requirements for all samples.
The Duplicate analysis met criteria for all samples.
The Matrix Spike analysis met criteria for all samples.
The Matrix Spike Duplicate analysis met criteria for all samples.
The Blank analysis did not indicate the presence of lab contamination.
The Calibration met the requirements.
The Serial Dilution met the acceptable requirements.

E. Additional Comments:

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature__ Mildred V Reyes

Mildred V. Reyes, QA/QC Supervisor
2011.04.18 14:02:19 -04'00'

I Mildred V. Reyes, as the designated Quality Assurance ~~Officer~~ Supervisor, hereby attest that all electronic deliverables have been thoroughly reviewed and are in agreement with the associated hardcopy data. The enclosed electronic files have been reviewed for accuracy (including significant figures), completeness and format. The laboratory will be responsible for any labor time necessary to correct enclosed electronic deliverables that have been found to be in error. I can be reached at (908) 789-8900 if there are any questions or problems with the enclosed electronic deliverables.

Signature: Mildred V Reyes Title: QA/QC Supervisor Date: 4/18/11

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/28/11
Project:	CTO WE08	Date Received:	03/29/11
Client Sample ID:	SA-PZ-157I-20110328	SDG No.:	C1664
Lab Sample ID:	C1664-02	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ	Units	Prep Date	Date Ana.	Ana Met.
TOC	1.4		1	0.097	0.25	0.5	mg/L	03/31/11	03/31/11	SW9060

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/28/11
Project:	CTO WE08	Date Received:	03/29/11
Client Sample ID:	SA-PZ-157I1-20110328	SDG No.:	C1664
Lab Sample ID:	C1664-01	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ	Units	Prep Date	Date Ana.	Ana Met.
TOC	3.6		1	0.097	0.25	0.5	mg/L	03/31/11	03/31/11	SW9060

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/28/11
Project:	CTO WE08	Date Received:	03/29/11
Client Sample ID:	SA-PZ-158I-20110328	SDG No.:	C1664
Lab Sample ID:	C1664-03	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ	Units	Prep Date	Date Ana.	Ana Met.
TOC	1.1		1	0.097	0.25	0.5	mg/L	03/31/11	03/31/11	SW9060

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/28/11
Project:	CTO WE08	Date Received:	03/29/11
Client Sample ID:	SA-PZ-158I1-20110328	SDG No.:	C1664
Lab Sample ID:	C1664-04	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ	Units	Prep Date	Date Ana.	Ana Met.
TOC	3.5		1	0.097	0.25	0.5	mg/L	03/31/11	03/31/11	SW9060

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/28/11
Project:	CTO WE08	Date Received:	03/29/11
Client Sample ID:	SA-PZ-159I-20110328	SDG No.:	C1664
Lab Sample ID:	C1664-06	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ	Units	Prep Date	Date Ana.	Ana Met.
TOC	1.2		1	0.097	0.25	0.5	mg/L	03/31/11	03/31/11	SW9060

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	03/28/11
Project:	CTO WE08	Date Received:	03/29/11
Client Sample ID:	SA-PZ-159I1-20110328	SDG No.:	C1664
Lab Sample ID:	C1664-05	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ	Units	Prep Date	Date Ana.	Ana Met.
TOC	5.9		1	0.097	0.25	0.5	mg/L	03/31/11	03/31/11	SW9060

CHEMTECH 284 Sheffield Street, Mountainside, New Jersey 07092 Phone : 908 789 8900 Fax : 908 789 8922

ANALYTICAL RESULTS SUMMARY

PROJECT NAME : CTO WE08

TETRA TECH NUS, INC.
661 Anderson Drive

Pittsburgh , Pennsylvania - 15220-2745
Phone No: 4129218361

ORDER ID : C1740
ATTENTION : David Brayack

ACCREDITED IN ACCORDANCE WITH nelac
LABORATORY ACCREDITATION BUREAU ACCREDITED ISO/IEC 17025
DoD ELAP

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Cover Page

Order ID : C1740

Project ID : CTO WE08

Client : Tetra Tech NUS, Inc.

Lab Sample Number	Client Sample Number
C1740-01	SA-PZ-159I1-20110404
C1740-02	SA-PZ-159I-20110404
C1740-03	SA-PZ-158I1-20110404
C1740-04	SA-PZ-158I-20110404
C1740-05	SA-PZ-157I1-20110404
C1740-06	SA-PZ-157I-20110404
C1740-07	CARBONIN-20110404

I certify that the data package is in compliance with the terms and conditions of the contract,both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : Mildred V Reyes

Mildred V. Reyes, QA/QC Supervisor
2011.04.25 16:25:47 -04'00'

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

I Mildred V Reyes, as the designated Quality Assurance ~~Officer~~ Supervisor, hereby attest that all electronic deliverables have been thoroughly reviewed and are in agreement with the associated hardcopy data. The enclosed electronic files have been reviewed for accuracy (including significant figures), completeness and format. The laboratory will be responsible for any labor time necessary to correct enclosed electronic deliverables that have been found to be in error. I can be reached at (908) 789-8900 if there are any questions or problems with the enclosed electronic deliverables.

Signature: Mildred V Reyes Title: QA/QC Supervisor Date: 4/25/11

CHEMTECH

CASE NARRATIVE

Tetra Tech NUS, Inc.
Project Name: CTO WE08
Project # N/A
Chemtech Project # C1740
Test Name: VOCMS Group1

A. Number of Samples and Date of Receipt:
7 Water samples were received on 04/05/2011.

B. Parameters
According to the Chain of Custody document, the following analyses were requested: TOC and VOCMS Group1. This data package contains results for VOCMS Group1.

C. Analytical Techniques:
The analysis performed on instrument MSVOA_G were done using GC column RTX-VMS which is 20 meters, 0.18 mm id, 1.0 um df, Restek Cat. #49914. The Trap was supplied by OI Analytical, OI #10 Trap , OI Eclipse 4660 Concentrator.The analysis of VOCMS Group1 was based on method 8260B.

D. QA/ QC Samples:
The Holding Times were met for all analysis.
The Surrogate recoveries met the acceptable criteria.
The Internal Standards Areas met the acceptable requirements.
The Retention Times were acceptable for all samples.
The MS recoveries met the requirements for all compounds.
The MSD recoveries met the acceptable requirements.
The RPD recoveries met criteria.
The Blank Spike met requirements for all samples.
The Blank Spike Duplicate met requirements for all samples.
The Blank analysis did not indicate the presence of lab contamination.
The Initial Calibration met the requirements.
The Continuous Calibration met the requirements.
The Tuning criteria met requirements.

E. Additional Comments:
Sample CARBONIN-20110404 was diluted due to high concentration.

Please use %D calculated based on Avg RF and CCRF for all compounds using Average Response Factor when the %RSD value for a compound is <15% for the Initial Calibration curve and use %D calculated based on Amount added and Calculated amount for all compounds using Linear Regression when the %RSD value for a compound is > 15% for the Initial Calibration curve for SW-846 analysis.

CHEMTECH

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature_____ Mildred V. Reyes, QA/QC Supervisor
2011.04.25 16:25:37 -04'00'

CHEMTECH

CASE NARRATIVE

Tetra Tech NUS, Inc.
Project Name: CTO WE08
Project # N/A
Chemtech Project # C1740
Test Name: TOC

A. Number of Samples and Date of Receipt:
7 Water samples were received on 04/05/2011.

B. Parameters:
According to the Chain of Custody document, the following analyses were requested: TOC and VOCMS Group1. This data package contains results for TOC.

C. Analytical Techniques:
The analysis of TOC was based on method 9060.

D. QA/ QC Samples:
The Holding Times were met for all analysis.
The Blank Spike met requirements for all samples.
The Duplicate analysis met criteria for all samples.
The Matrix Spike analysis met criteria for all samples.
The Blank analysis did not indicate the presence of lab contamination.
The Calibration met the requirements.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature Mildred V Reyes

Mildred V. Reyes, QA/QC Supervisor
2011.04.25 16:25:24 -04'00'

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/04/11
Project:	CTO WE08	Date Received:	04/05/11
Client Sample ID:	CARBONIN-20110404	SDG No.:	C1740
Lab Sample ID:	C1740-07	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG034141.D	1		04/07/11	VG040611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	0.5	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	0.5	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	0.5	1	ug/L
75-00-3	Chloroethane	64		0.2	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	10		0.47	0.5	1	ug/L
67-64-1	Acetone	2.5	U	0.5	2.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	0.5	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	0.5	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	0.5	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	140	E	0.36	0.5	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	0.5	1	ug/L
78-93-3	2-Butanone	3.8	J	1.3	2.5	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	0.5	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	0.5	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	0.5	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	29		0.4	0.5	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	0.5	1	ug/L
71-43-2	Benzene	0.59	J	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	0.5	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	0.5	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	0.5	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	2.5	5	ug/L
108-88-3	Toluene	0.5	U	0.37	0.5	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	0.5	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/04/11
Project:	CTO WE08	Date Received:	04/05/11
Client Sample ID:	CARBONIN-20110404	SDG No.:	C1740
Lab Sample ID:	C1740-07	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG034141.D	1		04/07/11	VG040611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	0.5	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	0.5	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	2.5	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	0.5	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	0.5	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	0.5	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	1	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	0.5	1	ug/L
100-42-5	Styrene	0.5	U	0.36	0.5	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	0.5	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	1.7		0.32	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.57	J	0.45	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	2.2		0.2	0.5	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	0.5	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	20	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	51.1		70 - 120		102%	SPK: 50
1868-53-7	Dibromofluoromethane	51		85 - 115		102%	SPK: 50
2037-26-5	Toluene-d8	46.7		85 - 120		93%	SPK: 50
460-00-4	4-Bromofluorobenzene	52		75 - 120		104%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	628871	3.88				
540-36-3	1,4-Difluorobenzene	1218610	4.68				
3114-55-4	Chlorobenzene-d5	1050540	9.65				
3855-82-1	1,4-Dichlorobenzene-d4	400187	13.36				

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/04/11
Project:	CTO WE08	Date Received:	04/05/11
Client Sample ID:	CARBONIN-20110404	SDG No.:	C1740
Lab Sample ID:	C1740-07	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG034141.D	1		04/07/11	VG040611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/04/11
Project:	CTO WE08	Date Received:	04/05/11
Client Sample ID:	CARBONIN-20110404DL	SDG No.:	C1740
Lab Sample ID:	C1740-07DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG034159.D	5		04/07/11	VG040711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	2.5	U	1	2.5	5	ug/L
74-87-3	Chloromethane	2.5	U	1	2.5	5	ug/L
75-01-4	Vinyl Chloride	2.5	U	1.7	2.5	5	ug/L
74-83-9	Bromomethane	2.5	U	1	2.5	5	ug/L
75-00-3	Chloroethane	59	D	1	2.5	5	ug/L
75-69-4	Trichlorofluoromethane	2.5	U	1.8	2.5	5	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	2.5	U	2.2	2.5	5	ug/L
75-35-4	1,1-Dichloroethene	10	D	2.4	2.5	5	ug/L
67-64-1	Acetone	12.5	U	2.5	12.5	25	ug/L
75-15-0	Carbon Disulfide	2.5	U	1	2.5	5	ug/L
1634-04-4	Methyl tert-butyl Ether	2.5	U	1.8	2.5	5	ug/L
79-20-9	Methyl Acetate	2.5	U	1	2.5	5	ug/L
75-09-2	Methylene Chloride	2.5	U	2	2.5	5	ug/L
156-60-5	trans-1,2-Dichloroethene	2.5	U	2	2.5	5	ug/L
75-34-3	1,1-Dichloroethane	150	D	1.8	2.5	5	ug/L
110-82-7	Cyclohexane	2.5	U	1	2.5	5	ug/L
78-93-3	2-Butanone	12.5	U	6.6	12.5	25	ug/L
56-23-5	Carbon Tetrachloride	2.5	U	1	2.5	5	ug/L
156-59-2	cis-1,2-Dichloroethene	2.5	U	1.8	2.5	5	ug/L
74-97-5	Bromochloromethane	2.5	U	1	2.5	5	ug/L
67-66-3	Chloroform	2.5	U	1.7	2.5	5	ug/L
71-55-6	1,1,1-Trichloroethane	27	D	2	2.5	5	ug/L
108-87-2	Methylcyclohexane	2.5	U	1	2.5	5	ug/L
71-43-2	Benzene	2.5	U	1.6	2.5	5	ug/L
107-06-2	1,2-Dichloroethane	2.5	U	2.4	2.5	5	ug/L
79-01-6	Trichloroethene	2.5	U	1.4	2.5	5	ug/L
78-87-5	1,2-Dichloropropane	2.5	U	2.3	2.5	5	ug/L
75-27-4	Bromodichloromethane	2.5	U	1.8	2.5	5	ug/L
108-10-1	4-Methyl-2-Pentanone	12.5	U	10	12.5	25	ug/L
108-88-3	Toluene	2.5	U	1.8	2.5	5	ug/L
10061-02-6	t-1,3-Dichloropropene	2.5	U	1.4	2.5	5	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/04/11
Project:	CTO WE08	Date Received:	04/05/11
Client Sample ID:	CARBONIN-20110404DL	SDG No.:	C1740
Lab Sample ID:	C1740-07DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG034159.D	5		04/07/11	VG040711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units
10061-01-5	cis-1,3-Dichloropropene	2.5	U	1.6	2.5	5	ug/L
79-00-5	1,1,2-Trichloroethane	2.5	U	1.9	2.5	5	ug/L
591-78-6	2-Hexanone	12.5	U	9.7	12.5	25	ug/L
124-48-1	Dibromochloromethane	2.5	U	1	2.5	5	ug/L
106-93-4	1,2-Dibromoethane	2.5	U	2	2.5	5	ug/L
127-18-4	Tetrachloroethene	2.5	U	1.4	2.5	5	ug/L
108-90-7	Chlorobenzene	2.5	U	2.4	2.5	5	ug/L
100-41-4	Ethyl Benzene	2.5	U	1	2.5	5	ug/L
179601-23-1	m/p-Xylenes	5	U	4.8	5	10	ug/L
95-47-6	o-Xylene	2.5	U	2.2	2.5	5	ug/L
100-42-5	Styrene	2.5	U	1.8	2.5	5	ug/L
75-25-2	Bromoform	2.5	U	2.4	2.5	5	ug/L
98-82-8	Isopropylbenzene	2.5	U	2.2	2.5	5	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U	1.6	2.5	5	ug/L
541-73-1	1,3-Dichlorobenzene	2.5	U	2.2	2.5	5	ug/L
106-46-7	1,4-Dichlorobenzene	2.5	U	1.6	2.5	5	ug/L
95-50-1	1,2-Dichlorobenzene	2.5	U	2.2	2.5	5	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	2.5	U	2.3	2.5	5	ug/L
120-82-1	1,2,4-Trichlorobenzene	2.9	JD	1	2.5	5	ug/L
87-61-6	1,2,3-Trichlorobenzene	2.5	U	1	2.5	5	ug/L
123-91-1	1,4-Dioxane	50	U	100	100	100	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	48.3		70 - 120		97%	SPK: 50
1868-53-7	Dibromofluoromethane	48.8		85 - 115		98%	SPK: 50
2037-26-5	Toluene-d8	44.3		85 - 120		89%	SPK: 50
460-00-4	4-Bromofluorobenzene	50.6		75 - 120		101%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	626658	3.87				
540-36-3	1,4-Difluorobenzene	1190090	4.67				
3114-55-4	Chlorobenzene-d5	1029350	9.64				
3855-82-1	1,4-Dichlorobenzene-d4	405343	13.35				

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/04/11
Project:	CTO WE08	Date Received:	04/05/11
Client Sample ID:	CARBONIN-20110404DL	SDG No.:	C1740
Lab Sample ID:	C1740-07DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG034159.D	5		04/07/11	VG040711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/04/11
Project:	CTO WE08	Date Received:	04/05/11
Client Sample ID:	SA-PZ-157I-20110404	SDG No.:	C1740
Lab Sample ID:	C1740-06	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ	Units	Prep Date	Date Ana.	Ana Met.
TOC	2		1	0.097	0.25	0.5	mg/L	04/06/11	04/06/11	SW9060

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/04/11
Project:	CTO WE08	Date Received:	04/05/11
Client Sample ID:	SA-PZ-157I1-20110404	SDG No.:	C1740
Lab Sample ID:	C1740-05	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ	Units	Prep Date	Date Ana.	Ana Met.
TOC	2.9		1	0.097	0.25	0.5	mg/L	04/06/11	04/06/11	SW9060

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/04/11
Project:	CTO WE08	Date Received:	04/05/11
Client Sample ID:	SA-PZ-158I-20110404	SDG No.:	C1740
Lab Sample ID:	C1740-04	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ	Units	Prep Date	Date Ana.	Ana Met.
TOC	1.7		1	0.097	0.25	0.5	mg/L	04/06/11	04/06/11	SW9060

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/04/11
Project:	CTO WE08	Date Received:	04/05/11
Client Sample ID:	SA-PZ-158I1-20110404	SDG No.:	C1740
Lab Sample ID:	C1740-03	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ	Units	Prep Date	Date Ana.	Ana Met.
TOC	3.3		1	0.097	0.25	0.5	mg/L	04/06/11	04/06/11	SW9060

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/04/11
Project:	CTO WE08	Date Received:	04/05/11
Client Sample ID:	SA-PZ-159I-20110404	SDG No.:	C1740
Lab Sample ID:	C1740-02	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ	Units	Prep Date	Date Ana.	Ana Met.
TOC	1.8		1	0.097	0.25	0.5	mg/L	04/06/11	04/06/11	SW9060

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/04/11
Project:	CTO WE08	Date Received:	04/05/11
Client Sample ID:	SA-PZ-159I1-20110404	SDG No.:	C1740
Lab Sample ID:	C1740-01	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ	Units	Prep Date	Date Ana.	Ana Met.
TOC	3.6		1	0.097	0.25	0.5	mg/L	04/06/11	04/06/11	SW9060

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Duplicate Sample Summary

Client:	Tetra Tech NUS, Inc.	**SDG No.:**	C1740
Project:	CTO WE08	**Sample ID:**	C1740-01
Client ID:	SA-PZ-159I1-20110404D	**Percent Solids for Spike Sample:**	0

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	Dilution Factor	RPD/ AD	Qual	Analysis Date
TOC	**mg/L**	**+/-20**	**3.60**		**3.70**		**1**	**2.7**		**04/06/2011**

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ANALYTICAL RESULTS SUMMARY

PROJECT NAME : CTO WE08

TETRA TECH NUS, INC.
661 Anderson Drive

Pittsburgh , Pennsylvania - 15220-2745
Phone No: 4129218361

ORDER ID : C1836
ATTENTION : David Brayack

ACCREDITED IN ACCORDANCE WITH nelac

LABORATORY ACCREDITATION BUREAU ACCREDITED ISO/IEC 17025

DoD ELAP

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Cover Page

Order ID : C1836

Project ID : CTO WE08

Client : Tetra Tech NUS, Inc.

Lab Sample Number	Client Sample Number
C1836-01	SA-PZ-159I1-20110411
C1836-02	SA-PZ-159I-20110411
C1836-03	SA-PZ-158I1-20110411
C1836-04	SA-PZ-158I-20110411
C1836-05	SA-PZ-157I1-20110411
C1836-06	SA-PZ-157I-20110411
C1836-07	CARBONIN-20110411

I certify that the data package is in compliance with the terms and conditions of the contract,both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : Mildred V Reyes

Mildred V. Reyes, QA/QC Supervisor
2011.05.02 16:02:09 -04'00'

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

I Mildred V. Reyes, as the designated Quality Assurance ~~Officer~~ Supervisor, hereby attest that all electronic deliverables have been thoroughly reviewed and are in agreement with the associated hardcopy data. The enclosed electronic files have been reviewed for accuracy (including significant figures), completeness and format. The laboratory will be responsible for any labor time necessary to correct enclosed electronic deliverables that have been found to be in error. I can be reached at (908) 789-8900 if there are any questions or problems with the enclosed electronic deliverables.

Signature: Mildred V Reyes Title: QA/QC Supervisor Date: 5/2/11

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CASE NARRATIVE

Tetra Tech NUS, Inc.
Project Name: CTO WE08
Project # N/A
Chemtech Project # C1836
Test Name: VOCMS Group1

A. Number of Samples and Date of Receipt:
7 Water samples were received on 04/12/2011.

B. Parameters
According to the Chain of Custody document, the following analyses were requested: TOC and VOCMS Group1. This data package contains results for VOCMS Group1.

C. Analytical Techniques:
The analysis performed on instrument MSVOA_G were done using GC column RTX-VMS which is 20 meters, 0.18 mm id, 1.0 um df, Restek Cat. #49914. The Trap was supplied by OI Analytical, OI #10 Trap , OI Eclipse 4660 Concentrator.The analysis of VOCMS Group1 was based on method 8260B.

D. QA/ QC Samples:
The Holding Times were met for all analysis.
The Surrogate recoveries met the acceptable criteria.
The Internal Standards Areas met the acceptable requirements.
The Retention Times were acceptable for all samples.
The MS recoveries met the requirements for all compounds .
The MSD recoveries met the acceptable requirements .
The RPD for {C1848-09MSD} with File ID: VG034339.D recoveries met criteria except for Chloromethane[31%] .
The Blank Spike met requirements for all samples .
The Blank Spike Duplicate met requirements for all samples .
The Blank analysis did not indicate the presence of lab contamination.
The Initial Calibration met the requirements .
The Continuous Calibration File ID VG034322.D met the requirements except for Dichlorodifluoromethane, Chloromethane and Trichlorofluoromethane. These compound are biased high and they are not present in any of the samples.
The Tuning criteria met requirements.

Sample CARBON-20110411 was diluted due to high concentration.

E. Additional Comments:

Please use %D calculated based on Avg RF and CCRF for all compounds using Average Response Factor when the %RSD value for a compound is <15% for the Initial

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Calibration curve and use %D calculated based on Amount added and Calculated amount for all compounds using Linear Regression when the %RSD value for a compound is > 15% for the Initial Calibration curve for SW-846 analysis.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature Mildred V Reyes

Mildred V. Reyes, QA/QC Supervisor
2011.05.02 16:01:55 -04'00'

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CASE NARRATIVE

Tetra Tech NUS, Inc.
Project Name: CTO WE08
Project # N/A
Chemtech Project # C1836
Test Name: TOC

A. Number of Samples and Date of Receipt:
7 Water samples were received on 04/12/2011.

B. Parameters:
According to the Chain of Custody document, the following analyses were requested: TOC and VOCMS Group1. This data package contains results for TOC.

C. Analytical Techniques:
The analysis of TOC was based on method 9060.

D. QA/ QC Samples:
The Holding Times were met for all analysis.
The Blank Spike met requirements for all samples.
The Duplicate analysis met criteria for all samples.
The Matrix Spike analysis met criteria for all samples.
The Blank analysis did not indicate the presence of lab contamination.
The Calibration met the requirements.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature Mildred V Reyes

Mildred V. Reyes, QA/QC Supervisor
2011.05.02 15:57:42 -04'00'

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/11/11
Project:	CTO WE08	Date Received:	04/12/11
Client Sample ID:	CARBONIN-20110411	SDG No.:	c1836
Lab Sample ID:	C1836-07	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG034302.D	1		04/14/11	VG041411

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	51		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	10		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	130	E	0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	3.3	J	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	27		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.58	J	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/11/11
Project:	CTO WE08	Date Received:	04/12/11
Client Sample ID:	CARBONIN-20110411	SDG No.:	c1836
Lab Sample ID:	C1836-07	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG034302.D	1		04/14/11	VG041411

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	1.7		0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.79	J	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	3		0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.63	J	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	50		70 - 120	100%	SPK: 50
1868-53-7	Dibromofluoromethane	49.6		85 - 115	99%	SPK: 50
2037-26-5	Toluene-d8	48.5		85 - 120	97%	SPK: 50
460-00-4	4-Bromofluorobenzene	51.6		75 - 120	103%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	399558	3.86			
540-36-3	1,4-Difluorobenzene	777782	4.67			
3114-55-4	Chlorobenzene-d5	670722	9.64			
3855-82-1	1,4-Dichlorobenzene-d4	250082	13.35			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/11/11
Project:	CTO WE08	Date Received:	04/12/11
Client Sample ID:	CARBONIN-20110411	SDG No.:	c1836
Lab Sample ID:	C1836-07	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG034302.D	1		04/14/11	VG041411

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/11/11
Project:	CTO WE08	Date Received:	04/12/11
Client Sample ID:	CARBONIN-20110411DL	SDG No.:	c1836
Lab Sample ID:	C1836-07DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG034329.D	5		04/15/11	VG041511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	2.5	U	1	5	ug/L
74-87-3	Chloromethane	2.5	U	1	5	ug/L
75-01-4	Vinyl Chloride	2.5	U	1.7	5	ug/L
74-83-9	Bromomethane	2.5	U	1	5	ug/L
75-00-3	Chloroethane	48	D	1	5	ug/L
75-69-4	Trichlorofluoromethane	2.5	U	1.8	5	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	2.5	U	2.2	5	ug/L
75-35-4	1,1-Dichloroethene	9.9	D	2.4	5	ug/L
67-64-1	Acetone	12.5	U	2.5	25	ug/L
75-15-0	Carbon Disulfide	2.5	U	1	5	ug/L
1634-04-4	Methyl tert-butyl Ether	2.5	U	1.8	5	ug/L
79-20-9	Methyl Acetate	2.5	U	1	5	ug/L
75-09-2	Methylene Chloride	2.5	U	2	5	ug/L
156-60-5	trans-1,2-Dichloroethene	2.5	U	2	5	ug/L
75-34-3	1,1-Dichloroethane	150	D	1.8	5	ug/L
110-82-7	Cyclohexane	2.5	U	1	5	ug/L
78-93-3	2-Butanone	12.5	U	6.6	25	ug/L
56-23-5	Carbon Tetrachloride	2.5	U	1	5	ug/L
156-59-2	cis-1,2-Dichloroethene	2.5	U	1.8	5	ug/L
74-97-5	Bromochloromethane	2.5	U	1	5	ug/L
67-66-3	Chloroform	2.5	U	1.7	5	ug/L
71-55-6	1,1,1-Trichloroethane	27	D	2	5	ug/L
108-87-2	Methylcyclohexane	2.5	U	1	5	ug/L
71-43-2	Benzene	2.5	U	1.6	5	ug/L
107-06-2	1,2-Dichloroethane	2.5	U	2.4	5	ug/L
79-01-6	Trichloroethene	2.5	U	1.4	5	ug/L
78-87-5	1,2-Dichloropropane	2.5	U	2.3	5	ug/L
75-27-4	Bromodichloromethane	2.5	U	1.8	5	ug/L
108-10-1	4-Methyl-2-Pentanone	12.5	U	10	25	ug/L
108-88-3	Toluene	2.5	U	1.8	5	ug/L
10061-02-6	t-1,3-Dichloropropene	2.5	U	1.4	5	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/11/11
Project:	CTO WE08	Date Received:	04/12/11
Client Sample ID:	CARBONIN-20110411DL	SDG No.:	c1836
Lab Sample ID:	C1836-07DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG034329.D	5		04/15/11	VG041511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	2.5	U	1.6	5	ug/L
79-00-5	1,1,2-Trichloroethane	2.5	U	1.9	5	ug/L
591-78-6	2-Hexanone	12.5	U	9.7	25	ug/L
124-48-1	Dibromochloromethane	2.5	U	1	5	ug/L
106-93-4	1,2-Dibromoethane	2.5	U	2	5	ug/L
127-18-4	Tetrachloroethene	2.5	U	1.4	5	ug/L
108-90-7	Chlorobenzene	2.5	U	2.4	5	ug/L
100-41-4	Ethyl Benzene	2.5	U	1	5	ug/L
179601-23-1	m/p-Xylenes	5	U	4.8	10	ug/L
95-47-6	o-Xylene	2.5	U	2.2	5	ug/L
100-42-5	Styrene	2.5	U	1.8	5	ug/L
75-25-2	Bromoform	2.5	U	2.4	5	ug/L
98-82-8	Isopropylbenzene	2.5	U	2.2	5	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U	1.6	5	ug/L
541-73-1	1,3-Dichlorobenzene	2.5	U	2.2	5	ug/L
106-46-7	1,4-Dichlorobenzene	2.5	U	1.6	5	ug/L
95-50-1	1,2-Dichlorobenzene	2.5	U	2.2	5	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	2.5	U	2.3	5	ug/L
120-82-1	1,2,4-Trichlorobenzene	2.5	U	1	5	ug/L
87-61-6	1,2,3-Trichlorobenzene	2.5	U	1	5	ug/L
123-91-1	1,4-Dioxane	50	U	100	100	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	50.9		70 - 120	102%	SPK: 50
1868-53-7	Dibromofluoromethane	47.8		85 - 115	96%	SPK: 50
2037-26-5	Toluene-d8	45.7		85 - 120	91%	SPK: 50
460-00-4	4-Bromofluorobenzene	48.1		75 - 120	96%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	340936	3.85			
540-36-3	1,4-Difluorobenzene	647936	4.66			
3114-55-4	Chlorobenzene-d5	561516	9.63			
3855-82-1	1,4-Dichlorobenzene-d4	214418	13.34			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/11/11
Project:	CTO WE08	Date Received:	04/12/11
Client Sample ID:	CARBONIN-20110411DL	SDG No.:	c1836
Lab Sample ID:	C1836-07DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG034329.D	5		04/15/11	VG041511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/11/11
Project:	CTO WE08	Date Received:	04/12/11
Client Sample ID:	SA-PZ-157I-20110411	SDG No.:	C1836
Lab Sample ID:	C1836-06	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
TOC	1.9		1	0.097	0.5	mg/L	04/14/11	04/14/11	SW9060

CHEMTECH

Duplicate Sample Summary

Client:	Tetra Tech NUS, Inc.	**SDG No.:**	C1836
Project:	CTO WE08	**Sample ID:**	C1836-06
Client ID:	SA-PZ-157I-20110411D	**Percent Solids for Spike Sample:**	0

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	Dilution Factor	RPD/ AD	Qual	Analysis Date
TOC	**mg/L**	**+/-20**	**1.90**		**1.90**		**1**	**0**		**04/14/2011**

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/11/11
Project:	CTO WE08	Date Received:	04/12/11
Client Sample ID:	SA-PZ-157I1-20110411	SDG No.:	C1836
Lab Sample ID:	C1836-05	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
TOC	2.7		1	0.097	0.5	mg/L	04/14/11	04/14/11	SW9060

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/11/11
Project:	CTO WE08	Date Received:	04/12/11
Client Sample ID:	SA-PZ-158I-20110411	SDG No.:	C1836
Lab Sample ID:	C1836-04	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
TOC	0.999		1	0.097	0.5	mg/L	04/14/11	04/14/11	SW9060

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/11/11
Project:	CTO WE08	Date Received:	04/12/11
Client Sample ID:	SA-PZ-158I1-20110411	SDG No.:	C1836
Lab Sample ID:	C1836-03	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
TOC	3.1		1	0.097	0.5	mg/L	04/14/11	04/14/11	SW9060

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/11/11
Project:	CTO WE08	Date Received:	04/12/11
Client Sample ID:	SA-PZ-159I-20110411	SDG No.:	C1836
Lab Sample ID:	C1836-02	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
TOC	1.6		1	0.097	0.5	mg/L	04/14/11	04/14/11	SW9060

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/11/11
Project:	CTO WE08	Date Received:	04/12/11
Client Sample ID:	SA-PZ-159I1-20110411	SDG No.:	C1836
Lab Sample ID:	C1836-01	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
TOC	3.2		1	0.097	0.5	mg/L	04/14/11	04/14/11	SW9060

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ANALYTICAL RESULTS SUMMARY

PROJECT NAME : CTO WE08

TETRA TECH NUS, INC.
661 Anderson Drive

Pittsburgh , Pennsylvania - 15220-2745
Phone No: 4129218361

ORDER ID : C1952
ATTENTION : David Brayack

ACCREDITED IN ACCORDANCE WITH nelac

LABORATORY ACCREDITATION BUREAU ACCREDITED ISO/IEC 17025

DoD ELAP

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Cover Page

Order ID : C1952

Project ID : CTO WE08

Client : Tetra Tech NUS, Inc.

Lab Sample Number	Client Sample Number
C1952-01	SA-TB01-20110411
C1952-02	SA-PZ-159I-20110419
C1952-03	SA-PZ-157I1-20110420
C1952-04	SA-PZ-157I-20110420
C1952-05	SA-PZ-158I1-20110420
C1952-06	SA-PZ-158I-20110420
C1952-07	SA-PZ-159I1-20110420
C1952-08	SA-PZ-159I-20110420
C1952-09	CARBONIN-20110420

I certify that the data package is in compliance with the terms and conditions of the contract,both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : Mildred V Reyes

Mildred V. Reyes, QA/QC Supervisor
2011.05.13 15:54:39 -04'00'

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

I Mildred V Reyes, as the designated Quality Assurance ~~Officer~~ Supervisor, hereby attest that all electronic deliverables have been thoroughly reviewed and are in agreement with the associated hardcopy data. The enclosed electronic files have been reviewed for accuracy (including significant figures), completeness and format. The laboratory will be responsible for any labor time necessary to correct enclosed electronic deliverables that have been found to be in error. I can be reached at (908) 789-8900 if there are any questions or problems with the enclosed electronic deliverables.

Signature: Mildred V Reyes Title: QA/QC Supervisor Date: 5/13/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/20/11
Project:	CTO WE08	Date Received:	04/21/11
Client Sample ID:	CARBONIN-20110420	SDG No.:	C1952
Lab Sample ID:	C1952-09	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD032762.D	1		04/22/11	VD042211

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	98		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	12		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	170	E	0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	3.6		0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	32		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.67	J	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/20/11
Project:	CTO WE08	Date Received:	04/21/11
Client Sample ID:	CARBONIN-20110420	SDG No.:	C1952
Lab Sample ID:	C1952-09	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD032762.D	1		04/22/11	VD042211

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	1.5		0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.61	J	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	2.2		0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.61	J	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	50.9		70 - 120	102%	SPK: 50
1868-53-7	Dibromofluoromethane	52.3		85 - 115	105%	SPK: 50
2037-26-5	Toluene-d8	49.5		85 - 120	99%	SPK: 50
460-00-4	4-Bromofluorobenzene	62	*	75 - 120	124%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	773705	4.15			
540-36-3	1,4-Difluorobenzene	1069860	4.78			
3114-55-4	Chlorobenzene-d5	1852960	7.76			
3855-82-1	1,4-Dichlorobenzene-d4	998730	9.7			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/20/11
Project:	CTO WE08	Date Received:	04/21/11
Client Sample ID:	CARBONIN-20110420	SDG No.:	C1952
Lab Sample ID:	C1952-09	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD032762.D	1		04/22/11	VD042211

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/20/11
Project:	CTO WE08	Date Received:	04/21/11
Client Sample ID:	CARBONIN-20110420DL	SDG No.:	C1952
Lab Sample ID:	C1952-09DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD032863.D	5		04/28/11	VD042811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	2.5	U	1	5	ug/L
74-87-3	Chloromethane	2.5	U	1	5	ug/L
75-01-4	Vinyl Chloride	2.5	U	1.7	5	ug/L
74-83-9	Bromomethane	2.5	U	1	5	ug/L
75-00-3	Chloroethane	59	D	1	5	ug/L
75-69-4	Trichlorofluoromethane	2.5	U	1.8	5	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	2.5	U	2.2	5	ug/L
75-35-4	1,1-Dichloroethene	8.8	D	2.4	5	ug/L
67-64-1	Acetone	12.5	U	2.5	25	ug/L
75-15-0	Carbon Disulfide	2.5	U	1	5	ug/L
1634-04-4	Methyl tert-butyl Ether	2.5	U	1.8	5	ug/L
79-20-9	Methyl Acetate	2.5	U	1	5	ug/L
75-09-2	Methylene Chloride	2.5	U	2	5	ug/L
156-60-5	trans-1,2-Dichloroethene	2.5	U	2	5	ug/L
75-34-3	1,1-Dichloroethane	130	D	1.8	5	ug/L
110-82-7	Cyclohexane	2.5	U	1	5	ug/L
78-93-3	2-Butanone	12.5	U	6.6	25	ug/L
56-23-5	Carbon Tetrachloride	2.5	U	1	5	ug/L
156-59-2	cis-1,2-Dichloroethene	2.5	U	1.8	5	ug/L
74-97-5	Bromochloromethane	2.5	U	1	5	ug/L
67-66-3	Chloroform	2.5	U	1.7	5	ug/L
71-55-6	1,1,1-Trichloroethane	19	D	2	5	ug/L
108-87-2	Methylcyclohexane	2.5	U	1	5	ug/L
71-43-2	Benzene	2.5	U	1.6	5	ug/L
107-06-2	1,2-Dichloroethane	2.5	U	2.4	5	ug/L
79-01-6	Trichloroethene	2.5	U	1.4	5	ug/L
78-87-5	1,2-Dichloropropane	2.5	U	2.3	5	ug/L
75-27-4	Bromodichloromethane	2.5	U	1.8	5	ug/L
108-10-1	4-Methyl-2-Pentanone	12.5	U	10	25	ug/L
108-88-3	Toluene	2.5	U	1.8	5	ug/L
10061-02-6	t-1,3-Dichloropropene	2.5	U	1.4	5	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/20/11
Project:	CTO WE08	Date Received:	04/21/11
Client Sample ID:	CARBONIN-20110420DL	SDG No.:	C1952
Lab Sample ID:	C1952-09DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD032863.D	5		04/28/11	VD042811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	2.5	U	1.6	5	ug/L
79-00-5	1,1,2-Trichloroethane	2.5	U	1.9	5	ug/L
591-78-6	2-Hexanone	12.5	U	9.7	25	ug/L
124-48-1	Dibromochloromethane	2.5	U	1	5	ug/L
106-93-4	1,2-Dibromoethane	2.5	U	2	5	ug/L
127-18-4	Tetrachloroethene	2.5	U	1.4	5	ug/L
108-90-7	Chlorobenzene	2.5	U	2.4	5	ug/L
100-41-4	Ethyl Benzene	2.5	U	1	5	ug/L
179601-23-1	m/p-Xylenes	5	U	4.8	10	ug/L
95-47-6	o-Xylene	2.5	U	2.2	5	ug/L
100-42-5	Styrene	2.5	U	1.8	5	ug/L
75-25-2	Bromoform	2.5	U	2.4	5	ug/L
98-82-8	Isopropylbenzene	2.5	U	2.2	5	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U	1.6	5	ug/L
541-73-1	1,3-Dichlorobenzene	2.5	U	2.2	5	ug/L
106-46-7	1,4-Dichlorobenzene	3.4	JD	1.6	5	ug/L
95-50-1	1,2-Dichlorobenzene	3	JD	2.2	5	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	2.5	U	2.3	5	ug/L
120-82-1	1,2,4-Trichlorobenzene	9	D	1	5	ug/L
87-61-6	1,2,3-Trichlorobenzene	11	D	1	5	ug/L
123-91-1	1,4-Dioxane	50	U	100	100	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	42.4		70 - 120	85%	SPK: 50
1868-53-7	Dibromofluoromethane	44.6		85 - 115	89%	SPK: 50
2037-26-5	Toluene-d8	45		85 - 120	90%	SPK: 50
460-00-4	4-Bromofluorobenzene	51		75 - 120	102%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	919269	4.2			
540-36-3	1,4-Difluorobenzene	1243600	4.83			
3114-55-4	Chlorobenzene-d5	1755230	7.81			
3855-82-1	1,4-Dichlorobenzene-d4	910216	9.74			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/20/11
Project:	CTO WE08	Date Received:	04/21/11
Client Sample ID:	CARBONIN-20110420DL	SDG No.:	C1952
Lab Sample ID:	C1952-09DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD032863.D	5		04/28/11	VD042811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/20/11
Project:	CTO WE08	Date Received:	04/21/11
Client Sample ID:	CARBONIN-20110420	SDG No.:	C1952
Lab Sample ID:	C1952-09	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
TOC	1.2		1	0.097	0.5	mg/L	04/28/11	04/28/11	SW9060

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/20/11
Project:	CTO WE08	Date Received:	04/21/11
Client Sample ID:	SA-PZ-157I-20110420	SDG No.:	C1952
Lab Sample ID:	C1952-04	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
TOC	1.2		1	0.097	0.5	mg/L	04/28/11	04/28/11	SW9060

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/20/11
Project:	CTO WE08	Date Received:	04/21/11
Client Sample ID:	SA-PZ-157I1-20110420	SDG No.:	C1952
Lab Sample ID:	C1952-03	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
TOC	1.8		1	0.097	0.5	mg/L	04/28/11	04/28/11	SW9060

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/20/11
Project:	CTO WE08	Date Received:	04/21/11
Client Sample ID:	SA-PZ-158I-20110420	SDG No.:	C1952
Lab Sample ID:	C1952-06	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
TOC	1.2		1	0.097	0.5	mg/L	04/28/11	04/28/11	SW9060

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/20/11
Project:	CTO WE08	Date Received:	04/21/11
Client Sample ID:	SA-PZ-158I1-20110420	SDG No.:	C1952
Lab Sample ID:	C1952-05	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
TOC	2.3		1	0.097	0.5	mg/L	04/28/11	04/28/11	SW9060

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/19/11
Project:	CTO WE08	Date Received:	04/21/11
Client Sample ID:	SA-PZ-159I-20110419	SDG No.:	C1952
Lab Sample ID:	C1952-02	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD032763.D	1		04/22/11	VD042211

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	10		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.64	J	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	5.6		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	1.5		0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	89		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	21		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/19/11
Project:	CTO WE08	Date Received:	04/21/11
Client Sample ID:	SA-PZ-159I-20110419	SDG No.:	C1952
Lab Sample ID:	C1952-02	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD032763.D	1		04/22/11	VD042211

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	50.8		70 - 120	102%	SPK: 50
1868-53-7	Dibromofluoromethane	53.3		85 - 115	107%	SPK: 50
2037-26-5	Toluene-d8	46.4		85 - 120	93%	SPK: 50
460-00-4	4-Bromofluorobenzene	61.7	*	75 - 120	123%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	760475	4.15			
540-36-3	1,4-Difluorobenzene	1031780	4.78			
3114-55-4	Chlorobenzene-d5	1816630	7.77			
3855-82-1	1,4-Dichlorobenzene-d4	953292	9.7			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/19/11
Project:	CTO WE08	Date Received:	04/21/11
Client Sample ID:	SA-PZ-159I-20110419	SDG No.:	C1952
Lab Sample ID:	C1952-02	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD032763.D	1		04/22/11	VD042211

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/19/11
Project:	CTO WE08	Date Received:	04/21/11
Client Sample ID:	SA-PZ-159I-20110419RE	SDG No.:	C1952
Lab Sample ID:	C1952-02RE	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD032866.D	1		04/28/11	VD042811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	7.6		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	5.2		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.56	J	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	80		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	16		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/19/11
Project:	CTO WE08	Date Received:	04/21/11
Client Sample ID:	SA-PZ-159I-20110419RE	SDG No.:	C1952
Lab Sample ID:	C1952-02RE	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD032866.D	1		04/28/11	VD042811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	42.1		70 - 120	84%	SPK: 50
1868-53-7	Dibromofluoromethane	43.4		85 - 115	87%	SPK: 50
2037-26-5	Toluene-d8	37.9	*	85 - 120	76%	SPK: 50
460-00-4	4-Bromofluorobenzene	46.6		75 - 120	93%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	900326	4.2			
540-36-3	1,4-Difluorobenzene	1245260	4.83			
3114-55-4	Chlorobenzene-d5	1770880	7.81			
3855-82-1	1,4-Dichlorobenzene-d4	921078	9.73			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/19/11
Project:	CTO WE08	Date Received:	04/21/11
Client Sample ID:	SA-PZ-159I-20110419RE	SDG No.:	C1952
Lab Sample ID:	C1952-02RE	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD032866.D	1		04/28/11	VD042811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/20/11
Project:	CTO WE08	Date Received:	04/21/11
Client Sample ID:	SA-PZ-159I-20110420	SDG No.:	C1952
Lab Sample ID:	C1952-08	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD032761.D	1		04/22/11	VD042211

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	14		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.59	J	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	6.8		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	1.4		0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	100		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	24		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/20/11
Project:	CTO WE08	Date Received:	04/21/11
Client Sample ID:	SA-PZ-159I-20110420	SDG No.:	C1952
Lab Sample ID:	C1952-08	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD032761.D	1		04/22/11	VD042211

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	52.9		70 - 120	106%	SPK: 50
1868-53-7	Dibromofluoromethane	54.8		85 - 115	110%	SPK: 50
2037-26-5	Toluene-d8	50.3		85 - 120	101%	SPK: 50
460-00-4	4-Bromofluorobenzene	64.9	*	75 - 120	130%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	794478	4.15			
540-36-3	1,4-Difluorobenzene	1065830	4.78			
3114-55-4	Chlorobenzene-d5	1880260	7.76			
3855-82-1	1,4-Dichlorobenzene-d4	994140	9.69			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/20/11
Project:	CTO WE08	Date Received:	04/21/11
Client Sample ID:	SA-PZ-159I-20110420	SDG No.:	C1952
Lab Sample ID:	C1952-08	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD032761.D	1		04/22/11	VD042211

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/20/11
Project:	CTO WE08	Date Received:	04/21/11
Client Sample ID:	SA-PZ-159I-20110420RE	SDG No.:	C1952
Lab Sample ID:	C1952-08RE	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD032865.D	1		04/28/11	VD042811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	11		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	5.9		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	1.4		0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	92		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	19		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/20/11
Project:	CTO WE08	Date Received:	04/21/11
Client Sample ID:	SA-PZ-159I-20110420RE	SDG No.:	C1952
Lab Sample ID:	C1952-08RE	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD032865.D	1		04/28/11	VD042811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	43.9		70 - 120	88%	SPK: 50
1868-53-7	Dibromofluoromethane	45.9		85 - 115	92%	SPK: 50
2037-26-5	Toluene-d8	42.1	*	85 - 120	84%	SPK: 50
460-00-4	4-Bromofluorobenzene	50.6		75 - 120	101%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	894909	4.2			
540-36-3	1,4-Difluorobenzene	1256090	4.82			
3114-55-4	Chlorobenzene-d5	1747780	7.81			
3855-82-1	1,4-Dichlorobenzene-d4	935664	9.73			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/20/11
Project:	CTO WE08	Date Received:	04/21/11
Client Sample ID:	SA-PZ-159I-20110420RE	SDG No.:	C1952
Lab Sample ID:	C1952-08RE	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD032865.D	1		04/28/11	VD042811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/19/11
Project:	CTO WE08	Date Received:	04/21/11
Client Sample ID:	SA-PZ-159I-20110419	SDG No.:	C1952
Lab Sample ID:	C1952-02	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
TOC	1.3		1	0.097	0.5	mg/L	04/28/11	04/28/11	SW9060

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/20/11
Project:	CTO WE08	Date Received:	04/21/11
Client Sample ID:	SA-PZ-159I1-20110420	SDG No.:	C1952
Lab Sample ID:	C1952-07	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
TOC	2.2		1	0.097	0.5	mg/L	04/28/11	04/28/11	SW9060

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/11/11
Project:	CTO WE08	Date Received:	04/21/11
Client Sample ID:	SA-TB01-20110411	SDG No.:	C1952
Lab Sample ID:	C1952-01	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD032755.D	1		04/22/11	VD042211

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	0.5	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	0.5	U	0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	0.5	U	0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/11/11
Project:	CTO WE08	Date Received:	04/21/11
Client Sample ID:	SA-TB01-20110411	SDG No.:	C1952
Lab Sample ID:	C1952-01	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD032755.D	1		04/22/11	VD042211

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	46.4		70 - 120	93%	SPK: 50
1868-53-7	Dibromofluoromethane	51.4		85 - 115	103%	SPK: 50
2037-26-5	Toluene-d8	47.6		85 - 120	95%	SPK: 50
460-00-4	4-Bromofluorobenzene	53.3		75 - 120	107%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	965502	4.14			
540-36-3	1,4-Difluorobenzene	1281100	4.77			
3114-55-4	Chlorobenzene-d5	2105750	7.76			
3855-82-1	1,4-Dichlorobenzene-d4	1077710	9.69			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/11/11
Project:	CTO WE08	Date Received:	04/21/11
Client Sample ID:	SA-TB01-20110411	SDG No.:	C1952
Lab Sample ID:	C1952-01	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD032755.D	1		04/22/11	VD042211

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Cover Page

Order ID : C2167

Project ID : CTO WE08

Client : Tetra Tech NUS, Inc.

Lab Sample Number	Client Sample Number
C2167-01	SA-TB01-20110411
C2167-02	SA-PZ-157I-20110509
C2167-03	SA-PZ-157I1-20110509
C2167-04	SA-PZ-158I-20110509
C2167-05	SA-PZ-158I1-20110509
C2167-06	SA-PZ-159I-20110509
C2167-07	SA-PZ-159I1-20110509
C2167-08	CARBONIN-20110509

I certify that the data package is in compliance with the terms and conditions of the contract,both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : Mildred V Reyes

Mildred V. Reyes, QA/QC Supervisor
2011.05.31 16:23:09 -04'00'

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

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CASE NARRATIVE

Tetra Tech NUS, Inc.
Project Name: CTO WE08
Project # N/A
Chemtech Project # C2167
Test Name: VOCMS Group1

A. Number of Samples and Date of Receipt:
8 Water samples were received on 05/10/2011.

B. Parameters
According to the Chain of Custody document, the following analyses were requested: TOC and VOCMS Group1. This data package contains results for VOCMS Group1.

C. Analytical Techniques:
The analysis performed on instrument MSVOA_G were done using GC column RTX-VMS which is 20 meters, 0.18 mm id, 1.0 um df, Restek Cat. #49914. The Trap was supplied by OI Analytical, OI #10 Trap , OI Eclipse 4660 Concentrator.The analysis performed on instrument MSVOA_H were done using GC column RTX-VMS which is 20 meters, 0.18 mm id, 1.0 um df, Restek Cat. #49914. The Trap was supplied BY OI Analytical, OI #10 Trap , OI Eclipse 4660 Concentrator.The analysis of VOCMS Group1 was based on method 8260B.

D. QA/ QC Samples:
The Holding Times were met for all analysis except for SA-TB01-20110411. Sample was received outside hold time.
The Surrogate recoveries met the acceptable criteria except for SA-PZ-157I-20110509 [Toluene-d8 - 79%], SA-PZ-157I-20110509DL [1,2-Dichloroethane-d4 - 61%, 4-Bromofluorobenzene - 68%, Dibromofluoromethane - 78%, Toluene-d8 - 73%], SA-PZ-157I1-20110509 [1,2-Dichloroethane-d4 - 69%, Dibromofluoromethane - 82% and Toluene-d8 - 77%].The samples failing surrogates were re-analyzed at dilution.
The Internal Standards Areas met the acceptable requirements.
The Retention Times were acceptable for all samples.
The RPD recoveries met criteria.
The Blank Spike met requirements for all samples.
The Blank Spike Duplicate met requirements for all samples.
The Blank analysis did not indicate the presence of lab contamination.
The Initial Calibration met the requirements.
The Continuous Calibration File ID VH040944.D and VH040972.D met the requirements except for Acetone.
The Tuning criteria met requirements.

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E. Additional Comments:
Samples SA-PZ-157I-20110509, SA-PZ-157I1-20110509 and SA-PZ-159I1-20110509 were diluted due to high concentrations.

Please use %D calculated based on Avg RF and CCRF for all compounds using Average Response Factor when the %RSD value for a compound is <15% for the Initial Calibration curve and use %D calculated based on Amount added and Calculated amount for all compounds using Linear Regression when the %RSD value for a compound is > 15% for the Initial Calibration curve for SW-846 analysis.

F. Manual Integration Comments:
Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature Mildred V Reyes

Mildred V. Reyes, QA/QC Supervisor
2011.05.31 16:22:59 -04'00'

I Hildred U Reyes, as the designated Quality Assurance Officer, hereby attest that all electronic deliverables have been thoroughly reviewed and are in agreement with the associated hardcopy data. The enclosed electronic files have been reviewed for accuracy (including significant figures), completeness and format. The laboratory will be responsible for any labor time necessary to correct enclosed electronic deliverables that have been found to be in error. I can be reached at (908) 789-8900 if there are any questions or problems with the enclosed electronic deliverables.

Signature: Hildred U Reyes Title: QA/QC Supervisor Date: 5/31/11

CHEMTECH

284 Sheffield Street Mountainside NJ 07092
Tel. 908-789-8900 Fax: 908-789-8922

DATA REPORTING QUALIFIERS- ORGANIC

For reporting results, the following " Result Qualifiers" are used:

Value	If the result is a value greater than or equal to the detection limit, report the value
U	Indicates the compound was analyzed for but was not detected. Report the minimum detection limit for the sample with the U. This is the detection limit attainable for this particular sample based on any concentration or dilution that may have been required.
ND	Indicates the compound was analyzed for but was not detected
J	Indicates an estimated value. This flag is used: (1) When estimating a concentration for a tentatively identified compound (library search hits, where a 1:1 response is assumed.) (2) When the mass spectral data indicated the identification, however the result was less than the specified detection limit greater than zero. If the detection limit was 10ug/L, and a concentration of 3ug/L was calculated, report as 3 J.
B	Indicates the analyte was found in the blank as well as the sample.
E	Indicates the analyte 's concentration exceeds the calibrated range of the instrument for that specific analysis.
D	This flag identifies all compounds identified in an analysis at a secondary dilution factor.
P	This flag is used for Pesticide/PCB target analyte when there is >25% difference for detected concentrations between the two GC columns.
N	This flag indicates presumptive evidence of a compound. This is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. For generic characterization of a TIC, such as chlorinated hydrocarbon, the flag is not used.
A	This flag indicates that a Tentatively Identified Compound is a suspected Aldol-condensation product.

QA Control # A3040283

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	05/09/11
Project:	CTO WE08	Date Received:	05/10/11
Client Sample ID:	CARBONIN-20110509	SDG No.:	C2167
Lab Sample ID:	C2167-08	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH040959.D	1		05/20/11	VH052011

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	38		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	7.3		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	110		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	21		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	05/09/11
Project:	CTO WE08	Date Received:	05/10/11
Client Sample ID:	CARBONIN-20110509	SDG No.:	C2167
Lab Sample ID:	C2167-08	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH040959.D	1		05/20/11	VH052011

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	40.5		70 - 120	81%	SPK: 50
1868-53-7	Dibromofluoromethane	46.9		85 - 115	94%	SPK: 50
2037-26-5	Toluene-d8	44.4		85 - 120	89%	SPK: 50
460-00-4	4-Bromofluorobenzene	42.8		75 - 120	86%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	573824	4.07			
540-36-3	1,4-Difluorobenzene	1120810	4.59			
3114-55-4	Chlorobenzene-d5	939316	7.93			
3855-82-1	1,4-Dichlorobenzene-d4	418425	10.43			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	05/09/11
Project:	CTO WE08	Date Received:	05/10/11
Client Sample ID:	CARBONIN-20110509	SDG No.:	C2167
Lab Sample ID:	C2167-08	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH040959.D	1		05/20/11	VH052011

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	05/09/11
Project:	CTO WE08	Date Received:	05/10/11
Client Sample ID:	CARBONIN-20110509	SDG No.:	C2167
Lab Sample ID:	C2167-08	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
TOC	0.783		1	0.097	0.5	mg/L	05/14/11	05/14/11	SW9060

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	05/09/11
Project:	CTO WE08	Date Received:	05/10/11
Client Sample ID:	SA-PZ-157I-20110509	SDG No.:	C2167
Lab Sample ID:	C2167-02	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH040953.D	1		05/20/11	VH052011

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	180	E	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	17		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	250	E	0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.62	J	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	31		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	1.7		0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	05/09/11
Project:	CTO WE08	Date Received:	05/10/11
Client Sample ID:	SA-PZ-157I-20110509	SDG No.:	C2167
Lab Sample ID:	C2167-02	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH040953.D	1		05/20/11	VH052011

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.53	J	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	1.4		0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	6.6		0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	1.9		0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	5		0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	1.7		0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	35.2		70 - 120	70%	SPK: 50
1868-53-7	Dibromofluoromethane	44		85 - 115	88%	SPK: 50
2037-26-5	Toluene-d8	39.7	*	85 - 120	79%	SPK: 50
460-00-4	4-Bromofluorobenzene	39.5		75 - 120	79%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	564987	4.07			
540-36-3	1,4-Difluorobenzene	1051410	4.6			
3114-55-4	Chlorobenzene-d5	883312	7.93			
3855-82-1	1,4-Dichlorobenzene-d4	374927	10.43			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	05/09/11
Project:	CTO WE08	Date Received:	05/10/11
Client Sample ID:	SA-PZ-157I-20110509	SDG No.:	C2167
Lab Sample ID:	C2167-02	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH040953.D	1		05/20/11	VH052011

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	05/09/11
Project:	CTO WE08	Date Received:	05/10/11
Client Sample ID:	SA-PZ-157I-20110509DL	SDG No.:	C2167
Lab Sample ID:	C2167-02DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH040955.D	10		05/20/11	VH052011

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	5	U	2	10	ug/L
74-87-3	Chloromethane	5	U	2	10	ug/L
75-01-4	Vinyl Chloride	5	U	3.4	10	ug/L
74-83-9	Bromomethane	5	U	2	10	ug/L
75-00-3	Chloroethane	200	D	2	10	ug/L
75-69-4	Trichlorofluoromethane	5	U	3.5	10	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	5	U	4.5	10	ug/L
75-35-4	1,1-Dichloroethene	17	D	4.7	10	ug/L
67-64-1	Acetone	25	U	5	50	ug/L
75-15-0	Carbon Disulfide	5	U	2	10	ug/L
1634-04-4	Methyl tert-butyl Ether	5	U	3.5	10	ug/L
79-20-9	Methyl Acetate	5	U	2	10	ug/L
75-09-2	Methylene Chloride	5	U	4.1	10	ug/L
156-60-5	trans-1,2-Dichloroethene	5	U	4.1	10	ug/L
75-34-3	1,1-Dichloroethane	280	D	3.6	10	ug/L
110-82-7	Cyclohexane	5	U	2	10	ug/L
78-93-3	2-Butanone	25	U	13	50	ug/L
56-23-5	Carbon Tetrachloride	5	U	2	10	ug/L
156-59-2	cis-1,2-Dichloroethene	5	U	3.5	10	ug/L
74-97-5	Bromochloromethane	5	U	2	10	ug/L
67-66-3	Chloroform	5	U	3.4	10	ug/L
71-55-6	1,1,1-Trichloroethane	35	D	4	10	ug/L
108-87-2	Methylcyclohexane	5	U	2	10	ug/L
71-43-2	Benzene	5	U	3.2	10	ug/L
107-06-2	1,2-Dichloroethane	5	U	4.8	10	ug/L
79-01-6	Trichloroethene	5	U	2.8	10	ug/L
78-87-5	1,2-Dichloropropane	5	U	4.6	10	ug/L
75-27-4	Bromodichloromethane	5	U	3.6	10	ug/L
108-10-1	4-Methyl-2-Pentanone	25	U	21	50	ug/L
108-88-3	Toluene	5	U	3.7	10	ug/L
10061-02-6	t-1,3-Dichloropropene	5	U	2.9	10	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	05/09/11
Project:	CTO WE08	Date Received:	05/10/11
Client Sample ID:	SA-PZ-157I-20110509DL	SDG No.:	C2167
Lab Sample ID:	C2167-02DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH040955.D	10		05/20/11	VH052011

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	5	U	3.1	10	ug/L
79-00-5	1,1,2-Trichloroethane	5	U	3.8	10	ug/L
591-78-6	2-Hexanone	25	U	19	50	ug/L
124-48-1	Dibromochloromethane	5	U	2	10	ug/L
106-93-4	1,2-Dibromoethane	5	U	4.1	10	ug/L
127-18-4	Tetrachloroethene	5	U	2.7	10	ug/L
108-90-7	Chlorobenzene	5	U	4.9	10	ug/L
100-41-4	Ethyl Benzene	5	U	2	10	ug/L
179601-23-1	m/p-Xylenes	10	U	9.5	20	ug/L
95-47-6	o-Xylene	5	U	4.3	10	ug/L
100-42-5	Styrene	5	U	3.6	10	ug/L
75-25-2	Bromoform	5	U	4.7	10	ug/L
98-82-8	Isopropylbenzene	5	U	4.5	10	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	5	U	3.1	10	ug/L
541-73-1	1,3-Dichlorobenzene	5	U	4.3	10	ug/L
106-46-7	1,4-Dichlorobenzene	5	U	3.2	10	ug/L
95-50-1	1,2-Dichlorobenzene	5	U	4.5	10	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	5	U	4.6	10	ug/L
120-82-1	1,2,4-Trichlorobenzene	5	U	2	10	ug/L
87-61-6	1,2,3-Trichlorobenzene	5	U	2	10	ug/L
123-91-1	1,4-Dioxane	100	U	200	200	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	30.7	*	70 - 120	61%	SPK: 50
1868-53-7	Dibromofluoromethane	39.2	*	85 - 115	78%	SPK: 50
2037-26-5	Toluene-d8	36.2	*	85 - 120	73%	SPK: 50
460-00-4	4-Bromofluorobenzene	34	*	75 - 120	68%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	440123	4.07			
540-36-3	1,4-Difluorobenzene	821113	4.59			
3114-55-4	Chlorobenzene-d5	714415	7.94			
3855-82-1	1,4-Dichlorobenzene-d4	296785	10.43			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	05/09/11
Project:	CTO WE08	Date Received:	05/10/11
Client Sample ID:	SA-PZ-157I-20110509DL	SDG No.:	C2167
Lab Sample ID:	C2167-02DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH040955.D	10		05/20/11	VH052011

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	05/09/11
Project:	CTO WE08	Date Received:	05/10/11
Client Sample ID:	SA-PZ-157I-20110509	SDG No.:	C2167
Lab Sample ID:	C2167-02	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
TOC	2.4		1	0.097	0.5	mg/L	05/14/11	05/14/11	SW9060

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	05/09/11
Project:	CTO WE08	Date Received:	05/10/11
Client Sample ID:	SA-PZ-157I1-20110509	SDG No.:	C2167
Lab Sample ID:	C2167-03	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH040958.D	1		05/20/11	VH052011

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	170	E	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	13		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	170	E	0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.96	J	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	16		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	1.9		0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	05/09/11
Project:	CTO WE08	Date Received:	05/10/11
Client Sample ID:	SA-PZ-15711-20110509	SDG No.:	C2167
Lab Sample ID:	C2167-03	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH040958.D	1		05/20/11	VH052011

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	5.1		0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	3		0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	7.3		0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	37		0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	9.8		0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	8.6		0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	2.7		0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	34.6	*	70 - 120	69%	SPK: 50
1868-53-7	Dibromofluoromethane	41	*	85 - 115	82%	SPK: 50
2037-26-5	Toluene-d8	38.7	*	85 - 120	77%	SPK: 50
460-00-4	4-Bromofluorobenzene	37.6		75 - 120	75%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	440604	4.08			
540-36-3	1,4-Difluorobenzene	810486	4.59			
3114-55-4	Chlorobenzene-d5	692468	7.94			
3855-82-1	1,4-Dichlorobenzene-d4	311067	10.43			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	05/09/11
Project:	CTO WE08	Date Received:	05/10/11
Client Sample ID:	SA-PZ-157I1-20110509	SDG No.:	C2167
Lab Sample ID:	C2167-03	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH040958.D	1		05/20/11	VH052011

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	05/09/11
Project:	CTO WE08	Date Received:	05/10/11
Client Sample ID:	SA-PZ-157I1-20110509DL	SDG No.:	C2167
Lab Sample ID:	C2167-03DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH040977.D	10		05/22/11	VH052211

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	5	U	2	10	ug/L
74-87-3	Chloromethane	5	U	2	10	ug/L
75-01-4	Vinyl Chloride	5	U	3.4	10	ug/L
74-83-9	Bromomethane	5	U	2	10	ug/L
75-00-3	Chloroethane	130	D	2	10	ug/L
75-69-4	Trichlorofluoromethane	5	U	3.5	10	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	5	U	4.5	10	ug/L
75-35-4	1,1-Dichloroethene	11	D	4.7	10	ug/L
67-64-1	Acetone	25	U	5	50	ug/L
75-15-0	Carbon Disulfide	5	U	2	10	ug/L
1634-04-4	Methyl tert-butyl Ether	5	U	3.5	10	ug/L
79-20-9	Methyl Acetate	5	U	2	10	ug/L
75-09-2	Methylene Chloride	5	U	4.1	10	ug/L
156-60-5	trans-1,2-Dichloroethene	5	U	4.1	10	ug/L
75-34-3	1,1-Dichloroethane	140	D	3.6	10	ug/L
110-82-7	Cyclohexane	5	U	2	10	ug/L
78-93-3	2-Butanone	25	U	13	50	ug/L
56-23-5	Carbon Tetrachloride	5	U	2	10	ug/L
156-59-2	cis-1,2-Dichloroethene	5	U	3.5	10	ug/L
74-97-5	Bromochloromethane	5	U	2	10	ug/L
67-66-3	Chloroform	5	U	3.4	10	ug/L
71-55-6	1,1,1-Trichloroethane	11	D	4	10	ug/L
108-87-2	Methylcyclohexane	5	U	2	10	ug/L
71-43-2	Benzene	5	U	3.2	10	ug/L
107-06-2	1,2-Dichloroethane	5	U	4.8	10	ug/L
79-01-6	Trichloroethene	5	U	2.8	10	ug/L
78-87-5	1,2-Dichloropropane	5	U	4.6	10	ug/L
75-27-4	Bromodichloromethane	5	U	3.6	10	ug/L
108-10-1	4-Methyl-2-Pentanone	25	U	21	50	ug/L
108-88-3	Toluene	5	U	3.7	10	ug/L
10061-02-6	t-1,3-Dichloropropene	5	U	2.9	10	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	05/09/11
Project:	CTO WE08	Date Received:	05/10/11
Client Sample ID:	SA-PZ-15711-20110509DL	SDG No.:	C2167
Lab Sample ID:	C2167-03DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH040977.D	10		05/22/11	VH052211

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	5	U	3.1	10	ug/L
79-00-5	1,1,2-Trichloroethane	5	U	3.8	10	ug/L
591-78-6	2-Hexanone	25	U	19	50	ug/L
124-48-1	Dibromochloromethane	5	U	2	10	ug/L
106-93-4	1,2-Dibromoethane	5	U	4.1	10	ug/L
127-18-4	Tetrachloroethene	5	U	2.7	10	ug/L
108-90-7	Chlorobenzene	5	U	4.9	10	ug/L
100-41-4	Ethyl Benzene	5	U	2	10	ug/L
179601-23-1	m/p-Xylenes	10	U	9.5	20	ug/L
95-47-6	o-Xylene	5	U	4.3	10	ug/L
100-42-5	Styrene	5	U	3.6	10	ug/L
75-25-2	Bromoform	5	U	4.7	10	ug/L
98-82-8	Isopropylbenzene	5	U	4.5	10	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	5	U	3.1	10	ug/L
541-73-1	1,3-Dichlorobenzene	6.1	JD	4.3	10	ug/L
106-46-7	1,4-Dichlorobenzene	31	D	3.2	10	ug/L
95-50-1	1,2-Dichlorobenzene	7.2	JD	4.5	10	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	5	U	4.6	10	ug/L
120-82-1	1,2,4-Trichlorobenzene	5	U	2	10	ug/L
87-61-6	1,2,3-Trichlorobenzene	5	U	2	10	ug/L
123-91-1	1,4-Dioxane	100	U	200	200	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	44.9		70 - 120	90%	SPK: 50
1868-53-7	Dibromofluoromethane	53.9		85 - 115	108%	SPK: 50
2037-26-5	Toluene-d8	51.9		85 - 120	104%	SPK: 50
460-00-4	4-Bromofluorobenzene	50.5		75 - 120	101%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	596708	4.07			
540-36-3	1,4-Difluorobenzene	1122020	4.58			
3114-55-4	Chlorobenzene-d5	926904	7.92			
3855-82-1	1,4-Dichlorobenzene-d4	422529	10.42			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	05/09/11
Project:	CTO WE08	Date Received:	05/10/11
Client Sample ID:	SA-PZ-157I1-20110509DL	SDG No.:	C2167
Lab Sample ID:	C2167-03DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH040977.D	10		05/22/11	VH052211

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	05/09/11
Project:	CTO WE08	Date Received:	05/10/11
Client Sample ID:	SA-PZ-157I1-20110509	SDG No.:	C2167
Lab Sample ID:	C2167-03	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
TOC	2.1		1	0.097	0.5	mg/L	05/14/11	05/14/11	SW9060

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	05/09/11
Project:	CTO WE08	Date Received:	05/10/11
Client Sample ID:	SA-PZ-158I-20110509	SDG No.:	C2167
Lab Sample ID:	C2167-04	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH040981.D	1		05/22/11	VH052211

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	14		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	5		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	71		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	14		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	05/09/11
Project:	CTO WE08	Date Received:	05/10/11
Client Sample ID:	SA-PZ-158I-20110509	SDG No.:	C2167
Lab Sample ID:	C2167-04	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH040981.D	1		05/22/11	VH052211

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	44		70 - 120	88%	SPK: 50
1868-53-7	Dibromofluoromethane	53.9		85 - 115	108%	SPK: 50
2037-26-5	Toluene-d8	50.5		85 - 120	101%	SPK: 50
460-00-4	4-Bromofluorobenzene	50.6		75 - 120	101%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	604034	4.07			
540-36-3	1,4-Difluorobenzene	1152150	4.57			
3114-55-4	Chlorobenzene-d5	963959	7.92			
3855-82-1	1,4-Dichlorobenzene-d4	460424	10.42			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	05/09/11
Project:	CTO WE08	Date Received:	05/10/11
Client Sample ID:	SA-PZ-158I-20110509	SDG No.:	C2167
Lab Sample ID:	C2167-04	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH040981.D	1		05/22/11	VH052211

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	05/09/11
Project:	CTO WE08	Date Received:	05/10/11
Client Sample ID:	SA-PZ-158I-20110509	SDG No.:	C2167
Lab Sample ID:	C2167-04	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
TOC	0.961		1	0.097	0.5	mg/L	05/14/11	05/14/11	SW9060

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	05/09/11
Project:	CTO WE08	Date Received:	05/10/11
Client Sample ID:	SA-PZ-15811-20110509	SDG No.:	C2167
Lab Sample ID:	C2167-05	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH040982.D	1		05/22/11	VH052211

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	130		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	8.5		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	110		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.64	J	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	6.5		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	1.5		0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	05/09/11
Project:	CTO WE08	Date Received:	05/10/11
Client Sample ID:	SA-PZ-15811-20110509	SDG No.:	C2167
Lab Sample ID:	C2167-05	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH040982.D	1		05/22/11	VH052211

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	4		0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	2.2		0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	6		0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	30		0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	7.6		0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	6.6		0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	2.4		0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	44.1		70 - 120	88%	SPK: 50
1868-53-7	Dibromofluoromethane	53.6		85 - 115	107%	SPK: 50
2037-26-5	Toluene-d8	51.9		85 - 120	104%	SPK: 50
460-00-4	4-Bromofluorobenzene	49.3		75 - 120	99%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	603265	4.07			
540-36-3	1,4-Difluorobenzene	1145460	4.58			
3114-55-4	Chlorobenzene-d5	971494	7.92			
3855-82-1	1,4-Dichlorobenzene-d4	431418	10.42			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	05/09/11
Project:	CTO WE08	Date Received:	05/10/11
Client Sample ID:	SA-PZ-158I1-20110509	SDG No.:	C2167
Lab Sample ID:	C2167-05	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH040982.D	1		05/22/11	VH052211

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	05/09/11
Project:	CTO WE08	Date Received:	05/10/11
Client Sample ID:	SA-PZ-158I1-20110509	SDG No.:	C2167
Lab Sample ID:	C2167-05	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
TOC	2.7		1	0.097	0.5	mg/L	05/14/11	05/14/11	SW9060

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	05/09/11
Project:	CTO WE08	Date Received:	05/10/11
Client Sample ID:	SA-PZ-159I-20110509	SDG No.:	C2167
Lab Sample ID:	C2167-06	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH040983.D	1		05/22/11	VH052211

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	28		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	6.2		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	90		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	16		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	05/09/11
Project:	CTO WE08	Date Received:	05/10/11
Client Sample ID:	SA-PZ-159I-20110509	SDG No.:	C2167
Lab Sample ID:	C2167-06	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH040983.D	1		05/22/11	VH052211

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	44		70 - 120	88%	SPK: 50
1868-53-7	Dibromofluoromethane	55		85 - 115	110%	SPK: 50
2037-26-5	Toluene-d8	51.9		85 - 120	104%	SPK: 50
460-00-4	4-Bromofluorobenzene	49.7		75 - 120	99%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	618208	4.06			
540-36-3	1,4-Difluorobenzene	1144010	4.58			
3114-55-4	Chlorobenzene-d5	950464	7.92			
3855-82-1	1,4-Dichlorobenzene-d4	431069	10.42			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	05/09/11
Project:	CTO WE08	Date Received:	05/10/11
Client Sample ID:	SA-PZ-1591-20110509	SDG No.:	C2167
Lab Sample ID:	C2167-06	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH040983.D	1		05/22/11	VH052211

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	05/09/11
Project:	CTO WE08	Date Received:	05/10/11
Client Sample ID:	SA-PZ-159I-20110509	SDG No.:	C2167
Lab Sample ID:	C2167-06	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
TOC	1.2		1	0.097	0.5	mg/L	05/14/11	05/14/11	SW9060

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	05/09/11
Project:	CTO WE08	Date Received:	05/10/11
Client Sample ID:	SA-PZ-15911-20110509	SDG No.:	C2167
Lab Sample ID:	C2167-07	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH040956.D	1		05/20/11	VH052011

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	180	E	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	13		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	150		0.36	1	ug/L
110-82-7	Cyclohexane	0.79	J	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.85	J	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	9		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	2.5		0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	05/09/11
Project:	CTO WE08	Date Received:	05/10/11
Client Sample ID:	SA-PZ-15911-20110509	SDG No.:	C2167
Lab Sample ID:	C2167-07	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH040956.D	1		05/20/11	VH052011

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	9.6		0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	7.1		0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	14		0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	68		0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	17		0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	12		0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	5		0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	40.8		70 - 120	82%	SPK: 50
1868-53-7	Dibromofluoromethane	52.1		85 - 115	104%	SPK: 50
2037-26-5	Toluene-d8	47.8		85 - 120	96%	SPK: 50
460-00-4	4-Bromofluorobenzene	49.9		75 - 120	100%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	408556	4.08			
540-36-3	1,4-Difluorobenzene	735856	4.59			
3114-55-4	Chlorobenzene-d5	623159	7.94			
3855-82-1	1,4-Dichlorobenzene-d4	292556	10.43			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	05/09/11
Project:	CTO WE08	Date Received:	05/10/11
Client Sample ID:	SA-PZ-1591I-20110509	SDG No.:	C2167
Lab Sample ID:	C2167-07	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH040956.D	1		05/20/11	VH052011

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	05/09/11
Project:	CTO WE08	Date Received:	05/10/11
Client Sample ID:	SA-PZ-15911-20110509DL	SDG No.:	C2167
Lab Sample ID:	C2167-07DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH040978.D	10		05/22/11	VH052211

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	5	U	2	10	ug/L
74-87-3	Chloromethane	5	U	2	10	ug/L
75-01-4	Vinyl Chloride	5	U	3.4	10	ug/L
74-83-9	Bromomethane	5	U	2	10	ug/L
75-00-3	Chloroethane	130	D	2	10	ug/L
75-69-4	Trichlorofluoromethane	5	U	3.5	10	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	5	U	4.5	10	ug/L
75-35-4	1,1-Dichloroethene	5	U	4.7	10	ug/L
67-64-1	Acetone	25	U	5	50	ug/L
75-15-0	Carbon Disulfide	5	U	2	10	ug/L
1634-04-4	Methyl tert-butyl Ether	5	U	3.5	10	ug/L
79-20-9	Methyl Acetate	5	U	2	10	ug/L
75-09-2	Methylene Chloride	5	U	4.1	10	ug/L
156-60-5	trans-1,2-Dichloroethene	5	U	4.1	10	ug/L
75-34-3	1,1-Dichloroethane	110	D	3.6	10	ug/L
110-82-7	Cyclohexane	5	U	2	10	ug/L
78-93-3	2-Butanone	25	U	13	50	ug/L
56-23-5	Carbon Tetrachloride	5	U	2	10	ug/L
156-59-2	cis-1,2-Dichloroethene	5	U	3.5	10	ug/L
74-97-5	Bromochloromethane	5	U	2	10	ug/L
67-66-3	Chloroform	5	U	3.4	10	ug/L
71-55-6	1,1,1-Trichloroethane	5	U	4	10	ug/L
108-87-2	Methylcyclohexane	5	U	2	10	ug/L
71-43-2	Benzene	5	U	3.2	10	ug/L
107-06-2	1,2-Dichloroethane	5	U	4.8	10	ug/L
79-01-6	Trichloroethene	5	U	2.8	10	ug/L
78-87-5	1,2-Dichloropropane	5	U	4.6	10	ug/L
75-27-4	Bromodichloromethane	5	U	3.6	10	ug/L
108-10-1	4-Methyl-2-Pentanone	25	U	21	50	ug/L
108-88-3	Toluene	5	U	3.7	10	ug/L
10061-02-6	t-1,3-Dichloropropene	5	U	2.9	10	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	05/09/11
Project:	CTO WE08	Date Received:	05/10/11
Client Sample ID:	SA-PZ-15911-20110509DL	SDG No.:	C2167
Lab Sample ID:	C2167-07DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH040978.D	10		05/22/11	VH052211

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	5	U	3.1	10	ug/L
79-00-5	1,1,2-Trichloroethane	5	U	3.8	10	ug/L
591-78-6	2-Hexanone	25	U	19	50	ug/L
124-48-1	Dibromochloromethane	5	U	2	10	ug/L
106-93-4	1,2-Dibromoethane	5	U	4.1	10	ug/L
127-18-4	Tetrachloroethene	5	U	2.7	10	ug/L
108-90-7	Chlorobenzene	5	U	4.9	10	ug/L
100-41-4	Ethyl Benzene	5	U	2	10	ug/L
179601-23-1	m/p-Xylenes	10	U	9.5	20	ug/L
95-47-6	o-Xylene	5	U	4.3	10	ug/L
100-42-5	Styrene	5	U	3.6	10	ug/L
75-25-2	Bromoform	5	U	4.7	10	ug/L
98-82-8	Isopropylbenzene	5	U	4.5	10	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	5	U	3.1	10	ug/L
541-73-1	1,3-Dichlorobenzene	5	U	4.3	10	ug/L
106-46-7	1,4-Dichlorobenzene	24	D	3.2	10	ug/L
95-50-1	1,2-Dichlorobenzene	6.6	JD	4.5	10	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	5	U	4.6	10	ug/L
120-82-1	1,2,4-Trichlorobenzene	5	U	2	10	ug/L
87-61-6	1,2,3-Trichlorobenzene	5	U	2	10	ug/L
123-91-1	1,4-Dioxane	100	U	200	200	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	48.4		70 - 120	97%	SPK: 50
1868-53-7	Dibromofluoromethane	53.8		85 - 115	108%	SPK: 50
2037-26-5	Toluene-d8	49.3		85 - 120	99%	SPK: 50
460-00-4	4-Bromofluorobenzene	48.3		75 - 120	97%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	633702	4.06			
540-36-3	1,4-Difluorobenzene	1250760	4.58			
3114-55-4	Chlorobenzene-d5	1048940	7.92			
3855-82-1	1,4-Dichlorobenzene-d4	475529	10.42			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	05/09/11
Project:	CTO WE08	Date Received:	05/10/11
Client Sample ID:	SA-PZ-15911-20110509DL	SDG No.:	C2167
Lab Sample ID:	C2167-07DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH040978.D	10		05/22/11	VH052211

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	05/09/11
Project:	CTO WE08	Date Received:	05/10/11
Client Sample ID:	SA-PZ-159I1-20110509	SDG No.:	C2167
Lab Sample ID:	C2167-07	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
TOC	1.9		1	0.097	0.5	mg/L	05/14/11	05/14/11	SW9060

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/11/11
Project:	CTO WE08	Date Received:	05/10/11
Client Sample ID:	SA-TB01-20110411	SDG No.:	C2167
Lab Sample ID:	C2167-01	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG034768.D	1		05/11/11	VG051111

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	0.5	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	0.5	U	0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	0.5	U	0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/11/11
Project:	CTO WE08	Date Received:	05/10/11
Client Sample ID:	SA-TB01-20110411	SDG No.:	C2167
Lab Sample ID:	C2167-01	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG034768.D	1		05/11/11	VG051111

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	47.9		70 - 120	96%	SPK: 50
1868-53-7	Dibromofluoromethane	50.4		85 - 115	101%	SPK: 50
2037-26-5	Toluene-d8	47.6		85 - 120	95%	SPK: 50
460-00-4	4-Bromofluorobenzene	43.9		75 - 120	88%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	662123	3.87			
540-36-3	1,4-Difluorobenzene	1194310	4.67			
3114-55-4	Chlorobenzene-d5	972322	9.64			
3855-82-1	1,4-Dichlorobenzene-d4	345056	13.35			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	04/11/11
Project:	CTO WE08	Date Received:	05/10/11
Client Sample ID:	SA-TB01-20110411	SDG No.:	C2167
Lab Sample ID:	C2167-01	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG034768.D	1		05/11/11	VG051111

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Cover Page

Order ID : C2167

Project ID : CTO WE08

Client : Tetra Tech NUS, Inc.

Lab Sample Number	Client Sample Number
C2167-01	SA-TB01-20110411
C2167-02	SA-PZ-157I-20110509
C2167-03	SA-PZ-157I1-20110509
C2167-04	SA-PZ-158I-20110509
C2167-05	SA-PZ-158I1-20110509
C2167-06	SA-PZ-159I-20110509
C2167-07	SA-PZ-159I1-20110509
C2167-08	CARBONIN-20110509

I certify that the data package is in compliance with the terms and conditions of the contract,both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : Mildred V Reyes

Mildred V. Reyes, QA/QC Supervisor
2011.05.31 16:21:30 -04'00'

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

CHEMTECH

CASE NARRATIVE

Tetra Tech NUS, Inc.
Project Name: CTO WE08
Project # N/A
Chemtech Project # C2167

A. Number of Samples and Date of Receipt:
8 Water samples were received on 5/10/11.

B. Parameters:
According to the Chain of Custody document, the following analyses were requested: TOC, and VOCMS Group1. This data package contains results for TOC.

C. Analytical Techniques:
The analysis of TOC was based on method 9060

D. QA/ QC Samples:
The Holding Times were met for all analysis.
The Blank Spike met requirements for all samples.
The Duplicate analysis met criteria for all samples.
The Matrix Spike analysis met criteria for all samples.
The Blank analysis did not indicate the presence of lab contamination.
The Calibration met the requirements.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature Mildred V Reyes

Mildred V. Reyes, QA/QC Supervisor
2011.05.31 16:21:20 -04'00'

I Mildred U Reyes, as the designated Quality Assurance Officer, hereby attest that all electronic deliverables have been thoroughly reviewed and are in agreement with the associated hardcopy data. The enclosed electronic files have been reviewed for accuracy (including significant figures), completeness and format. The laboratory will be responsible for any labor time necessary to correct enclosed electronic deliverables that have been found to be in error. I can be reached at (808) 789-8900 if there are any questions or problems with the enclosed electronic deliverables.

Signature: Mildred U Reyes Title: QA/QC Supervisor Date: 5/31/11

CHEMTECH

284 Sheffield Street Mountainside NJ 07092
Tel. 908-789-8900 Fax: 908-789-8922

DATA REPORTING QUALIFIERS- INORGANIC

For reporting results, the following " Result Qualifiers" are used:

J	Indicates the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL), but greater than or equal to the Instrument Detection Limit (IDL).
U	Indicates the analyte was analyzed for, but not detected.
ND	Indicates the analyte was analyzed for, but not detected.
E	Indicates the reported value is estimated because of the presence of interference.
M	Indicates Duplicate injection precision is not met.
N	Indicates spiked sample recovery is not within control limits.
S	Indicates the reported value was determined by the Method of Standard Addition (MSA).
*	Indicates the duplicate analysis is not within control limits.
+	Indicates correlation coefficient for the MSA is less than 0.995.
D	Indicates the reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.
M	Method qualifiers **"P"** for ICP instrument **"PM"** for ICP when Microwave Digestion is used **"CV"** for Manual Cold Vapor AA **"AV"** for automated Cold Vapor AA **"CA"** for MIDI-Distillation Spectrophotometer **"AS"** for Semi –Automated Spectrophotometer **"C"** for Manual Spectrophotometer **"T"** for Titrimetric analysis **"NR"** for analyte not required to be analyzed
OR	**Indicates the analyte 's concentration exceeds the calibrated range of the instrument for that specific analysis.**

QA Control # A3040282

CHEMTECH 284 Sheffield Street, Mountainside, New Jersey 07092 Phone : 908 789 8900 Fax : 908 789 8922

ANALYTICAL RESULTS SUMMARY

PROJECT NAME : CTO WE08

TETRA TECH NUS, INC.
661 Anderson Drive

Pittsburgh , Pennsylvania - 15220-2745
Phone No: 4129218361

ORDER ID : C2595
ATTENTION : David Brayack

ACCREDITED IN ACCORDANCE WITH nelac

DoD ELAP

CHEMTECH 284 Sheffield Street, Mountainside, New Jersey 07092 Phone : 908 789 8900 Fax : 908 789 8922

Cover Page

Order ID : C2595

Project ID : CTO WE08

Client : Tetra Tech NUS, Inc.

Lab Sample Number	Client Sample Number
C2595-01	SA-TB03-20110606
C2595-02	SA-TW405-3135
C2595-03	SA-TW405-2125
C2595-04	SADUP02-20110606
C2595-05	SA-TW407-3135
C2595-06	SA-TW407-2125
C2595-07	SA-TW406-2125
C2595-08	SA-TW406-3135
C2595-09	SA-TW416-3337
C2595-10	C2595-09MS
C2595-11	C2595-09MSD
C2595-12	SA-TW416-3842
C2595-13	SA-TW416-4347
C2595-14	SA-RB01-20110607
C2595-15	SA-PZ136I-20110607
C2595-16	SA-TW416-4852
C2595-17	SA-TW415-3337
C2595-18	SA-TW415-3842
C2595-19	SA-TW415-4347
C2595-20	SA-TW414-3337
C2595-21	SA-TW414-3842
C2595-22	SA-TW414-4347

I certify that the data package is in compliance with the terms and conditions of the contract,both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : Mildred V Reyes

Mildred V. Reyes, QA/QC Supervisor
2011.06.30 09:39:13 -04'00'

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

CHEMTECH

CASE NARRATIVE

Tetra Tech NUS, Inc.
Project Name: CTO WE08
Project # N/A
Chemtech Project # C2595
Test Name: VOCMS Group1

A. Number of Samples and Date of Receipt:
22 Water samples were received on 06/09/2011.

B. Parameters
According to the Chain of Custody document, the following analyses were requested: VOCMS Group1. This data package contains results for VOCMS Group1.

C. Analytical Techniques:
The analysis performed on instrument MSVOA_D were done using GC column RTX-VMS which is 20 meters, 0.18 mm id, 1.0 um df, Restek Cat. #49914. The Trap was supplied by SUPELCO, K (VOACARB 3000) , TEKMAR LSC-2000 Concentrator.The analysis performed on instrument MSVOA_G were done using GC column RTX-VMS which is 20 meters, 0.18 mm id, 1.0 um df, Restek Cat. #49914. The Trap was supplied by OI Analytical, OI #10 Trap , OI Eclipse 4660 Concentrator.The analysis of VOCMS Group1 was based on method 8260B.

D. QA/ QC Samples:
The Holding Times were met for all analysis.
The Surrogate recoveries met the acceptable criteria except for SA-TW415-3337 [Dibromofluoromethane - 116%], SA-TW414-4347 [Dibromofluoromethane - 116%].
The Internal Standards Areas met the acceptable requirements.
The Retention Times were acceptable for all samples.
The MS {C2595-10MS} with File ID: VD033536.D recoveries met the requirements for all compounds except for Chloroethane[58%] .
The MSD {C2595-11MSD} with File ID: VD033537.D recoveries met the acceptable requirements except for Chloroethane[54%] .
The RPD recoveries met criteria .
The Blank Spike for {BSD0615W3} with File ID: VD033517.D met requirements for all samples except for Chloroethane[145%] .
The Blank Spike Duplicate met requirements for all samples .The Blank Spike for {BSD0617W2} with File ID: VD033562.D met requirements for all samples except for Chloroethane[160%] .The Blank Spike for {BSD0618W1} with File ID: VD033584.D met requirements for all samples except for Chloroethane[150%], Methylene Chloride[180%] .
The Blank analysis indicated presence of Methylene Chloride[5.2 ug/L] FileID:VD033583.D{VBD0618W1} due to possible lab contamination.
The Initial Calibration met the requirements .

The Continuous Calibration File ID VD033533.D met the requirements except for 1,2-Dichloroethane .The Continuous Calibration File ID VD033559.D met the requirements except for Carbon Tetrachloride,1,2-Dichloroethane,Dibromochloromethane and Bromoform .The Continuous Calibration File ID VD033581.D met the requirements except for Chloromethane,Vinyl Chloride,1,2-Dichloroethane and Carbon Tetrachloride . The Tuning criteria met requirements.
Samples SA-TW406-3135, SA-TW416-3842, SA-TW416-4347, SA-TW415-3337, SA-TW415-3842, SA-TW414-3337, SA-TW414-3842 and SA-TW414-4347 were diluted due to high concentrations.

E. Additional Comments:
Please use %D calculated based on Avg RF and CCRF for all compounds using Average Response Factor when the %RSD value for a compound is <15% for the Initial Calibration curve and use %D calculated based on Amount added and Calculated amount for all compounds using Linear Regression when the %RSD value for a compound is > 15% for the Initial Calibration curve for SW-846 analysis.

F. Manual Integration Comments:
Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature____ Mildred V Reyes

Mildred V. Reyes, QA/QC Supervisor
2011.06.30 09:38:57 -04'00'

I Hildred V. Reyes, as the designated Quality Assurance ~~Officer~~ Supervisor, hereby attest that all electronic deliverables have been thoroughly reviewed and are in agreement with the associated hardcopy data. The enclosed electronic files have been reviewed for accuracy (including significant figures), completeness and format. The laboratory will be responsible for any labor time necessary to correct enclosed electronic deliverables that have been found to be in error. I can be reached at (908) 789-8900 if there are any questions or problems with the enclosed electronic deliverables.

Signature: Hildred V Reyes Title: QA/QC Supervisor Date: 06/29/11

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/07/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-PZ136I-20110607	SDG No.:	C2595
Lab Sample ID:	C2595-15	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033565.D	1		06/17/11	VD061711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	0.5	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	0.5	U	0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	0.5	U	0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/07/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-PZ136I-20110607	SDG No.:	C2595
Lab Sample ID:	C2595-15	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033565.D	1		06/17/11	VD061711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	53.2		70 - 120	106%	SPK: 50
1868-53-7	Dibromofluoromethane	55.3		85 - 115	111%	SPK: 50
2037-26-5	Toluene-d8	49.1		85 - 120	98%	SPK: 50
460-00-4	4-Bromofluorobenzene	54.6		75 - 120	109%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	424089	4.18			
540-36-3	1,4-Difluorobenzene	565789	4.8			
3114-55-4	Chlorobenzene-d5	909982	7.79			
3855-82-1	1,4-Dichlorobenzene-d4	545140	9.72			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/06/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW405-2125	SDG No.:	C2595
Lab Sample ID:	C2595-03	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033523.D	1		06/16/11	VD061511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	0.5	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	0.5	U	0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	0.5	U	0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/06/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW405-2125	SDG No.:	C2595
Lab Sample ID:	C2595-03	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033523.D	1		06/16/11	VD061511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	52.4		70 - 120	105%	SPK: 50
1868-53-7	Dibromofluoromethane	52.8		85 - 115	106%	SPK: 50
2037-26-5	Toluene-d8	50.9		85 - 120	102%	SPK: 50
460-00-4	4-Bromofluorobenzene	55		75 - 120	110%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	500253	4.16			
540-36-3	1,4-Difluorobenzene	767942	4.79			
3114-55-4	Chlorobenzene-d5	1199480	7.78			
3855-82-1	1,4-Dichlorobenzene-d4	667636	9.71			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/06/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SADUP02-20110606 → SA-TW405-2125	SDG No.:	C2595
Lab Sample ID:	C2595-04	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033524.D	1		06/16/11	VD061511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	0.5	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	0.5	U	0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	0.5	U	0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/06/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SADUP02-20110606 →SA-TW405-2125	SDG No.:	C2595
Lab Sample ID:	C2595-04	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033524.D	1		06/16/11	VD061511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	51.7		70 - 120	103%	SPK: 50
1868-53-7	Dibromofluoromethane	56		85 - 115	112%	SPK: 50
2037-26-5	Toluene-d8	53.6		85 - 120	107%	SPK: 50
460-00-4	4-Bromofluorobenzene	58		75 - 120	116%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	507621	4.17			
540-36-3	1,4-Difluorobenzene	719777	4.79			
3114-55-4	Chlorobenzene-d5	1204980	7.78			
3855-82-1	1,4-Dichlorobenzene-d4	667857	9.71			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/06/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW405-3135	SDG No.:	C2595
Lab Sample ID:	C2595-02	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033530.D	1		06/16/11	VD061511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	0.5	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	0.5	U	0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	0.5	U	0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/06/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW405-3135	SDG No.:	C2595
Lab Sample ID:	C2595-02	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033530.D	1		06/16/11	VD061511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.93	J	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	55		70 - 120	110%	SPK: 50
1868-53-7	Dibromofluoromethane	57.4		85 - 115	115%	SPK: 50
2037-26-5	Toluene-d8	48		85 - 120	96%	SPK: 50
460-00-4	4-Bromofluorobenzene	57		75 - 120	114%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	473781	4.16			
540-36-3	1,4-Difluorobenzene	684234	4.79			
3114-55-4	Chlorobenzene-d5	1057690	7.79			
3855-82-1	1,4-Dichlorobenzene-d4	620352	9.72			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/06/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW406-2125	SDG No.:	C2595
Lab Sample ID:	C2595-07	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033527.D	1		06/16/11	VD061511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	0.5	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	0.5	U	0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	0.5	U	0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/06/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW406-2125	SDG No.:	C2595
Lab Sample ID:	C2595-07	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033527.D	1		06/16/11	VD061511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	2		0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	55.4		70 - 120	111%	SPK: 50
1868-53-7	Dibromofluoromethane	56.2		85 - 115	112%	SPK: 50
2037-26-5	Toluene-d8	50.2		85 - 120	100%	SPK: 50
460-00-4	4-Bromofluorobenzene	57.2		75 - 120	114%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	473705	4.16			
540-36-3	1,4-Difluorobenzene	685340	4.79			
3114-55-4	Chlorobenzene-d5	1141530	7.78			
3855-82-1	1,4-Dichlorobenzene-d4	627638	9.72			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/06/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW406-3135	SDG No.:	C2595
Lab Sample ID:	C2595-08	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033528.D	1		06/16/11	VD061511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	0.5	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	0.5	U	0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	0.5	U	0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/06/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW406-3135	SDG No.:	C2595
Lab Sample ID:	C2595-08	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033528.D	1		06/16/11	VD061511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	160	E	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	55.3		70 - 120	111%	SPK: 50
1868-53-7	Dibromofluoromethane	57.2		85 - 115	114%	SPK: 50
2037-26-5	Toluene-d8	47.2		85 - 120	94%	SPK: 50
460-00-4	4-Bromofluorobenzene	56.8		75 - 120	114%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	490955	4.16			
540-36-3	1,4-Difluorobenzene	693964	4.79			
3114-55-4	Chlorobenzene-d5	1142520	7.79			
3855-82-1	1,4-Dichlorobenzene-d4	631825	9.71			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/06/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW406-3135DL	SDG No.:	C2595
Lab Sample ID:	C2595-08DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033541.D	5		06/16/11	VD061611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	2.5	U	1	5	ug/L
74-87-3	Chloromethane	2.5	U	1	5	ug/L
75-01-4	Vinyl Chloride	2.5	U	1.7	5	ug/L
74-83-9	Bromomethane	2.5	U	1	5	ug/L
75-00-3	Chloroethane	2.5	U	1	5	ug/L
75-69-4	Trichlorofluoromethane	2.5	U	1.8	5	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	2.5	U	2.2	5	ug/L
75-35-4	1,1-Dichloroethene	2.5	U	2.4	5	ug/L
67-64-1	Acetone	12.5	U	2.5	25	ug/L
75-15-0	Carbon Disulfide	2.5	U	1	5	ug/L
1634-04-4	Methyl tert-butyl Ether	2.5	U	1.8	5	ug/L
79-20-9	Methyl Acetate	2.5	U	1	5	ug/L
75-09-2	Methylene Chloride	2.5	U	2	5	ug/L
156-60-5	trans-1,2-Dichloroethene	2.5	U	2	5	ug/L
75-34-3	1,1-Dichloroethane	2.5	U	1.8	5	ug/L
110-82-7	Cyclohexane	2.5	U	1	5	ug/L
78-93-3	2-Butanone	12.5	U	6.6	25	ug/L
56-23-5	Carbon Tetrachloride	2.5	U	1	5	ug/L
156-59-2	cis-1,2-Dichloroethene	2.5	U	1.8	5	ug/L
74-97-5	Bromochloromethane	2.5	U	1	5	ug/L
67-66-3	Chloroform	2.5	U	1.7	5	ug/L
71-55-6	1,1,1-Trichloroethane	2.5	U	2	5	ug/L
108-87-2	Methylcyclohexane	2.5	U	1	5	ug/L
71-43-2	Benzene	2.5	U	1.6	5	ug/L
107-06-2	1,2-Dichloroethane	2.5	U	2.4	5	ug/L
79-01-6	Trichloroethene	2.5	U	1.4	5	ug/L
78-87-5	1,2-Dichloropropane	2.5	U	2.3	5	ug/L
75-27-4	Bromodichloromethane	2.5	U	1.8	5	ug/L
108-10-1	4-Methyl-2-Pentanone	12.5	U	10	25	ug/L
108-88-3	Toluene	2.5	U	1.8	5	ug/L
10061-02-6	t-1,3-Dichloropropene	2.5	U	1.4	5	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/06/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW406-3135DL	SDG No.:	C2595
Lab Sample ID:	C2595-08DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033541.D	5		06/16/11	VD061611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	2.5	U	1.6	5	ug/L
79-00-5	1,1,2-Trichloroethane	2.5	U	1.9	5	ug/L
591-78-6	2-Hexanone	12.5	U	9.7	25	ug/L
124-48-1	Dibromochloromethane	2.5	U	1	5	ug/L
106-93-4	1,2-Dibromoethane	2.5	U	2	5	ug/L
127-18-4	Tetrachloroethene	180	D	1.4	5	ug/L
108-90-7	Chlorobenzene	2.5	U	2.4	5	ug/L
100-41-4	Ethyl Benzene	2.5	U	1	5	ug/L
179601-23-1	m/p-Xylenes	5	U	4.8	10	ug/L
95-47-6	o-Xylene	2.5	U	2.2	5	ug/L
100-42-5	Styrene	2.5	U	1.8	5	ug/L
75-25-2	Bromoform	2.5	U	2.4	5	ug/L
98-82-8	Isopropylbenzene	2.5	U	2.2	5	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U	1.6	5	ug/L
541-73-1	1,3-Dichlorobenzene	2.5	U	2.2	5	ug/L
106-46-7	1,4-Dichlorobenzene	2.5	U	1.6	5	ug/L
95-50-1	1,2-Dichlorobenzene	2.5	U	2.2	5	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	2.5	U	2.3	5	ug/L
120-82-1	1,2,4-Trichlorobenzene	2.5	U	1	5	ug/L
87-61-6	1,2,3-Trichlorobenzene	2.5	U	1	5	ug/L
123-91-1	1,4-Dioxane	50	U	100	100	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	52		70 - 120	104%	SPK: 50
1868-53-7	Dibromofluoromethane	54		85 - 115	108%	SPK: 50
2037-26-5	Toluene-d8	50.3		85 - 120	101%	SPK: 50
460-00-4	4-Bromofluorobenzene	51.6		75 - 120	103%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	470338	4.17			
540-36-3	1,4-Difluorobenzene	652940	4.79			
3114-55-4	Chlorobenzene-d5	1023070	7.79			
3855-82-1	1,4-Dichlorobenzene-d4	579252	9.72			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/06/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW407-2125	SDG No.:	C2595
Lab Sample ID:	C2595-06	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033525.D	1		06/16/11	VD061511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	0.5	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	0.5	U	0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	0.5	U	0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/06/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW407-2125	SDG No.:	C2595
Lab Sample ID:	C2595-06	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033525.D	1		06/16/11	VD061511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	52.1		70 - 120	104%	SPK: 50
1868-53-7	Dibromofluoromethane	55.4		85 - 115	111%	SPK: 50
2037-26-5	Toluene-d8	52.6		85 - 120	105%	SPK: 50
460-00-4	4-Bromofluorobenzene	56.8		75 - 120	114%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	510368	4.15			
540-36-3	1,4-Difluorobenzene	725604	4.79			
3114-55-4	Chlorobenzene-d5	1123360	7.79			
3855-82-1	1,4-Dichlorobenzene-d4	639441	9.72			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/06/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW407-3135	SDG No.:	C2595
Lab Sample ID:	C2595-05	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033531.D	1		06/16/11	VD061511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	0.5	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	0.5	U	0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	0.5	U	0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/06/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW407-3135	SDG No.:	C2595
Lab Sample ID:	C2595-05	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033531.D	1		06/16/11	VD061511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	54.5		70 - 120	109%	SPK: 50
1868-53-7	Dibromofluoromethane	56.4		85 - 115	113%	SPK: 50
2037-26-5	Toluene-d8	50.5		85 - 120	101%	SPK: 50
460-00-4	4-Bromofluorobenzene	56.4		75 - 120	113%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	480067	4.16			
540-36-3	1,4-Difluorobenzene	677357	4.8			
3114-55-4	Chlorobenzene-d5	1060640	7.78			
3855-82-1	1,4-Dichlorobenzene-d4	609243	9.71			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/07/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW414-3337	SDG No.:	C2595
Lab Sample ID:	C2595-20	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033570.D	1		06/17/11	VD061711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	110		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	41		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	730	E	0.36	1	ug/L
110-82-7	Cyclohexane	1.2		0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	150		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	2.1		0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.72	J	0.48	1	ug/L
79-01-6	Trichloroethene	0.69	J	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/07/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW414-3337	SDG No.:	C2595
Lab Sample ID:	C2595-20	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033570.D	1		06/17/11	VD061711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	1.6		0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	6.2		0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	3.5		0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	16		0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	6.1		0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	9.1		0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	2.7		0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	53.3		70 - 120	107%	SPK: 50
1868-53-7	Dibromofluoromethane	57.6		85 - 115	115%	SPK: 50
2037-26-5	Toluene-d8	46		85 - 120	92%	SPK: 50
460-00-4	4-Bromofluorobenzene	52.7		75 - 120	105%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	406596	4.18			
540-36-3	1,4-Difluorobenzene	545734	4.8			
3114-55-4	Chlorobenzene-d5	853060	7.79			
3855-82-1	1,4-Dichlorobenzene-d4	486122	9.72			
TENTATIVE IDENTIFIED COMPOUNDS						

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/07/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW414-3337	SDG No.:	C2595
Lab Sample ID:	C2595-20	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033570.D	1		06/17/11	VD061711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
98-06-6	tert-Butylbenzene	2.0	J		9.36	ug/L
135-98-8	sec-Butylbenzene	6.0	J		9.5	ug/L

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/07/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW414-3337DL	SDG No.:	C2595
Lab Sample ID:	C2595-20DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033588.D	20		06/18/11	VD061811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	10	U	4	20	ug/L
74-87-3	Chloromethane	10	U	4	20	ug/L
75-01-4	Vinyl Chloride	10	U	6.8	20	ug/L
74-83-9	Bromomethane	10	U	4	20	ug/L
75-00-3	Chloroethane	180	D	4	20	ug/L
75-69-4	Trichlorofluoromethane	10	U	7	20	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	10	U	9	20	ug/L
75-35-4	1,1-Dichloroethene	38	D	9.4	20	ug/L
67-64-1	Acetone	50	U	10	100	ug/L
75-15-0	Carbon Disulfide	10	U	4	20	ug/L
1634-04-4	Methyl tert-butyl Ether	10	U	7	20	ug/L
79-20-9	Methyl Acetate	10	U	4	20	ug/L
75-09-2	Methylene Chloride	10	U	8.2	20	ug/L
156-60-5	trans-1,2-Dichloroethene	10	U	8.2	20	ug/L
75-34-3	1,1-Dichloroethane	710	D	7.2	20	ug/L
110-82-7	Cyclohexane	10	U	4	20	ug/L
78-93-3	2-Butanone	50	U	26	100	ug/L
56-23-5	Carbon Tetrachloride	10	U	4	20	ug/L
156-59-2	cis-1,2-Dichloroethene	10	U	7	20	ug/L
74-97-5	Bromochloromethane	10	U	4	20	ug/L
67-66-3	Chloroform	10	U	6.8	20	ug/L
71-55-6	1,1,1-Trichloroethane	140	D	8	20	ug/L
108-87-2	Methylcyclohexane	10	U	4	20	ug/L
71-43-2	Benzene	10	U	6.4	20	ug/L
107-06-2	1,2-Dichloroethane	10	U	9.6	20	ug/L
79-01-6	Trichloroethene	10	U	5.6	20	ug/L
78-87-5	1,2-Dichloropropane	10	U	9.2	20	ug/L
75-27-4	Bromodichloromethane	10	U	7.2	20	ug/L
108-10-1	4-Methyl-2-Pentanone	50	U	42	100	ug/L
108-88-3	Toluene	10	U	7.4	20	ug/L
10061-02-6	t-1,3-Dichloropropene	10	U	5.8	20	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/07/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW414-3337DL	SDG No.:	C2595
Lab Sample ID:	C2595-20DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033588.D	20		06/18/11	VD061811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	10	U	6.2	20	ug/L
79-00-5	1,1,2-Trichloroethane	10	U	7.6	20	ug/L
591-78-6	2-Hexanone	50	U	39	100	ug/L
124-48-1	Dibromochloromethane	10	U	4	20	ug/L
106-93-4	1,2-Dibromoethane	10	U	8.2	20	ug/L
127-18-4	Tetrachloroethene	10	U	5.4	20	ug/L
108-90-7	Chlorobenzene	10	U	9.8	20	ug/L
100-41-4	Ethyl Benzene	10	U	4	20	ug/L
179601-23-1	m/p-Xylenes	20	U	19	40	ug/L
95-47-6	o-Xylene	10	U	8.6	20	ug/L
100-42-5	Styrene	10	U	7.2	20	ug/L
75-25-2	Bromoform	10	U	9.4	20	ug/L
98-82-8	Isopropylbenzene	10	U	9	20	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	10	U	6.2	20	ug/L
541-73-1	1,3-Dichlorobenzene	10	U	8.6	20	ug/L
106-46-7	1,4-Dichlorobenzene	10	U	6.4	20	ug/L
95-50-1	1,2-Dichlorobenzene	10	U	9	20	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	10	U	9.2	20	ug/L
120-82-1	1,2,4-Trichlorobenzene	10	U	4	20	ug/L
87-61-6	1,2,3-Trichlorobenzene	10	U	4	20	ug/L
123-91-1	1,4-Dioxane	200	U	400	400	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	54.3		70 - 120	109%	SPK: 50
1868-53-7	Dibromofluoromethane	56.6		85 - 115	113%	SPK: 50
2037-26-5	Toluene-d8	52.2		85 - 120	104%	SPK: 50
460-00-4	4-Bromofluorobenzene	53.8		75 - 120	108%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	405741	4.18			
540-36-3	1,4-Difluorobenzene	553206	4.81			
3114-55-4	Chlorobenzene-d5	843812	7.79			
3855-82-1	1,4-Dichlorobenzene-d4	487886	9.72			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/07/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW414-3337DL	SDG No.:	C2595
Lab Sample ID:	C2595-20DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033588.D	20		06/18/11	VD061811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/07/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW414-3842	SDG No.:	C2595
Lab Sample ID:	C2595-21	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033571.D	1		06/17/11	VD061711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	79		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	37		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	580	E	0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	170	E	0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	1.3		0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.72	J	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/07/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW414-3842	SDG No.:	C2595
Lab Sample ID:	C2595-21	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033571.D	1		06/17/11	VD061711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	2		0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	1.4		0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1.6		0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.51	J	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	52.3		70 - 120	105%	SPK: 50
1868-53-7	Dibromofluoromethane	57.3		85 - 115	115%	SPK: 50
2037-26-5	Toluene-d8	44.3		85 - 120	89%	SPK: 50
460-00-4	4-Bromofluorobenzene	54.4		75 - 120	109%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	400588	4.17			
540-36-3	1,4-Difluorobenzene	542426	4.8			
3114-55-4	Chlorobenzene-d5	839217	7.79			
3855-82-1	1,4-Dichlorobenzene-d4	492754	9.72			
TENTATIVE IDENTIFIED COMPOUNDS						

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/07/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW414-3842	SDG No.:	C2595
Lab Sample ID:	C2595-21	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033571.D	1		06/17/11	VD061711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
135-98-8	sec-Butylbenzene	1.3	J		9.51	ug/L

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/07/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW414-3842DL	SDG No.:	C2595
Lab Sample ID:	C2595-21DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033589.D	20		06/18/11	VD061811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	10	U	4	20	ug/L
74-87-3	Chloromethane	10	U	4	20	ug/L
75-01-4	Vinyl Chloride	10	U	6.8	20	ug/L
74-83-9	Bromomethane	10	U	4	20	ug/L
75-00-3	Chloroethane	10	U	4	20	ug/L
75-69-4	Trichlorofluoromethane	10	U	7	20	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	10	U	9	20	ug/L
75-35-4	1,1-Dichloroethene	33	D	9.4	20	ug/L
67-64-1	Acetone	50	U	10	100	ug/L
75-15-0	Carbon Disulfide	10	U	4	20	ug/L
1634-04-4	Methyl tert-butyl Ether	10	U	7	20	ug/L
79-20-9	Methyl Acetate	10	U	4	20	ug/L
75-09-2	Methylene Chloride	10	U	8.2	20	ug/L
156-60-5	trans-1,2-Dichloroethene	10	U	8.2	20	ug/L
75-34-3	1,1-Dichloroethane	530	D	7.2	20	ug/L
110-82-7	Cyclohexane	10	U	4	20	ug/L
78-93-3	2-Butanone	50	U	26	100	ug/L
56-23-5	Carbon Tetrachloride	10	U	4	20	ug/L
156-59-2	cis-1,2-Dichloroethene	10	U	7	20	ug/L
74-97-5	Bromochloromethane	10	U	4	20	ug/L
67-66-3	Chloroform	10	U	6.8	20	ug/L
71-55-6	1,1,1-Trichloroethane	160	D	8	20	ug/L
108-87-2	Methylcyclohexane	10	U	4	20	ug/L
71-43-2	Benzene	10	U	6.4	20	ug/L
107-06-2	1,2-Dichloroethane	10	U	9.6	20	ug/L
79-01-6	Trichloroethene	10	U	5.6	20	ug/L
78-87-5	1,2-Dichloropropane	10	U	9.2	20	ug/L
75-27-4	Bromodichloromethane	10	U	7.2	20	ug/L
108-10-1	4-Methyl-2-Pentanone	50	U	42	100	ug/L
108-88-3	Toluene	10	U	7.4	20	ug/L
10061-02-6	t-1,3-Dichloropropene	10	U	5.8	20	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/07/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW414-3842DL	SDG No.:	C2595
Lab Sample ID:	C2595-21DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033589.D	20		06/18/11	VD061811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	10	U	6.2	20	ug/L
79-00-5	1,1,2-Trichloroethane	10	U	7.6	20	ug/L
591-78-6	2-Hexanone	50	U	39	100	ug/L
124-48-1	Dibromochloromethane	10	U	4	20	ug/L
106-93-4	1,2-Dibromoethane	10	U	8.2	20	ug/L
127-18-4	Tetrachloroethene	10	U	5.4	20	ug/L
108-90-7	Chlorobenzene	10	U	9.8	20	ug/L
100-41-4	Ethyl Benzene	10	U	4	20	ug/L
179601-23-1	m/p-Xylenes	20	U	19	40	ug/L
95-47-6	o-Xylene	10	U	8.6	20	ug/L
100-42-5	Styrene	10	U	7.2	20	ug/L
75-25-2	Bromoform	10	U	9.4	20	ug/L
98-82-8	Isopropylbenzene	10	U	9	20	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	10	U	6.2	20	ug/L
541-73-1	1,3-Dichlorobenzene	10	U	8.6	20	ug/L
106-46-7	1,4-Dichlorobenzene	10	U	6.4	20	ug/L
95-50-1	1,2-Dichlorobenzene	10	U	9	20	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	10	U	9.2	20	ug/L
120-82-1	1,2,4-Trichlorobenzene	10	U	4	20	ug/L
87-61-6	1,2,3-Trichlorobenzene	10	U	4	20	ug/L
123-91-1	1,4-Dioxane	200	U	400	400	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	54		70 - 120	108%	SPK: 50
1868-53-7	Dibromofluoromethane	55.4		85 - 115	111%	SPK: 50
2037-26-5	Toluene-d8	50		85 - 120	100%	SPK: 50
460-00-4	4-Bromofluorobenzene	54.1		75 - 120	108%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	411289	4.17			
540-36-3	1,4-Difluorobenzene	554288	4.8			
3114-55-4	Chlorobenzene-d5	852430	7.8			
3855-82-1	1,4-Dichlorobenzene-d4	501031	9.72			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/07/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW414-4347	SDG No.:	C2595
Lab Sample ID:	C2595-22	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033572.D	1		06/17/11	VD061711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	88		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	34		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	650	E	0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	180	E	0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	1.4		0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.55	J	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/07/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW414-4347	SDG No.:	C2595
Lab Sample ID:	C2595-22	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033572.D	1		06/17/11	VD061711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.62	J	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.79	J	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	3.6		0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	1.9		0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1.4		0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.53	J	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	55.1		70 - 120	110%	SPK: 50
1868-53-7	Dibromofluoromethane	58.2	*	85 - 115	116%	SPK: 50
2037-26-5	Toluene-d8	45.7		85 - 120	91%	SPK: 50
460-00-4	4-Bromofluorobenzene	54.8		75 - 120	110%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	396158	4.17			
540-36-3	1,4-Difluorobenzene	533799	4.8			
3114-55-4	Chlorobenzene-d5	825557	7.79			
3855-82-1	1,4-Dichlorobenzene-d4	488389	9.72			
TENTATIVE IDENTIFIED COMPOUNDS						

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/07/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW414-4347	SDG No.:	C2595
Lab Sample ID:	C2595-22	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033572.D	1		06/17/11	VD061711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
98-06-6	tert-Butylbenzene	0.59	J		9.37	ug/L
135-98-8	sec-Butylbenzene	1.2	J		9.51	ug/L

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/07/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW414-4347DL	SDG No.:	C2595
Lab Sample ID:	C2595-22DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033590.D	20		06/18/11	VD061811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	10	U	4	20	ug/L
74-87-3	Chloromethane	10	U	4	20	ug/L
75-01-4	Vinyl Chloride	10	U	6.8	20	ug/L
74-83-9	Bromomethane	10	U	4	20	ug/L
75-00-3	Chloroethane	10	U	4	20	ug/L
75-69-4	Trichlorofluoromethane	10	U	7	20	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	10	U	9	20	ug/L
75-35-4	1,1-Dichloroethene	30	D	9.4	20	ug/L
67-64-1	Acetone	50	U	10	100	ug/L
75-15-0	Carbon Disulfide	10	U	4	20	ug/L
1634-04-4	Methyl tert-butyl Ether	10	U	7	20	ug/L
79-20-9	Methyl Acetate	10	U	4	20	ug/L
75-09-2	Methylene Chloride	10	U	8.2	20	ug/L
156-60-5	trans-1,2-Dichloroethene	10	U	8.2	20	ug/L
75-34-3	1,1-Dichloroethane	580	D	7.2	20	ug/L
110-82-7	Cyclohexane	10	U	4	20	ug/L
78-93-3	2-Butanone	50	U	26	100	ug/L
56-23-5	Carbon Tetrachloride	10	U	4	20	ug/L
156-59-2	cis-1,2-Dichloroethene	10	U	7	20	ug/L
74-97-5	Bromochloromethane	10	U	4	20	ug/L
67-66-3	Chloroform	10	U	6.8	20	ug/L
71-55-6	1,1,1-Trichloroethane	150	D	8	20	ug/L
108-87-2	Methylcyclohexane	10	U	4	20	ug/L
71-43-2	Benzene	10	U	6.4	20	ug/L
107-06-2	1,2-Dichloroethane	10	U	9.6	20	ug/L
79-01-6	Trichloroethene	10	U	5.6	20	ug/L
78-87-5	1,2-Dichloropropane	10	U	9.2	20	ug/L
75-27-4	Bromodichloromethane	10	U	7.2	20	ug/L
108-10-1	4-Methyl-2-Pentanone	50	U	42	100	ug/L
108-88-3	Toluene	10	U	7.4	20	ug/L
10061-02-6	t-1,3-Dichloropropene	10	U	5.8	20	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/07/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW414-4347DL	SDG No.:	C2595
Lab Sample ID:	C2595-22DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033590.D	20		06/18/11	VD061811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	10	U	6.2	20	ug/L
79-00-5	1,1,2-Trichloroethane	10	U	7.6	20	ug/L
591-78-6	2-Hexanone	50	U	39	100	ug/L
124-48-1	Dibromochloromethane	10	U	4	20	ug/L
106-93-4	1,2-Dibromoethane	10	U	8.2	20	ug/L
127-18-4	Tetrachloroethene	10	U	5.4	20	ug/L
108-90-7	Chlorobenzene	10	U	9.8	20	ug/L
100-41-4	Ethyl Benzene	10	U	4	20	ug/L
179601-23-1	m/p-Xylenes	20	U	19	40	ug/L
95-47-6	o-Xylene	10	U	8.6	20	ug/L
100-42-5	Styrene	10	U	7.2	20	ug/L
75-25-2	Bromoform	10	U	9.4	20	ug/L
98-82-8	Isopropylbenzene	10	U	9	20	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	10	U	6.2	20	ug/L
541-73-1	1,3-Dichlorobenzene	10	U	8.6	20	ug/L
106-46-7	1,4-Dichlorobenzene	10	U	6.4	20	ug/L
95-50-1	1,2-Dichlorobenzene	10	U	9	20	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	10	U	9.2	20	ug/L
120-82-1	1,2,4-Trichlorobenzene	10	U	4	20	ug/L
87-61-6	1,2,3-Trichlorobenzene	10	U	4	20	ug/L
123-91-1	1,4-Dioxane	200	U	400	400	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	52.7		70 - 120	105%	SPK: 50
1868-53-7	Dibromofluoromethane	57.1		85 - 115	114%	SPK: 50
2037-26-5	Toluene-d8	52.2		85 - 120	104%	SPK: 50
460-00-4	4-Bromofluorobenzene	56.8		75 - 120	114%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	422857	4.17			
540-36-3	1,4-Difluorobenzene	536541	4.81			
3114-55-4	Chlorobenzene-d5	868045	7.81			
3855-82-1	1,4-Dichlorobenzene-d4	508992	9.74			

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/07/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW415-3337	SDG No.:	C2595
Lab Sample ID:	C2595-17	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033567.D	1		06/17/11	VD061711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	100		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	45		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	870	E	0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	220	E	0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	2		0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/07/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW415-3337	SDG No.:	C2595
Lab Sample ID:	C2595-17	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033567.D	1		06/17/11	VD061711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	3.4		0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.8	J	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	3.3		0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	2.6		0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	3.7		0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	1.1		0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	55.3		70 - 120	111%	SPK: 50
1868-53-7	Dibromofluoromethane	57.8	*	85 - 115	116%	SPK: 50
2037-26-5	Toluene-d8	46.3		85 - 120	93%	SPK: 50
460-00-4	4-Bromofluorobenzene	53.8		75 - 120	108%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	404361	4.18			
540-36-3	1,4-Difluorobenzene	563536	4.8			
3114-55-4	Chlorobenzene-d5	869672	7.79			
3855-82-1	1,4-Dichlorobenzene-d4	511988	9.73			
TENTATIVE IDENTIFIED COMPOUNDS						

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/07/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW415-3337	SDG No.:	C2595
Lab Sample ID:	C2595-17	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033567.D	1		06/17/11	VD061711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
002406-25-9	Nitroxide, bis(1,1-dimethylethyl)	8.6	J		3.9	ug/L
	unknown5.34	5.6	J		5.34	ug/L
039782-38-2	Butane, 1-(ethenyloxy)-3-methyl-	7.8	J		5.48	ug/L
98-06-6	tert-Butylbenzene	1.1	J		9.37	ug/L
135-98-8	sec-Butylbenzene	4.0	J		9.5	ug/L

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/07/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW415-3337DL	SDG No.:	C2595
Lab Sample ID:	C2595-17DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033586.D	20		06/18/11	VD061811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	10	U	4	20	ug/L
74-87-3	Chloromethane	10	U	4	20	ug/L
75-01-4	Vinyl Chloride	10	U	6.8	20	ug/L
74-83-9	Bromomethane	10	U	4	20	ug/L
75-00-3	Chloroethane	97	D	4	20	ug/L
75-69-4	Trichlorofluoromethane	10	U	7	20	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	10	U	9	20	ug/L
75-35-4	1,1-Dichloroethene	43	D	9.4	20	ug/L
67-64-1	Acetone	50	U	10	100	ug/L
75-15-0	Carbon Disulfide	10	U	4	20	ug/L
1634-04-4	Methyl tert-butyl Ether	10	U	7	20	ug/L
79-20-9	Methyl Acetate	10	U	4	20	ug/L
75-09-2	Methylene Chloride	10	U	8.2	20	ug/L
156-60-5	trans-1,2-Dichloroethene	10	U	8.2	20	ug/L
75-34-3	1,1-Dichloroethane	850	D	7.2	20	ug/L
110-82-7	Cyclohexane	10	U	4	20	ug/L
78-93-3	2-Butanone	50	U	26	100	ug/L
56-23-5	Carbon Tetrachloride	10	U	4	20	ug/L
156-59-2	cis-1,2-Dichloroethene	10	U	7	20	ug/L
74-97-5	Bromochloromethane	10	U	4	20	ug/L
67-66-3	Chloroform	10	U	6.8	20	ug/L
71-55-6	1,1,1-Trichloroethane	210	D	8	20	ug/L
108-87-2	Methylcyclohexane	10	U	4	20	ug/L
71-43-2	Benzene	10	U	6.4	20	ug/L
107-06-2	1,2-Dichloroethane	10	U	9.6	20	ug/L
79-01-6	Trichloroethene	10	U	5.6	20	ug/L
78-87-5	1,2-Dichloropropane	10	U	9.2	20	ug/L
75-27-4	Bromodichloromethane	10	U	7.2	20	ug/L
108-10-1	4-Methyl-2-Pentanone	50	U	42	100	ug/L
108-88-3	Toluene	10	U	7.4	20	ug/L
10061-02-6	t-1,3-Dichloropropene	10	U	5.8	20	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/07/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW415-3337DL	SDG No.:	C2595
Lab Sample ID:	C2595-17DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033586.D	20		06/18/11	VD061811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	10	U	6.2	20	ug/L
79-00-5	1,1,2-Trichloroethane	10	U	7.6	20	ug/L
591-78-6	2-Hexanone	50	U	39	100	ug/L
124-48-1	Dibromochloromethane	10	U	4	20	ug/L
106-93-4	1,2-Dibromoethane	10	U	8.2	20	ug/L
127-18-4	Tetrachloroethene	10	U	5.4	20	ug/L
108-90-7	Chlorobenzene	10	U	9.8	20	ug/L
100-41-4	Ethyl Benzene	10	U	4	20	ug/L
179601-23-1	m/p-Xylenes	20	U	19	40	ug/L
95-47-6	o-Xylene	10	U	8.6	20	ug/L
100-42-5	Styrene	10	U	7.2	20	ug/L
75-25-2	Bromoform	10	U	9.4	20	ug/L
98-82-8	Isopropylbenzene	10	U	9	20	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	10	U	6.2	20	ug/L
541-73-1	1,3-Dichlorobenzene	10	U	8.6	20	ug/L
106-46-7	1,4-Dichlorobenzene	10	U	6.4	20	ug/L
95-50-1	1,2-Dichlorobenzene	10	U	9	20	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	10	U	9.2	20	ug/L
120-82-1	1,2,4-Trichlorobenzene	10	U	4	20	ug/L
87-61-6	1,2,3-Trichlorobenzene	10	U	4	20	ug/L
123-91-1	1,4-Dioxane	200	U	400	400	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	54.5		70 - 120	109%	SPK: 50
1868-53-7	Dibromofluoromethane	54.6		85 - 115	109%	SPK: 50
2037-26-5	Toluene-d8	51.6		85 - 120	103%	SPK: 50
460-00-4	4-Bromofluorobenzene	54		75 - 120	108%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	406913	4.17			
540-36-3	1,4-Difluorobenzene	555340	4.8			
3114-55-4	Chlorobenzene-d5	836530	7.79			
3855-82-1	1,4-Dichlorobenzene-d4	491627	9.72			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/07/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW415-3842	SDG No.:	C2595
Lab Sample ID:	C2595-18	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033568.D	1		06/17/11	VD061711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	20		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	9.9		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	180	E	0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	56		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/07/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW415-3842	SDG No.:	C2595
Lab Sample ID:	C2595-18	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033568.D	1		06/17/11	VD061711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	53.9		70 - 120	108%	SPK: 50
1868-53-7	Dibromofluoromethane	56.4		85 - 115	113%	SPK: 50
2037-26-5	Toluene-d8	45.2		85 - 120	90%	SPK: 50
460-00-4	4-Bromofluorobenzene	54.9		75 - 120	110%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	414358	4.17			
540-36-3	1,4-Difluorobenzene	540465	4.8			
3114-55-4	Chlorobenzene-d5	866342	7.79			
3855-82-1	1,4-Dichlorobenzene-d4	518578	9.72			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/07/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW415-3842DL	SDG No.:	C2595
Lab Sample ID:	C2595-18DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033587.D	10		06/18/11	VD061811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	5	U	2	10	ug/L
74-87-3	Chloromethane	5	U	2	10	ug/L
75-01-4	Vinyl Chloride	5	U	3.4	10	ug/L
74-83-9	Bromomethane	5	U	2	10	ug/L
75-00-3	Chloroethane	5	U	2	10	ug/L
75-69-4	Trichlorofluoromethane	5	U	3.5	10	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	5	U	4.5	10	ug/L
75-35-4	1,1-Dichloroethene	12	D	4.7	10	ug/L
67-64-1	Acetone	25	U	5	50	ug/L
75-15-0	Carbon Disulfide	5	U	2	10	ug/L
1634-04-4	Methyl tert-butyl Ether	5	U	3.5	10	ug/L
79-20-9	Methyl Acetate	5	U	2	10	ug/L
75-09-2	Methylene Chloride	5	U	4.1	10	ug/L
156-60-5	trans-1,2-Dichloroethene	5	U	4.1	10	ug/L
75-34-3	1,1-Dichloroethane	170	D	3.6	10	ug/L
110-82-7	Cyclohexane	5	U	2	10	ug/L
78-93-3	2-Butanone	25	U	13	50	ug/L
56-23-5	Carbon Tetrachloride	5	U	2	10	ug/L
156-59-2	cis-1,2-Dichloroethene	5	U	3.5	10	ug/L
74-97-5	Bromochloromethane	5	U	2	10	ug/L
67-66-3	Chloroform	5	U	3.4	10	ug/L
71-55-6	1,1,1-Trichloroethane	51	D	4	10	ug/L
108-87-2	Methylcyclohexane	5	U	2	10	ug/L
71-43-2	Benzene	5	U	3.2	10	ug/L
107-06-2	1,2-Dichloroethane	5	U	4.8	10	ug/L
79-01-6	Trichloroethene	5	U	2.8	10	ug/L
78-87-5	1,2-Dichloropropane	5	U	4.6	10	ug/L
75-27-4	Bromodichloromethane	5	U	3.6	10	ug/L
108-10-1	4-Methyl-2-Pentanone	25	U	21	50	ug/L
108-88-3	Toluene	5	U	3.7	10	ug/L
10061-02-6	t-1,3-Dichloropropene	5	U	2.9	10	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/07/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW415-3842DL	SDG No.:	C2595
Lab Sample ID:	C2595-18DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033587.D	10		06/18/11	VD061811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	5	U	3.1	10	ug/L
79-00-5	1,1,2-Trichloroethane	5	U	3.8	10	ug/L
591-78-6	2-Hexanone	25	U	19	50	ug/L
124-48-1	Dibromochloromethane	5	U	2	10	ug/L
106-93-4	1,2-Dibromoethane	5	U	4.1	10	ug/L
127-18-4	Tetrachloroethene	5	U	2.7	10	ug/L
108-90-7	Chlorobenzene	5	U	4.9	10	ug/L
100-41-4	Ethyl Benzene	5	U	2	10	ug/L
179601-23-1	m/p-Xylenes	10	U	9.5	20	ug/L
95-47-6	o-Xylene	5	U	4.3	10	ug/L
100-42-5	Styrene	5	U	3.6	10	ug/L
75-25-2	Bromoform	5	U	4.7	10	ug/L
98-82-8	Isopropylbenzene	5	U	4.5	10	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	5	U	3.1	10	ug/L
541-73-1	1,3-Dichlorobenzene	5	U	4.3	10	ug/L
106-46-7	1,4-Dichlorobenzene	5	U	3.2	10	ug/L
95-50-1	1,2-Dichlorobenzene	5	U	4.5	10	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	5	U	4.6	10	ug/L
120-82-1	1,2,4-Trichlorobenzene	5	U	2	10	ug/L
87-61-6	1,2,3-Trichlorobenzene	5	U	2	10	ug/L
123-91-1	1,4-Dioxane	100	U	200	200	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	55		70 - 120	110%	SPK: 50
1868-53-7	Dibromofluoromethane	54.7		85 - 115	109%	SPK: 50
2037-26-5	Toluene-d8	47.6		85 - 120	95%	SPK: 50
460-00-4	4-Bromofluorobenzene	50.6		75 - 120	101%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	424666	4.18			
540-36-3	1,4-Difluorobenzene	593911	4.8			
3114-55-4	Chlorobenzene-d5	878703	7.8			
3855-82-1	1,4-Dichlorobenzene-d4	503162	9.72			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/07/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW415-4347	SDG No.:	C2595
Lab Sample ID:	C2595-19	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035626.D	1		06/19/11	VG061911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	1		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.59	J	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	0.53	J	0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	6.9		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/07/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW415-4347	SDG No.:	C2595
Lab Sample ID:	C2595-19	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035626.D	1		06/19/11	VG061911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	48.6		66 - 150	97%	SPK: 50
1868-53-7	Dibromofluoromethane	50.9		76 - 130	102%	SPK: 50
2037-26-5	Toluene-d8	42.4		78 - 121	85%	SPK: 50
460-00-4	4-Bromofluorobenzene	44.4		70 - 131	89%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	740707	3.92			
540-36-3	1,4-Difluorobenzene	1300010	4.74			
3114-55-4	Chlorobenzene-d5	903692	9.7			
3855-82-1	1,4-Dichlorobenzene-d4	367798	13.41			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/06/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW416-3337	SDG No.:	C2595
Lab Sample ID:	C2595-09	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033540.D	1		06/16/11	VD061611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	50		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	5.9		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	140		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	32		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/06/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW416-3337	SDG No.:	C2595
Lab Sample ID:	C2595-09	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033540.D	1		06/16/11	VD061611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	50.3		70 - 120	101%	SPK: 50
1868-53-7	Dibromofluoromethane	52		85 - 115	104%	SPK: 50
2037-26-5	Toluene-d8	45.3		85 - 120	91%	SPK: 50
460-00-4	4-Bromofluorobenzene	53		75 - 120	106%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	455117	4.17			
540-36-3	1,4-Difluorobenzene	627962	4.79			
3114-55-4	Chlorobenzene-d5	965686	7.78			
3855-82-1	1,4-Dichlorobenzene-d4	568103	9.71			
TENTATIVE IDENTIFIED COMPOUNDS						

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/06/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW416-3337	SDG No.:	C2595
Lab Sample ID:	C2595-09	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033540.D	1		06/16/11	VD061611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
98-06-6	tert-Butylbenzene	0.71	J		9.37	ug/L
135-98-8	sec-Butylbenzene	1.9	J		9.5	ug/L

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/06/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW416-3842	SDG No.:	C2595
Lab Sample ID:	C2595-12	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033529.D	1		06/16/11	VD061511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	80		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	18		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	380	E	0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	120		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	1		0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/06/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW416-3842	SDG No.:	C2595
Lab Sample ID:	C2595-12	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033529.D	1		06/16/11	VD061511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.7	J	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.77	J	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	54.3		70 - 120	109%	SPK: 50
1868-53-7	Dibromofluoromethane	56.5		85 - 115	113%	SPK: 50
2037-26-5	Toluene-d8	48.8		85 - 120	98%	SPK: 50
460-00-4	4-Bromofluorobenzene	56.4		75 - 120	113%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	484192	4.16			
540-36-3	1,4-Difluorobenzene	693162	4.79			
3114-55-4	Chlorobenzene-d5	1117740	7.79			
3855-82-1	1,4-Dichlorobenzene-d4	625488	9.71			
TENTATIVE IDENTIFIED COMPOUNDS						

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/06/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW416-3842	SDG No.:	C2595
Lab Sample ID:	C2595-12	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033529.D	1		06/16/11	VD061511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
135-98-8	sec-Butylbenzene	1.6	J		9.5	ug/L

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/06/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW416-3842DL	SDG No.:	C2595
Lab Sample ID:	C2595-12DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033546.D	10		06/16/11	VD061611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	5	U	2	10	ug/L
74-87-3	Chloromethane	5	U	2	10	ug/L
75-01-4	Vinyl Chloride	5	U	3.4	10	ug/L
74-83-9	Bromomethane	5	U	2	10	ug/L
75-00-3	Chloroethane	190	D	2	10	ug/L
75-69-4	Trichlorofluoromethane	5	U	3.5	10	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	5	U	4.5	10	ug/L
75-35-4	1,1-Dichloroethene	22	D	4.7	10	ug/L
67-64-1	Acetone	25	U	5	50	ug/L
75-15-0	Carbon Disulfide	5	U	2	10	ug/L
1634-04-4	Methyl tert-butyl Ether	5	U	3.5	10	ug/L
79-20-9	Methyl Acetate	5	U	2	10	ug/L
75-09-2	Methylene Chloride	5	U	4.1	10	ug/L
156-60-5	trans-1,2-Dichloroethene	5	U	4.1	10	ug/L
75-34-3	1,1-Dichloroethane	440	D	3.6	10	ug/L
110-82-7	Cyclohexane	5	U	2	10	ug/L
78-93-3	2-Butanone	25	U	13	50	ug/L
56-23-5	Carbon Tetrachloride	5	U	2	10	ug/L
156-59-2	cis-1,2-Dichloroethene	5	U	3.5	10	ug/L
74-97-5	Bromochloromethane	5	U	2	10	ug/L
67-66-3	Chloroform	5	U	3.4	10	ug/L
71-55-6	1,1,1-Trichloroethane	120	D	4	10	ug/L
108-87-2	Methylcyclohexane	5	U	2	10	ug/L
71-43-2	Benzene	5	U	3.2	10	ug/L
107-06-2	1,2-Dichloroethane	5	U	4.8	10	ug/L
79-01-6	Trichloroethene	5	U	2.8	10	ug/L
78-87-5	1,2-Dichloropropane	5	U	4.6	10	ug/L
75-27-4	Bromodichloromethane	5	U	3.6	10	ug/L
108-10-1	4-Methyl-2-Pentanone	25	U	21	50	ug/L
108-88-3	Toluene	5	U	3.7	10	ug/L
10061-02-6	t-1,3-Dichloropropene	5	U	2.9	10	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/06/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW416-3842DL	SDG No.:	C2595
Lab Sample ID:	C2595-12DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033546.D	10		06/16/11	VD061611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	5	U	3.1	10	ug/L
79-00-5	1,1,2-Trichloroethane	5	U	3.8	10	ug/L
591-78-6	2-Hexanone	25	U	19	50	ug/L
124-48-1	Dibromochloromethane	5	U	2	10	ug/L
106-93-4	1,2-Dibromoethane	5	U	4.1	10	ug/L
127-18-4	Tetrachloroethene	5	U	2.7	10	ug/L
108-90-7	Chlorobenzene	5	U	4.9	10	ug/L
100-41-4	Ethyl Benzene	5	U	2	10	ug/L
179601-23-1	m/p-Xylenes	10	U	9.5	20	ug/L
95-47-6	o-Xylene	5	U	4.3	10	ug/L
100-42-5	Styrene	5	U	3.6	10	ug/L
75-25-2	Bromoform	5	U	4.7	10	ug/L
98-82-8	Isopropylbenzene	5	U	4.5	10	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	5	U	3.1	10	ug/L
541-73-1	1,3-Dichlorobenzene	5	U	4.3	10	ug/L
106-46-7	1,4-Dichlorobenzene	5	U	3.2	10	ug/L
95-50-1	1,2-Dichlorobenzene	5	U	4.5	10	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	5	U	4.6	10	ug/L
120-82-1	1,2,4-Trichlorobenzene	5	U	2	10	ug/L
87-61-6	1,2,3-Trichlorobenzene	5	U	2	10	ug/L
123-91-1	1,4-Dioxane	100	U	200	200	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	51.6		70 - 120	103%	SPK: 50
1868-53-7	Dibromofluoromethane	53.2		85 - 115	106%	SPK: 50
2037-26-5	Toluene-d8	53.1		85 - 120	106%	SPK: 50
460-00-4	4-Bromofluorobenzene	55.3		75 - 120	111%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	424367	4.16			
540-36-3	1,4-Difluorobenzene	581595	4.79			
3114-55-4	Chlorobenzene-d5	951081	7.79			
3855-82-1	1,4-Dichlorobenzene-d4	541791	9.72			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/06/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW416-4347	SDG No.:	C2595
Lab Sample ID:	C2595-13	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033526.D	1		06/16/11	VD061511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	76		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	17		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	370	E	0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	120		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/06/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW416-4347	SDG No.:	C2595
Lab Sample ID:	C2595-13	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033526.D	1		06/16/11	VD061511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	1.1		0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.74	J	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	53.8		70 - 120	108%	SPK: 50
1868-53-7	Dibromofluoromethane	56		85 - 115	112%	SPK: 50
2037-26-5	Toluene-d8	52.4		85 - 120	105%	SPK: 50
460-00-4	4-Bromofluorobenzene	58.9		75 - 120	118%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	492663	4.16			
540-36-3	1,4-Difluorobenzene	687570	4.79			
3114-55-4	Chlorobenzene-d5	1090150	7.78			
3855-82-1	1,4-Dichlorobenzene-d4	652640	9.72			
TENTATIVE IDENTIFIED COMPOUNDS						

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/06/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW416-4347	SDG No.:	C2595
Lab Sample ID:	C2595-13	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033526.D	1		06/16/11	VD061511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
135-98-8	sec-Butylbenzene	0.81	J		9.51	ug/L

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/06/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW416-4347DL	SDG No.:	C2595
Lab Sample ID:	C2595-13DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033547.D	10		06/16/11	VD061611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	5	U	2	10	ug/L
74-87-3	Chloromethane	5	U	2	10	ug/L
75-01-4	Vinyl Chloride	5	U	3.4	10	ug/L
74-83-9	Bromomethane	5	U	2	10	ug/L
75-00-3	Chloroethane	120	D	2	10	ug/L
75-69-4	Trichlorofluoromethane	5	U	3.5	10	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	5	U	4.5	10	ug/L
75-35-4	1,1-Dichloroethene	20	D	4.7	10	ug/L
67-64-1	Acetone	25	U	5	50	ug/L
75-15-0	Carbon Disulfide	5	U	2	10	ug/L
1634-04-4	Methyl tert-butyl Ether	5	U	3.5	10	ug/L
79-20-9	Methyl Acetate	5	U	2	10	ug/L
75-09-2	Methylene Chloride	5	U	4.1	10	ug/L
156-60-5	trans-1,2-Dichloroethene	5	U	4.1	10	ug/L
75-34-3	1,1-Dichloroethane	390	D	3.6	10	ug/L
110-82-7	Cyclohexane	5	U	2	10	ug/L
78-93-3	2-Butanone	25	U	13	50	ug/L
56-23-5	Carbon Tetrachloride	5	U	2	10	ug/L
156-59-2	cis-1,2-Dichloroethene	5	U	3.5	10	ug/L
74-97-5	Bromochloromethane	5	U	2	10	ug/L
67-66-3	Chloroform	5	U	3.4	10	ug/L
71-55-6	1,1,1-Trichloroethane	130	D	4	10	ug/L
108-87-2	Methylcyclohexane	5	U	2	10	ug/L
71-43-2	Benzene	5	U	3.2	10	ug/L
107-06-2	1,2-Dichloroethane	5	U	4.8	10	ug/L
79-01-6	Trichloroethene	5	U	2.8	10	ug/L
78-87-5	1,2-Dichloropropane	5	U	4.6	10	ug/L
75-27-4	Bromodichloromethane	5	U	3.6	10	ug/L
108-10-1	4-Methyl-2-Pentanone	25	U	21	50	ug/L
108-88-3	Toluene	5	U	3.7	10	ug/L
10061-02-6	t-1,3-Dichloropropene	5	U	2.9	10	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/06/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW416-4347DL	SDG No.:	C2595
Lab Sample ID:	C2595-13DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033547.D	10		06/16/11	VD061611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	5	U	3.1	10	ug/L
79-00-5	1,1,2-Trichloroethane	5	U	3.8	10	ug/L
591-78-6	2-Hexanone	25	U	19	50	ug/L
124-48-1	Dibromochloromethane	5	U	2	10	ug/L
106-93-4	1,2-Dibromoethane	5	U	4.1	10	ug/L
127-18-4	Tetrachloroethene	5	U	2.7	10	ug/L
108-90-7	Chlorobenzene	5	U	4.9	10	ug/L
100-41-4	Ethyl Benzene	5	U	2	10	ug/L
179601-23-1	m/p-Xylenes	10	U	9.5	20	ug/L
95-47-6	o-Xylene	5	U	4.3	10	ug/L
100-42-5	Styrene	5	U	3.6	10	ug/L
75-25-2	Bromoform	5	U	4.7	10	ug/L
98-82-8	Isopropylbenzene	5	U	4.5	10	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	5	U	3.1	10	ug/L
541-73-1	1,3-Dichlorobenzene	5	U	4.3	10	ug/L
106-46-7	1,4-Dichlorobenzene	5	U	3.2	10	ug/L
95-50-1	1,2-Dichlorobenzene	5	U	4.5	10	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	5	U	4.6	10	ug/L
120-82-1	1,2,4-Trichlorobenzene	5	U	2	10	ug/L
87-61-6	1,2,3-Trichlorobenzene	5	U	2	10	ug/L
123-91-1	1,4-Dioxane	100	U	200	200	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	51.5		70 - 120	103%	SPK: 50
1868-53-7	Dibromofluoromethane	51.9		85 - 115	104%	SPK: 50
2037-26-5	Toluene-d8	49.1		85 - 120	98%	SPK: 50
460-00-4	4-Bromofluorobenzene	51.9		75 - 120	104%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	439671	4.17			
540-36-3	1,4-Difluorobenzene	633179	4.8			
3114-55-4	Chlorobenzene-d5	940627	7.79			
3855-82-1	1,4-Dichlorobenzene-d4	552561	9.72			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/07/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW416-4852	SDG No.:	C2595
Lab Sample ID:	C2595-16	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033566.D	1		06/17/11	VD061711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	0.5	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.71	J	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	0.5	U	0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	1.9		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/07/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW416-4852	SDG No.:	C2595
Lab Sample ID:	C2595-16	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033566.D	1		06/17/11	VD061711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	53.1		70 - 120	106%	SPK: 50
1868-53-7	Dibromofluoromethane	57.6		85 - 115	115%	SPK: 50
2037-26-5	Toluene-d8	47.3		85 - 120	95%	SPK: 50
460-00-4	4-Bromofluorobenzene	56.2		75 - 120	113%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	414977	4.17			
540-36-3	1,4-Difluorobenzene	549607	4.8			
3114-55-4	Chlorobenzene-d5	856555	7.8			
3855-82-1	1,4-Dichlorobenzene-d4	527331	9.72			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/06/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TB03-20110606	SDG No.:	C2595
Lab Sample ID:	C2595-01	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033521.D	1		06/16/11	VD061511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	0.5	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	0.5	U	0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	6		0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	0.5	U	0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/06/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TB03-20110606	SDG No.:	C2595
Lab Sample ID:	C2595-01	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD033521.D	1		06/16/11	VD061511

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	52.5		70 - 120	105%	SPK: 50
1868-53-7	Dibromofluoromethane	56.9		85 - 115	114%	SPK: 50
2037-26-5	Toluene-d8	54.1		85 - 120	108%	SPK: 50
460-00-4	4-Bromofluorobenzene	58.1		75 - 120	116%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	557247	4.17			
540-36-3	1,4-Difluorobenzene	805916	4.79			
3114-55-4	Chlorobenzene-d5	1301840	7.79			
3855-82-1	1,4-Dichlorobenzene-d4	728590	9.72			

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ANALYTICAL RESULTS SUMMARY

PROJECT NAME : CTO WE08

TETRA TECH NUS, INC.
661 Anderson Drive

Pittsburgh , Pennsylvania - 15220-2745
Phone No: 4129218361

ORDER ID : C2596
ATTENTION : David Brayack

ACCREDITED IN ACCORDANCE WITH nelac

DoD ELAP

CHEMTECH 284 Sheffield Street, Mountainside, New Jersey 07092 Phone : 908 789 8900 Fax : 908 789 8922

Cover Page

Order ID : C2596

Project ID : CTO WE08

Client : Tetra Tech NUS, Inc.

Lab Sample Number	Client Sample Number
C2596-01	SA-PZ135I-20110607
C2596-02	SA-PZ137I-20110608
C2596-03	SA-SB01-20110608
C2596-04	SA-TW413-3337
C2596-05	SA-TW413-3842
C2596-06	SA-TW413-4347
C2596-07	SA-DUP03-20110608
C2596-08	SA-TW412-3337
C2596-09	SA-TW412-3842
C2596-10	SA-TW412-4347
C2596-11	SA-TW411-3337
C2596-12	SA-TW411-3842
C2596-13	SA-TW411-4347

I certify that the data package is in compliance with the terms and conditions of the contract,both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : Mildred V Reyes

Mildred V. Reyes, QA/QC Supervisor
2011.07.01 15:41:38 -04'00'

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

I Mildred V. Reyes, as the designated Quality Assurance ~~Officer~~ Supervisor, hereby attest that all electronic deliverables have been thoroughly reviewed and are in agreement with the associated hardcopy data. The enclosed electronic files have been reviewed for accuracy (including significant figures), completeness and format. The laboratory will be responsible for any labor time necessary to correct enclosed electronic deliverables that have been found to be in error. I can be reached at (908) 789-8900 if there are any questions or problems with the enclosed electronic deliverables.

Signature: Mildred V Reyes Title: QA/QC Supervisor Date: 7/1/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/07/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-PZ135I-20110607	SDG No.:	C2596
Lab Sample ID:	C2596-01	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035549.D	1		06/17/11	VG061611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	1.8		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	2.8		0.47	1	ug/L
67-64-1	Acetone	4.4	J	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	35		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	5.6		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/07/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-PZ135I-20110607	SDG No.:	C2596
Lab Sample ID:	C2596-01	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035549.D	1		06/17/11	VG061611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	52.9		70 - 120	106%	SPK: 50
1868-53-7	Dibromofluoromethane	48.9		85 - 115	98%	SPK: 50
2037-26-5	Toluene-d8	42.6		85 - 120	85%	SPK: 50
460-00-4	4-Bromofluorobenzene	43.6		75 - 120	87%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	894705	3.92			
540-36-3	1,4-Difluorobenzene	1516990	4.74			
3114-55-4	Chlorobenzene-d5	1157950	9.7			
3855-82-1	1,4-Dichlorobenzene-d4	477507	13.4			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/07/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-PZ135I-20110607	SDG No.:	C2596
Lab Sample ID:	C2596-01	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035549.D	1		06/17/11	VG061611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-PZ137I-20110608	SDG No.:	C2596
Lab Sample ID:	C2596-02	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035550.D	1		06/17/11	VG061611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	0.5	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	0.5	U	0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	1.2		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-PZ137I-20110608	SDG No.:	C2596
Lab Sample ID:	C2596-02	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035550.D	1		06/17/11	VG061611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	53.7		70 - 120	107%	SPK: 50
1868-53-7	Dibromofluoromethane	48.6		85 - 115	97%	SPK: 50
2037-26-5	Toluene-d8	42.5		85 - 120	85%	SPK: 50
460-00-4	4-Bromofluorobenzene	42.6		75 - 120	85%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	891715	3.92			
540-36-3	1,4-Difluorobenzene	1454480	4.74			
3114-55-4	Chlorobenzene-d5	1139840	9.7			
3855-82-1	1,4-Dichlorobenzene-d4	460784	13.4			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-PZ137I-20110608	SDG No.:	C2596
Lab Sample ID:	C2596-02	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035550.D	1		06/17/11	VG061611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW411-3337	SDG No.:	C2596
Lab Sample ID:	C2596-11	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035570.D	1		06/18/11	VG061711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	10		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	2.9		0.47	1	ug/L
67-64-1	Acetone	8.2		0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	64		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	2.5		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW411-3337	SDG No.:	C2596
Lab Sample ID:	C2596-11	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035570.D	1		06/18/11	VG061711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	56.4		70 - 120	113%	SPK: 50
1868-53-7	Dibromofluoromethane	50.5		85 - 115	101%	SPK: 50
2037-26-5	Toluene-d8	38.3	*	85 - 120	77%	SPK: 50
460-00-4	4-Bromofluorobenzene	39.2		75 - 120	78%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	821965	3.93			
540-36-3	1,4-Difluorobenzene	1413280	4.75			
3114-55-4	Chlorobenzene-d5	1007830	9.7			
3855-82-1	1,4-Dichlorobenzene-d4	404544	13.4			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW411-3337	SDG No.:	C2596
Lab Sample ID:	C2596-11	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035570.D	1		06/18/11	VG061711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW411-3337RE	SDG No.:	C2596
Lab Sample ID:	C2596-11RE	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035706.D	1		06/21/11	VG062111

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	7.1		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	2.4		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	55		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	2.5		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW411-3337RE	SDG No.:	C2596
Lab Sample ID:	C2596-11RE	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035706.D	1		06/21/11	VG062111

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	48.8		70 - 120	98%	SPK: 50
1868-53-7	Dibromofluoromethane	49.8		85 - 115	100%	SPK: 50
2037-26-5	Toluene-d8	39.9	*	85 - 120	80%	SPK: 50
460-00-4	4-Bromofluorobenzene	43.2		75 - 120	86%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	663884	3.92			
540-36-3	1,4-Difluorobenzene	1181940	4.74			
3114-55-4	Chlorobenzene-d5	796151	9.7			
3855-82-1	1,4-Dichlorobenzene-d4	329206	13.41			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW411-3337RE	SDG No.:	C2596
Lab Sample ID:	C2596-11RE	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035706.D	1		06/21/11	VG062111

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW411-3842	SDG No.:	C2596
Lab Sample ID:	C2596-12	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035571.D	1		06/18/11	VG061711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	0.5	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	0.62	J	0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	10		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW411-3842	SDG No.:	C2596
Lab Sample ID:	C2596-12	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035571.D	1		06/18/11	VG061711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	59.4		70 - 120	119%	SPK: 50
1868-53-7	Dibromofluoromethane	52.6		85 - 115	105%	SPK: 50
2037-26-5	Toluene-d8	35.7	*	85 - 120	71%	SPK: 50
460-00-4	4-Bromofluorobenzene	38.3		75 - 120	77%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	837308	3.92			
540-36-3	1,4-Difluorobenzene	1403580	4.74			
3114-55-4	Chlorobenzene-d5	1007240	9.7			
3855-82-1	1,4-Dichlorobenzene-d4	402528	13.4			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW411-3842	SDG No.:	C2596
Lab Sample ID:	C2596-12	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035571.D	1		06/18/11	VG061711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW411-3842RE	SDG No.:	C2596
Lab Sample ID:	C2596-12RE	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035707.D	1		06/21/11	VG062111

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	0.5	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	0.67	J	0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	8.6		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW411-3842RE	SDG No.:	C2596
Lab Sample ID:	C2596-12RE	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035707.D	1		06/21/11	VG062111

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	49.8		70 - 120	100%	SPK: 50
1868-53-7	Dibromofluoromethane	51.7		85 - 115	103%	SPK: 50
2037-26-5	Toluene-d8	39.7	*	85 - 120	79%	SPK: 50
460-00-4	4-Bromofluorobenzene	43.8		75 - 120	88%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	683971	3.93			
540-36-3	1,4-Difluorobenzene	1192380	4.74			
3114-55-4	Chlorobenzene-d5	827756	9.71			
3855-82-1	1,4-Dichlorobenzene-d4	331626	13.41			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW411-3842RE	SDG No.:	C2596
Lab Sample ID:	C2596-12RE	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035707.D	1		06/21/11	VG062111

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW411-4347	SDG No.:	C2596
Lab Sample ID:	C2596-13	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035572.D	1		06/18/11	VG061711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	7.9		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	2.3		0.47	1	ug/L
67-64-1	Acetone	7.3		0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	48		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW411-4347	SDG No.:	C2596
Lab Sample ID:	C2596-13	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035572.D	1		06/18/11	VG061711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	61.7	*	70 - 120	123%	SPK: 50
1868-53-7	Dibromofluoromethane	50.6		85 - 115	101%	SPK: 50
2037-26-5	Toluene-d8	38.1	*	85 - 120	76%	SPK: 50
460-00-4	4-Bromofluorobenzene	39.8		75 - 120	80%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	829999	3.92			
540-36-3	1,4-Difluorobenzene	1396880	4.75			
3114-55-4	Chlorobenzene-d5	1019670	9.7			
3855-82-1	1,4-Dichlorobenzene-d4	405400	13.4			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW411-4347	SDG No.:	C2596
Lab Sample ID:	C2596-13	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035572.D	1		06/18/11	VG061711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW411-4347RE	SDG No.:	C2596
Lab Sample ID:	C2596-13RE	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035708.D	1		06/21/11	VG062111

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	5.3		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	1.9		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	43		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW411-4347RE	SDG No.:	C2596
Lab Sample ID:	C2596-13RE	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035708.D	1		06/21/11	VG062111

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	50.5		70 - 120	101%	SPK: 50
1868-53-7	Dibromofluoromethane	50.3		85 - 115	101%	SPK: 50
2037-26-5	Toluene-d8	40.1	*	85 - 120	80%	SPK: 50
460-00-4	4-Bromofluorobenzene	44.5		75 - 120	89%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	658221	3.93			
540-36-3	1,4-Difluorobenzene	1143250	4.75			
3114-55-4	Chlorobenzene-d5	805654	9.7			
3855-82-1	1,4-Dichlorobenzene-d4	325170	13.41			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW411-4347RE	SDG No.:	C2596
Lab Sample ID:	C2596-13RE	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035708.D	1		06/21/11	VG062111

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW412-3337	SDG No.:	C2596
Lab Sample ID:	C2596-08	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035556.D	1		06/17/11	VG061611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	15		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	5.4		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	89		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	5.3		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW412-3337	SDG No.:	C2596
Lab Sample ID:	C2596-08	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035556.D	1		06/17/11	VG061611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.8	J	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.74	J	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	53.6		70 - 120	107%	SPK: 50
1868-53-7	Dibromofluoromethane	51.2		85 - 115	102%	SPK: 50
2037-26-5	Toluene-d8	37.4	*	85 - 120	75%	SPK: 50
460-00-4	4-Bromofluorobenzene	41.7		75 - 120	83%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	823185	3.92			
540-36-3	1,4-Difluorobenzene	1330690	4.73			
3114-55-4	Chlorobenzene-d5	1007020	9.69			
3855-82-1	1,4-Dichlorobenzene-d4	417317	13.41			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW412-3337	SDG No.:	C2596
Lab Sample ID:	C2596-08	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035556.D	1		06/17/11	VG061611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW412-3337RE	SDG No.:	C2596
Lab Sample ID:	C2596-08RE	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035703.D	1		06/21/11	VG062111

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	11		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	4.4		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	83		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	4.9		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW412-3337RE	SDG No.:	C2596
Lab Sample ID:	C2596-08RE	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035703.D	1		06/21/11	VG062111

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.74	J	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.62	J	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	49.6		70 - 120	99%	SPK: 50
1868-53-7	Dibromofluoromethane	51.9		85 - 115	104%	SPK: 50
2037-26-5	Toluene-d8	39.1	*	85 - 120	78%	SPK: 50
460-00-4	4-Bromofluorobenzene	45.1		75 - 120	90%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	701752	3.92			
540-36-3	1,4-Difluorobenzene	1192830	4.74			
3114-55-4	Chlorobenzene-d5	855338	9.71			
3855-82-1	1,4-Dichlorobenzene-d4	343082	13.41			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW412-3337RE	SDG No.:	C2596
Lab Sample ID:	C2596-08RE	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035703.D	1		06/21/11	VG062111

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW412-3842	SDG No.:	C2596
Lab Sample ID:	C2596-09	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035557.D	1		06/17/11	VG061611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	16		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	7.6		0.47	1	ug/L
67-64-1	Acetone	8		0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	100		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	7		1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	18		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW412-3842	SDG No.:	C2596
Lab Sample ID:	C2596-09	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035557.D	1		06/17/11	VG061611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	1.1		0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.9	J	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	54.4		70 - 120	109%	SPK: 50
1868-53-7	Dibromofluoromethane	51		85 - 115	102%	SPK: 50
2037-26-5	Toluene-d8	37	*	85 - 120	74%	SPK: 50
460-00-4	4-Bromofluorobenzene	40.3		75 - 120	81%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	799195	3.92			
540-36-3	1,4-Difluorobenzene	1331490	4.73			
3114-55-4	Chlorobenzene-d5	976382	9.69			
3855-82-1	1,4-Dichlorobenzene-d4	406171	13.4			
TENTATIVE IDENTIFIED COMPOUNDS						

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW412-3842	SDG No.:	C2596
Lab Sample ID:	C2596-09	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035557.D	1		06/17/11	VG061611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
135-98-8	sec-Butylbenzene	0.51	J		13.02	ug/L

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW412-3842RE	SDG No.:	C2596
Lab Sample ID:	C2596-09RE	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035704.D	1		06/21/11	VG062111

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	10		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	6.3		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	97		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	17		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW412-3842RE	SDG No.:	C2596
Lab Sample ID:	C2596-09RE	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035704.D	1		06/21/11	VG062111

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	1		0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1	J	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	49.4		70 - 120	99%	SPK: 50
1868-53-7	Dibromofluoromethane	50.3		85 - 115	101%	SPK: 50
2037-26-5	Toluene-d8	39.4	*	85 - 120	79%	SPK: 50
460-00-4	4-Bromofluorobenzene	43.6		75 - 120	87%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	710525	3.93			
540-36-3	1,4-Difluorobenzene	1217450	4.75			
3114-55-4	Chlorobenzene-d5	842043	9.7			
3855-82-1	1,4-Dichlorobenzene-d4	358946	13.4			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW412-3842RE	SDG No.:	C2596
Lab Sample ID:	C2596-09RE	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035704.D	1		06/21/11	VG062111

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW412-4347	SDG No.:	C2596
Lab Sample ID:	C2596-10	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035705.D	1		06/21/11	VG062111

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	1.4		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	1.3		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	25		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	2.1		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW412-4347	SDG No.:	C2596
Lab Sample ID:	C2596-10	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035705.D	1		06/21/11	VG062111

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	47.6		70 - 120	95%	SPK: 50
1868-53-7	Dibromofluoromethane	48.8		85 - 115	98%	SPK: 50
2037-26-5	Toluene-d8	43.9		85 - 120	88%	SPK: 50
460-00-4	4-Bromofluorobenzene	44.8		75 - 120	90%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	720309	3.93			
540-36-3	1,4-Difluorobenzene	1223690	4.75			
3114-55-4	Chlorobenzene-d5	846048	9.7			
3855-82-1	1,4-Dichlorobenzene-d4	346406	13.4			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW412-4347	SDG No.:	C2596
Lab Sample ID:	C2596-10	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035705.D	1		06/21/11	VG062111

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW413-3337	SDG No.:	C2596
Lab Sample ID:	C2596-04	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035552.D	1		06/17/11	VG061611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	63		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	27		0.47	1	ug/L
67-64-1	Acetone	11		0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	310	E	0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	75		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.71	J	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW413-3337	SDG No.:	C2596
Lab Sample ID:	C2596-04	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035552.D	1		06/17/11	VG061611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	1.7		0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.91	J	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1.8		0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	54.9		70 - 120	110%	SPK: 50
1868-53-7	Dibromofluoromethane	50.5		85 - 115	101%	SPK: 50
2037-26-5	Toluene-d8	38.4	*	85 - 120	77%	SPK: 50
460-00-4	4-Bromofluorobenzene	43		75 - 120	86%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	839907	3.93			
540-36-3	1,4-Difluorobenzene	1381160	4.74			
3114-55-4	Chlorobenzene-d5	1045470	9.7			
3855-82-1	1,4-Dichlorobenzene-d4	442680	13.4			
TENTATIVE IDENTIFIED COMPOUNDS						

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW413-3337	SDG No.:	C2596
Lab Sample ID:	C2596-04	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035552.D	1		06/17/11	VG061611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
135-98-8	sec-Butylbenzene	1.4	J		13.02	ug/L

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW413-3337DL	SDG No.:	C2596
Lab Sample ID:	C2596-04DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035565.D	10		06/17/11	VG061711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	5	U	2	10	ug/L
74-87-3	Chloromethane	5	U	2	10	ug/L
75-01-4	Vinyl Chloride	5	U	3.4	10	ug/L
74-83-9	Bromomethane	5	U	2	10	ug/L
75-00-3	Chloroethane	58	D	2	10	ug/L
75-69-4	Trichlorofluoromethane	5	U	3.5	10	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	5	U	4.5	10	ug/L
75-35-4	1,1-Dichloroethene	27	D	4.7	10	ug/L
67-64-1	Acetone	25	U	5	50	ug/L
75-15-0	Carbon Disulfide	5	U	2	10	ug/L
1634-04-4	Methyl tert-butyl Ether	5	U	3.5	10	ug/L
79-20-9	Methyl Acetate	5	U	2	10	ug/L
75-09-2	Methylene Chloride	5	U	4.1	10	ug/L
156-60-5	trans-1,2-Dichloroethene	5	U	4.1	10	ug/L
75-34-3	1,1-Dichloroethane	360	D	3.6	10	ug/L
110-82-7	Cyclohexane	5	U	2	10	ug/L
78-93-3	2-Butanone	25	U	13	50	ug/L
56-23-5	Carbon Tetrachloride	5	U	2	10	ug/L
156-59-2	cis-1,2-Dichloroethene	5	U	3.5	10	ug/L
74-97-5	Bromochloromethane	5	U	2	10	ug/L
67-66-3	Chloroform	5	U	3.4	10	ug/L
71-55-6	1,1,1-Trichloroethane	72	D	4	10	ug/L
108-87-2	Methylcyclohexane	5	U	2	10	ug/L
71-43-2	Benzene	5	U	3.2	10	ug/L
107-06-2	1,2-Dichloroethane	5	U	4.8	10	ug/L
79-01-6	Trichloroethene	5	U	2.8	10	ug/L
78-87-5	1,2-Dichloropropane	5	U	4.6	10	ug/L
75-27-4	Bromodichloromethane	5	U	3.6	10	ug/L
108-10-1	4-Methyl-2-Pentanone	25	U	21	50	ug/L
108-88-3	Toluene	5	U	3.7	10	ug/L
10061-02-6	t-1,3-Dichloropropene	5	U	2.9	10	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW413-3337DL	SDG No.:	C2596
Lab Sample ID:	C2596-04DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035565.D	10		06/17/11	VG061711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	5	U	3.1	10	ug/L
79-00-5	1,1,2-Trichloroethane	5	U	3.8	10	ug/L
591-78-6	2-Hexanone	25	U	19	50	ug/L
124-48-1	Dibromochloromethane	5	U	2	10	ug/L
106-93-4	1,2-Dibromoethane	5	U	4.1	10	ug/L
127-18-4	Tetrachloroethene	5	U	2.7	10	ug/L
108-90-7	Chlorobenzene	5	U	4.9	10	ug/L
100-41-4	Ethyl Benzene	5	U	2	10	ug/L
179601-23-1	m/p-Xylenes	10	U	9.5	20	ug/L
95-47-6	o-Xylene	5	U	4.3	10	ug/L
100-42-5	Styrene	5	U	3.6	10	ug/L
75-25-2	Bromoform	5	U	4.7	10	ug/L
98-82-8	Isopropylbenzene	5	U	4.5	10	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	5	U	3.1	10	ug/L
541-73-1	1,3-Dichlorobenzene	5	U	4.3	10	ug/L
106-46-7	1,4-Dichlorobenzene	5	U	3.2	10	ug/L
95-50-1	1,2-Dichlorobenzene	5	U	4.5	10	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	5	U	4.6	10	ug/L
120-82-1	1,2,4-Trichlorobenzene	5	U	2	10	ug/L
87-61-6	1,2,3-Trichlorobenzene	5	U	2	10	ug/L
123-91-1	1,4-Dioxane	100	U	200	200	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	57		70 - 120	114%	SPK: 50
1868-53-7	Dibromofluoromethane	49.7		85 - 115	99%	SPK: 50
2037-26-5	Toluene-d8	41.5	*	85 - 120	83%	SPK: 50
460-00-4	4-Bromofluorobenzene	41.6		75 - 120	83%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	900089	3.93			
540-36-3	1,4-Difluorobenzene	1534080	4.75			
3114-55-4	Chlorobenzene-d5	1079360	9.7			
3855-82-1	1,4-Dichlorobenzene-d4	455828	13.4			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW413-3337DL	SDG No.:	C2596
Lab Sample ID:	C2596-04DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035565.D	10		06/17/11	VG061711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW413-3842	SDG No.:	C2596
Lab Sample ID:	C2596-05	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035553.D	1		06/17/11	VG061611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	30		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	19		0.47	1	ug/L
67-64-1	Acetone	6.6		0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	240	E	0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	55		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW413-3842	SDG No.:	C2596
Lab Sample ID:	C2596-05	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035553.D	1		06/17/11	VG061611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.75	J	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	56.6		70 - 120	113%	SPK: 50
1868-53-7	Dibromofluoromethane	50.3		85 - 115	101%	SPK: 50
2037-26-5	Toluene-d8	38.2	*	85 - 120	76%	SPK: 50
460-00-4	4-Bromofluorobenzene	43.1		75 - 120	86%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	806613	3.92			
540-36-3	1,4-Difluorobenzene	1376150	4.74			
3114-55-4	Chlorobenzene-d5	996655	9.7			
3855-82-1	1,4-Dichlorobenzene-d4	439988	13.4			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW413-3842	SDG No.:	C2596
Lab Sample ID:	C2596-05	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035553.D	1		06/17/11	VG061611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW413-3842DL	SDG No.:	C2596
Lab Sample ID:	C2596-05DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035566.D	10		06/17/11	VG061711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	5	U	2	10	ug/L
74-87-3	Chloromethane	5	U	2	10	ug/L
75-01-4	Vinyl Chloride	5	U	3.4	10	ug/L
74-83-9	Bromomethane	5	U	2	10	ug/L
75-00-3	Chloroethane	31	D	2	10	ug/L
75-69-4	Trichlorofluoromethane	5	U	3.5	10	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	5	U	4.5	10	ug/L
75-35-4	1,1-Dichloroethene	18	D	4.7	10	ug/L
67-64-1	Acetone	25	U	5	50	ug/L
75-15-0	Carbon Disulfide	5	U	2	10	ug/L
1634-04-4	Methyl tert-butyl Ether	5	U	3.5	10	ug/L
79-20-9	Methyl Acetate	5	U	2	10	ug/L
75-09-2	Methylene Chloride	5	U	4.1	10	ug/L
156-60-5	trans-1,2-Dichloroethene	5	U	4.1	10	ug/L
75-34-3	1,1-Dichloroethane	280	D	3.6	10	ug/L
110-82-7	Cyclohexane	5	U	2	10	ug/L
78-93-3	2-Butanone	25	U	13	50	ug/L
56-23-5	Carbon Tetrachloride	5	U	2	10	ug/L
156-59-2	cis-1,2-Dichloroethene	5	U	3.5	10	ug/L
74-97-5	Bromochloromethane	5	U	2	10	ug/L
67-66-3	Chloroform	5	U	3.4	10	ug/L
71-55-6	1,1,1-Trichloroethane	55	D	4	10	ug/L
108-87-2	Methylcyclohexane	5	U	2	10	ug/L
71-43-2	Benzene	5	U	3.2	10	ug/L
107-06-2	1,2-Dichloroethane	5	U	4.8	10	ug/L
79-01-6	Trichloroethene	5	U	2.8	10	ug/L
78-87-5	1,2-Dichloropropane	5	U	4.6	10	ug/L
75-27-4	Bromodichloromethane	5	U	3.6	10	ug/L
108-10-1	4-Methyl-2-Pentanone	25	U	21	50	ug/L
108-88-3	Toluene	5	U	3.7	10	ug/L
10061-02-6	t-1,3-Dichloropropene	5	U	2.9	10	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW413-3842DL	SDG No.:	C2596
Lab Sample ID:	C2596-05DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035566.D	10		06/17/11	VG061711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	5	U	3.1	10	ug/L
79-00-5	1,1,2-Trichloroethane	5	U	3.8	10	ug/L
591-78-6	2-Hexanone	25	U	19	50	ug/L
124-48-1	Dibromochloromethane	5	U	2	10	ug/L
106-93-4	1,2-Dibromoethane	5	U	4.1	10	ug/L
127-18-4	Tetrachloroethene	5	U	2.7	10	ug/L
108-90-7	Chlorobenzene	5	U	4.9	10	ug/L
100-41-4	Ethyl Benzene	5	U	2	10	ug/L
179601-23-1	m/p-Xylenes	10	U	9.5	20	ug/L
95-47-6	o-Xylene	5	U	4.3	10	ug/L
100-42-5	Styrene	5	U	3.6	10	ug/L
75-25-2	Bromoform	5	U	4.7	10	ug/L
98-82-8	Isopropylbenzene	5	U	4.5	10	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	5	U	3.1	10	ug/L
541-73-1	1,3-Dichlorobenzene	5	U	4.3	10	ug/L
106-46-7	1,4-Dichlorobenzene	5	U	3.2	10	ug/L
95-50-1	1,2-Dichlorobenzene	5	U	4.5	10	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	5	U	4.6	10	ug/L
120-82-1	1,2,4-Trichlorobenzene	5	U	2	10	ug/L
87-61-6	1,2,3-Trichlorobenzene	5	U	2	10	ug/L
123-91-1	1,4-Dioxane	100	U	200	200	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	58.8		70 - 120	118%	SPK: 50
1868-53-7	Dibromofluoromethane	49.2		85 - 115	98%	SPK: 50
2037-26-5	Toluene-d8	39.7	*	85 - 120	79%	SPK: 50
460-00-4	4-Bromofluorobenzene	41.7		75 - 120	83%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	880519	3.92			
540-36-3	1,4-Difluorobenzene	1507860	4.74			
3114-55-4	Chlorobenzene-d5	1059740	9.7			
3855-82-1	1,4-Dichlorobenzene-d4	454266	13.4			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW413-3842DL	SDG No.:	C2596
Lab Sample ID:	C2596-05DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035566.D	10		06/17/11	VG061711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-DUP03-20110608 → SA-TW413-3842	SDG No.:	C2596
Lab Sample ID:	C2596-07	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035555.D	1		06/17/11	VG061611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	33		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	18		0.47	1	ug/L
67-64-1	Acetone	4.6	J	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	240	E	0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	53		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-DUP03-20110608 → SA-TW413-3842	SDG No.:	C2596
Lab Sample ID:	C2596-07	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035555.D	1		06/17/11	VG061611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.84	J	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	58.6		70 - 120	117%	SPK: 50
1868-53-7	Dibromofluoromethane	51.7		85 - 115	103%	SPK: 50
2037-26-5	Toluene-d8	37.7	*	85 - 120	75%	SPK: 50
460-00-4	4-Bromofluorobenzene	42.8		75 - 120	86%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	808195	3.92			
540-36-3	1,4-Difluorobenzene	1314560	4.74			
3114-55-4	Chlorobenzene-d5	994930	9.7			
3855-82-1	1,4-Dichlorobenzene-d4	423678	13.4			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-DUP03-20110608 →SA-TW413-3842	SDG No.:	C2596
Lab Sample ID:	C2596-07	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035555.D	1		06/17/11	VG061611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-DUP03-20110608DL →SA-TW413-3842	SDG No.:	C2596
Lab Sample ID:	C2596-07DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035568.D	10		06/17/11	VG061711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	5	U	2	10	ug/L
74-87-3	Chloromethane	5	U	2	10	ug/L
75-01-4	Vinyl Chloride	5	U	3.4	10	ug/L
74-83-9	Bromomethane	5	U	2	10	ug/L
75-00-3	Chloroethane	32	D	2	10	ug/L
75-69-4	Trichlorofluoromethane	5	U	3.5	10	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	5	U	4.5	10	ug/L
75-35-4	1,1-Dichloroethene	19	D	4.7	10	ug/L
67-64-1	Acetone	25	U	5	50	ug/L
75-15-0	Carbon Disulfide	5	U	2	10	ug/L
1634-04-4	Methyl tert-butyl Ether	5	U	3.5	10	ug/L
79-20-9	Methyl Acetate	5	U	2	10	ug/L
75-09-2	Methylene Chloride	5	U	4.1	10	ug/L
156-60-5	trans-1,2-Dichloroethene	5	U	4.1	10	ug/L
75-34-3	1,1-Dichloroethane	260	D	3.6	10	ug/L
110-82-7	Cyclohexane	5	U	2	10	ug/L
78-93-3	2-Butanone	25	U	13	50	ug/L
56-23-5	Carbon Tetrachloride	5	U	2	10	ug/L
156-59-2	cis-1,2-Dichloroethene	5	U	3.5	10	ug/L
74-97-5	Bromochloromethane	5	U	2	10	ug/L
67-66-3	Chloroform	5	U	3.4	10	ug/L
71-55-6	1,1,1-Trichloroethane	48	D	4	10	ug/L
108-87-2	Methylcyclohexane	5	U	2	10	ug/L
71-43-2	Benzene	5	U	3.2	10	ug/L
107-06-2	1,2-Dichloroethane	5	U	4.8	10	ug/L
79-01-6	Trichloroethene	5	U	2.8	10	ug/L
78-87-5	1,2-Dichloropropane	5	U	4.6	10	ug/L
75-27-4	Bromodichloromethane	5	U	3.6	10	ug/L
108-10-1	4-Methyl-2-Pentanone	25	U	21	50	ug/L
108-88-3	Toluene	5	U	3.7	10	ug/L
10061-02-6	t-1,3-Dichloropropene	5	U	2.9	10	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-DUP03-20110608DL →SA-TW413-3842	SDG No.:	C2596
Lab Sample ID:	C2596-07DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035568.D	10		06/17/11	VG061711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	5	U	3.1	10	ug/L
79-00-5	1,1,2-Trichloroethane	5	U	3.8	10	ug/L
591-78-6	2-Hexanone	25	U	19	50	ug/L
124-48-1	Dibromochloromethane	5	U	2	10	ug/L
106-93-4	1,2-Dibromoethane	5	U	4.1	10	ug/L
127-18-4	Tetrachloroethene	5	U	2.7	10	ug/L
108-90-7	Chlorobenzene	5	U	4.9	10	ug/L
100-41-4	Ethyl Benzene	5	U	2	10	ug/L
179601-23-1	m/p-Xylenes	10	U	9.5	20	ug/L
95-47-6	o-Xylene	5	U	4.3	10	ug/L
100-42-5	Styrene	5	U	3.6	10	ug/L
75-25-2	Bromoform	5	U	4.7	10	ug/L
98-82-8	Isopropylbenzene	5	U	4.5	10	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	5	U	3.1	10	ug/L
541-73-1	1,3-Dichlorobenzene	5	U	4.3	10	ug/L
106-46-7	1,4-Dichlorobenzene	5	U	3.2	10	ug/L
95-50-1	1,2-Dichlorobenzene	5	U	4.5	10	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	5	U	4.6	10	ug/L
120-82-1	1,2,4-Trichlorobenzene	5	U	2	10	ug/L
87-61-6	1,2,3-Trichlorobenzene	5	U	2	10	ug/L
123-91-1	1,4-Dioxane	100	U	200	200	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	57.8		70 - 120	116%	SPK: 50
1868-53-7	Dibromofluoromethane	48		85 - 115	96%	SPK: 50
2037-26-5	Toluene-d8	40.4	*	85 - 120	81%	SPK: 50
460-00-4	4-Bromofluorobenzene	39		75 - 120	78%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	880324	3.93			
540-36-3	1,4-Difluorobenzene	1493210	4.74			
3114-55-4	Chlorobenzene-d5	1042660	9.7			
3855-82-1	1,4-Dichlorobenzene-d4	418228	13.41			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-DUP03-20110608DL →SA-TW413-~~38~~ 3842	SDG No.:	C2596
Lab Sample ID:	C2596-07DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035568.D	10		06/17/11	VG061711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW413-4347	SDG No.:	C2596
Lab Sample ID:	C2596-06	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035554.D	1		06/17/11	VG061611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	19		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	11		0.47	1	ug/L
67-64-1	Acetone	5.2		0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	170	E	0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	23		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW413-4347	SDG No.:	C2596
Lab Sample ID:	C2596-06	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035554.D	1		06/17/11	VG061611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	55.7		70 - 120	111%	SPK: 50
1868-53-7	Dibromofluoromethane	49.9		85 - 115	100%	SPK: 50
2037-26-5	Toluene-d8	38.6	*	85 - 120	77%	SPK: 50
460-00-4	4-Bromofluorobenzene	42.5		75 - 120	85%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	833279	3.93			
540-36-3	1,4-Difluorobenzene	1351280	4.74			
3114-55-4	Chlorobenzene-d5	1023050	9.69			
3855-82-1	1,4-Dichlorobenzene-d4	413537	13.4			
TENTATIVE IDENTIFIED COMPOUNDS						

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW413-4347	SDG No.:	C2596
Lab Sample ID:	C2596-06	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035554.D	1		06/17/11	VG061611

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
60-29-7	Diethyl Ether	1.1	J		1.32	ug/L

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW413-4347DL	SDG No.:	C2596
Lab Sample ID:	C2596-06DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035567.D	5		06/17/11	VG061711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	2.5	U	1	5	ug/L
74-87-3	Chloromethane	2.5	U	1	5	ug/L
75-01-4	Vinyl Chloride	2.5	U	1.7	5	ug/L
74-83-9	Bromomethane	2.5	U	1	5	ug/L
75-00-3	Chloroethane	18	D	1	5	ug/L
75-69-4	Trichlorofluoromethane	2.5	U	1.8	5	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	2.5	U	2.2	5	ug/L
75-35-4	1,1-Dichloroethene	10	D	2.4	5	ug/L
67-64-1	Acetone	12.5	U	2.5	25	ug/L
75-15-0	Carbon Disulfide	2.5	U	1	5	ug/L
1634-04-4	Methyl tert-butyl Ether	2.5	U	1.8	5	ug/L
79-20-9	Methyl Acetate	2.5	U	1	5	ug/L
75-09-2	Methylene Chloride	2.5	U	2	5	ug/L
156-60-5	trans-1,2-Dichloroethene	2.5	U	2	5	ug/L
75-34-3	1,1-Dichloroethane	180	D	1.8	5	ug/L
110-82-7	Cyclohexane	2.5	U	1	5	ug/L
78-93-3	2-Butanone	12.5	U	6.6	25	ug/L
56-23-5	Carbon Tetrachloride	2.5	U	1	5	ug/L
156-59-2	cis-1,2-Dichloroethene	2.5	U	1.8	5	ug/L
74-97-5	Bromochloromethane	2.5	U	1	5	ug/L
67-66-3	Chloroform	2.5	U	1.7	5	ug/L
71-55-6	1,1,1-Trichloroethane	20	D	2	5	ug/L
108-87-2	Methylcyclohexane	2.5	U	1	5	ug/L
71-43-2	Benzene	2.5	U	1.6	5	ug/L
107-06-2	1,2-Dichloroethane	2.5	U	2.4	5	ug/L
79-01-6	Trichloroethene	2.5	U	1.4	5	ug/L
78-87-5	1,2-Dichloropropane	2.5	U	2.3	5	ug/L
75-27-4	Bromodichloromethane	2.5	U	1.8	5	ug/L
108-10-1	4-Methyl-2-Pentanone	12.5	U	10	25	ug/L
108-88-3	Toluene	2.5	U	1.8	5	ug/L
10061-02-6	t-1,3-Dichloropropene	2.5	U	1.4	5	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW413-4347DL	SDG No.:	C2596
Lab Sample ID:	C2596-06DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035567.D	5		06/17/11	VG061711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	2.5	U	1.6	5	ug/L
79-00-5	1,1,2-Trichloroethane	2.5	U	1.9	5	ug/L
591-78-6	2-Hexanone	12.5	U	9.7	25	ug/L
124-48-1	Dibromochloromethane	2.5	U	1	5	ug/L
106-93-4	1,2-Dibromoethane	2.5	U	2	5	ug/L
127-18-4	Tetrachloroethene	2.5	U	1.4	5	ug/L
108-90-7	Chlorobenzene	2.5	U	2.4	5	ug/L
100-41-4	Ethyl Benzene	2.5	U	1	5	ug/L
179601-23-1	m/p-Xylenes	5	U	4.8	10	ug/L
95-47-6	o-Xylene	2.5	U	2.2	5	ug/L
100-42-5	Styrene	2.5	U	1.8	5	ug/L
75-25-2	Bromoform	2.5	U	2.4	5	ug/L
98-82-8	Isopropylbenzene	2.5	U	2.2	5	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U	1.6	5	ug/L
541-73-1	1,3-Dichlorobenzene	2.5	U	2.2	5	ug/L
106-46-7	1,4-Dichlorobenzene	2.5	U	1.6	5	ug/L
95-50-1	1,2-Dichlorobenzene	2.5	U	2.2	5	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	2.5	U	2.3	5	ug/L
120-82-1	1,2,4-Trichlorobenzene	2.5	U	1	5	ug/L
87-61-6	1,2,3-Trichlorobenzene	2.5	U	1	5	ug/L
123-91-1	1,4-Dioxane	50	U	100	100	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	58.2		70 - 120	116%	SPK: 50
1868-53-7	Dibromofluoromethane	48.4		85 - 115	97%	SPK: 50
2037-26-5	Toluene-d8	40.4	*	85 - 120	81%	SPK: 50
460-00-4	4-Bromofluorobenzene	41.7		75 - 120	83%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	894687	3.92			
540-36-3	1,4-Difluorobenzene	1506210	4.74			
3114-55-4	Chlorobenzene-d5	1107040	9.69			
3855-82-1	1,4-Dichlorobenzene-d4	432442	13.4			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/08/11
Project:	CTO WE08	Date Received:	06/09/11
Client Sample ID:	SA-TW413-4347DL	SDG No.:	C2596
Lab Sample ID:	C2596-06DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035567.D	5		06/17/11	VG061711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

CHEMTECH 284 Sheffield Street, Mountainside, New Jersey 07092 Phone : 908 789 8900 Fax : 908 789 8922

ANALYTICAL RESULTS SUMMARY

PROJECT NAME : CTO WE08

TETRA TECH NUS, INC.
661 Anderson Drive

Pittsburgh , Pennsylvania - 15220-2745
Phone No: 4129218361

ORDER ID : C2634
ATTENTION : David Brayack

ACCREDITED IN ACCORDANCE WITH nelac

DoD ELAP

CHEMTECH 284 Sheffield Street, Mountainside, New Jersey 07092 Phone : 908 789 8900 Fax : 908 789 8922

Cover Page

Order ID : C2634

Project ID : CTO WE08

Client : Tetra Tech NUS, Inc.

Lab Sample Number	Client Sample Number
C2634-01	SA-TB04-20110609
C2634-02	SA-PZ133I-20110609
C2634-03	SA-TW410-3337
C2634-04	SA-TW410-3842
C2634-05	SA-TW410-4347
C2634-06	SA-DUP04-20110609
C2634-07	SA-TW409-3337
C2634-08	SA-TW409-3842
C2634-09	C2634-08MS
C2634-10	C2634-08MSD
C2634-11	SA-TW409-4347
C2634-12	SA-PZ133I1-20110609
C2634-13	SA-PZ139I-20110610
C2634-14	SA-TW408-3337
C2634-15	SA-TW408-3842
C2634-16	SA-TW408-4347

I certify that the data package is in compliance with the terms and conditions of the contract,both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : Mildred V Reyes

Mildred V. Reyes, QA/QC Supervisor
2011.07.05 14:16:36 -04'00'

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

CHEMTECH

CASE NARRATIVE

Tetra Tech NUS, Inc.
Project Name: CTO WE08
Project # N/A
Chemtech Project # C2634
Test Name: VOCMS Group1

A. Number of Samples and Date of Receipt:
16 Water samples were received on 06/11/2011.

B. Parameters
According to the Chain of Custody document, the following analyses were requested: VOCMS Group1. This data package contains results for VOCMS Group1.

C. Analytical Techniques:
The analysis performed on instrument MSVOA_G were done using GC column RTX-VMS which is 20 meters, 0.18 mm id, 1.0 um df, Restek Cat. #49914. The Trap was supplied by OI Analytical, OI #10 Trap , OI Eclipse 4660 Concentrator.The analysis performed on instrument MSVOA_H were done using GC column RTX-VMS which is 20 meters, 0.18 mm id, 1.0 um df, Restek Cat. #49914. The Trap was supplied BY OI Analytical, OI #10 Trap , OI Eclipse 4660 Concentrator.The analysis of VOCMS Group1 was based on method 8260B.

D. QA/ QC Samples:
The Holding Times were met for all analysis.
The Surrogate recoveries met the acceptable criteria except for SA-TB04-20110609 [1,2-Dichloroethane-d4 - 121%], SA-TB04-20110609RE [1,2-Dichloroethane-d4 - 126%], SA-TW409-3842MS [1,2-Dichloroethane-d4 - 130%, 4-Bromofluorobenzene - 128%], SA-PZ133I1-20110609 [1,2-Dichloroethane-d4 - 144%, 4-Bromofluorobenzene - 123%], SA-PZ139I-20110610 [1,2-Dichloroethane-d4 - 122%], SA-PZ139I-20110610RE [1 and2-Dichloroethane-d4 - 128%].
The Internal Standards Areas met the acceptable requirements.
The Retention Times were acceptable for all samples.
The MS {C2634-09MS} with File ID: VH041592.D recoveries met the requirements for all compounds except for 1,2,4-Trichlorobenzene[62%], 1,4-Dioxane[59%] and Chloromethane[140%] .
The MSD {C2634-10MSD} with File ID: VH041593.D recoveries met the acceptable requirements except for 1,4-Dioxane[50%] and Chloromethane[134%] .
The RPD recoveries met criteria .
The Blank Spike Duplicate met requirements for all samples .The Blank Spike for {BSH0618W1} with File ID: VH041576.D met requirements for all samples except for Acetone[150%], Methylene Chloride[240%] .The Blank Spike for {BSH0619W1} with File ID: VH041609.D met requirements for all samples except for Acetone[160%],

Chloromethane[130%] and Methylene Chloride[305%] but it is not present in the sample.
The Blank analysis indicated presence of Methylene Chloride[25 ug/L] FileID:VH041608.D{VBH0619W1} due to possible lab contamination.
The Initial Calibration met the requirements .
The Continuous Calibration File ID VG035641.D met the requirements except for Dichlorodifluoromethane and Tetrachloroethene .The Continuous Calibration File ID VH041606.D met the requirements except for Acetone,Methyl Acetate,Methylene Chloride,4-Methyl-2-Pentanone and 1,4-Dioxane the associate samples have no hit in the samples.
The Tuning criteria met requirements.
Samples SA-PZ133I1-20110609 and SA-TW408-3842 were diluted due to high concentrations.

E. Additional Comments:
Please use %D calculated based on Avg RF and CCRF for all compounds using Average Response Factor when the %RSD value for a compound is <15% for the Initial Calibration curve and use %D calculated based on Amount added and Calculated amount for all compounds using Linear Regression when the %RSD value for a compound is > 15% for the Initial Calibration curve for SW-846 analysis.

F. Manual Integration Comments:
Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature_____ Mildred V. Reyes, QA/QC Supervisor
2011.07.05 14:15:27 -04'00'

I Nilda U. Reyes, as the designated Quality Assurance ~~Officer~~ Supervisor, hereby attest that all electronic deliverables have been thoroughly reviewed and are in agreement with the associated hardcopy data. The enclosed electronic files have been reviewed for accuracy (including significant figures), completeness and format. The laboratory will be responsible for any labor time necessary to correct enclosed electronic deliverables that have been found to be in error. I can be reached at (908) 789-8900 if there are any questions or problems with the enclosed electronic deliverables.

Signature: Nilda U Reyes Title: QA/QC Supervisor Date: 7/5/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/09/11
Project:	CTO WE08	Date Received:	06/11/11
Client Sample ID:	SA-PZ133I-20110609	SDG No.:	C2634
Lab Sample ID:	C2634-02	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041578.D	1		06/18/11	VH061811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	6.7		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	4.3		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	76		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	9.5		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/09/11
Project:	CTO WE08	Date Received:	06/11/11
Client Sample ID:	SA-PZ133I-20110609	SDG No.:	C2634
Lab Sample ID:	C2634-02	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041578.D	1		06/18/11	VH061811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	58.1		70 - 120	116%	SPK: 50
1868-53-7	Dibromofluoromethane	48.8		85 - 115	98%	SPK: 50
2037-26-5	Toluene-d8	54.5		85 - 120	109%	SPK: 50
460-00-4	4-Bromofluorobenzene	49.5		75 - 120	99%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	460820	4.08			
540-36-3	1,4-Difluorobenzene	929766	4.59			
3114-55-4	Chlorobenzene-d5	781825	7.95			
3855-82-1	1,4-Dichlorobenzene-d4	327413	10.44			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/09/11
Project:	CTO WE08	Date Received:	06/11/11
Client Sample ID:	SA-PZ133I1-20110609	SDG No.:	C2634
Lab Sample ID:	C2634-12	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041586.D	1		06/18/11	VH061811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	22		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	13		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	250	E	0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	22		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/09/11
Project:	CTO WE08	Date Received:	06/11/11
Client Sample ID:	SA-PZ133I1-20110609	SDG No.:	C2634
Lab Sample ID:	C2634-12	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041586.D	1		06/18/11	VH061811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	72	*	70 - 120	144%	SPK: 50
1868-53-7	Dibromofluoromethane	56		85 - 115	112%	SPK: 50
2037-26-5	Toluene-d8	57.1		85 - 120	114%	SPK: 50
460-00-4	4-Bromofluorobenzene	61.4	*	75 - 120	123%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	277431	4.08			
540-36-3	1,4-Difluorobenzene	544621	4.6			
3114-55-4	Chlorobenzene-d5	522450	7.94			
3855-82-1	1,4-Dichlorobenzene-d4	247750	10.43			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/09/11
Project:	CTO WE08	Date Received:	06/11/11
Client Sample ID:	SA-PZ133I1-20110609DL	SDG No.:	C2634
Lab Sample ID:	C2634-12DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041611.D	10		06/19/11	VH061911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	5	U	2	10	ug/L
74-87-3	Chloromethane	5	U	2	10	ug/L
75-01-4	Vinyl Chloride	5	U	3.4	10	ug/L
74-83-9	Bromomethane	5	U	2	10	ug/L
75-00-3	Chloroethane	48	D	2	10	ug/L
75-69-4	Trichlorofluoromethane	5	U	3.5	10	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	5	U	4.5	10	ug/L
75-35-4	1,1-Dichloroethene	7.7	JD	4.7	10	ug/L
67-64-1	Acetone	25	U	5	50	ug/L
75-15-0	Carbon Disulfide	5	U	2	10	ug/L
1634-04-4	Methyl tert-butyl Ether	5	U	3.5	10	ug/L
79-20-9	Methyl Acetate	5	U	2	10	ug/L
75-09-2	Methylene Chloride	5	U	4.1	10	ug/L
156-60-5	trans-1,2-Dichloroethene	5	U	4.1	10	ug/L
75-34-3	1,1-Dichloroethane	120	D	3.6	10	ug/L
110-82-7	Cyclohexane	5	U	2	10	ug/L
78-93-3	2-Butanone	25	U	13	50	ug/L
56-23-5	Carbon Tetrachloride	5	U	2	10	ug/L
156-59-2	cis-1,2-Dichloroethene	5	U	3.5	10	ug/L
74-97-5	Bromochloromethane	5	U	2	10	ug/L
67-66-3	Chloroform	5	U	3.4	10	ug/L
71-55-6	1,1,1-Trichloroethane	5	U	4	10	ug/L
108-87-2	Methylcyclohexane	5	U	2	10	ug/L
71-43-2	Benzene	5	U	3.2	10	ug/L
107-06-2	1,2-Dichloroethane	5	U	4.8	10	ug/L
79-01-6	Trichloroethene	5	U	2.8	10	ug/L
78-87-5	1,2-Dichloropropane	5	U	4.6	10	ug/L
75-27-4	Bromodichloromethane	5	U	3.6	10	ug/L
108-10-1	4-Methyl-2-Pentanone	25	U	21	50	ug/L
108-88-3	Toluene	5	U	3.7	10	ug/L
10061-02-6	t-1,3-Dichloropropene	5	U	2.9	10	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/09/11
Project:	CTO WE08	Date Received:	06/11/11
Client Sample ID:	SA-PZ133I1-20110609DL	SDG No.:	C2634
Lab Sample ID:	C2634-12DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041611.D	10		06/19/11	VH061911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	5	U	3.1	10	ug/L
79-00-5	1,1,2-Trichloroethane	5	U	3.8	10	ug/L
591-78-6	2-Hexanone	25	U	19	50	ug/L
124-48-1	Dibromochloromethane	5	U	2	10	ug/L
106-93-4	1,2-Dibromoethane	5	U	4.1	10	ug/L
127-18-4	Tetrachloroethene	5	U	2.7	10	ug/L
108-90-7	Chlorobenzene	5	U	4.9	10	ug/L
100-41-4	Ethyl Benzene	5	U	2	10	ug/L
179601-23-1	m/p-Xylenes	10	U	9.5	20	ug/L
95-47-6	o-Xylene	5	U	4.3	10	ug/L
100-42-5	Styrene	5	U	3.6	10	ug/L
75-25-2	Bromoform	5	U	4.7	10	ug/L
98-82-8	Isopropylbenzene	5	U	4.5	10	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	5	U	3.1	10	ug/L
541-73-1	1,3-Dichlorobenzene	5	U	4.3	10	ug/L
106-46-7	1,4-Dichlorobenzene	5	U	3.2	10	ug/L
95-50-1	1,2-Dichlorobenzene	5	U	4.5	10	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	5	U	4.6	10	ug/L
120-82-1	1,2,4-Trichlorobenzene	5	U	2	10	ug/L
87-61-6	1,2,3-Trichlorobenzene	5	U	2	10	ug/L
123-91-1	1,4-Dioxane	100	U	200	200	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	58.7		70 - 120	117%	SPK: 50
1868-53-7	Dibromofluoromethane	50.3		85 - 115	101%	SPK: 50
2037-26-5	Toluene-d8	54.8		85 - 120	110%	SPK: 50
460-00-4	4-Bromofluorobenzene	53.4		75 - 120	107%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	554957	4.08			
540-36-3	1,4-Difluorobenzene	1067470	4.6			
3114-55-4	Chlorobenzene-d5	894910	7.95			
3855-82-1	1,4-Dichlorobenzene-d4	390271	10.43			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/10/11
Project:	CTO WE08	Date Received:	06/11/11
Client Sample ID:	SA-PZ139I-20110610	SDG No.:	C2634
Lab Sample ID:	C2634-13	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041612.D	1		06/19/11	VH061911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	0.5	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	0.5	U	0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	5.9		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/10/11
Project:	CTO WE08	Date Received:	06/11/11
Client Sample ID:	SA-PZ139I-20110610	SDG No.:	C2634
Lab Sample ID:	C2634-13	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041612.D	1		06/19/11	VH061911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	61	*	70 - 120	122%	SPK: 50
1868-53-7	Dibromofluoromethane	50.4		85 - 115	101%	SPK: 50
2037-26-5	Toluene-d8	51.3		85 - 120	103%	SPK: 50
460-00-4	4-Bromofluorobenzene	49		75 - 120	98%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	467651	4.08			
540-36-3	1,4-Difluorobenzene	961890	4.6			
3114-55-4	Chlorobenzene-d5	745187	7.94			
3855-82-1	1,4-Dichlorobenzene-d4	317927	10.44			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/10/11
Project:	CTO WE08	Date Received:	06/11/11
Client Sample ID:	SA-PZ139I-20110610RE	SDG No.:	C2634
Lab Sample ID:	C2634-13RE	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041622.D	1		06/19/11	VH061911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	0.5	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	0.5	U	0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	5		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/10/11
Project:	CTO WE08	Date Received:	06/11/11
Client Sample ID:	SA-PZ139I-20110610RE	SDG No.:	C2634
Lab Sample ID:	C2634-13RE	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041622.D	1		06/19/11	VH061911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	63.9	*	70 - 120	128%	SPK: 50
1868-53-7	Dibromofluoromethane	54.3		85 - 115	109%	SPK: 50
2037-26-5	Toluene-d8	55.4		85 - 120	111%	SPK: 50
460-00-4	4-Bromofluorobenzene	52.5		75 - 120	105%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	411023	4.08			
540-36-3	1,4-Difluorobenzene	740713	4.6			
3114-55-4	Chlorobenzene-d5	644508	7.95			
3855-82-1	1,4-Dichlorobenzene-d4	287400	10.44			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/10/11
Project:	CTO WE08	Date Received:	06/11/11
Client Sample ID:	SA-TW408-3337	SDG No.:	C2634
Lab Sample ID:	C2634-14	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041617.D	1		06/19/11	VH061911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	46		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	3.3		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	34		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.61	J	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.75	J	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/10/11
Project:	CTO WE08	Date Received:	06/11/11
Client Sample ID:	SA-TW408-3337	SDG No.:	C2634
Lab Sample ID:	C2634-14	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041617.D	1		06/19/11	VH061911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	3.8		0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.62	J	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	4.7		0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	26		0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	6.4		0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	3.7		0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	1.3		0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	59.3		70 - 120	119%	SPK: 50
1868-53-7	Dibromofluoromethane	50.2		85 - 115	100%	SPK: 50
2037-26-5	Toluene-d8	56.8		85 - 120	114%	SPK: 50
460-00-4	4-Bromofluorobenzene	59.2		75 - 120	118%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	352443	4.08			
540-36-3	1,4-Difluorobenzene	643089	4.6			
3114-55-4	Chlorobenzene-d5	597916	7.95			
3855-82-1	1,4-Dichlorobenzene-d4	264324	10.44			
TENTATIVE IDENTIFIED COMPOUNDS						

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/10/11
Project:	CTO WE08	Date Received:	06/11/11
Client Sample ID:	SA-TW408-3337	SDG No.:	C2634
Lab Sample ID:	C2634-14	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041617.D	1		06/19/11	VH061911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
98-06-6	tert-Butylbenzene	1.3	J		10.03	ug/L
135-98-8	sec-Butylbenzene	3.7	J		10.19	ug/L

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/10/11
Project:	CTO WE08	Date Received:	06/11/11
Client Sample ID:	SA-TW408-3842	SDG No.:	C2634
Lab Sample ID:	C2634-15	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041589.D	1		06/19/11	VH061811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	110		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	11		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	170	E	0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.6	J	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	19		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	1.1		0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/10/11
Project:	CTO WE08	Date Received:	06/11/11
Client Sample ID:	SA-TW408-3842	SDG No.:	C2634
Lab Sample ID:	C2634-15	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041589.D	1		06/19/11	VH061811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.64	J	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	2.9		0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	1.2		0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	4.3		0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	1.4		0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	57.4		70 - 120	115%	SPK: 50
1868-53-7	Dibromofluoromethane	55.2		85 - 115	110%	SPK: 50
2037-26-5	Toluene-d8	56.8		85 - 120	114%	SPK: 50
460-00-4	4-Bromofluorobenzene	53.8		75 - 120	108%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	387274	4.08			
540-36-3	1,4-Difluorobenzene	718565	4.6			
3114-55-4	Chlorobenzene-d5	628029	7.95			
3855-82-1	1,4-Dichlorobenzene-d4	270276	10.44			
TENTATIVE IDENTIFIED COMPOUNDS						

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/10/11
Project:	CTO WE08	Date Received:	06/11/11
Client Sample ID:	SA-TW408-3842	SDG No.:	C2634
Lab Sample ID:	C2634-15	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041589.D	1		06/19/11	VH061811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
135-98-8	sec-Butylbenzene	1.5	J		10.2	ug/L

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/10/11
Project:	CTO WE08	Date Received:	06/11/11
Client Sample ID:	SA-TW408-3842DL	SDG No.:	C2634
Lab Sample ID:	C2634-15DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041621.D	10		06/19/11	VH061911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	5	U	2	10	ug/L
74-87-3	Chloromethane	5	U	2	10	ug/L
75-01-4	Vinyl Chloride	5	U	3.4	10	ug/L
74-83-9	Bromomethane	5	U	2	10	ug/L
75-00-3	Chloroethane	160	D	2	10	ug/L
75-69-4	Trichlorofluoromethane	5	U	3.5	10	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	5	U	4.5	10	ug/L
75-35-4	1,1-Dichloroethene	16	D	4.7	10	ug/L
67-64-1	Acetone	25	U	5	50	ug/L
75-15-0	Carbon Disulfide	5	U	2	10	ug/L
1634-04-4	Methyl tert-butyl Ether	5	U	3.5	10	ug/L
79-20-9	Methyl Acetate	5	U	2	10	ug/L
75-09-2	Methylene Chloride	5	U	4.1	10	ug/L
156-60-5	trans-1,2-Dichloroethene	5	U	4.1	10	ug/L
75-34-3	1,1-Dichloroethane	190	D	3.6	10	ug/L
110-82-7	Cyclohexane	5	U	2	10	ug/L
78-93-3	2-Butanone	25	U	13	50	ug/L
56-23-5	Carbon Tetrachloride	5	U	2	10	ug/L
156-59-2	cis-1,2-Dichloroethene	5	U	3.5	10	ug/L
74-97-5	Bromochloromethane	5	U	2	10	ug/L
67-66-3	Chloroform	5	U	3.4	10	ug/L
71-55-6	1,1,1-Trichloroethane	5	U	4	10	ug/L
108-87-2	Methylcyclohexane	5	U	2	10	ug/L
71-43-2	Benzene	5	U	3.2	10	ug/L
107-06-2	1,2-Dichloroethane	5	U	4.8	10	ug/L
79-01-6	Trichloroethene	5	U	2.8	10	ug/L
78-87-5	1,2-Dichloropropane	5	U	4.6	10	ug/L
75-27-4	Bromodichloromethane	5	U	3.6	10	ug/L
108-10-1	4-Methyl-2-Pentanone	25	U	21	50	ug/L
108-88-3	Toluene	5	U	3.7	10	ug/L
10061-02-6	t-1,3-Dichloropropene	5	U	2.9	10	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/10/11
Project:	CTO WE08	Date Received:	06/11/11
Client Sample ID:	SA-TW408-3842DL	SDG No.:	C2634
Lab Sample ID:	C2634-15DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041621.D	10		06/19/11	VH061911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	5	U	3.1	10	ug/L
79-00-5	1,1,2-Trichloroethane	5	U	3.8	10	ug/L
591-78-6	2-Hexanone	25	U	19	50	ug/L
124-48-1	Dibromochloromethane	5	U	2	10	ug/L
106-93-4	1,2-Dibromoethane	5	U	4.1	10	ug/L
127-18-4	Tetrachloroethene	5	U	2.7	10	ug/L
108-90-7	Chlorobenzene	5	U	4.9	10	ug/L
100-41-4	Ethyl Benzene	5	U	2	10	ug/L
179601-23-1	m/p-Xylenes	10	U	9.5	20	ug/L
95-47-6	o-Xylene	5	U	4.3	10	ug/L
100-42-5	Styrene	5	U	3.6	10	ug/L
75-25-2	Bromoform	5	U	4.7	10	ug/L
98-82-8	Isopropylbenzene	5	U	4.5	10	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	5	U	3.1	10	ug/L
541-73-1	1,3-Dichlorobenzene	5	U	4.3	10	ug/L
106-46-7	1,4-Dichlorobenzene	5	U	3.2	10	ug/L
95-50-1	1,2-Dichlorobenzene	5	U	4.5	10	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	5	U	4.6	10	ug/L
120-82-1	1,2,4-Trichlorobenzene	5	U	2	10	ug/L
87-61-6	1,2,3-Trichlorobenzene	5	U	2	10	ug/L
123-91-1	1,4-Dioxane	100	U	200	200	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	58.4		70 - 120	117%	SPK: 50
1868-53-7	Dibromofluoromethane	51.5		85 - 115	103%	SPK: 50
2037-26-5	Toluene-d8	57.4		85 - 120	115%	SPK: 50
460-00-4	4-Bromofluorobenzene	55.1		75 - 120	110%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	387182	4.08			
540-36-3	1,4-Difluorobenzene	764426	4.6			
3114-55-4	Chlorobenzene-d5	705163	7.95			
3855-82-1	1,4-Dichlorobenzene-d4	308469	10.44			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/10/11
Project:	CTO WE08	Date Received:	06/11/11
Client Sample ID:	SA-TW408-4347	SDG No.:	C2634
Lab Sample ID:	C2634-16	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041590.D	1		06/19/11	VH061811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	4.7		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	3.3		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	50		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	11		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/10/11
Project:	CTO WE08	Date Received:	06/11/11
Client Sample ID:	SA-TW408-4347	SDG No.:	C2634
Lab Sample ID:	C2634-16	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041590.D	1		06/19/11	VH061811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	53.2		70 - 120	106%	SPK: 50
1868-53-7	Dibromofluoromethane	55		85 - 115	110%	SPK: 50
2037-26-5	Toluene-d8	54.8		85 - 120	110%	SPK: 50
460-00-4	4-Bromofluorobenzene	58.1		75 - 120	116%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	323152	4.08			
540-36-3	1,4-Difluorobenzene	528927	4.6			
3114-55-4	Chlorobenzene-d5	475906	7.95			
3855-82-1	1,4-Dichlorobenzene-d4	227340	10.44			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/09/11
Project:	CTO WE08	Date Received:	06/11/11
Client Sample ID:	SA-TW409-3337	SDG No.:	C2634
Lab Sample ID:	C2634-07	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041613.D	1		06/19/11	VH061911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	0.5	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	0.83	J	0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	13		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/09/11
Project:	CTO WE08	Date Received:	06/11/11
Client Sample ID:	SA-TW409-3337	SDG No.:	C2634
Lab Sample ID:	C2634-07	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041613.D	1		06/19/11	VH061911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	59		70 - 120	118%	SPK: 50
1868-53-7	Dibromofluoromethane	50.6		85 - 115	101%	SPK: 50
2037-26-5	Toluene-d8	54.7		85 - 120	109%	SPK: 50
460-00-4	4-Bromofluorobenzene	54.4		75 - 120	109%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	441208	4.08			
540-36-3	1,4-Difluorobenzene	860456	4.59			
3114-55-4	Chlorobenzene-d5	733528	7.94			
3855-82-1	1,4-Dichlorobenzene-d4	312257	10.44			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/09/11
Project:	CTO WE08	Date Received:	06/11/11
Client Sample ID:	SA-TW409-3842	SDG No.:	C2634
Lab Sample ID:	C2634-08	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041591.D	1		06/19/11	VH061811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	0.5	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	0.5	U	0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	3.7		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/09/11
Project:	CTO WE08	Date Received:	06/11/11
Client Sample ID:	SA-TW409-3842	SDG No.:	C2634
Lab Sample ID:	C2634-08	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041591.D	1		06/19/11	VH061811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	57.2		70 - 120	114%	SPK: 50
1868-53-7	Dibromofluoromethane	52		85 - 115	104%	SPK: 50
2037-26-5	Toluene-d8	55.8		85 - 120	112%	SPK: 50
460-00-4	4-Bromofluorobenzene	53.4		75 - 120	107%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	324369	4.08			
540-36-3	1,4-Difluorobenzene	521140	4.6			
3114-55-4	Chlorobenzene-d5	442555	7.95			
3855-82-1	1,4-Dichlorobenzene-d4	204454	10.44			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/09/11
Project:	CTO WE08	Date Received:	06/11/11
Client Sample ID:	SA-TW409-4347	SDG No.:	C2634
Lab Sample ID:	C2634-11	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035661.D	1		06/20/11	vg061911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	0.5	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	0.5	U	0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	7.2		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/09/11
Project:	CTO WE08	Date Received:	06/11/11
Client Sample ID:	SA-TW409-4347	SDG No.:	C2634
Lab Sample ID:	C2634-11	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035661.D	1		06/20/11	vg061911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	50.8		70 - 120	102%	SPK: 50
1868-53-7	Dibromofluoromethane	49.6		85 - 115	99%	SPK: 50
2037-26-5	Toluene-d8	45.6		85 - 120	91%	SPK: 50
460-00-4	4-Bromofluorobenzene	42.9		75 - 120	86%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	621243	3.97			
540-36-3	1,4-Difluorobenzene	1093080	4.8			
3114-55-4	Chlorobenzene-d5	721404	9.74			
3855-82-1	1,4-Dichlorobenzene-d4	299984	13.44			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/09/11
Project:	CTO WE08	Date Received:	06/11/11
Client Sample ID:	SA-TW410-3337	SDG No.:	C2634
Lab Sample ID:	C2634-03	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041580.D	1		06/18/11	VH061811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	5.2		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	1.3		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	22		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/09/11
Project:	CTO WE08	Date Received:	06/11/11
Client Sample ID:	SA-TW410-3337	SDG No.:	C2634
Lab Sample ID:	C2634-03	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041580.D	1		06/18/11	VH061811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	58.6		70 - 120	117%	SPK: 50
1868-53-7	Dibromofluoromethane	50.6		85 - 115	101%	SPK: 50
2037-26-5	Toluene-d8	55.9		85 - 120	112%	SPK: 50
460-00-4	4-Bromofluorobenzene	50.2		75 - 120	100%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	448954	4.08			
540-36-3	1,4-Difluorobenzene	816054	4.59			
3114-55-4	Chlorobenzene-d5	696277	7.94			
3855-82-1	1,4-Dichlorobenzene-d4	281159	10.44			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/09/11
Project:	CTO WE08	Date Received:	06/11/11
Client Sample ID:	SA-TW410-3842	SDG No.:	C2634
Lab Sample ID:	C2634-04	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041615.D	1		06/19/11	VH061911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	0.5	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	0.93	J	0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	11		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/09/11
Project:	CTO WE08	Date Received:	06/11/11
Client Sample ID:	SA-TW410-3842	SDG No.:	C2634
Lab Sample ID:	C2634-04	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041615.D	1		06/19/11	VH061911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	60.2		70 - 120	120%	SPK: 50
1868-53-7	Dibromofluoromethane	47.8		85 - 115	96%	SPK: 50
2037-26-5	Toluene-d8	55.8		85 - 120	112%	SPK: 50
460-00-4	4-Bromofluorobenzene	51.9		75 - 120	104%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	446176	4.08			
540-36-3	1,4-Difluorobenzene	926731	4.61			
3114-55-4	Chlorobenzene-d5	778544	7.96			
3855-82-1	1,4-Dichlorobenzene-d4	324881	10.45			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/09/11
Project:	CTO WE08	Date Received:	06/11/11
Client Sample ID:	SA-DUP04-20110609 →SA-TW410-3842	SDG No.:	C2634
Lab Sample ID:	C2634-06	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041583.D	1		06/18/11	VH061811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	0.5	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	0.76	J	0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	10		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/09/11
Project:	CTO WE08	Date Received:	06/11/11
Client Sample ID:	SA-DUP04-20110609 →SA-TW410-3842	SDG No.:	C2634
Lab Sample ID:	C2634-06	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041583.D	1		06/18/11	VH061811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	51.7		70 - 120	103%	SPK: 50
1868-53-7	Dibromofluoromethane	53.7		85 - 115	107%	SPK: 50
2037-26-5	Toluene-d8	59		85 - 120	118%	SPK: 50
460-00-4	4-Bromofluorobenzene	51.8		75 - 120	104%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	442237	4.08			
540-36-3	1,4-Difluorobenzene	727522	4.59			
3114-55-4	Chlorobenzene-d5	631225	7.95			
3855-82-1	1,4-Dichlorobenzene-d4	264638	10.44			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/09/11
Project:	CTO WE08	Date Received:	06/11/11
Client Sample ID:	SA-TW410-4347	SDG No.:	C2634
Lab Sample ID:	C2634-05	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041582.D	1		06/18/11	VH061811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	0.5	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	1.2		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	25		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/09/11
Project:	CTO WE08	Date Received:	06/11/11
Client Sample ID:	SA-TW410-4347	SDG No.:	C2634
Lab Sample ID:	C2634-05	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041582.D	1		06/18/11	VH061811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	54.1		70 - 120	108%	SPK: 50
1868-53-7	Dibromofluoromethane	51.9		85 - 115	104%	SPK: 50
2037-26-5	Toluene-d8	54.3		85 - 120	109%	SPK: 50
460-00-4	4-Bromofluorobenzene	52.8		75 - 120	106%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	346054	4.08			
540-36-3	1,4-Difluorobenzene	639315	4.6			
3114-55-4	Chlorobenzene-d5	563383	7.95			
3855-82-1	1,4-Dichlorobenzene-d4	251257	10.44			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/09/11
Project:	CTO WE08	Date Received:	06/11/11
Client Sample ID:	SA-TB04-20110609	SDG No.:	C2634
Lab Sample ID:	C2634-01	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041579.D	1		06/18/11	VH061811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	0.5	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	0.5	U	0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	0.5	U	0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/09/11
Project:	CTO WE08	Date Received:	06/11/11
Client Sample ID:	SA-TB04-20110609	SDG No.:	C2634
Lab Sample ID:	C2634-01	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041579.D	1		06/18/11	VH061811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	60.7	*	70 - 120	121%	SPK: 50
1868-53-7	Dibromofluoromethane	54.3		85 - 115	109%	SPK: 50
2037-26-5	Toluene-d8	57.3		85 - 120	115%	SPK: 50
460-00-4	4-Bromofluorobenzene	56.7		75 - 120	113%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	336735	4.08			
540-36-3	1,4-Difluorobenzene	627510	4.6			
3114-55-4	Chlorobenzene-d5	558269	7.95			
3855-82-1	1,4-Dichlorobenzene-d4	267372	10.44			
TENTATIVE IDENTIFIED COMPOUNDS						

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/09/11
Project:	CTO WE08	Date Received:	06/11/11
Client Sample ID:	SA-TB04-20110609	SDG No.:	C2634
Lab Sample ID:	C2634-01	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041579.D	1		06/18/11	VH061811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
	unknown9.57	50	J		9.57	ug/L

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/09/11
Project:	CTO WE08	Date Received:	06/11/11
Client Sample ID:	SA-TB04-20110609RE	SDG No.:	C2634
Lab Sample ID:	C2634-01RE	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041614.D	1		06/19/11	VH061911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	0.5	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	0.5	U	0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	0.5	U	0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/09/11
Project:	CTO WE08	Date Received:	06/11/11
Client Sample ID:	SA-TB04-20110609RE	SDG No.:	C2634
Lab Sample ID:	C2634-01RE	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041614.D	1		06/19/11	VH061911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	62.8	*	70 - 120	126%	SPK: 50
1868-53-7	Dibromofluoromethane	51.1		85 - 115	102%	SPK: 50
2037-26-5	Toluene-d8	55.8		85 - 120	112%	SPK: 50
460-00-4	4-Bromofluorobenzene	58.9		75 - 120	118%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	376533	4.08			
540-36-3	1,4-Difluorobenzene	716180	4.6			
3114-55-4	Chlorobenzene-d5	655471	7.95			
3855-82-1	1,4-Dichlorobenzene-d4	322363	10.43			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/09/11
Project:	CTO WE08	Date Received:	06/11/11
Client Sample ID:	SA-TW409-3842MS	SDG No.:	C2634
Lab Sample ID:	C2634-09MS	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041592.D	1		06/19/11	VH061811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	56		0.2	1	ug/L
74-87-3	Chloromethane	70		0.2	1	ug/L
75-01-4	Vinyl Chloride	65		0.34	1	ug/L
74-83-9	Bromomethane	50		0.2	1	ug/L
75-00-3	Chloroethane	48		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	59		0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	57		0.45	1	ug/L
75-35-4	1,1-Dichloroethene	57		0.47	1	ug/L
67-64-1	Acetone	290		0.5	5	ug/L
75-15-0	Carbon Disulfide	62		0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	61		0.35	1	ug/L
79-20-9	Methyl Acetate	66		0.2	1	ug/L
75-09-2	Methylene Chloride	59		0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	55		0.41	1	ug/L
75-34-3	1,1-Dichloroethane	69		0.36	1	ug/L
110-82-7	Cyclohexane	57		0.2	1	ug/L
78-93-3	2-Butanone	310		1.3	5	ug/L
56-23-5	Carbon Tetrachloride	52		0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	58		0.35	1	ug/L
74-97-5	Bromochloromethane	53		0.2	1	ug/L
67-66-3	Chloroform	58		0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	63		0.4	1	ug/L
108-87-2	Methylcyclohexane	44		0.2	1	ug/L
71-43-2	Benzene	54		0.32	1	ug/L
107-06-2	1,2-Dichloroethane	56		0.48	1	ug/L
79-01-6	Trichloroethene	42		0.28	1	ug/L
78-87-5	1,2-Dichloropropane	52		0.46	1	ug/L
75-27-4	Bromodichloromethane	53		0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	310		2.1	5	ug/L
108-88-3	Toluene	47		0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	50		0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/09/11
Project:	CTO WE08	Date Received:	06/11/11
Client Sample ID:	SA-TW409-3842MS	SDG No.:	C2634
Lab Sample ID:	C2634-09MS	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041592.D	1		06/19/11	VH061811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	50		0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	52		0.38	1	ug/L
591-78-6	2-Hexanone	250		1.9	5	ug/L
124-48-1	Dibromochloromethane	49		0.2	1	ug/L
106-93-4	1,2-Dibromoethane	48		0.41	1	ug/L
127-18-4	Tetrachloroethene	28		0.27	1	ug/L
108-90-7	Chlorobenzene	42		0.49	1	ug/L
100-41-4	Ethyl Benzene	42		0.2	1	ug/L
179601-23-1	m/p-Xylenes	86		0.95	2	ug/L
95-47-6	o-Xylene	44		0.43	1	ug/L
100-42-5	Styrene	43		0.36	1	ug/L
75-25-2	Bromoform	42		0.47	1	ug/L
98-82-8	Isopropylbenzene	39		0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	44		0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	42		0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	41		0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	40		0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	46		0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	31		0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	34		0.2	1	ug/L
123-91-1	1,4-Dioxane	590		20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	65.2	*	70 - 120	130%	SPK: 50
1868-53-7	Dibromofluoromethane	54.8		85 - 115	110%	SPK: 50
2037-26-5	Toluene-d8	55.8		85 - 120	112%	SPK: 50
460-00-4	4-Bromofluorobenzene	63.8	*	75 - 120	128%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	371474	4.08			
540-36-3	1,4-Difluorobenzene	690038	4.6			
3114-55-4	Chlorobenzene-d5	648463	7.95			
3855-82-1	1,4-Dichlorobenzene-d4	336523	10.44			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/09/11
Project:	CTO WE08	Date Received:	06/11/11
Client Sample ID:	SA-TW409-3842MSD	SDG No.:	C2634
Lab Sample ID:	C2634-10MSD	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041593.D	1		06/19/11	VH061811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	57		0.2	1	ug/L
74-87-3	Chloromethane	67		0.2	1	ug/L
75-01-4	Vinyl Chloride	63		0.34	1	ug/L
74-83-9	Bromomethane	49		0.2	1	ug/L
75-00-3	Chloroethane	46		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	57		0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	60		0.45	1	ug/L
75-35-4	1,1-Dichloroethene	55		0.47	1	ug/L
67-64-1	Acetone	260		0.5	5	ug/L
75-15-0	Carbon Disulfide	56		0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	57		0.35	1	ug/L
79-20-9	Methyl Acetate	61		0.2	1	ug/L
75-09-2	Methylene Chloride	55		0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	53		0.41	1	ug/L
75-34-3	1,1-Dichloroethane	63		0.36	1	ug/L
110-82-7	Cyclohexane	55		0.2	1	ug/L
78-93-3	2-Butanone	270		1.3	5	ug/L
56-23-5	Carbon Tetrachloride	47		0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	53		0.35	1	ug/L
74-97-5	Bromochloromethane	47		0.2	1	ug/L
67-66-3	Chloroform	55		0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	53		0.4	1	ug/L
108-87-2	Methylcyclohexane	45		0.2	1	ug/L
71-43-2	Benzene	48		0.32	1	ug/L
107-06-2	1,2-Dichloroethane	50		0.48	1	ug/L
79-01-6	Trichloroethene	40		0.28	1	ug/L
78-87-5	1,2-Dichloropropane	49		0.46	1	ug/L
75-27-4	Bromodichloromethane	48		0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	280		2.1	5	ug/L
108-88-3	Toluene	44		0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	47		0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/09/11
Project:	CTO WE08	Date Received:	06/11/11
Client Sample ID:	SA-TW409-3842MSD	SDG No.:	C2634
Lab Sample ID:	C2634-10MSD	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041593.D	1		06/19/11	VH061811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	46		0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	47		0.38	1	ug/L
591-78-6	2-Hexanone	240		1.9	5	ug/L
124-48-1	Dibromochloromethane	46		0.2	1	ug/L
106-93-4	1,2-Dibromoethane	45		0.41	1	ug/L
127-18-4	Tetrachloroethene	27		0.27	1	ug/L
108-90-7	Chlorobenzene	40		0.49	1	ug/L
100-41-4	Ethyl Benzene	41		0.2	1	ug/L
179601-23-1	m/p-Xylenes	81		0.95	2	ug/L
95-47-6	o-Xylene	43		0.43	1	ug/L
100-42-5	Styrene	43		0.36	1	ug/L
75-25-2	Bromoform	41		0.47	1	ug/L
98-82-8	Isopropylbenzene	43		0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	47		0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	45		0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	43		0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	42		0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	48		0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	34		0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	34		0.2	1	ug/L
123-91-1	1,4-Dioxane	500		20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	60.2		70 - 120	120%	SPK: 50
1868-53-7	Dibromofluoromethane	52.4		85 - 115	105%	SPK: 50
2037-26-5	Toluene-d8	55		85 - 120	110%	SPK: 50
460-00-4	4-Bromofluorobenzene	58		75 - 120	116%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	458871	4.08			
540-36-3	1,4-Difluorobenzene	838455	4.6			
3114-55-4	Chlorobenzene-d5	752965	7.95			
3855-82-1	1,4-Dichlorobenzene-d4	332824	10.44			

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ANALYTICAL RESULTS SUMMARY

PROJECT NAME : CTO WE08

TETRA TECH NUS, INC.
661 Anderson Drive

Pittsburgh , Pennsylvania - 15220-2745
Phone No: 4129218361

ORDER ID : C2797
ATTENTION : David Brayack

ACCREDITED IN ACCORDANCE WITH nelac

DoD ELAP

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Cover Page

Order ID : C2797

Project ID : CTO WE08

Client : Tetra Tech NUS, Inc.

Lab Sample Number	Client Sample Number
C2797-01	SA-PZ158I1-20110620
C2797-02	SA-PZ158I-20110620
C2797-03	SA-TB20110620
C2797-04	SA-PZ149I1-20110620
C2797-05	SA-PZ139I-20110620
C2797-06	SA-PZ161I-20110621
C2797-07	SA-PZ133I-20110621
C2797-08	SA-PZ133I120110621
C2797-09	SA-PZ135I-20110621
C2797-10	SA-PZ136I-20110621

I certify that the data package is in compliance with the terms and conditions of the contract,both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : Mildred V Reyes

Mildred V. Reyes, QA/QC Supervisor
2011.07.14 15:22:58 -04'00'

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

CHEMTECH

CASE NARRATIVE

Tetra Tech NUS, Inc.
Project Name: CTO WE08
Project # N/A
Project Manger name: David Brayack
Chemtech Project # C2797
Test Name: VOCMS Group1

A. Number of Samples and Date of Receipt:
10 Water samples were received on 06/23/2011.

B. Parameters
According to the Chain of Custody document, the following analyses were requested: Metals Group3 and VOCMS Group1. This data package contains results for VOCMS Group1.

C. Analytical Techniques:
The analysis performed on instrument MSVOA_G were done using GC column RTX-VMS which is 20 meters, 0.18 mm id, 1.0 um df, Restek Cat. #49914. The Trap was supplied by OI Analytical, OI #10 Trap , OI Eclipse 4660 Concentrator.The analysis performed on instrument MSVOA_H were done using GC column RTX-VMS which is 20 meters, 0.18 mm id, 1.0 um df, Restek Cat. #49914. The Trap was supplied BY OI Analytical, OI #10 Trap , OI Eclipse 4660 Concentrator.The analysis of VOCMS Group1 was based on method 8260B.

D. QA/ QC Samples:
The Holding Times were met for all analysis.
The Surrogate recoveries met the acceptable criteria except for VLCS03 [Dibromofluoromethane - 82%], VLCSD03 [1,2-Dichloroethane-d4 - 121%], SA-PZ158I-20110620 [4-Bromofluorobenzene - 66%, Dibromofluoromethane - 60%, Toluene-d8 - 67%], SA-PZ158I-20110620RE [4-Bromofluorobenzene - 128%, Dibromofluoromethane - 82%], SA-TB20110620 [4-Bromofluorobenzene - 50%, Dibromofluoromethane - 52%, Toluene-d8 - 52%], SA-TB20110620RE [4-Bromofluorobenzene - 125%, Dibromofluoromethane - 84%], SA-PZ149I1-20110620 [4-Bromofluorobenzene - 56%, Dibromofluoromethane - 57%, Toluene-d8 - 56%], SA-PZ149I1-20110620RE [4-Bromofluorobenzene - 131%, Dibromofluoromethane - 81%], SA-PZ161I-20110621 [1,2-Dichloroethane-d4 - 129%], SA-PZ161I-20110621DL [1,2-Dichloroethane-d4 - 121%, 4-Bromofluorobenzene - 147%], SA-PZ133I-20110621 [1,2-Dichloroethane-d4 - 142%], SA-PZ133I-20110621RE [4-Bromofluorobenzene - 132% and Dibromofluoromethane - 84%].
The Internal Standards Areas met the acceptable requirements except for SA-PZ158I-20110620, SA-TB20110620 and SA-PZ149I1-20110620. Samples failing for surrogate and Internal Standard were reanalyzed and diluted.
The Retention Times were acceptable for all samples.

The RPD for {BSH0629W2} with File ID: VH041935.D recoveries met criteria except for 1,4-Dioxane[31%] .
The Blank Spike for {BSH0628W2} with File ID: VH041896.D met requirements for all samples except for Acetone[160%], Chloromethane[140%] .The Blank Spike for {BSH0629W1} with File ID: VH041934.D met requirements for all samples except for Chloromethane[140%],Acetone [150%],.The Blank Spike Duplicate for {BSH0629W2} with File ID: VH041935.D met requirements for all samples except for Acetone[160%], Chloromethane[145%] and Methyl Acetate[160%] but it is not present in the associates sample.
The Blank analysis indicated presence of Methylene Chloride[0.94 ug/L] FileID:VH041895.D{VBH0628W2} due to possible lab contamination.
The Initial Calibration met the requirements .
The Continuous Calibration File ID VG035947.D met the requirements except for Acetone and 2-Butanone .The Continuous Calibration File ID VH041893.D met the requirements except for Carbon Disulfide, Methyl Acetate,4-Methyl-2-Pentanone,1,2-Dibromo-3-Chloropropane and Acetone .The Continuous Calibration File ID VH041931.D met the requirements except for Chloromethane,Methyl Acetate,2-Butanone,Chloroform,1,1,1-Trichloroethane,4-Methyl-2-Pentanone,1,1,2,2-Tetrachloroethane,1,2-Dibromo-3-Chloropropane and Acetone but the associate samples have no hit for this compounds.
The Tuning criteria met requirements.
Samples SA-PZ158I1-20110620 was diluted due to bad matrix.
Samples SA-PZ161I-20110621, SA-PZ133I120110621 were diluted due to high concentrations.

E. Additional Comments:
Please use %D calculated based on Avg RF and CCRF for all compounds using Average Response Factor when the %RSD value for a compound is <15% for the Initial Calibration curve and use %D calculated based on Amount added and Calculated amount for all compounds using Linear Regression when the %RSD value for a compound is > 15% for the Initial Calibration curve for SW-846 analysis.

F. Manual Integration Comments:
Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature___ Mildred V Reyes

Mildred V. Reyes, QA/QC Supervisor
2011.07.14 15:22:48 -04'00'

CHEMTECH

CASE NARRATIVE

Tetra Tech NUS, Inc.
Project Name: CTO WE08
Project # N/A
Project Manger name: David Brayack
Chemtech Project # C2797
Test Name: Metals Group3

A. Number of Samples and Date of Receipt:
10 Water samples were received on 06/23/2011.

B. Parameters:
According to the Chain of Custody document, the following analyses were requested: Metals Group3 and VOCMS Group1. This data package contains results for Metals Group3.

C. Analytical Techniques:
The analysis of Metals Group3 was based on method 6010B and digestion based on method 3010 (waters).

D. QA/ QC Samples:
The Holding Times were met for all analysis.
The Blank Spike met requirements for all samples.
The Duplicate analysis met criteria for all samples.
The Matrix Spike analysis met criteria for all samples.
The Matrix Spike Duplicate analysis met criteria for all samples.
The Blank analysis did not indicate the presence of lab contamination.
The Calibration met the requirements.
The Serial Dilution met the acceptable requirements.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature Mildred V Reyes

Mildred V. Reyes, QA/QC Supervisor
2011.07.14 15:22:25 -04'00'

I Mildred V. Reyes, as the designated Quality Assurance ~~Officer~~ Supervisor, hereby attest that all electronic deliverables have been thoroughly reviewed and are in agreement with the associated hardcopy data. The enclosed electronic files have been reviewed for accuracy (including significant figures), completeness and format. The laboratory will be responsible for any labor time necessary to correct enclosed electronic deliverables that have been found to be in error. I can be reached at (908) 789-8900 if there are any questions or problems with the enclosed electronic deliverables.

Signature: Mildred V Reyes Title: QA/QC Supervisor Date: 7/14/11

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ133I-20110621	SDG No.:	C2797
Lab Sample ID:	C2797-07	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041911.D	1		06/29/11	VH062811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	7.4		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	4.2		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	90		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	10		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ133I-20110621	SDG No.:	C2797
Lab Sample ID:	C2797-07	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041911.D	1		06/29/11	VH062811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	71.1	*	70 - 120	142%	SPK: 50
1868-53-7	Dibromofluoromethane	45.6		85 - 115	91%	SPK: 50
2037-26-5	Toluene-d8	51.8		85 - 120	104%	SPK: 50
460-00-4	4-Bromofluorobenzene	48.8		75 - 120	98%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	287889	4.08			
540-36-3	1,4-Difluorobenzene	659646	4.59			
3114-55-4	Chlorobenzene-d5	528069	7.94			
3855-82-1	1,4-Dichlorobenzene-d4	215103	10.44			

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ133I-20110621RE	SDG No.:	C2797
Lab Sample ID:	C2797-07RE	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041946.D	1		06/29/11	VH062911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	6.8		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	3.8		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	73		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	11		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ133I-20110621RE	SDG No.:	C2797
Lab Sample ID:	C2797-07RE	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041946.D	1		06/29/11	VH062911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	52.7		70 - 120	105%	SPK: 50
1868-53-7	Dibromofluoromethane	42	*	85 - 115	84%	SPK: 50
2037-26-5	Toluene-d8	54.1		85 - 120	108%	SPK: 50
460-00-4	4-Bromofluorobenzene	65.8	*	75 - 120	132%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	601085	4.08			
540-36-3	1,4-Difluorobenzene	1308960	4.59			
3114-55-4	Chlorobenzene-d5	1220780	7.93			
3855-82-1	1,4-Dichlorobenzene-d4	531095	10.43			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ133I-20110621	SDG No.:	C2797
Lab Sample ID:	C2797-07	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7439-89-6	Iron	45.1	J	1	20.4	50	ug/L	06/24/11	06/28/11	SW6010B
7439-96-5	Manganese	870		1	1.7	10	ug/L	06/24/11	06/28/11	SW6010B

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	Metals Group3				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ133I120110621	SDG No.:	C2797
Lab Sample ID:	C2797-08	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035957.D	1		06/30/11	VG063011

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	15		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	8.3		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	150	E	0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	14		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ133I120110621	SDG No.:	C2797
Lab Sample ID:	C2797-08	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035957.D	1		06/30/11	VG063011

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	54.7		70 - 120	109%	SPK: 50
1868-53-7	Dibromofluoromethane	49.7		85 - 115	99%	SPK: 50
2037-26-5	Toluene-d8	50.3		85 - 120	101%	SPK: 50
460-00-4	4-Bromofluorobenzene	45.1		75 - 120	90%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	584728	3.93			
540-36-3	1,4-Difluorobenzene	1041390	4.74			
3114-55-4	Chlorobenzene-d5	743583	9.69			
3855-82-1	1,4-Dichlorobenzene-d4	266987	13.4			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ133I120110621DL	SDG No.:	C2797
Lab Sample ID:	C2797-08DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035958.D	10		06/30/11	VG063011

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	5	U	2	10	ug/L
74-87-3	Chloromethane	5	U	2	10	ug/L
75-01-4	Vinyl Chloride	5	U	3.4	10	ug/L
74-83-9	Bromomethane	5	U	2	10	ug/L
75-00-3	Chloroethane	30	D	2	10	ug/L
75-69-4	Trichlorofluoromethane	5	U	3.5	10	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	5	U	4.5	10	ug/L
75-35-4	1,1-Dichloroethene	9.5	JD	4.7	10	ug/L
67-64-1	Acetone	25	U	5	50	ug/L
75-15-0	Carbon Disulfide	5	U	2	10	ug/L
1634-04-4	Methyl tert-butyl Ether	5	U	3.5	10	ug/L
79-20-9	Methyl Acetate	5	U	2	10	ug/L
75-09-2	Methylene Chloride	5	U	4.1	10	ug/L
156-60-5	trans-1,2-Dichloroethene	5	U	4.1	10	ug/L
75-34-3	1,1-Dichloroethane	170	D	3.6	10	ug/L
110-82-7	Cyclohexane	5	U	2	10	ug/L
78-93-3	2-Butanone	25	U	13	50	ug/L
56-23-5	Carbon Tetrachloride	5	U	2	10	ug/L
156-59-2	cis-1,2-Dichloroethene	5	U	3.5	10	ug/L
74-97-5	Bromochloromethane	5	U	2	10	ug/L
67-66-3	Chloroform	5	U	3.4	10	ug/L
71-55-6	1,1,1-Trichloroethane	5	U	4	10	ug/L
108-87-2	Methylcyclohexane	5	U	2	10	ug/L
71-43-2	Benzene	5	U	3.2	10	ug/L
107-06-2	1,2-Dichloroethane	5	U	4.8	10	ug/L
79-01-6	Trichloroethene	5	U	2.8	10	ug/L
78-87-5	1,2-Dichloropropane	5	U	4.6	10	ug/L
75-27-4	Bromodichloromethane	5	U	3.6	10	ug/L
108-10-1	4-Methyl-2-Pentanone	25	U	21	50	ug/L
108-88-3	Toluene	5	U	3.7	10	ug/L
10061-02-6	t-1,3-Dichloropropene	5	U	2.9	10	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ133I120110621DL	SDG No.:	C2797
Lab Sample ID:	C2797-08DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035958.D	10		06/30/11	VG063011

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	5	U	3.1	10	ug/L
79-00-5	1,1,2-Trichloroethane	5	U	3.8	10	ug/L
591-78-6	2-Hexanone	25	U	19	50	ug/L
124-48-1	Dibromochloromethane	5	U	2	10	ug/L
106-93-4	1,2-Dibromoethane	5	U	4.1	10	ug/L
127-18-4	Tetrachloroethene	5	U	2.7	10	ug/L
108-90-7	Chlorobenzene	5	U	4.9	10	ug/L
100-41-4	Ethyl Benzene	5	U	2	10	ug/L
179601-23-1	m/p-Xylenes	10	U	9.5	20	ug/L
95-47-6	o-Xylene	5	U	4.3	10	ug/L
100-42-5	Styrene	5	U	3.6	10	ug/L
75-25-2	Bromoform	5	U	4.7	10	ug/L
98-82-8	Isopropylbenzene	5	U	4.5	10	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	5	U	3.1	10	ug/L
541-73-1	1,3-Dichlorobenzene	5	U	4.3	10	ug/L
106-46-7	1,4-Dichlorobenzene	5	U	3.2	10	ug/L
95-50-1	1,2-Dichlorobenzene	5	U	4.5	10	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	5	U	4.6	10	ug/L
120-82-1	1,2,4-Trichlorobenzene	5	U	2	10	ug/L
87-61-6	1,2,3-Trichlorobenzene	5	U	2	10	ug/L
123-91-1	1,4-Dioxane	100	U	200	200	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	55.7		70 - 120	111%	SPK: 50
1868-53-7	Dibromofluoromethane	50		85 - 115	100%	SPK: 50
2037-26-5	Toluene-d8	50.8		85 - 120	102%	SPK: 50
460-00-4	4-Bromofluorobenzene	46.2		75 - 120	92%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	568755	3.92			
540-36-3	1,4-Difluorobenzene	1007970	4.74			
3114-55-4	Chlorobenzene-d5	702496	9.7			
3855-82-1	1,4-Dichlorobenzene-d4	264272	13.4			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ133I120110621	SDG No.:	C2797
Lab Sample ID:	C2797-08	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7439-89-6	Iron	46.1	J	1	20.4	50	ug/L	06/24/11	06/28/11	SW6010B
7439-96-5	Manganese	2760		1	1.7	10	ug/L	06/24/11	06/28/11	SW6010B

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	Metals Group3				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ135I-20110621	SDG No.:	C2797
Lab Sample ID:	C2797-09	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035961.D	1		06/30/11	VG063011

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	2.1		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.69	J	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	1.9		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	27		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	4.6		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ135I-20110621	SDG No.:	C2797
Lab Sample ID:	C2797-09	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035961.D	1		06/30/11	VG063011

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	54.2		70 - 120	108%	SPK: 50
1868-53-7	Dibromofluoromethane	49.9		85 - 115	100%	SPK: 50
2037-26-5	Toluene-d8	51		85 - 120	102%	SPK: 50
460-00-4	4-Bromofluorobenzene	46		75 - 120	92%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	577745	3.93			
540-36-3	1,4-Difluorobenzene	977713	4.74			
3114-55-4	Chlorobenzene-d5	669910	9.7			
3855-82-1	1,4-Dichlorobenzene-d4	267936	13.41			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ135I-20110621	SDG No.:	C2797
Lab Sample ID:	C2797-09	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7439-89-6	Iron	26.7	J	1	20.4	50	ug/L	06/24/11	06/28/11	SW6010B
7439-96-5	Manganese	927		1	1.7	10	ug/L	06/24/11	06/28/11	SW6010B

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	Metals Group3				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ136I-20110621	SDG No.:	C2797
Lab Sample ID:	C2797-10	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035962.D	1		06/30/11	VG063011

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	0.5	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.65	J	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	0.5	U	0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	1.5		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ136I-20110621	SDG No.:	C2797
Lab Sample ID:	C2797-10	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035962.D	1		06/30/11	VG063011

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	56.3		70 - 120	113%	SPK: 50
1868-53-7	Dibromofluoromethane	48.5		85 - 115	97%	SPK: 50
2037-26-5	Toluene-d8	49.6		85 - 120	99%	SPK: 50
460-00-4	4-Bromofluorobenzene	43.8		75 - 120	88%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	553608	3.93			
540-36-3	1,4-Difluorobenzene	984380	4.74			
3114-55-4	Chlorobenzene-d5	670761	9.7			
3855-82-1	1,4-Dichlorobenzene-d4	259177	13.4			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ136I-20110621	SDG No.:	C2797
Lab Sample ID:	C2797-10	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7439-89-6	Iron	877		1	20.4	50	ug/L	06/24/11	06/28/11	SW6010B
7439-96-5	Manganese	1600		1	1.7	10	ug/L	06/24/11	06/28/11	SW6010B

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	Metals Group3				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/20/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ139I-20110620	SDG No.:	C2797
Lab Sample ID:	C2797-05	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035954.D	1		06/30/11	VG063011

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	0.5	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	0.5	U	0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	4.6		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/20/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ139I-20110620	SDG No.:	C2797
Lab Sample ID:	C2797-05	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035954.D	1		06/30/11	VG063011

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	53.6		70 - 120	107%	SPK: 50
1868-53-7	Dibromofluoromethane	47.9		85 - 115	96%	SPK: 50
2037-26-5	Toluene-d8	49.6		85 - 120	99%	SPK: 50
460-00-4	4-Bromofluorobenzene	43.7		75 - 120	87%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	603520	3.92			
540-36-3	1,4-Difluorobenzene	1144590	4.73			
3114-55-4	Chlorobenzene-d5	732839	9.69			
3855-82-1	1,4-Dichlorobenzene-d4	287891	13.4			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/20/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ139I-20110620	SDG No.:	C2797
Lab Sample ID:	C2797-05	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7439-89-6	Iron	40.7	J	1	20.4	50	ug/L	06/24/11	06/28/11	SW6010B
7439-96-5	Manganese	172		1	1.7	10	ug/L	06/24/11	06/28/11	SW6010B

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	Metals Group3				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/20/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ149I1-20110620	SDG No.:	C2797
Lab Sample ID:	C2797-04	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041908.D	1		06/29/11	VH062811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	21		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	1.9		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	21		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/20/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ149I1-20110620	SDG No.:	C2797
Lab Sample ID:	C2797-04	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041908.D	1		06/29/11	VH062811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	2.7		0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	5		0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	26		0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	6.6		0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	35.5		70 - 120	71%	SPK: 50
1868-53-7	Dibromofluoromethane	28.5	*	85 - 115	57%	SPK: 50
2037-26-5	Toluene-d8	28.2	*	85 - 120	56%	SPK: 50
460-00-4	4-Bromofluorobenzene	28.2	*	75 - 120	56%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	173923	4.08			
540-36-3	1,4-Difluorobenzene	336851	4.6			
3114-55-4	Chlorobenzene-d5	281375	7.94			
3855-82-1	1,4-Dichlorobenzene-d4	118017	10.44			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/20/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ149I1-20110620RE	SDG No.:	C2797
Lab Sample ID:	C2797-04RE	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041945.D	1		06/29/11	VH062911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	14		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	1.3		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	12		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/20/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ149I1-20110620RE	SDG No.:	C2797
Lab Sample ID:	C2797-04RE	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041945.D	1		06/29/11	VH062911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	1.5		0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	2.5		0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	12		0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	3.2		0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	55.6		70 - 120	111%	SPK: 50
1868-53-7	Dibromofluoromethane	40.3	*	85 - 115	81%	SPK: 50
2037-26-5	Toluene-d8	56.3		85 - 120	113%	SPK: 50
460-00-4	4-Bromofluorobenzene	65.6	*	75 - 120	131%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	633941	4.08			
540-36-3	1,4-Difluorobenzene	1423250	4.58			
3114-55-4	Chlorobenzene-d5	1333160	7.94			
3855-82-1	1,4-Dichlorobenzene-d4	620795	10.43			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/20/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ149I1-20110620	SDG No.:	C2797
Lab Sample ID:	C2797-04	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7439-89-6	Iron	112		1	20.4	50	ug/L	06/24/11	06/28/11	SW6010B
7439-96-5	Manganese	1630		1	1.7	10	ug/L	06/24/11	06/28/11	SW6010B

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	Metals Group3				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/20/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ158I-20110620	SDG No.:	C2797
Lab Sample ID:	C2797-02	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041907.D	1		06/29/11	VH062811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	14		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	5.9		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	82		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	16		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/20/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ158I-20110620	SDG No.:	C2797
Lab Sample ID:	C2797-02	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041907.D	1		06/29/11	VH062811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	45		70 - 120	90%	SPK: 50
1868-53-7	Dibromofluoromethane	29.9	*	85 - 115	60%	SPK: 50
2037-26-5	Toluene-d8	33.5	*	85 - 120	67%	SPK: 50
460-00-4	4-Bromofluorobenzene	33	*	75 - 120	66%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	306227	4.08			
540-36-3	1,4-Difluorobenzene	617979	4.59			
3114-55-4	Chlorobenzene-d5	481110	7.94			
3855-82-1	1,4-Dichlorobenzene-d4	205935	10.44			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/20/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ158I-20110620RE	SDG No.:	C2797
Lab Sample ID:	C2797-02RE	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041943.D	1		06/29/11	VH062911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	11		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	4.6		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	63		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	13		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/20/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ158I-20110620RE	SDG No.:	C2797
Lab Sample ID:	C2797-02RE	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041943.D	1		06/29/11	VH062911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	50.4		70 - 120	101%	SPK: 50
1868-53-7	Dibromofluoromethane	40.9	*	85 - 115	82%	SPK: 50
2037-26-5	Toluene-d8	54.1		85 - 120	108%	SPK: 50
460-00-4	4-Bromofluorobenzene	64	*	75 - 120	128%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	665470	4.07			
540-36-3	1,4-Difluorobenzene	1429030	4.59			
3114-55-4	Chlorobenzene-d5	1315780	7.93			
3855-82-1	1,4-Dichlorobenzene-d4	592095	10.43			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/20/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ158I-20110620	SDG No.:	C2797
Lab Sample ID:	C2797-02	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7439-89-6	Iron	6110		1	20.4	50	ug/L	06/24/11	06/28/11	SW6010B
7439-96-5	Manganese	708		1	1.7	10	ug/L	06/24/11	06/28/11	SW6010B

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	Metals Group3				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/20/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ158I1-20110620	SDG No.:	C2797
Lab Sample ID:	C2797-01	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035956.D	10		06/30/11	VG063011

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	5	U	2	10	ug/L
74-87-3	Chloromethane	5	U	2	10	ug/L
75-01-4	Vinyl Chloride	5	U	3.4	10	ug/L
74-83-9	Bromomethane	5	U	2	10	ug/L
75-00-3	Chloroethane	170		2	10	ug/L
75-69-4	Trichlorofluoromethane	5	U	3.5	10	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	5	U	4.5	10	ug/L
75-35-4	1,1-Dichloroethene	15		4.7	10	ug/L
67-64-1	Acetone	25	U	5	50	ug/L
75-15-0	Carbon Disulfide	5	U	2	10	ug/L
1634-04-4	Methyl tert-butyl Ether	5	U	3.5	10	ug/L
79-20-9	Methyl Acetate	5	U	2	10	ug/L
75-09-2	Methylene Chloride	5	U	4.1	10	ug/L
156-60-5	trans-1,2-Dichloroethene	5	U	4.1	10	ug/L
75-34-3	1,1-Dichloroethane	190		3.6	10	ug/L
110-82-7	Cyclohexane	5	U	2	10	ug/L
78-93-3	2-Butanone	25	U	13	50	ug/L
56-23-5	Carbon Tetrachloride	5	U	2	10	ug/L
156-59-2	cis-1,2-Dichloroethene	5	U	3.5	10	ug/L
74-97-5	Bromochloromethane	5	U	2	10	ug/L
67-66-3	Chloroform	5	U	3.4	10	ug/L
71-55-6	1,1,1-Trichloroethane	5	U	4	10	ug/L
108-87-2	Methylcyclohexane	5	U	2	10	ug/L
71-43-2	Benzene	5	U	3.2	10	ug/L
107-06-2	1,2-Dichloroethane	5	U	4.8	10	ug/L
79-01-6	Trichloroethene	5	U	2.8	10	ug/L
78-87-5	1,2-Dichloropropane	5	U	4.6	10	ug/L
75-27-4	Bromodichloromethane	5	U	3.6	10	ug/L
108-10-1	4-Methyl-2-Pentanone	25	U	21	50	ug/L
108-88-3	Toluene	5	U	3.7	10	ug/L
10061-02-6	t-1,3-Dichloropropene	5	U	2.9	10	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/20/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ158I1-20110620	SDG No.:	C2797
Lab Sample ID:	C2797-01	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035956.D	10		06/30/11	VG063011

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	5	U	3.1	10	ug/L
79-00-5	1,1,2-Trichloroethane	5	U	3.8	10	ug/L
591-78-6	2-Hexanone	25	U	19	50	ug/L
124-48-1	Dibromochloromethane	5	U	2	10	ug/L
106-93-4	1,2-Dibromoethane	5	U	4.1	10	ug/L
127-18-4	Tetrachloroethene	5	U	2.7	10	ug/L
108-90-7	Chlorobenzene	5	U	4.9	10	ug/L
100-41-4	Ethyl Benzene	5	U	2	10	ug/L
179601-23-1	m/p-Xylenes	10	U	9.5	20	ug/L
95-47-6	o-Xylene	5	U	4.3	10	ug/L
100-42-5	Styrene	5	U	3.6	10	ug/L
75-25-2	Bromoform	5	U	4.7	10	ug/L
98-82-8	Isopropylbenzene	5	U	4.5	10	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	5	U	3.1	10	ug/L
541-73-1	1,3-Dichlorobenzene	5	U	4.3	10	ug/L
106-46-7	1,4-Dichlorobenzene	5	U	3.2	10	ug/L
95-50-1	1,2-Dichlorobenzene	5.3	J	4.5	10	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	5	U	4.6	10	ug/L
120-82-1	1,2,4-Trichlorobenzene	6.8	J	2	10	ug/L
87-61-6	1,2,3-Trichlorobenzene	5	U	2	10	ug/L
123-91-1	1,4-Dioxane	100	U	200	200	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	54.5		70 - 120	109%	SPK: 50
1868-53-7	Dibromofluoromethane	49		85 - 115	98%	SPK: 50
2037-26-5	Toluene-d8	50.5		85 - 120	101%	SPK: 50
460-00-4	4-Bromofluorobenzene	46.7		75 - 120	93%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	596528	3.92			
540-36-3	1,4-Difluorobenzene	1043030	4.74			
3114-55-4	Chlorobenzene-d5	706467	9.7			
3855-82-1	1,4-Dichlorobenzene-d4	272458	13.4			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/20/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ158I1-20110620	SDG No.:	C2797
Lab Sample ID:	C2797-01	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7439-89-6	Iron	1370		1	20.4	50	ug/L	06/24/11	06/28/11	SW6010B
7439-96-5	Manganese	5450		1	1.7	10	ug/L	06/24/11	06/28/11	SW6010B

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	Metals Group3				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ161I-20110621	SDG No.:	C2797
Lab Sample ID:	C2797-06	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041910.D	1		06/29/11	VH062811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	16		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	13		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	220	E	0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	35		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ161I-20110621	SDG No.:	C2797
Lab Sample ID:	C2797-06	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041910.D	1		06/29/11	VH062811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	64.4	*	70 - 120	129%	SPK: 50
1868-53-7	Dibromofluoromethane	48.6		85 - 115	97%	SPK: 50
2037-26-5	Toluene-d8	53.1		85 - 120	106%	SPK: 50
460-00-4	4-Bromofluorobenzene	52.4		75 - 120	105%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	352497	4.08			
540-36-3	1,4-Difluorobenzene	687924	4.59			
3114-55-4	Chlorobenzene-d5	552819	7.95			
3855-82-1	1,4-Dichlorobenzene-d4	233129	10.44			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ161I-20110621DL	SDG No.:	C2797
Lab Sample ID:	C2797-06DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041942.D	10		06/29/11	VH062911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	5	U	2	10	ug/L
74-87-3	Chloromethane	5	U	2	10	ug/L
75-01-4	Vinyl Chloride	5	U	3.4	10	ug/L
74-83-9	Bromomethane	5	U	2	10	ug/L
75-00-3	Chloroethane	57	D	2	10	ug/L
75-69-4	Trichlorofluoromethane	5	U	3.5	10	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	5	U	4.5	10	ug/L
75-35-4	1,1-Dichloroethene	19	D	4.7	10	ug/L
67-64-1	Acetone	25	U	5	50	ug/L
75-15-0	Carbon Disulfide	5	U	2	10	ug/L
1634-04-4	Methyl tert-butyl Ether	5	U	3.5	10	ug/L
79-20-9	Methyl Acetate	5	U	2	10	ug/L
75-09-2	Methylene Chloride	5	U	4.1	10	ug/L
156-60-5	trans-1,2-Dichloroethene	5	U	4.1	10	ug/L
75-34-3	1,1-Dichloroethane	290	D	3.6	10	ug/L
110-82-7	Cyclohexane	5	U	2	10	ug/L
78-93-3	2-Butanone	25	U	13	50	ug/L
56-23-5	Carbon Tetrachloride	5	U	2	10	ug/L
156-59-2	cis-1,2-Dichloroethene	5	U	3.5	10	ug/L
74-97-5	Bromochloromethane	5	U	2	10	ug/L
67-66-3	Chloroform	5	U	3.4	10	ug/L
71-55-6	1,1,1-Trichloroethane	55	D	4	10	ug/L
108-87-2	Methylcyclohexane	5	U	2	10	ug/L
71-43-2	Benzene	5	U	3.2	10	ug/L
107-06-2	1,2-Dichloroethane	5	U	4.8	10	ug/L
79-01-6	Trichloroethene	5	U	2.8	10	ug/L
78-87-5	1,2-Dichloropropane	5	U	4.6	10	ug/L
75-27-4	Bromodichloromethane	5	U	3.6	10	ug/L
108-10-1	4-Methyl-2-Pentanone	25	U	21	50	ug/L
108-88-3	Toluene	5	U	3.7	10	ug/L
10061-02-6	t-1,3-Dichloropropene	5	U	2.9	10	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ161I-20110621DL	SDG No.:	C2797
Lab Sample ID:	C2797-06DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041942.D	10		06/29/11	VH062911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	5	U	3.1	10	ug/L
79-00-5	1,1,2-Trichloroethane	5	U	3.8	10	ug/L
591-78-6	2-Hexanone	25	U	19	50	ug/L
124-48-1	Dibromochloromethane	5	U	2	10	ug/L
106-93-4	1,2-Dibromoethane	5	U	4.1	10	ug/L
127-18-4	Tetrachloroethene	5	U	2.7	10	ug/L
108-90-7	Chlorobenzene	5	U	4.9	10	ug/L
100-41-4	Ethyl Benzene	5	U	2	10	ug/L
179601-23-1	m/p-Xylenes	10	U	9.5	20	ug/L
95-47-6	o-Xylene	5	U	4.3	10	ug/L
100-42-5	Styrene	5	U	3.6	10	ug/L
75-25-2	Bromoform	5	U	4.7	10	ug/L
98-82-8	Isopropylbenzene	5	U	4.5	10	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	5	U	3.1	10	ug/L
541-73-1	1,3-Dichlorobenzene	5	U	4.3	10	ug/L
106-46-7	1,4-Dichlorobenzene	5	U	3.2	10	ug/L
95-50-1	1,2-Dichlorobenzene	5	U	4.5	10	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	5	U	4.6	10	ug/L
120-82-1	1,2,4-Trichlorobenzene	5	U	2	10	ug/L
87-61-6	1,2,3-Trichlorobenzene	5	U	2	10	ug/L
123-91-1	1,4-Dioxane	100	U	200	200	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	60.4	*	70 - 120	121%	SPK: 50
1868-53-7	Dibromofluoromethane	44.9		85 - 115	90%	SPK: 50
2037-26-5	Toluene-d8	56.7		85 - 120	113%	SPK: 50
460-00-4	4-Bromofluorobenzene	73.6	*	75 - 120	147%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	489297	4.07			
540-36-3	1,4-Difluorobenzene	1094280	4.59			
3114-55-4	Chlorobenzene-d5	1073000	7.93			
3855-82-1	1,4-Dichlorobenzene-d4	571059	10.43			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ161I-20110621	SDG No.:	C2797
Lab Sample ID:	C2797-06	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7439-89-6	Iron	11800		1	20.4	50	ug/L	06/24/11	06/28/11	SW6010B
7439-96-5	Manganese	2770		1	1.7	10	ug/L	06/24/11	06/28/11	SW6010B

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	Metals Group3				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/20/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-TB20110620	SDG No.:	C2797
Lab Sample ID:	C2797-03	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041903.D	1		06/28/11	VH062811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	0.5	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	0.5	U	0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	9	B	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	0.5	U	0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	8.7		1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/20/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-TB20110620	SDG No.:	C2797
Lab Sample ID:	C2797-03	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041903.D	1		06/28/11	VH062811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	35.8		70 - 120	72%	SPK: 50
1868-53-7	Dibromofluoromethane	26	*	85 - 115	52%	SPK: 50
2037-26-5	Toluene-d8	26	*	85 - 120	52%	SPK: 50
460-00-4	4-Bromofluorobenzene	25.1	*	75 - 120	50%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	190568	4.08			
540-36-3	1,4-Difluorobenzene	372558	4.6			
3114-55-4	Chlorobenzene-d5	302629	7.95			
3855-82-1	1,4-Dichlorobenzene-d4	133911	10.43			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/20/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-TB20110620RE	SDG No.:	C2797
Lab Sample ID:	C2797-03RE	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041944.D	1		06/29/11	VH062911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	0.5	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	0.5	U	0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	4.4		0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	0.5	U	0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	J	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/20/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-TB20110620RE	SDG No.:	C2797
Lab Sample ID:	C2797-03RE	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VH041944.D	1		06/29/11	VH062911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	56.6		70 - 120	113%	SPK: 50
1868-53-7	Dibromofluoromethane	42.2	*	85 - 115	84%	SPK: 50
2037-26-5	Toluene-d8	54.8		85 - 120	110%	SPK: 50
460-00-4	4-Bromofluorobenzene	62.7	*	75 - 120	125%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	649658	4.08			
540-36-3	1,4-Difluorobenzene	1468700	4.59			
3114-55-4	Chlorobenzene-d5	1374250	7.93			
3855-82-1	1,4-Dichlorobenzene-d4	625630	10.43			

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ANALYTICAL RESULTS SUMMARY

PROJECT NAME : CTO WE08

TETRA TECH NUS, INC.
661 Anderson Drive

Pittsburgh , Pennsylvania - 15220-2745
Phone No: 4129218361

ORDER ID : C2798
ATTENTION : David Brayack

ACCREDITED IN ACCORDANCE WITH nelac

DoD ELAP

CHEMTECH 284 Sheffield Street, Mountainside, New Jersey 07092 Phone : 908 789 8900 Fax : 908 789 8922

Cover Page

Order ID : C2798

Project ID : CTO WE08

Client : Tetra Tech NUS, Inc.

Lab Sample Number	Client Sample Number
C2798-01	SA-PZ159I1-20110621
C2798-02	SA-PZ159I-20110621
C2798-03	SA-PZ157I-20110621
C2798-04	C2798-03MS
C2798-05	C2798-03MSD
C2798-06	SA-PZ157I1-20110621
C2798-07	SA-PZ160I-20110621
C2798-08	SA-PZ160I1-20110621
C2798-09	SA-PZ138I-20110621
C2798-10	SA-PZ138I1-20110621
C2798-11	SA-DUP01-20110621
C2798-12	SA-DUP02-20110621
C2798-13	SA-PZ151I1-20110622
C2798-14	SA-PZ408-20110622
C2798-15	SA-PZ155I-20110622

I certify that the data package is in compliance with the terms and conditions of the contract,both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : Mildred V Reyes

Mildred V. Reyes, QA/QC Supervisor
2011.07.18 14:52:46 -04'00'

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ138I-20110621	SDG No.:	C2798
Lab Sample ID:	C2798-09	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035928.D	1		06/30/11	VG062911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	0.5	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	0.6	J	0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	9.6		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	1.5		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ138I-20110621	SDG No.:	C2798
Lab Sample ID:	C2798-09	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035928.D	1		06/30/11	VG062911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	53.7		70 - 120	107%	SPK: 50
1868-53-7	Dibromofluoromethane	49.7		85 - 115	99%	SPK: 50
2037-26-5	Toluene-d8	50.2		85 - 120	100%	SPK: 50
460-00-4	4-Bromofluorobenzene	47.8		75 - 120	96%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	680786	3.92			
540-36-3	1,4-Difluorobenzene	1191510	4.74			
3114-55-4	Chlorobenzene-d5	809209	9.69			
3855-82-1	1,4-Dichlorobenzene-d4	326804	13.4			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ138I-20110621	SDG No.:	C2798
Lab Sample ID:	C2798-09	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035928.D	1		06/30/11	VG062911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ138I-20110621	SDG No.:	C2798
Lab Sample ID:	C2798-09	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7439-89-6	Iron	23.8	J	1	20.4	50	ug/L	06/24/11	06/28/11	SW6010B
7439-96-5	Manganese	731		1	1.7	10	ug/L	06/24/11	06/28/11	SW6010B

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	Metals Group3				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ138I1-20110621	SDG No.:	C2798
Lab Sample ID:	C2798-10	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035939.D	20		06/30/11	VG062911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	10	U	4	20	ug/L
74-87-3	Chloromethane	10	U	4	20	ug/L
75-01-4	Vinyl Chloride	10	U	6.8	20	ug/L
74-83-9	Bromomethane	10	U	4	20	ug/L
75-00-3	Chloroethane	250		4	20	ug/L
75-69-4	Trichlorofluoromethane	10	U	7	20	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	10	U	9	20	ug/L
75-35-4	1,1-Dichloroethene	100		9.4	20	ug/L
67-64-1	Acetone	50	U	10	100	ug/L
75-15-0	Carbon Disulfide	10	U	4	20	ug/L
1634-04-4	Methyl tert-butyl Ether	10	U	7	20	ug/L
79-20-9	Methyl Acetate	10	U	4	20	ug/L
75-09-2	Methylene Chloride	10	U	8.2	20	ug/L
156-60-5	trans-1,2-Dichloroethene	10	U	8.2	20	ug/L
75-34-3	1,1-Dichloroethane	1500		7.2	20	ug/L
110-82-7	Cyclohexane	10	U	4	20	ug/L
78-93-3	2-Butanone	50	U	26	100	ug/L
56-23-5	Carbon Tetrachloride	10	U	4	20	ug/L
156-59-2	cis-1,2-Dichloroethene	10	U	7	20	ug/L
74-97-5	Bromochloromethane	10	U	4	20	ug/L
67-66-3	Chloroform	10	U	6.8	20	ug/L
71-55-6	1,1,1-Trichloroethane	320		8	20	ug/L
108-87-2	Methylcyclohexane	10	U	4	20	ug/L
71-43-2	Benzene	10	U	6.4	20	ug/L
107-06-2	1,2-Dichloroethane	10	U	9.6	20	ug/L
79-01-6	Trichloroethene	10	U	5.6	20	ug/L
78-87-5	1,2-Dichloropropane	10	U	9.2	20	ug/L
75-27-4	Bromodichloromethane	10	U	7.2	20	ug/L
108-10-1	4-Methyl-2-Pentanone	50	U	42	100	ug/L
108-88-3	Toluene	10	U	7.4	20	ug/L
10061-02-6	t-1,3-Dichloropropene	10	U	5.8	20	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ138I1-20110621	SDG No.:	C2798
Lab Sample ID:	C2798-10	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035939.D	20		06/30/11	VG062911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	10	U	6.2	20	ug/L
79-00-5	1,1,2-Trichloroethane	10	U	7.6	20	ug/L
591-78-6	2-Hexanone	50	U	39	100	ug/L
124-48-1	Dibromochloromethane	10	U	4	20	ug/L
106-93-4	1,2-Dibromoethane	10	U	8.2	20	ug/L
127-18-4	Tetrachloroethene	10	U	5.4	20	ug/L
108-90-7	Chlorobenzene	10	U	9.8	20	ug/L
100-41-4	Ethyl Benzene	10	U	4	20	ug/L
179601-23-1	m/p-Xylenes	20	U	19	40	ug/L
95-47-6	o-Xylene	10	U	8.6	20	ug/L
100-42-5	Styrene	10	U	7.2	20	ug/L
75-25-2	Bromoform	10	U	9.4	20	ug/L
98-82-8	Isopropylbenzene	10	U	9	20	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	10	U	6.2	20	ug/L
541-73-1	1,3-Dichlorobenzene	10	U	8.6	20	ug/L
106-46-7	1,4-Dichlorobenzene	10	U	6.4	20	ug/L
95-50-1	1,2-Dichlorobenzene	10	U	9	20	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	10	U	9.2	20	ug/L
120-82-1	1,2,4-Trichlorobenzene	10	U	4	20	ug/L
87-61-6	1,2,3-Trichlorobenzene	10	U	4	20	ug/L
123-91-1	1,4-Dioxane	200	U	400	400	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	55.3		70 - 120	111%	SPK: 50
1868-53-7	Dibromofluoromethane	51.6		85 - 115	103%	SPK: 50
2037-26-5	Toluene-d8	51.3		85 - 120	103%	SPK: 50
460-00-4	4-Bromofluorobenzene	47.1		75 - 120	94%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	573711	3.93			
540-36-3	1,4-Difluorobenzene	990058	4.74			
3114-55-4	Chlorobenzene-d5	683226	9.7			
3855-82-1	1,4-Dichlorobenzene-d4	274274	13.4			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ138I1-20110621	SDG No.:	C2798
Lab Sample ID:	C2798-10	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035939.D	20		06/30/11	VG062911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-DUP02-20110621 →SA-PZ138I1-20110621	SDG No.:	C2798
Lab Sample ID:	C2798-12	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035943.D	20		06/30/11	VG062911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	10	U	4	20	ug/L
74-87-3	Chloromethane	10	U	4	20	ug/L
75-01-4	Vinyl Chloride	10	U	6.8	20	ug/L
74-83-9	Bromomethane	10	U	4	20	ug/L
75-00-3	Chloroethane	280		4	20	ug/L
75-69-4	Trichlorofluoromethane	10	U	7	20	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	10	U	9	20	ug/L
75-35-4	1,1-Dichloroethene	85		9.4	20	ug/L
67-64-1	Acetone	50	U	10	100	ug/L
75-15-0	Carbon Disulfide	10	U	4	20	ug/L
1634-04-4	Methyl tert-butyl Ether	10	U	7	20	ug/L
79-20-9	Methyl Acetate	10	U	4	20	ug/L
75-09-2	Methylene Chloride	10	U	8.2	20	ug/L
156-60-5	trans-1,2-Dichloroethene	10	U	8.2	20	ug/L
75-34-3	1,1-Dichloroethane	1500		7.2	20	ug/L
110-82-7	Cyclohexane	10	U	4	20	ug/L
78-93-3	2-Butanone	50	U	26	100	ug/L
56-23-5	Carbon Tetrachloride	10	U	4	20	ug/L
156-59-2	cis-1,2-Dichloroethene	10	U	7	20	ug/L
74-97-5	Bromochloromethane	10	U	4	20	ug/L
67-66-3	Chloroform	10	U	6.8	20	ug/L
71-55-6	1,1,1-Trichloroethane	300		8	20	ug/L
108-87-2	Methylcyclohexane	10	U	4	20	ug/L
71-43-2	Benzene	10	U	6.4	20	ug/L
107-06-2	1,2-Dichloroethane	10	U	9.6	20	ug/L
79-01-6	Trichloroethene	10	U	5.6	20	ug/L
78-87-5	1,2-Dichloropropane	10	U	9.2	20	ug/L
75-27-4	Bromodichloromethane	10	U	7.2	20	ug/L
108-10-1	4-Methyl-2-Pentanone	50	U	42	100	ug/L
108-88-3	Toluene	10	U	7.4	20	ug/L
10061-02-6	t-1,3-Dichloropropene	10	U	5.8	20	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-DUP02-20110621 → SA-PZ138I1-20110621	SDG No.:	C2798
Lab Sample ID:	C2798-12	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035943.D	20		06/30/11	VG062911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	10	U	6.2	20	ug/L
79-00-5	1,1,2-Trichloroethane	10	U	7.6	20	ug/L
591-78-6	2-Hexanone	50	U	39	100	ug/L
124-48-1	Dibromochloromethane	10	U	4	20	ug/L
106-93-4	1,2-Dibromoethane	10	U	8.2	20	ug/L
127-18-4	Tetrachloroethene	10	U	5.4	20	ug/L
108-90-7	Chlorobenzene	10	U	9.8	20	ug/L
100-41-4	Ethyl Benzene	10	U	4	20	ug/L
179601-23-1	m/p-Xylenes	20	U	19	40	ug/L
95-47-6	o-Xylene	10	U	8.6	20	ug/L
100-42-5	Styrene	10	U	7.2	20	ug/L
75-25-2	Bromoform	10	U	9.4	20	ug/L
98-82-8	Isopropylbenzene	10	U	9	20	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	10	U	6.2	20	ug/L
541-73-1	1,3-Dichlorobenzene	10	U	8.6	20	ug/L
106-46-7	1,4-Dichlorobenzene	10	U	6.4	20	ug/L
95-50-1	1,2-Dichlorobenzene	10	U	9	20	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	10	U	9.2	20	ug/L
120-82-1	1,2,4-Trichlorobenzene	10	U	4	20	ug/L
87-61-6	1,2,3-Trichlorobenzene	10	U	4	20	ug/L
123-91-1	1,4-Dioxane	200	U	400	400	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	55.4		70 - 120	111%	SPK: 50
1868-53-7	Dibromofluoromethane	50.7		85 - 115	101%	SPK: 50
2037-26-5	Toluene-d8	51.7		85 - 120	103%	SPK: 50
460-00-4	4-Bromofluorobenzene	46.5		75 - 120	93%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	567756	3.92			
540-36-3	1,4-Difluorobenzene	969125	4.74			
3114-55-4	Chlorobenzene-d5	678843	9.7			
3855-82-1	1,4-Dichlorobenzene-d4	269782	13.4			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-DUP02-20110621 → SA-PZ138I1-20110621	SDG No.:	C2798
Lab Sample ID:	C2798-12	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035943.D	20		06/30/11	VG062911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ138I1-20110621	SDG No.:	C2798
Lab Sample ID:	C2798-10	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7439-89-6	Iron	29.2	J	1	20.4	50	ug/L	06/24/11	06/28/11	SW6010B
7439-96-5	Manganese	5220		1	1.7	10	ug/L	06/24/11	06/28/11	SW6010B

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	Metals Group3				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-DUP02-20110621 →SA-PZ138I1-20110621	SDG No.:	C2798
Lab Sample ID:	C2798-12	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7439-89-6	Iron	39.8	J	1	20.4	50	ug/L	06/24/11	06/28/11	SW6010B
7439-96-5	Manganese	5260		1	1.7	10	ug/L	06/24/11	06/28/11	SW6010B

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	Metals Group3				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/22/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ151I1-20110622	SDG No.:	C2798
Lab Sample ID:	C2798-13	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035953.D	20		06/30/11	VG063011

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	10	U	4	20	ug/L
74-87-3	Chloromethane	10	U	4	20	ug/L
75-01-4	Vinyl Chloride	10	U	6.8	20	ug/L
74-83-9	Bromomethane	10	U	4	20	ug/L
75-00-3	Chloroethane	260		4	20	ug/L
75-69-4	Trichlorofluoromethane	10	U	7	20	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	10	U	9	20	ug/L
75-35-4	1,1-Dichloroethene	24		9.4	20	ug/L
67-64-1	Acetone	50	U	10	100	ug/L
75-15-0	Carbon Disulfide	10	U	4	20	ug/L
1634-04-4	Methyl tert-butyl Ether	10	U	7	20	ug/L
79-20-9	Methyl Acetate	10	U	4	20	ug/L
75-09-2	Methylene Chloride	10	U	8.2	20	ug/L
156-60-5	trans-1,2-Dichloroethene	10	U	8.2	20	ug/L
75-34-3	1,1-Dichloroethane	390		7.2	20	ug/L
110-82-7	Cyclohexane	10	U	4	20	ug/L
78-93-3	2-Butanone	50	U	26	100	ug/L
56-23-5	Carbon Tetrachloride	10	U	4	20	ug/L
156-59-2	cis-1,2-Dichloroethene	10	U	7	20	ug/L
74-97-5	Bromochloromethane	10	U	4	20	ug/L
67-66-3	Chloroform	10	U	6.8	20	ug/L
71-55-6	1,1,1-Trichloroethane	10	U	8	20	ug/L
108-87-2	Methylcyclohexane	10	U	4	20	ug/L
71-43-2	Benzene	10	U	6.4	20	ug/L
107-06-2	1,2-Dichloroethane	10	U	9.6	20	ug/L
79-01-6	Trichloroethene	10	U	5.6	20	ug/L
78-87-5	1,2-Dichloropropane	10	U	9.2	20	ug/L
75-27-4	Bromodichloromethane	10	U	7.2	20	ug/L
108-10-1	4-Methyl-2-Pentanone	50	U	42	100	ug/L
108-88-3	Toluene	10	U	7.4	20	ug/L
10061-02-6	t-1,3-Dichloropropene	10	U	5.8	20	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/22/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ151I1-20110622	SDG No.:	C2798
Lab Sample ID:	C2798-13	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035953.D	20		06/30/11	VG063011

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	10	U	6.2	20	ug/L
79-00-5	1,1,2-Trichloroethane	10	U	7.6	20	ug/L
591-78-6	2-Hexanone	50	U	39	100	ug/L
124-48-1	Dibromochloromethane	10	U	4	20	ug/L
106-93-4	1,2-Dibromoethane	10	U	8.2	20	ug/L
127-18-4	Tetrachloroethene	10	U	5.4	20	ug/L
108-90-7	Chlorobenzene	10	U	9.8	20	ug/L
100-41-4	Ethyl Benzene	10	U	4	20	ug/L
179601-23-1	m/p-Xylenes	20	U	19	40	ug/L
95-47-6	o-Xylene	10	U	8.6	20	ug/L
100-42-5	Styrene	10	U	7.2	20	ug/L
75-25-2	Bromoform	10	U	9.4	20	ug/L
98-82-8	Isopropylbenzene	10	U	9	20	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	10	U	6.2	20	ug/L
541-73-1	1,3-Dichlorobenzene	10	U	8.6	20	ug/L
106-46-7	1,4-Dichlorobenzene	10	U	6.4	20	ug/L
95-50-1	1,2-Dichlorobenzene	10	U	9	20	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	10	U	9.2	20	ug/L
120-82-1	1,2,4-Trichlorobenzene	10	U	4	20	ug/L
87-61-6	1,2,3-Trichlorobenzene	10	U	4	20	ug/L
123-91-1	1,4-Dioxane	200	U	400	400	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	54.9		70 - 120	110%	SPK: 50
1868-53-7	Dibromofluoromethane	49.2		85 - 115	98%	SPK: 50
2037-26-5	Toluene-d8	52.2		85 - 120	104%	SPK: 50
460-00-4	4-Bromofluorobenzene	46.6		75 - 120	93%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	595059	3.93			
540-36-3	1,4-Difluorobenzene	1046590	4.75			
3114-55-4	Chlorobenzene-d5	720988	9.7			
3855-82-1	1,4-Dichlorobenzene-d4	279902	13.4			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/22/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ151I1-20110622	SDG No.:	C2798
Lab Sample ID:	C2798-13	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035953.D	20		06/30/11	VG063011

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

Tabulated Analytical Results
Gases

CLIENT: Tetra Tech NUS, Inc.
PROJECT: CTO WE08
SAMPLE ID: SA-PZ151I1-20110622
LAB ID: C2798-13
FILENAME: FA000160.D
LAB PROJECT: C2798

MATRIX: AQUEOUS
ANALYST: UA
DILUTION: 1
DATE ANALYZED: 7/5/2011

CAS #	COMPOUNDS	RESULTS (ug/l)	QUALIFIER	LOQ (ug/l)	MDL (u/l)	LOD (ug/l)
74-84-0	ETHANE	< 3.0	U	5.0	2.6	3.0
74-85-1	ETHYLENE	< 3.0	U	5.0	2.6	3.0
74-82-8	METHANE	317.51	E	5.0	2.6	3.0

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL/LOD
B = PRESENT IN THE ASSOCIATED BLANK
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW
D = DILUTION
.... J = ESTIMATED VALUE
..... LOD = LIMIT OF DETECTION
..... LOQ = LIMIT OF QUANTITATION

Tabulated Analytical Results
Gases

CLIENT: Tetra Tech NUS, Inc.
PROJECT: CTO WE08
SAMPLE ID: SA-PZ151I1-20110622DL
LAB ID: C2798-13DL
FILENAME: FA000166.D
LAB PROJECT: C2798

MATRIX: AQUEOUS
ANALYST: UA
DILUTION: 10
DATE ANALYZED: 7/5/2011

CAS #	COMPOUNDS	RESULTS (ug/l)	QUALIFIER	LOQ (ug/l)	MDL (u/l)	LOD (ug/l)
74-84-0	ETHANE	< 3.0	UD	50.0	26.0	30.0
74-85-1	ETHYLENE	< 3.0	UD	50.0	26.0	30.0
74-82-8	METHANE	344.10	D	50.0	26.0	30.0

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL/LOD
B = PRESENT IN THE ASSOCIATED BLANK
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW
D = DILUTION
.... J = ESTIMATED VALUE
..... LOD = LIMIT OF DETECTION
..... LOQ = LIMIT OF QUANTITATION

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/22/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ151I1-20110622	SDG No.:	C2798
Lab Sample ID:	C2798-13	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7429-90-5	Aluminum	25	U	1	6.5	50	ug/L	06/24/11	06/28/11	SW6010B
7440-36-0	Antimony	12.5	U	1	8	25	ug/L	06/24/11	06/28/11	SW6010B
7440-38-2	Arsenic	5	U	1	4.2	10	ug/L	06/24/11	06/28/11	SW6010B
7440-39-3	Barium	26	J	1	4	50	ug/L	06/24/11	06/28/11	SW6010B
7440-41-7	Beryllium	1.5	U	1	0.7	3	ug/L	06/24/11	06/28/11	SW6010B
7440-43-9	Cadmium	1.5	U	1	0.5	3	ug/L	06/24/11	06/28/11	SW6010B
7440-70-2	Calcium	16000		1	31.8	1000	ug/L	06/24/11	06/28/11	SW6010B
7440-47-3	Chromium	2.5	U	1	1.1	5	ug/L	06/24/11	06/28/11	SW6010B
7440-48-4	Cobalt	7.5	U	1	5.8	15	ug/L	06/24/11	06/28/11	SW6010B
7440-50-8	Copper	5	U	1	2	10	ug/L	06/24/11	06/28/11	SW6010B
7439-89-6	Iron	612		1	20.4	50	ug/L	06/24/11	06/28/11	SW6010B
7439-92-1	Lead	3	U	1	2.6	6	ug/L	06/24/11	06/28/11	SW6010B
7439-95-4	Magnesium	1100		1	32.5	1000	ug/L	06/24/11	06/28/11	SW6010B
7439-96-5	Manganese	5270		1	1.7	10	ug/L	06/24/11	06/28/11	SW6010B
7439-97-6	Mercury	0.17	JN	1	0.09	0.2	ug/L	06/27/11	06/28/11	SW7470A
7440-02-0	Nickel	10	U	1	4.2	20	ug/L	06/24/11	06/28/11	SW6010B
7440-09-7	Potassium	3080		1	38.8	1000	ug/L	06/24/11	06/28/11	SW6010B
7782-49-2	Selenium	5	U	1	4.8	10	ug/L	06/24/11	06/28/11	SW6010B
7440-22-4	Silver	2.5	U	1	1.5	5	ug/L	06/24/11	06/28/11	SW6010B
7440-23-5	Sodium	6460	N	1	13.9	1000	ug/L	06/24/11	06/28/11	SW6010B
7440-28-0	Thallium	10	U	1	2.4	20	ug/L	06/24/11	06/28/11	SW6010B
7440-62-2	Vanadium	10	U	1	6.1	20	ug/L	06/24/11	06/28/11	SW6010B
7440-66-6	Zinc	11.7	J	1	6.5	20	ug/L	06/24/11	06/28/11	SW6010B

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	METALS-TAL				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/22/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ155I-20110622	SDG No.:	C2798
Lab Sample ID:	C2798-15	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035929.D	1		06/30/11	VG062911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	2.2		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	2.4		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	43		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	7.8		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/22/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ155I-20110622	SDG No.:	C2798
Lab Sample ID:	C2798-15	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035929.D	1		06/30/11	VG062911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	52.7		70 - 120	105%	SPK: 50
1868-53-7	Dibromofluoromethane	48.8		85 - 115	98%	SPK: 50
2037-26-5	Toluene-d8	50.9		85 - 120	102%	SPK: 50
460-00-4	4-Bromofluorobenzene	48.2		75 - 120	96%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	644372	3.93			
540-36-3	1,4-Difluorobenzene	1133280	4.74			
3114-55-4	Chlorobenzene-d5	779087	9.7			
3855-82-1	1,4-Dichlorobenzene-d4	307939	13.41			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/22/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ155I-20110622	SDG No.:	C2798
Lab Sample ID:	C2798-15	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035929.D	1		06/30/11	VG062911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

Tabulated Analytical Results
Gases

CLIENT: Tetra Tech NUS, Inc.
PROJECT: CTO WE08
SAMPLE ID: SA-PZ155I-20110622
LAB ID: C2798-15
FILENAME: FA000162.D
LAB PROJECT: C2798

MATRIX: AQUEOUS
ANALYST: UA
DILUTION: 1
DATE ANALYZED: 7/5/2011

CAS #	COMPOUNDS	RESULTS (ug/l)	QUALIFIER	LOQ (ug/l)	MDL (u/l)	LOD (ug/l)
74-84-0	ETHANE	< 3.0	U	5.0	2.6	3.0
74-85-1	ETHYLENE	< 3.0	U	5.0	2.6	3.0
74-82-8	METHANE	< 3.0	U	5.0	2.6	3.0

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL/LOD
B = PRESENT IN THE ASSOCIATED BLANK
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW
D = DILUTION
.... J = ESTIMATED VALUE
..... LOD = LIMIT OF DETECTION
..... LOQ = LIMIT OF QUANTITATION

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/22/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ155I-20110622	SDG No.:	C2798
Lab Sample ID:	C2798-15	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7429-90-5	Aluminum	8.73	J	1	6.5	50	ug/L	06/24/11	06/28/11	SW6010B
7440-36-0	Antimony	12.5	U	1	8	25	ug/L	06/24/11	06/28/11	SW6010B
7440-38-2	Arsenic	5	U	1	4.2	10	ug/L	06/24/11	06/28/11	SW6010B
7440-39-3	Barium	17.6	J	1	4	50	ug/L	06/24/11	06/28/11	SW6010B
7440-41-7	Beryllium	1.5	U	1	0.7	3	ug/L	06/24/11	06/28/11	SW6010B
7440-43-9	Cadmium	1.5	U	1	0.5	3	ug/L	06/24/11	06/28/11	SW6010B
7440-70-2	Calcium	6810		1	31.8	1000	ug/L	06/24/11	06/28/11	SW6010B
7440-47-3	Chromium	2.5	U	1	1.1	5	ug/L	06/24/11	06/28/11	SW6010B
7440-48-4	Cobalt	7.5	U	1	5.8	15	ug/L	06/24/11	06/28/11	SW6010B
7440-50-8	Copper	5	U	1	2	10	ug/L	06/24/11	06/28/11	SW6010B
7439-89-6	Iron	205		1	20.4	50	ug/L	06/24/11	06/28/11	SW6010B
7439-92-1	Lead	3	U	1	2.6	6	ug/L	06/24/11	06/28/11	SW6010B
7439-95-4	Magnesium	1820		1	32.5	1000	ug/L	06/24/11	06/28/11	SW6010B
7439-96-5	Manganese	291		1	1.7	10	ug/L	06/24/11	06/28/11	SW6010B
7439-97-6	Mercury	0.1	UN	1	0.09	0.2	ug/L	06/27/11	06/28/11	SW7470A
7440-02-0	Nickel	10	U	1	4.2	20	ug/L	06/24/11	06/28/11	SW6010B
7440-09-7	Potassium	935	J	1	38.8	1000	ug/L	06/24/11	06/28/11	SW6010B
7782-49-2	Selenium	5	U	1	4.8	10	ug/L	06/24/11	06/28/11	SW6010B
7440-22-4	Silver	2.5	U	1	1.5	5	ug/L	06/24/11	06/28/11	SW6010B
7440-23-5	Sodium	8830	N	1	13.9	1000	ug/L	06/24/11	06/28/11	SW6010B
7440-28-0	Thallium	10	U	1	2.4	20	ug/L	06/24/11	06/28/11	SW6010B
7440-62-2	Vanadium	10	U	1	6.1	20	ug/L	06/24/11	06/28/11	SW6010B
7440-66-6	Zinc	10	U	1	6.5	20	ug/L	06/24/11	06/28/11	SW6010B

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	METALS-TAL				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ157I-20110621	SDG No.:	C2798
Lab Sample ID:	C2798-03	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035896.D	1		06/28/11	VG062811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	3.4		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.7	J	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	3.4		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	45		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	9.7		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ157I-20110621	SDG No.:	C2798
Lab Sample ID:	C2798-03	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035896.D	1		06/28/11	VG062811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.85	J	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	52.2		70 - 120	104%	SPK: 50
1868-53-7	Dibromofluoromethane	48.9		85 - 115	98%	SPK: 50
2037-26-5	Toluene-d8	44.9		85 - 120	90%	SPK: 50
460-00-4	4-Bromofluorobenzene	43.3		75 - 120	87%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	694954	3.93			
540-36-3	1,4-Difluorobenzene	1186580	4.74			
3114-55-4	Chlorobenzene-d5	797721	9.7			
3855-82-1	1,4-Dichlorobenzene-d4	322838	13.41			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ157I-20110621	SDG No.:	C2798
Lab Sample ID:	C2798-03	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035896.D	1		06/28/11	VG062811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

Tabulated Analytical Results
Gases

CLIENT: Tetra Tech NUS, Inc.
PROJECT: CTO WE08
SAMPLE ID: SA-PZ157I-20110621
LAB ID: C2798-03
FILENAME: FA000149.D
LAB PROJECT: C2798

MATRIX: AQUEOUS
ANALYST: UA
DILUTION: 1
DATE ANALYZED: 7/2/2011

CAS #	COMPOUNDS	RESULTS (ug/l)	QUALIFIER	LOQ (ug/l)	MDL (u/l)	LOD (ug/l)
74-84-0	ETHANE	< 3.0	U	5.0	2.6	3.0
74-85-1	ETHYLENE	< 3.0	U	5.0	2.6	3.0
74-82-8	METHANE	<3.0	U	5.0	2.6	3.0

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL/LOD
B = PRESENT IN THE ASSOCIATED BLANK
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW
D = DILUTION
.... J = ESTIMATED VALUE
..... LOD = LIMIT OF DETECTION
..... LOQ = LIMIT OF QUANTITATION

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ157I-20110621	SDG No.:	C2798
Lab Sample ID:	C2798-03	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7429-90-5	Aluminum	25	U	1	6.5	50	ug/L	06/24/11	06/28/11	SW6010B
7440-36-0	Antimony	12.5	U	1	8	25	ug/L	06/24/11	06/28/11	SW6010B
7440-38-2	Arsenic	5	U	1	4.2	10	ug/L	06/24/11	06/28/11	SW6010B
7440-39-3	Barium	18.2	J	1	4	50	ug/L	06/24/11	06/28/11	SW6010B
7440-41-7	Beryllium	1.5	U	1	0.7	3	ug/L	06/24/11	06/28/11	SW6010B
7440-43-9	Cadmium	1.5	U	1	0.5	3	ug/L	06/24/11	06/28/11	SW6010B
7440-70-2	Calcium	6420		1	31.8	1000	ug/L	06/24/11	06/28/11	SW6010B
7440-47-3	Chromium	2.5	U	1	1.1	5	ug/L	06/24/11	06/28/11	SW6010B
7440-48-4	Cobalt	7.5	U	1	5.8	15	ug/L	06/24/11	06/28/11	SW6010B
7440-50-8	Copper	5	U	1	2	10	ug/L	06/24/11	06/28/11	SW6010B
7439-89-6	Iron	978		1	20.4	50	ug/L	06/24/11	06/28/11	SW6010B
7439-92-1	Lead	3	U	1	2.6	6	ug/L	06/24/11	06/28/11	SW6010B
7439-95-4	Magnesium	1440		1	32.5	1000	ug/L	06/24/11	06/28/11	SW6010B
7439-96-5	Manganese	1050		1	1.7	10	ug/L	06/24/11	06/28/11	SW6010B
7439-97-6	Mercury	0.62	N	1	0.09	0.2	ug/L	06/27/11	06/28/11	SW7470A
7440-02-0	Nickel	10	U	1	4.2	20	ug/L	06/24/11	06/28/11	SW6010B
7440-09-7	Potassium	1420		1	38.8	1000	ug/L	06/24/11	06/28/11	SW6010B
7782-49-2	Selenium	5	U	1	4.8	10	ug/L	06/24/11	06/28/11	SW6010B
7440-22-4	Silver	2.5	U	1	1.5	5	ug/L	06/24/11	06/28/11	SW6010B
7440-23-5	Sodium	9530	N	1	13.9	1000	ug/L	06/24/11	06/28/11	SW6010B
7440-28-0	Thallium	10	U	1	2.4	20	ug/L	06/24/11	06/28/11	SW6010B
7440-62-2	Vanadium	8.39	J	1	6.1	20	ug/L	06/24/11	06/28/11	SW6010B
7440-66-6	Zinc	7.12	J	1	6.5	20	ug/L	06/24/11	06/28/11	SW6010B

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	METALS-TAL				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ157I1-20110621	SDG No.:	C2798
Lab Sample ID:	C2798-06	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035935.D	10		06/30/11	VG062911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	5	U	2	10	ug/L
74-87-3	Chloromethane	5	U	2	10	ug/L
75-01-4	Vinyl Chloride	5	U	3.4	10	ug/L
74-83-9	Bromomethane	5	U	2	10	ug/L
75-00-3	Chloroethane	200		2	10	ug/L
75-69-4	Trichlorofluoromethane	5	U	3.5	10	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	5	U	4.5	10	ug/L
75-35-4	1,1-Dichloroethene	19		4.7	10	ug/L
67-64-1	Acetone	25	U	5	50	ug/L
75-15-0	Carbon Disulfide	5	U	2	10	ug/L
1634-04-4	Methyl tert-butyl Ether	5	U	3.5	10	ug/L
79-20-9	Methyl Acetate	5	U	2	10	ug/L
75-09-2	Methylene Chloride	5	U	4.1	10	ug/L
156-60-5	trans-1,2-Dichloroethene	5	U	4.1	10	ug/L
75-34-3	1,1-Dichloroethane	280		3.6	10	ug/L
110-82-7	Cyclohexane	5	U	2	10	ug/L
78-93-3	2-Butanone	25	U	13	50	ug/L
56-23-5	Carbon Tetrachloride	5	U	2	10	ug/L
156-59-2	cis-1,2-Dichloroethene	5	U	3.5	10	ug/L
74-97-5	Bromochloromethane	5	U	2	10	ug/L
67-66-3	Chloroform	5	U	3.4	10	ug/L
71-55-6	1,1,1-Trichloroethane	23		4	10	ug/L
108-87-2	Methylcyclohexane	5	U	2	10	ug/L
71-43-2	Benzene	5	U	3.2	10	ug/L
107-06-2	1,2-Dichloroethane	5	U	4.8	10	ug/L
79-01-6	Trichloroethene	5	U	2.8	10	ug/L
78-87-5	1,2-Dichloropropane	5	U	4.6	10	ug/L
75-27-4	Bromodichloromethane	5	U	3.6	10	ug/L
108-10-1	4-Methyl-2-Pentanone	25	U	21	50	ug/L
108-88-3	Toluene	5	U	3.7	10	ug/L
10061-02-6	t-1,3-Dichloropropene	5	U	2.9	10	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ157I1-20110621	SDG No.:	C2798
Lab Sample ID:	C2798-06	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035935.D	10		06/30/11	VG062911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	5	U	3.1	10	ug/L
79-00-5	1,1,2-Trichloroethane	5	U	3.8	10	ug/L
591-78-6	2-Hexanone	25	U	19	50	ug/L
124-48-1	Dibromochloromethane	5	U	2	10	ug/L
106-93-4	1,2-Dibromoethane	5	U	4.1	10	ug/L
127-18-4	Tetrachloroethene	5	U	2.7	10	ug/L
108-90-7	Chlorobenzene	5	U	4.9	10	ug/L
100-41-4	Ethyl Benzene	5	U	2	10	ug/L
179601-23-1	m/p-Xylenes	10	U	9.5	20	ug/L
95-47-6	o-Xylene	5	U	4.3	10	ug/L
100-42-5	Styrene	5	U	3.6	10	ug/L
75-25-2	Bromoform	5	U	4.7	10	ug/L
98-82-8	Isopropylbenzene	5	U	4.5	10	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	5	U	3.1	10	ug/L
541-73-1	1,3-Dichlorobenzene	5.9	J	4.3	10	ug/L
106-46-7	1,4-Dichlorobenzene	26		3.2	10	ug/L
95-50-1	1,2-Dichlorobenzene	7.4	J	4.5	10	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	5	U	4.6	10	ug/L
120-82-1	1,2,4-Trichlorobenzene	6.3	J	2	10	ug/L
87-61-6	1,2,3-Trichlorobenzene	5	U	2	10	ug/L
123-91-1	1,4-Dioxane	100	U	200	200	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	53.4		70 - 120	107%	SPK: 50
1868-53-7	Dibromofluoromethane	49.5		85 - 115	99%	SPK: 50
2037-26-5	Toluene-d8	50.8		85 - 120	102%	SPK: 50
460-00-4	4-Bromofluorobenzene	45.4		75 - 120	91%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	623927	3.92			
540-36-3	1,4-Difluorobenzene	1108870	4.74			
3114-55-4	Chlorobenzene-d5	747168	9.69			
3855-82-1	1,4-Dichlorobenzene-d4	287237	13.4			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ157I1-20110621	SDG No.:	C2798
Lab Sample ID:	C2798-06	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035935.D	10		06/30/11	VG062911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

Tabulated Analytical Results
Gases

CLIENT: Tetra Tech NUS, Inc.
PROJECT: CTO WE08
SAMPLE ID: SA-PZ157I1-20110621
LAB ID: C2798-06
FILENAME: FA000152.D
LAB PROJECT: C2798

MATRIX: AQUEOUS
ANALYST: UA
DILUTION: 1
DATE ANALYZED: 7/2/2011

CAS #	COMPOUNDS	RESULTS (ug/l)	QUALIFIER	LOQ (ug/l)	MDL (u/l)	LOD (ug/l)
74-84-0	ETHANE	< 3.0	U	5.0	2.6	3.0
74-85-1	ETHYLENE	< 3.0	U	5.0	2.6	3.0
74-82-8	METHANE	139.13	E	5.0	2.6	3.0

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL/LOD
B = PRESENT IN THE ASSOCIATED BLANK
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW
D = DILUTION
.... J = ESTIMATED VALUE
..... LOD = LIMIT OF DETECTION
..... LOQ = LIMIT OF QUANTITATION

Tabulated Analytical Results
Gases

CLIENT: Tetra Tech NUS, Inc.
PROJECT: CTO WE08
SAMPLE ID: SSA-PZ157I1-20110621DL
LAB ID: C2798-06DL
FILENAME: FA000164.D
LAB PROJECT: C2798

MATRIX: AQUEOUS
ANALYST: UA
DILUTION: 10
DATE ANALYZED: 7/5/2011

CAS #	COMPOUNDS	RESULTS (ug/l)	QUALIFIER	LOQ (ug/l)	MDL (u/l)	LOD (ug/l)
74-84-0	ETHANE	< 3.0	UD	50.0	26.0	30.0
74-85-1	ETHYLENE	< 3.0	UD	50.0	26.0	30.0
74-82-8	METHANE	207.53	D	50.0	26.0	30.0

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL/LOD
B = PRESENT IN THE ASSOCIATED BLANK
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW
D = DILUTION
.... J = ESTIMATED VALUE
..... LOD = LIMIT OF DETECTION
..... LOQ = LIMIT OF QUANTITATION

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ157I1-20110621	SDG No.:	C2798
Lab Sample ID:	C2798-06	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7429-90-5	Aluminum	49.9	J	1	6.5	50	ug/L	06/24/11	06/28/11	SW6010B
7440-36-0	Antimony	12.5	U	1	8	25	ug/L	06/24/11	06/28/11	SW6010B
7440-38-2	Arsenic	5	U	1	4.2	10	ug/L	06/24/11	06/28/11	SW6010B
7440-39-3	Barium	20	J	1	4	50	ug/L	06/24/11	06/28/11	SW6010B
7440-41-7	Beryllium	1.5	U	1	0.7	3	ug/L	06/24/11	06/28/11	SW6010B
7440-43-9	Cadmium	1.5	U	1	0.5	3	ug/L	06/24/11	06/28/11	SW6010B
7440-70-2	Calcium	15900		1	31.8	1000	ug/L	06/24/11	06/28/11	SW6010B
7440-47-3	Chromium	2.37	J	1	1.1	5	ug/L	06/24/11	06/28/11	SW6010B
7440-48-4	Cobalt	7.5	U	1	5.8	15	ug/L	06/24/11	06/28/11	SW6010B
7440-50-8	Copper	5	U	1	2	10	ug/L	06/24/11	06/28/11	SW6010B
7439-89-6	Iron	776		1	20.4	50	ug/L	06/24/11	06/28/11	SW6010B
7439-92-1	Lead	3	U	1	2.6	6	ug/L	06/24/11	06/28/11	SW6010B
7439-95-4	Magnesium	1130		1	32.5	1000	ug/L	06/24/11	06/28/11	SW6010B
7439-96-5	Manganese	5200		1	1.7	10	ug/L	06/24/11	06/28/11	SW6010B
7439-97-6	Mercury	0.42	N	1	0.09	0.2	ug/L	06/27/11	06/28/11	SW7470A
7440-02-0	Nickel	10	U	1	4.2	20	ug/L	06/24/11	06/28/11	SW6010B
7440-09-7	Potassium	2820		1	38.8	1000	ug/L	06/24/11	06/28/11	SW6010B
7782-49-2	Selenium	5	U	1	4.8	10	ug/L	06/24/11	06/28/11	SW6010B
7440-22-4	Silver	2.5	U	1	1.5	5	ug/L	06/24/11	06/28/11	SW6010B
7440-23-5	Sodium	5990	N	1	13.9	1000	ug/L	06/24/11	06/28/11	SW6010B
7440-28-0	Thallium	10	U	1	2.4	20	ug/L	06/24/11	06/28/11	SW6010B
7440-62-2	Vanadium	10	U	1	6.1	20	ug/L	06/24/11	06/28/11	SW6010B
7440-66-6	Zinc	10	U	1	6.5	20	ug/L	06/24/11	06/28/11	SW6010B

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	METALS-TAL				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ159I-20110621	SDG No.:	C2798
Lab Sample ID:	C2798-02	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035932.D	1		06/30/11	VG062911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	99		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	7.3		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	130		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	15		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.81	J	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ159I-20110621	SDG No.:	C2798
Lab Sample ID:	C2798-02	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035932.D	1		06/30/11	VG062911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	2.3		0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.72	J	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	1.2		0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	2		0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	55		70 - 120	110%	SPK: 50
1868-53-7	Dibromofluoromethane	50.5		85 - 115	101%	SPK: 50
2037-26-5	Toluene-d8	48.6		85 - 120	97%	SPK: 50
460-00-4	4-Bromofluorobenzene	45.2		75 - 120	90%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	621397	3.93			
540-36-3	1,4-Difluorobenzene	1107580	4.75			
3114-55-4	Chlorobenzene-d5	764376	9.7			
3855-82-1	1,4-Dichlorobenzene-d4	305287	13.41			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ159I-20110621	SDG No.:	C2798
Lab Sample ID:	C2798-02	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035932.D	1		06/30/11	VG062911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

Tabulated Analytical Results
Gases

CLIENT: Tetra Tech NUS, Inc.
PROJECT: CTO WE08
SAMPLE ID: SA-PZ159I-20110621
LAB ID: C2798-02
FILENAME: FA000148.D
LAB PROJECT: C2798

MATRIX: AQUEOUS
ANALYST: UA
DILUTION: 1
DATE ANALYZED: 7/2/2011

CAS #	COMPOUNDS	RESULTS (ug/l)	QUALIFIER	LOQ (ug/l)	MDL (u/l)	LOD (ug/l)
74-84-0	ETHANE	< 3.0	U	5.0	2.6	3.0
74-85-1	ETHYLENE	< 3.0	U	5.0	2.6	3.0
74-82-8	METHANE	39.01		5.0	2.6	3.0

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL/LOD
B = PRESENT IN THE ASSOCIATED BLANK
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW
D = DILUTION
.... J = ESTIMATED VALUE
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..... LOQ = LIMIT OF QUANTITATION

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ159I-20110621	SDG No.:	C2798
Lab Sample ID:	C2798-02	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7429-90-5	Aluminum	25	U	1	6.5	50	ug/L	06/24/11	06/28/11	SW6010B
7440-36-0	Antimony	12.5	U	1	8	25	ug/L	06/24/11	06/28/11	SW6010B
7440-38-2	Arsenic	11.9		1	4.2	10	ug/L	06/24/11	06/28/11	SW6010B
7440-39-3	Barium	25.4	J	1	4	50	ug/L	06/24/11	06/28/11	SW6010B
7440-41-7	Beryllium	1.5	U	1	0.7	3	ug/L	06/24/11	06/28/11	SW6010B
7440-43-9	Cadmium	1.5	U	1	0.5	3	ug/L	06/24/11	06/28/11	SW6010B
7440-70-2	Calcium	7100		1	31.8	1000	ug/L	06/24/11	06/28/11	SW6010B
7440-47-3	Chromium	2.5	U	1	1.1	5	ug/L	06/24/11	06/28/11	SW6010B
7440-48-4	Cobalt	7.5	U	1	5.8	15	ug/L	06/24/11	06/28/11	SW6010B
7440-50-8	Copper	5	U	1	2	10	ug/L	06/24/11	06/28/11	SW6010B
7439-89-6	Iron	7910		1	20.4	50	ug/L	06/24/11	06/28/11	SW6010B
7439-92-1	Lead	3	U	1	2.6	6	ug/L	06/24/11	06/28/11	SW6010B
7439-95-4	Magnesium	2040		1	32.5	1000	ug/L	06/24/11	06/28/11	SW6010B
7439-96-5	Manganese	845		1	1.7	10	ug/L	06/24/11	06/28/11	SW6010B
7439-97-6	Mercury	0.1	UN	1	0.09	0.2	ug/L	06/27/11	06/28/11	SW7470A
7440-02-0	Nickel	10	U	1	4.2	20	ug/L	06/24/11	06/28/11	SW6010B
7440-09-7	Potassium	1160		1	38.8	1000	ug/L	06/24/11	06/28/11	SW6010B
7782-49-2	Selenium	5	U	1	4.8	10	ug/L	06/24/11	06/28/11	SW6010B
7440-22-4	Silver	2.5	U	1	1.5	5	ug/L	06/24/11	06/28/11	SW6010B
7440-23-5	Sodium	8520	N	1	13.9	1000	ug/L	06/24/11	06/28/11	SW6010B
7440-28-0	Thallium	10	U	1	2.4	20	ug/L	06/24/11	06/28/11	SW6010B
7440-62-2	Vanadium	10	U	1	6.1	20	ug/L	06/24/11	06/28/11	SW6010B
7440-66-6	Zinc	10	U	1	6.5	20	ug/L	06/24/11	06/28/11	SW6010B

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	METALS-TAL				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
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OR = Over Range

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ159I1-20110621	SDG No.:	C2798
Lab Sample ID:	C2798-01	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035930.D	1		06/30/11	VG062911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	66		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	3.6		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	59		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	3.2		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.91	J	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ159I1-20110621	SDG No.:	C2798
Lab Sample ID:	C2798-01	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035930.D	1		06/30/11	VG062911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	3.9		0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	2.6		0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	4.3		0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	21		0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	6.4		0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	2.7		0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	2.6		0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	53.2		70 - 120	106%	SPK: 50
1868-53-7	Dibromofluoromethane	51.1		85 - 115	102%	SPK: 50
2037-26-5	Toluene-d8	52.4		85 - 120	105%	SPK: 50
460-00-4	4-Bromofluorobenzene	49.6		75 - 120	99%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	653808	3.93			
540-36-3	1,4-Difluorobenzene	1100940	4.74			
3114-55-4	Chlorobenzene-d5	785671	9.7			
3855-82-1	1,4-Dichlorobenzene-d4	309000	13.41			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ159I1-20110621	SDG No.:	C2798
Lab Sample ID:	C2798-01	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035930.D	1		06/30/11	VG062911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-DUP01-20110621 → SA-PZ159I1-20110621	SDG No.:	C2798
Lab Sample ID:	C2798-11	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035940.D	1		06/30/11	VG062911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	70		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	3.7		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	62		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	2.8		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.79	J	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-DUP01-20110621 →SA-PZ159I1 - 20110621	SDG No.:	C2798
Lab Sample ID:	C2798-11	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035940.D	1		06/30/11	VG062911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	3.8		0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	2.5		0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	4.4		0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	22		0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	6		0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	2.8		0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	2.8		0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	55.7		70 - 120	111%	SPK: 50
1868-53-7	Dibromofluoromethane	50.8		85 - 115	102%	SPK: 50
2037-26-5	Toluene-d8	50.9		85 - 120	102%	SPK: 50
460-00-4	4-Bromofluorobenzene	48.3		75 - 120	97%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	562533	3.92			
540-36-3	1,4-Difluorobenzene	1009030	4.74			
3114-55-4	Chlorobenzene-d5	725930	9.7			
3855-82-1	1,4-Dichlorobenzene-d4	284002	13.4			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-DUP01-20110621 →SA-PZ159I2-20110621	SDG No.:	C2798
Lab Sample ID:	C2798-11	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035940.D	1		06/30/11	VG062911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

Tabulated Analytical Results
Gases

CLIENT: Tetra Tech NUS, Inc.
PROJECT: CTO WE08
SAMPLE ID: SA-PZ159I1-20110621
LAB ID: C2798-01
FILENAME: FA000147.D
LAB PROJECT: C2798

MATRIX: AQUEOUS
ANALYST: UA
DILUTION: 1
DATE ANALYZED: 7/2/2011

CAS #	COMPOUNDS	RESULTS (ug/l)	QUALIFIER	LOQ (ug/l)	MDL (u/l)	LOD (ug/l)
74-84-0	ETHANE	< 3.0	U	5.0	2.6	3.0
74-85-1	ETHYLENE	< 3.0	U	5.0	2.6	3.0
74-82-8	METHANE	160.94	E	5.0	2.6	3.0

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL/LOD
B = PRESENT IN THE ASSOCIATED BLANK
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW
D = DILUTION
.... J = ESTIMATED VALUE
..... LOD = LIMIT OF DETECTION
..... LOQ = LIMIT OF QUANTITATION

Tabulated Analytical Results
Gases

CLIENT: Tetra Tech NUS, Inc.
PROJECT: CTO WE08
SAMPLE ID: SA-PZ159I1-20110621DL
LAB ID: C2798-01DL
FILENAME: FA000163.D
LAB PROJECT: C2798

MATRIX: AQUEOUS
ANALYST: UA
DILUTION: 10
DATE ANALYZED: 7/5/2011

CAS #	COMPOUNDS	RESULTS (ug/l)	QUALIFIER	LOQ (ug/l)	MDL (u/l)	LOD (ug/l)
74-84-0	ETHANE	< 30.0	UD	50.0	26.0	30.0
74-85-1	ETHYLENE	< 30.0	UD	50.0	26.0	30.0
74-82-8	METHANE	182.16	D	50.0	26.0	30.0

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL/LOD
B = PRESENT IN THE ASSOCIATED BLANK
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW
D = DILUTION
.... J = ESTIMATED VALUE
..... LOD = LIMIT OF DETECTION
..... LOQ = LIMIT OF QUANTITATION

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GC Volatiles
DETECTOR: FID

Tabulated Analytical Results
Gases

SA-PZ159I2-20110621

CLIENT: Tetra Tech NUS, Inc.
PROJECT: CTO WE08
SAMPLE ID: SA-DUP01-20110621
LAB ID: C2798-11
FILENAME: FA000154.D
LAB PROJECT: C2798

MATRIX: AQUEOUS
ANALYST: UA
DILUTION: 1
DATE ANALYZED: 7/2/2011

CAS #	COMPOUNDS	RESULTS (ug/l)	QUALIFIER	LOQ (ug/l)	MDL (u/l)	LOD (ug/l)
74-84-0	ETHANE	< 3.0	U	5.0	2.6	3.0
74-85-1	ETHYLENE	< 3.0	U	5.0	2.6	3.0
74-82-8	METHANE	152.90	E	5.0	2.6	3.0

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL/LOD
B = PRESENT IN THE ASSOCIATED BLANK
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW
D = DILUTION
.... J = ESTIMATED VALUE
..... LOD = LIMIT OF DETECTION
..... LOQ = LIMIT OF QUANTITATION

CHEMTECH

GC Volatiles
DETECTOR: FID

Tabulated Analytical Results
Gases

SA-PZ159I1 - 20110621

CLIENT: Tetra Tech NUS, Inc.
PROJECT: CTO WE08
SAMPLE ID: SA-DUP01-20110621DL
LAB ID: C2798-11DL
FILENAME: FA000165.D
LAB PROJECT: C2798

MATRIX: AQUEOUS
ANALYST: UA
DILUTION: 10
DATE ANALYZED: 7/5/2011

CAS #	COMPOUNDS	RESULTS (ug/l)	QUALIFIER	LOQ (ug/l)	MDL (u/l)	LOD (ug/l)
74-84-0	ETHANE	< 3.0	UD	50.0	26.0	30.0
74-85-1	ETHYLENE	< 3.0	UD	50.0	26.0	30.0
74-82-8	METHANE	264.00	D	50.0	26.0	30.0

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL/LOD
B = PRESENT IN THE ASSOCIATED BLANK
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW
D = DILUTION
.... J = ESTIMATED VALUE
..... LOD = LIMIT OF DETECTION
..... LOQ = LIMIT OF QUANTITATION

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ159I1-20110621	SDG No.:	C2798
Lab Sample ID:	C2798-01	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7429-90-5	Aluminum	13.6	J	1	6.5	50	ug/L	06/24/11	06/28/11	SW6010B
7440-36-0	Antimony	12.5	U	1	8	25	ug/L	06/24/11	06/28/11	SW6010B
7440-38-2	Arsenic	4.89	J	1	4.2	10	ug/L	06/24/11	06/28/11	SW6010B
7440-39-3	Barium	17.4	J	1	4	50	ug/L	06/24/11	06/28/11	SW6010B
7440-41-7	Beryllium	1.5	U	1	0.7	3	ug/L	06/24/11	06/28/11	SW6010B
7440-43-9	Cadmium	1.5	U	1	0.5	3	ug/L	06/24/11	06/28/11	SW6010B
7440-70-2	Calcium	15100		1	31.8	1000	ug/L	06/24/11	06/28/11	SW6010B
7440-47-3	Chromium	2.5	U	1	1.1	5	ug/L	06/24/11	06/28/11	SW6010B
7440-48-4	Cobalt	7.5	U	1	5.8	15	ug/L	06/24/11	06/28/11	SW6010B
7440-50-8	Copper	2.67	J	1	2	10	ug/L	06/24/11	06/28/11	SW6010B
7439-89-6	Iron	1460		1	20.4	50	ug/L	06/24/11	06/28/11	SW6010B
7439-92-1	Lead	3	U	1	2.6	6	ug/L	06/24/11	06/28/11	SW6010B
7439-95-4	Magnesium	1120		1	32.5	1000	ug/L	06/24/11	06/28/11	SW6010B
7439-96-5	Manganese	4690		1	1.7	10	ug/L	06/24/11	06/28/11	SW6010B
7439-97-6	Mercury	0.1	UN	1	0.09	0.2	ug/L	06/27/11	06/28/11	SW7470A
7440-02-0	Nickel	10	U	1	4.2	20	ug/L	06/24/11	06/28/11	SW6010B
7440-09-7	Potassium	2370		1	38.8	1000	ug/L	06/24/11	06/28/11	SW6010B
7782-49-2	Selenium	5	U	1	4.8	10	ug/L	06/24/11	06/28/11	SW6010B
7440-22-4	Silver	2.5	U	1	1.5	5	ug/L	06/24/11	06/28/11	SW6010B
7440-23-5	Sodium	5400	N	1	13.9	1000	ug/L	06/24/11	06/28/11	SW6010B
7440-28-0	Thallium	3.67	J	1	2.4	20	ug/L	06/24/11	06/28/11	SW6010B
7440-62-2	Vanadium	10	U	1	6.1	20	ug/L	06/24/11	06/28/11	SW6010B
7440-66-6	Zinc	6.87	J	1	6.5	20	ug/L	06/24/11	06/28/11	SW6010B

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	METALS-TAL				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-DUP01-20110621 →SA-PZ159I1-20110621	SDG No.:	C2798
Lab Sample ID:	C2798-11	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7429-90-5	Aluminum	25	U	1	6.5	50	ug/L	06/24/11	06/28/11	SW6010B
7440-36-0	Antimony	12.5	U	1	8	25	ug/L	06/24/11	06/28/11	SW6010B
7440-38-2	Arsenic	5.43	J	1	4.2	10	ug/L	06/24/11	06/28/11	SW6010B
7440-39-3	Barium	15.5	J	1	4	50	ug/L	06/24/11	06/28/11	SW6010B
7440-41-7	Beryllium	1.5	U	1	0.7	3	ug/L	06/24/11	06/28/11	SW6010B
7440-43-9	Cadmium	1.5	U	1	0.5	3	ug/L	06/24/11	06/28/11	SW6010B
7440-70-2	Calcium	13300		1	31.8	1000	ug/L	06/24/11	06/28/11	SW6010B
7440-47-3	Chromium	2.5	U	1	1.1	5	ug/L	06/24/11	06/28/11	SW6010B
7440-48-4	Cobalt	7.5	U	1	5.8	15	ug/L	06/24/11	06/28/11	SW6010B
7440-50-8	Copper	5	U	1	2	10	ug/L	06/24/11	06/28/11	SW6010B
7439-89-6	Iron	1400		1	20.4	50	ug/L	06/24/11	06/28/11	SW6010B
7439-92-1	Lead	3	U	1	2.6	6	ug/L	06/24/11	06/28/11	SW6010B
7439-95-4	Magnesium	1020		1	32.5	1000	ug/L	06/24/11	06/28/11	SW6010B
7439-96-5	Manganese	4560		1	1.7	10	ug/L	06/24/11	06/28/11	SW6010B
7439-97-6	Mercury	0.61	N	1	0.09	0.2	ug/L	06/27/11	06/28/11	SW7470A
7440-02-0	Nickel	10	U	1	4.2	20	ug/L	06/24/11	06/28/11	SW6010B
7440-09-7	Potassium	2300		1	38.8	1000	ug/L	06/24/11	06/28/11	SW6010B
7782-49-2	Selenium	5	U	1	4.8	10	ug/L	06/24/11	06/28/11	SW6010B
7440-22-4	Silver	2.5	U	1	1.5	5	ug/L	06/24/11	06/28/11	SW6010B
7440-23-5	Sodium	6190	N	1	13.9	1000	ug/L	06/24/11	06/28/11	SW6010B
7440-28-0	Thallium	3.43	J	1	2.4	20	ug/L	06/24/11	06/28/11	SW6010B
7440-62-2	Vanadium	10	U	1	6.1	20	ug/L	06/24/11	06/28/11	SW6010B
7440-66-6	Zinc	10	U	1	6.5	20	ug/L	06/24/11	06/28/11	SW6010B

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	METALS-TAL				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ160I-20110621	SDG No.:	C2798
Lab Sample ID:	C2798-07	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035927.D	1		06/30/11	VG062911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	6		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	4.8		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	85		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	14		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ160I-20110621	SDG No.:	C2798
Lab Sample ID:	C2798-07	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035927.D	1		06/30/11	VG062911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	52.8		70 - 120	106%	SPK: 50
1868-53-7	Dibromofluoromethane	47		85 - 115	94%	SPK: 50
2037-26-5	Toluene-d8	49.9		85 - 120	100%	SPK: 50
460-00-4	4-Bromofluorobenzene	45.1		75 - 120	90%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	700269	3.92			
540-36-3	1,4-Difluorobenzene	1227680	4.74			
3114-55-4	Chlorobenzene-d5	811578	9.69			
3855-82-1	1,4-Dichlorobenzene-d4	314910	13.4			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ160I-20110621	SDG No.:	C2798
Lab Sample ID:	C2798-07	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035927.D	1		06/30/11	VG062911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

Tabulated Analytical Results
Gases

CLIENT: Tetra Tech NUS, Inc.
PROJECT: CTO WE08
SAMPLE ID: SA-PZ160I-20110621
LAB ID: C2798-07
FILENAME: FA000153.D
LAB PROJECT: C2798

MATRIX: AQUEOUS
ANALYST: UA
DILUTION: 1
DATE ANALYZED: 7/2/2011

CAS #	COMPOUNDS	RESULTS (ug/l)	QUALIFIER	LOQ (ug/l)	MDL (u/l)	LOD (ug/l)
74-84-0	ETHANE	< 3.0	U	5.0	2.6	3.0
74-85-1	ETHYLENE	< 3.0	U	5.0	2.6	3.0
74-82-8	METHANE	< 3.0	U	5.0	2.6	3.0

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL/LOD
B = PRESENT IN THE ASSOCIATED BLANK
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW
D = DILUTION
.... J = ESTIMATED VALUE
..... LOD = LIMIT OF DETECTION
..... LOQ = LIMIT OF QUANTITATION

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ160I-20110621	SDG No.:	C2798
Lab Sample ID:	C2798-07	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7429-90-5	Aluminum	11.4	J	1	6.5	50	ug/L	06/24/11	06/28/11	SW6010B
7440-36-0	Antimony	12.5	U	1	8	25	ug/L	06/24/11	06/28/11	SW6010B
7440-38-2	Arsenic	19.4		1	4.2	10	ug/L	06/24/11	06/28/11	SW6010B
7440-39-3	Barium	22.6	J	1	4	50	ug/L	06/24/11	06/28/11	SW6010B
7440-41-7	Beryllium	1.5	U	1	0.7	3	ug/L	06/24/11	06/28/11	SW6010B
7440-43-9	Cadmium	0.755	J	1	0.5	3	ug/L	06/24/11	06/28/11	SW6010B
7440-70-2	Calcium	8350		1	31.8	1000	ug/L	06/24/11	06/28/11	SW6010B
7440-47-3	Chromium	2.5	U	1	1.1	5	ug/L	06/24/11	06/28/11	SW6010B
7440-48-4	Cobalt	7.5	U	1	5.8	15	ug/L	06/24/11	06/28/11	SW6010B
7440-50-8	Copper	5	U	1	2	10	ug/L	06/24/11	06/28/11	SW6010B
7439-89-6	Iron	11800		1	20.4	50	ug/L	06/24/11	06/28/11	SW6010B
7439-92-1	Lead	3	U	1	2.6	6	ug/L	06/24/11	06/28/11	SW6010B
7439-95-4	Magnesium	1890		1	32.5	1000	ug/L	06/24/11	06/28/11	SW6010B
7439-96-5	Manganese	660		1	1.7	10	ug/L	06/24/11	06/28/11	SW6010B
7439-97-6	Mercury	0.7	N	1	0.09	0.2	ug/L	06/27/11	06/28/11	SW7470A
7440-02-0	Nickel	10	U	1	4.2	20	ug/L	06/24/11	06/28/11	SW6010B
7440-09-7	Potassium	971	J	1	38.8	1000	ug/L	06/24/11	06/28/11	SW6010B
7782-49-2	Selenium	5	U	1	4.8	10	ug/L	06/24/11	06/28/11	SW6010B
7440-22-4	Silver	2.5	U	1	1.5	5	ug/L	06/24/11	06/28/11	SW6010B
7440-23-5	Sodium	9000	N	1	13.9	1000	ug/L	06/24/11	06/28/11	SW6010B
7440-28-0	Thallium	3.71	J	1	2.4	20	ug/L	06/24/11	06/28/11	SW6010B
7440-62-2	Vanadium	10	U	1	6.1	20	ug/L	06/24/11	06/28/11	SW6010B
7440-66-6	Zinc	10	U	1	6.5	20	ug/L	06/24/11	06/28/11	SW6010B

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	METALS-TAL				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ160I1-20110621	SDG No.:	C2798
Lab Sample ID:	C2798-08	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035937.D	10		06/30/11	VG062911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	5	U	2	10	ug/L
74-87-3	Chloromethane	5	U	2	10	ug/L
75-01-4	Vinyl Chloride	5	U	3.4	10	ug/L
74-83-9	Bromomethane	5	U	2	10	ug/L
75-00-3	Chloroethane	140		2	10	ug/L
75-69-4	Trichlorofluoromethane	5	U	3.5	10	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	5	U	4.5	10	ug/L
75-35-4	1,1-Dichloroethene	13		4.7	10	ug/L
67-64-1	Acetone	25	U	5	50	ug/L
75-15-0	Carbon Disulfide	5	U	2	10	ug/L
1634-04-4	Methyl tert-butyl Ether	5	U	3.5	10	ug/L
79-20-9	Methyl Acetate	5	U	2	10	ug/L
75-09-2	Methylene Chloride	5	U	4.1	10	ug/L
156-60-5	trans-1,2-Dichloroethene	5	U	4.1	10	ug/L
75-34-3	1,1-Dichloroethane	190		3.6	10	ug/L
110-82-7	Cyclohexane	5	U	2	10	ug/L
78-93-3	2-Butanone	25	U	13	50	ug/L
56-23-5	Carbon Tetrachloride	5	U	2	10	ug/L
156-59-2	cis-1,2-Dichloroethene	5	U	3.5	10	ug/L
74-97-5	Bromochloromethane	5	U	2	10	ug/L
67-66-3	Chloroform	5	U	3.4	10	ug/L
71-55-6	1,1,1-Trichloroethane	16		4	10	ug/L
108-87-2	Methylcyclohexane	5	U	2	10	ug/L
71-43-2	Benzene	5	U	3.2	10	ug/L
107-06-2	1,2-Dichloroethane	5	U	4.8	10	ug/L
79-01-6	Trichloroethene	5	U	2.8	10	ug/L
78-87-5	1,2-Dichloropropane	5	U	4.6	10	ug/L
75-27-4	Bromodichloromethane	5	U	3.6	10	ug/L
108-10-1	4-Methyl-2-Pentanone	25	U	21	50	ug/L
108-88-3	Toluene	5	U	3.7	10	ug/L
10061-02-6	t-1,3-Dichloropropene	5	U	2.9	10	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ160I1-20110621	SDG No.:	C2798
Lab Sample ID:	C2798-08	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035937.D	10		06/30/11	VG062911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	5	U	3.1	10	ug/L
79-00-5	1,1,2-Trichloroethane	5	U	3.8	10	ug/L
591-78-6	2-Hexanone	25	U	19	50	ug/L
124-48-1	Dibromochloromethane	5	U	2	10	ug/L
106-93-4	1,2-Dibromoethane	5	U	4.1	10	ug/L
127-18-4	Tetrachloroethene	5	U	2.7	10	ug/L
108-90-7	Chlorobenzene	5	U	4.9	10	ug/L
100-41-4	Ethyl Benzene	5	U	2	10	ug/L
179601-23-1	m/p-Xylenes	10	U	9.5	20	ug/L
95-47-6	o-Xylene	5	U	4.3	10	ug/L
100-42-5	Styrene	5	U	3.6	10	ug/L
75-25-2	Bromoform	5	U	4.7	10	ug/L
98-82-8	Isopropylbenzene	5	U	4.5	10	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	5	U	3.1	10	ug/L
541-73-1	1,3-Dichlorobenzene	5	U	4.3	10	ug/L
106-46-7	1,4-Dichlorobenzene	5	U	3.2	10	ug/L
95-50-1	1,2-Dichlorobenzene	5.2	J	4.5	10	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	5	U	4.6	10	ug/L
120-82-1	1,2,4-Trichlorobenzene	5	U	2	10	ug/L
87-61-6	1,2,3-Trichlorobenzene	5	U	2	10	ug/L
123-91-1	1,4-Dioxane	100	U	200	200	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	54.3		70 - 120	109%	SPK: 50
1868-53-7	Dibromofluoromethane	50.5		85 - 115	101%	SPK: 50
2037-26-5	Toluene-d8	52.6		85 - 120	105%	SPK: 50
460-00-4	4-Bromofluorobenzene	47.6		75 - 120	95%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	595882	3.92			
540-36-3	1,4-Difluorobenzene	1014710	4.74			
3114-55-4	Chlorobenzene-d5	725130	9.7			
3855-82-1	1,4-Dichlorobenzene-d4	287251	13.4			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ160I1-20110621	SDG No.:	C2798
Lab Sample ID:	C2798-08	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035937.D	10		06/30/11	VG062911

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ160I1-20110621	SDG No.:	C2798
Lab Sample ID:	C2798-08	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7439-89-6	Iron	2300		1	20.4	50	ug/L	06/24/11	06/28/11	SW6010B
7439-96-5	Manganese	3900		1	1.7	10	ug/L	06/24/11	06/28/11	SW6010B

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	Metals Group3				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/22/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ408-20110622	SDG No.:	C2798
Lab Sample ID:	C2798-14	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035952.D	10		06/30/11	VG063011

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	5	U	2	10	ug/L
74-87-3	Chloromethane	5	U	2	10	ug/L
75-01-4	Vinyl Chloride	5	U	3.4	10	ug/L
74-83-9	Bromomethane	5	U	2	10	ug/L
75-00-3	Chloroethane	130		2	10	ug/L
75-69-4	Trichlorofluoromethane	5	U	3.5	10	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	5	U	4.5	10	ug/L
75-35-4	1,1-Dichloroethene	13		4.7	10	ug/L
67-64-1	Acetone	25	U	5	50	ug/L
75-15-0	Carbon Disulfide	5	U	2	10	ug/L
1634-04-4	Methyl tert-butyl Ether	5	U	3.5	10	ug/L
79-20-9	Methyl Acetate	5	U	2	10	ug/L
75-09-2	Methylene Chloride	5	U	4.1	10	ug/L
156-60-5	trans-1,2-Dichloroethene	5	U	4.1	10	ug/L
75-34-3	1,1-Dichloroethane	160		3.6	10	ug/L
110-82-7	Cyclohexane	5	U	2	10	ug/L
78-93-3	2-Butanone	25	U	13	50	ug/L
56-23-5	Carbon Tetrachloride	5	U	2	10	ug/L
156-59-2	cis-1,2-Dichloroethene	5	U	3.5	10	ug/L
74-97-5	Bromochloromethane	5	U	2	10	ug/L
67-66-3	Chloroform	5	U	3.4	10	ug/L
71-55-6	1,1,1-Trichloroethane	5	U	4	10	ug/L
108-87-2	Methylcyclohexane	5	U	2	10	ug/L
71-43-2	Benzene	5	U	3.2	10	ug/L
107-06-2	1,2-Dichloroethane	5	U	4.8	10	ug/L
79-01-6	Trichloroethene	5	U	2.8	10	ug/L
78-87-5	1,2-Dichloropropane	5	U	4.6	10	ug/L
75-27-4	Bromodichloromethane	5	U	3.6	10	ug/L
108-10-1	4-Methyl-2-Pentanone	25	U	21	50	ug/L
108-88-3	Toluene	5	U	3.7	10	ug/L
10061-02-6	t-1,3-Dichloropropene	5	U	2.9	10	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/22/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ408-20110622	SDG No.:	C2798
Lab Sample ID:	C2798-14	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035952.D	10		06/30/11	VG063011

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	5	U	3.1	10	ug/L
79-00-5	1,1,2-Trichloroethane	5	U	3.8	10	ug/L
591-78-6	2-Hexanone	25	U	19	50	ug/L
124-48-1	Dibromochloromethane	5	U	2	10	ug/L
106-93-4	1,2-Dibromoethane	5	U	4.1	10	ug/L
127-18-4	Tetrachloroethene	5	U	2.7	10	ug/L
108-90-7	Chlorobenzene	5	U	4.9	10	ug/L
100-41-4	Ethyl Benzene	5	U	2	10	ug/L
179601-23-1	m/p-Xylenes	10	U	9.5	20	ug/L
95-47-6	o-Xylene	5	U	4.3	10	ug/L
100-42-5	Styrene	5	U	3.6	10	ug/L
75-25-2	Bromoform	5	U	4.7	10	ug/L
98-82-8	Isopropylbenzene	5	U	4.5	10	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	5	U	3.1	10	ug/L
541-73-1	1,3-Dichlorobenzene	5	U	4.3	10	ug/L
106-46-7	1,4-Dichlorobenzene	5	U	3.2	10	ug/L
95-50-1	1,2-Dichlorobenzene	5	U	4.5	10	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	5	U	4.6	10	ug/L
120-82-1	1,2,4-Trichlorobenzene	5	U	2	10	ug/L
87-61-6	1,2,3-Trichlorobenzene	5	U	2	10	ug/L
123-91-1	1,4-Dioxane	100	U	200	200	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	55.2		70 - 120	110%	SPK: 50
1868-53-7	Dibromofluoromethane	48.1		85 - 115	96%	SPK: 50
2037-26-5	Toluene-d8	49.3		85 - 120	99%	SPK: 50
460-00-4	4-Bromofluorobenzene	44		75 - 120	88%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	579699	3.92			
540-36-3	1,4-Difluorobenzene	1056460	4.74			
3114-55-4	Chlorobenzene-d5	732565	9.7			
3855-82-1	1,4-Dichlorobenzene-d4	282745	13.41			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/22/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ408-20110622	SDG No.:	C2798
Lab Sample ID:	C2798-14	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG035952.D	10		06/30/11	VG063011

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

Tabulated Analytical Results
Gases

CLIENT: Tetra Tech NUS, Inc.
PROJECT: CTO WE08
SAMPLE ID: SA-PZ408-20110622
LAB ID: C2798-14
FILENAME: FA000161.D
LAB PROJECT: C2798

MATRIX: AQUEOUS
ANALYST: UA
DILUTION: 1
DATE ANALYZED: 7/5/2011

CAS #	COMPOUNDS	RESULTS (ug/l)	QUALIFIER	LOQ (ug/l)	MDL (u/l)	LOD (ug/l)
74-84-0	ETHANE	< 3.0	U	5.0	2.6	3.0
74-85-1	ETHYLENE	< 3.0	U	5.0	2.6	3.0
74-82-8	METHANE	171.33	E	5.0	2.6	3.0

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL/LOD
B = PRESENT IN THE ASSOCIATED BLANK
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW
D = DILUTION
.... J = ESTIMATED VALUE
..... LOD = LIMIT OF DETECTION
..... LOQ = LIMIT OF QUANTITATION

Tabulated Analytical Results
Gases

CLIENT: Tetra Tech NUS, Inc.
PROJECT: CTO WE08
SAMPLE ID: SA-PZ408-20110622DL
LAB ID: C2798-14DL
FILENAME: FA000167.D
LAB PROJECT: C2798

MATRIX: AQUEOUS
ANALYST: UA
DILUTION: 10
DATE ANALYZED: 7/5/2011

CAS #	COMPOUNDS	RESULTS (ug/l)	QUALIFIER	LOQ (ug/l)	MDL (u/l)	LOD (ug/l)
74-84-0	ETHANE	< 3.0	UD	50.0	26.0	30.0
74-85-1	ETHYLENE	< 3.0	UD	50.0	26.0	30.0
74-82-8	METHANE	180.24	D	50.0	26.0	30.0

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL/LOD
B = PRESENT IN THE ASSOCIATED BLANK
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW
D = DILUTION
.... J = ESTIMATED VALUE
..... LOD = LIMIT OF DETECTION
..... LOQ = LIMIT OF QUANTITATION

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/22/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ408-20110622	SDG No.:	C2798
Lab Sample ID:	C2798-14	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7429-90-5	Aluminum	34.5	J	1	6.5	50	ug/L	06/24/11	06/28/11	SW6010B
7440-36-0	Antimony	12.5	U	1	8	25	ug/L	06/24/11	06/28/11	SW6010B
7440-38-2	Arsenic	5	U	1	4.2	10	ug/L	06/24/11	06/28/11	SW6010B
7440-39-3	Barium	19.9	J	1	4	50	ug/L	06/24/11	06/28/11	SW6010B
7440-41-7	Beryllium	1.5	U	1	0.7	3	ug/L	06/24/11	06/28/11	SW6010B
7440-43-9	Cadmium	1.5	U	1	0.5	3	ug/L	06/24/11	06/28/11	SW6010B
7440-70-2	Calcium	14900		1	31.8	1000	ug/L	06/24/11	06/28/11	SW6010B
7440-47-3	Chromium	2.5	U	1	1.1	5	ug/L	06/24/11	06/28/11	SW6010B
7440-48-4	Cobalt	7.5	U	1	5.8	15	ug/L	06/24/11	06/28/11	SW6010B
7440-50-8	Copper	5	U	1	2	10	ug/L	06/24/11	06/28/11	SW6010B
7439-89-6	Iron	1400		1	20.4	50	ug/L	06/24/11	06/28/11	SW6010B
7439-92-1	Lead	3	U	1	2.6	6	ug/L	06/24/11	06/28/11	SW6010B
7439-95-4	Magnesium	988	J	1	32.5	1000	ug/L	06/24/11	06/28/11	SW6010B
7439-96-5	Manganese	5000		1	1.7	10	ug/L	06/24/11	06/28/11	SW6010B
7439-97-6	Mercury	0.1	UN	1	0.09	0.2	ug/L	06/27/11	06/28/11	SW7470A
7440-02-0	Nickel	10	U	1	4.2	20	ug/L	06/24/11	06/28/11	SW6010B
7440-09-7	Potassium	2920		1	38.8	1000	ug/L	06/24/11	06/28/11	SW6010B
7782-49-2	Selenium	5	U	1	4.8	10	ug/L	06/24/11	06/28/11	SW6010B
7440-22-4	Silver	2.5	U	1	1.5	5	ug/L	06/24/11	06/28/11	SW6010B
7440-23-5	Sodium	7570	N	1	13.9	1000	ug/L	06/24/11	06/28/11	SW6010B
7440-28-0	Thallium	10	U	1	2.4	20	ug/L	06/24/11	06/28/11	SW6010B
7440-62-2	Vanadium	10	U	1	6.1	20	ug/L	06/24/11	06/28/11	SW6010B
7440-66-6	Zinc	6.85	J	1	6.5	20	ug/L	06/24/11	06/28/11	SW6010B

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	METALS-TAL				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/22/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ151I1-20110622	SDG No.:	C2798
Lab Sample ID:	C2798-13	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	5.02		1	0.075	0.15	mg/L	06/23/11	06/23/11	9056
Nitrite	0.15	U	1	0.022	0.15	mg/L	06/23/11	06/23/11	9056
Nitrate	0.1	U	1	0.027	0.1	mg/L	06/23/11	06/23/11	9056
Sulfide	1	U	1	0.03	1	mg/L	06/24/11	06/24/11	9030B
TOC	2.1		1	0.097	0.5	mg/L	06/23/11	06/23/11	SW9060

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/22/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ155I-20110622	SDG No.:	C2798
Lab Sample ID:	C2798-15	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	7.42		1	0.075	0.15	mg/L	06/23/11	06/23/11	9056
Nitrite	0.226		1	0.022	0.15	mg/L	06/23/11	06/23/11	9056
Nitrate	2.11		1	0.027	0.1	mg/L	06/23/11	06/23/11	9056
Sulfide	1	U	1	0.03	1	mg/L	06/24/11	06/24/11	9030B
TOC	0.662		1	0.097	0.5	mg/L	06/23/11	06/23/11	SW9060

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ157I-20110621	SDG No.:	C2798
Lab Sample ID:	C2798-03	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	7.48		1	0.075	0.15	mg/L	06/23/11	06/23/11	9056
Nitrite	0.236		1	0.022	0.15	mg/L	06/23/11	06/23/11	9056
Nitrate	1.02		1	0.027	0.1	mg/L	06/23/11	06/23/11	9056
Sulfide	1	U	1	0.03	1	mg/L	06/24/11	06/24/11	9030B
TOC	0.599		1	0.097	0.5	mg/L	06/23/11	06/23/11	SW9060

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
O = Over Range

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ157I1-20110621	SDG No.:	C2798
Lab Sample ID:	C2798-06	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	4.51		1	0.075	0.15	mg/L	06/23/11	06/23/11	9056
Nitrite	0.15	U	1	0.022	0.15	mg/L	06/23/11	06/23/11	9056
Nitrate	0.1	U	1	0.027	0.1	mg/L	06/23/11	06/23/11	9056
Sulfide	1	U	1	0.03	1	mg/L	06/24/11	06/24/11	9030B
TOC	1.9		1	0.097	0.5	mg/L	06/23/11	06/23/11	SW9060

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ159I-20110621	SDG No.:	C2798
Lab Sample ID:	C2798-02	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	6.28		1	0.075	0.15	mg/L	06/23/11	06/23/11	9056
Nitrite	0.15	U	1	0.022	0.15	mg/L	06/23/11	06/23/11	9056
Nitrate	0.1	U	1	0.027	0.1	mg/L	06/23/11	06/23/11	9056
Sulfide	1	U	1	0.03	1	mg/L	06/24/11	06/24/11	9030B
TOC	1.1		1	0.097	0.5	mg/L	06/23/11	06/23/11	SW9060

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ159I1-20110621	SDG No.:	C2798
Lab Sample ID:	C2798-01	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	3		1	0.075	0.15	mg/L	06/23/11	06/23/11	9056
Nitrite	0.15	U	1	0.022	0.15	mg/L	06/23/11	06/23/11	9056
Nitrate	0.1	U	1	0.027	0.1	mg/L	06/23/11	06/23/11	9056
Sulfide	1	U	1	0.03	1	mg/L	06/24/11	06/24/11	9030B
TOC	1.7		1	0.097	0.5	mg/L	06/23/11	06/23/11	SW9060

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-DUP01-20110621 →SA-PZ159I1-20110621	SDG No.:	C2798
Lab Sample ID:	C2798-11	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	2.97		1	0.075	0.15	mg/L	06/23/11	06/23/11	9056
Nitrite	0.15	U	1	0.022	0.15	mg/L	06/23/11	06/23/11	9056
Nitrate	0.1	U	1	0.027	0.1	mg/L	06/23/11	06/23/11	9056
Sulfide	1	U	1	0.03	1	mg/L	06/24/11	06/24/11	9030B
TOC	1.6		1	0.097	0.5	mg/L	06/23/11	06/23/11	SW9060

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/21/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ160I-20110621	SDG No.:	C2798
Lab Sample ID:	C2798-07	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	7.6		1	0.075	0.15	mg/L	06/23/11	06/23/11	9056
Nitrite	0.15	U	1	0.022	0.15	mg/L	06/23/11	06/23/11	9056
Nitrate	0.1	U	1	0.027	0.1	mg/L	06/23/11	06/23/11	9056
Sulfide	1	U	1	0.03	1	mg/L	06/24/11	06/24/11	9030B
TOC	1.1		1	0.097	0.5	mg/L	06/23/11	06/23/11	SW9060

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/22/11
Project:	CTO WE08	Date Received:	06/23/11
Client Sample ID:	SA-PZ408-20110622	SDG No.:	C2798
Lab Sample ID:	C2798-14	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	5.21		1	0.075	0.15	mg/L	06/23/11	06/23/11	9056
Nitrite	0.15	U	1	0.022	0.15	mg/L	06/23/11	06/23/11	9056
Nitrate	1.13		1	0.027	0.1	mg/L	06/23/11	06/23/11	9056
Sulfide	1	U	1	0.03	1	mg/L	06/24/11	06/24/11	9030B
TOC	1.6		1	0.097	0.5	mg/L	06/23/11	06/23/11	SW9060

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

2340 Stock Creek Blvd.
Rockford TN 37853-3044
Phone: (865) 573-8188
Fax: (865) 573-8133
Email: info@microbe.com

Client: David Brayack
Tetra Tech , Inc.
5700 Lake Wright Drive
Twin Oaks I, Suite 309
Norfolk, VA 23502

Phone: 757.461.3824

Fax: 757.461.4148

Identifier: 072IF **Date Rec:** 06/22/2011 **Report Date:** 06/28/2011

Client Project #: 112G02750 **Client Project Name:** Biostudy Area - Calverton

Purchase Order #:

Analysis Requested: CENSUS

Reviewed By:

Anita Biernacki

NOTICE: This report is intended only for the addressee shown above and may contain confidential or privileged information. If the recipient of this material is not the intended recipient or if you have received this in error, please notify Microbial Insights, Inc. immediately. The data and other information in this report represent only the sample(s) analyzed and are rendered upon condition that it is not to be reproduced without approval from Microbial Insights, Inc. Thank you for your cooperation.

MICROBIAL INSIGHTS, INC.

2340 Stock Creek Blvd. Rockford, TN 37853-3044
Tel. (865) 573-8188 Fax. (865) 573-8133

CENSUS

Client: **Tetra Tech , Inc.**
Project: Biostudy Area - Calverton

MI Project Number: **072IF**
Date Received: 06/22/2011

Sample Information

Client Sample ID:	**SA-PZ159I1-201 10621**	**SA-PZ157I1-20 110621**
Sample Date:	06/21/2011	06/21/2011
Units:	cells/mL	cells/mL
Analyst:	CT	CT

Dechlorinating Bacteria

Dehalococcoides spp.	*DHC*	**5.02E+01**	<5.00E-01
Dehalobacter spp.	*DHBt*	**6.01E+03**	**5.44E+02**

Legend:
NA = Not Analyzed NS = Not Sampled J = Estimated gene copies below PQL but above LQL I = Inhibited
< = Result not detected

2340 Stock Creek Blvd.
Rockford TN 37853-3044
Phone: (865) 573-8188
Fax: (865) 573-8133
Email: info@microbe.com

Identifier: 072IF **Date Rec:** 06/22/2011 **Report Date:** 06/28/2011

Client Project #: 112G02750 **Client Project Name:** Biostudy Area - Calverton

Purchase Order #:

Comments: QC was outside of the normal range for DHB. However in our professional opinion, the QC is consistent with recent performance of this assay and the quality of the samples should not be compromised. Corrective measures are currently underway to rectify this deviation.

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ANALYTICAL RESULTS SUMMARY

PROJECT NAME : CTO WE08

TETRA TECH NUS, INC.
661 Anderson Drive

Pittsburgh , Pennsylvania - 15220-2745
Phone No: 4129218361

ORDER ID : C3261
ATTENTION : David Brayack

ACCREDITED IN ACCORDANCE WITH nelac
DoD ELAP

CHEMTECH 284 Sheffield Street, Mountainside, New Jersey 07092 Phone : 908 789 8900 Fax : 908 789 8922

Cover Page

Order ID : C3261

Project ID : CTO WE08

Client : Tetra Tech NUS, Inc.

Lab Sample Number	Client Sample Number
C3261-01	SA-TB01-061711
C3261-02	SA-PZ-135-080311-0850
C3261-03	SA-PZ-136-080311-1115
C3261-04	SA-PZ-135-080311-1315
C3261-05	SA-PZ-136-080311-1435
C3261-06	SA-PZ-135-080411-0855
C3261-07	SA-PZ-136-080411-1050

I certify that the data package is in compliance with the terms and conditions of the contract,both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : Mildred V Reyes

Mildred V. Reyes, QA/QC Supervisor
2011.08.30 16:18:29 -04'00'

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

I Mildred V. Reyes, as the designated Quality Assurance ~~Officer~~ Supervisor, hereby attest that all electronic deliverables have been thoroughly reviewed and are in agreement with the associated hardcopy data. The enclosed electronic files have been reviewed for accuracy (including significant figures), completeness and format. The laboratory will be responsible for any labor time necessary to correct enclosed electronic deliverables that have been found to be in error. I can be reached at (908) 789-8900 if there are any questions or problems with the enclosed electronic deliverables.

Signature: Mildred V Reyes Title: QA/QC Supervisor Date: 8/30/11

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	08/03/11
Project:	CTO WE08	Date Received:	08/05/11
Client Sample ID:	SA-PZ-135-080311-0850	SDG No.:	C3261
Lab Sample ID:	C3261-02	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	ZB-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VE023477.D	1		08/17/11	VE081711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	0.5	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	1.9		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	26		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	4.8		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	08/03/11
Project:	CTO WE08	Date Received:	08/05/11
Client Sample ID:	SA-PZ-135-080311-0850	SDG No.:	C3261
Lab Sample ID:	C3261-02	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG036756.D	1		08/18/11	VG081811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	0.5	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	1.1		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	19		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.52	J	0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	08/03/11
Project:	CTO WE08	Date Received:	08/05/11
Client Sample ID:	SA-PZ-135-080311-0850	SDG No.:	C3261
Lab Sample ID:	C3261-02	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG036756.D	1		08/18/11	VG081811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	50.9		70 - 120	102%	SPK: 50
1868-53-7	Dibromofluoromethane	54.8		85 - 115	110%	SPK: 50
2037-26-5	Toluene-d8	53.5		85 - 120	107%	SPK: 50
460-00-4	4-Bromofluorobenzene	54.3		75 - 120	109%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	829384	3.92			
540-36-3	1,4-Difluorobenzene	1191980	4.74			
3114-55-4	Chlorobenzene-d5	1205900	9.69			
3855-82-1	1,4-Dichlorobenzene-d4	536140	13.4			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	08/03/11
Project:	CTO WE08	Date Received:	08/05/11
Client Sample ID:	SA-PZ-135-080311-0850	SDG No.:	C3261
Lab Sample ID:	C3261-02	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG036756.D	1		08/18/11	VG081811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	08/03/11
Project:	CTO WE08	Date Received:	08/05/11
Client Sample ID:	SA-PZ-135-080311-0850RE	SDG No.:	C3261
Lab Sample ID:	C3261-02RE	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG036756.D	1		08/18/11	VG081811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	0.5	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	1.1		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	19		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.52	J	0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	08/03/11
Project:	CTO WE08	Date Received:	08/05/11
Client Sample ID:	SA-PZ-135-080311-0850RE	SDG No.:	C3261
Lab Sample ID:	C3261-02RE	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG036756.D	1		08/18/11	VG081811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	50.9		70 - 120	102%	SPK: 50
1868-53-7	Dibromofluoromethane	54.8		85 - 115	110%	SPK: 50
2037-26-5	Toluene-d8	53.5		85 - 120	107%	SPK: 50
460-00-4	4-Bromofluorobenzene	54.3		75 - 120	109%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	829384	3.92			
540-36-3	1,4-Difluorobenzene	1191980	4.74			
3114-55-4	Chlorobenzene-d5	1205900	9.69			
3855-82-1	1,4-Dichlorobenzene-d4	536140	13.4			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	08/03/11
Project:	CTO WE08	Date Received:	08/05/11
Client Sample ID:	SA-PZ-135-080311-0850RE	SDG No.:	C3261
Lab Sample ID:	C3261-02RE	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG036756.D	1		08/18/11	VG081811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	08/03/11
Project:	CTO WE08	Date Received:	08/05/11
Client Sample ID:	SA-PZ-135-080311-1315	SDG No.:	C3261
Lab Sample ID:	C3261-04	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	ZB-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VE023475.D	1		08/17/11	VE081711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	0.5	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.86	J	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	2		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	31		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	6.3		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	08/03/11
Project:	CTO WE08	Date Received:	08/05/11
Client Sample ID:	SA-PZ-135-080311-1315	SDG No.:	C3261
Lab Sample ID:	C3261-04	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	ZB-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VE023475.D	1		08/17/11	VE081711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	60.1		70 - 120	120%	SPK: 50
1868-53-7	Dibromofluoromethane	57.4		85 - 115	115%	SPK: 50
2037-26-5	Toluene-d8	54.7		85 - 120	109%	SPK: 50
460-00-4	4-Bromofluorobenzene	54.6		75 - 120	109%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	1138380	9.35			
540-36-3	1,4-Difluorobenzene	2302950	10.44			
3114-55-4	Chlorobenzene-d5	2084250	14.83			
3855-82-1	1,4-Dichlorobenzene-d4	797548	18.64			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	08/03/11
Project:	CTO WE08	Date Received:	08/05/11
Client Sample ID:	SA-PZ-135-080311-1315	SDG No.:	C3261
Lab Sample ID:	C3261-04	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	ZB-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VE023475.D	1		08/17/11	VE081711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	08/04/11
Project:	CTO WE08	Date Received:	08/05/11
Client Sample ID:	SA-PZ-135-080411-0855	SDG No.:	C3261
Lab Sample ID:	C3261-06	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG036759.D	1		08/18/11	VG081811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	1.3		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.67	J	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	1.8		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	29		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	4		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	08/04/11
Project:	CTO WE08	Date Received:	08/05/11
Client Sample ID:	SA-PZ-135-080411-0855	SDG No.:	C3261
Lab Sample ID:	C3261-06	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG036759.D	1		08/18/11	VG081811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	51.5		70 - 120	103%	SPK: 50
1868-53-7	Dibromofluoromethane	54.9		85 - 115	110%	SPK: 50
2037-26-5	Toluene-d8	52.7		85 - 120	105%	SPK: 50
460-00-4	4-Bromofluorobenzene	53.2		75 - 120	106%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	806198	3.92			
540-36-3	1,4-Difluorobenzene	1153960	4.73			
3114-55-4	Chlorobenzene-d5	1171880	9.69			
3855-82-1	1,4-Dichlorobenzene-d4	526160	13.39			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	08/04/11
Project:	CTO WE08	Date Received:	08/05/11
Client Sample ID:	SA-PZ-135-080411-0855	SDG No.:	C3261
Lab Sample ID:	C3261-06	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG036759.D	1		08/18/11	VG081811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	08/03/11
Project:	CTO WE08	Date Received:	08/05/11
Client Sample ID:	SA-PZ-136-080311-1115	SDG No.:	C3261
Lab Sample ID:	C3261-03	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	ZB-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VE023474.D	1		08/17/11	VE081711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	14		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	10		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	140		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	21		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	08/03/11
Project:	CTO WE08	Date Received:	08/05/11
Client Sample ID:	SA-PZ-136-080311-1115	SDG No.:	C3261
Lab Sample ID:	C3261-03	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	ZB-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VE023474.D	1		08/17/11	VE081711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	58.2		70 - 120	116%	SPK: 50
1868-53-7	Dibromofluoromethane	56.4		85 - 115	113%	SPK: 50
2037-26-5	Toluene-d8	53.9		85 - 120	108%	SPK: 50
460-00-4	4-Bromofluorobenzene	54.3		75 - 120	109%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	1180330	9.35			
540-36-3	1,4-Difluorobenzene	2377090	10.44			
3114-55-4	Chlorobenzene-d5	2169890	14.83			
3855-82-1	1,4-Dichlorobenzene-d4	832122	18.64			
TENTATIVE IDENTIFIED COMPOUNDS						

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	08/03/11
Project:	CTO WE08	Date Received:	08/05/11
Client Sample ID:	SA-PZ-136-080311-1115	SDG No.:	C3261
Lab Sample ID:	C3261-03	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	ZB-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VE023474.D	1		08/17/11	VE081711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
60-29-7	Diethyl Ether	0.94	J		5.89	ug/L

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	08/03/11
Project:	CTO WE08	Date Received:	08/05/11
Client Sample ID:	SA-PZ-136-080311-1115RE	SDG No.:	C3261
Lab Sample ID:	C3261-03RE	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG036757.D	1		08/18/11	VG081811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	9.3		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	6.4		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	110		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	14		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	08/03/11
Project:	CTO WE08	Date Received:	08/05/11
Client Sample ID:	SA-PZ-136-080311-1115RE	SDG No.:	C3261
Lab Sample ID:	C3261-03RE	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG036757.D	1		08/18/11	VG081811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	52		70 - 120	104%	SPK: 50
1868-53-7	Dibromofluoromethane	55.3		85 - 115	111%	SPK: 50
2037-26-5	Toluene-d8	53.1		85 - 120	106%	SPK: 50
460-00-4	4-Bromofluorobenzene	54.8		75 - 120	110%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	795006	3.93			
540-36-3	1,4-Difluorobenzene	1142920	4.74			
3114-55-4	Chlorobenzene-d5	1183760	9.69			
3855-82-1	1,4-Dichlorobenzene-d4	533790	13.39			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	08/03/11
Project:	CTO WE08	Date Received:	08/05/11
Client Sample ID:	SA-PZ-136-080311-1115RE	SDG No.:	C3261
Lab Sample ID:	C3261-03RE	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG036757.D	1		08/18/11	VG081811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	08/03/11
Project:	CTO WE08	Date Received:	08/05/11
Client Sample ID:	SA-PZ-136-080311-1435	SDG No.:	C3261
Lab Sample ID:	C3261-05	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG036758.D	1		08/18/11	VG081811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	8.6		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	5.3		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	100		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	12		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	08/03/11
Project:	CTO WE08	Date Received:	08/05/11
Client Sample ID:	SA-PZ-136-080311-1435	SDG No.:	C3261
Lab Sample ID:	C3261-05	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG036758.D	1		08/18/11	VG081811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	50.5		70 - 120	101%	SPK: 50
1868-53-7	Dibromofluoromethane	54		85 - 115	108%	SPK: 50
2037-26-5	Toluene-d8	51.8		85 - 120	104%	SPK: 50
460-00-4	4-Bromofluorobenzene	53.3		75 - 120	107%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	815856	3.92			
540-36-3	1,4-Difluorobenzene	1163280	4.73			
3114-55-4	Chlorobenzene-d5	1160310	9.69			
3855-82-1	1,4-Dichlorobenzene-d4	522189	13.39			
TENTATIVE IDENTIFIED COMPOUNDS						

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	08/03/11
Project:	CTO WE08	Date Received:	08/05/11
Client Sample ID:	SA-PZ-136-080311-1435	SDG No.:	C3261
Lab Sample ID:	C3261-05	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG036758.D	1		08/18/11	VG081811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
60-29-7	Diethyl Ether	0.93	J		1.33	ug/L

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	08/03/11
Project:	CTO WE08	Date Received:	08/05/11
Client Sample ID:	SA-PZ-136-080311-1435RE	SDG No.:	C3261
Lab Sample ID:	C3261-05RE	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG036758.D	1		08/18/11	VG081811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	50.5		70 - 120	101%	SPK: 50
1868-53-7	Dibromofluoromethane	54		85 - 115	108%	SPK: 50
2037-26-5	Toluene-d8	51.8		85 - 120	104%	SPK: 50
460-00-4	4-Bromofluorobenzene	53.3		75 - 120	107%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	815856	3.92			
540-36-3	1,4-Difluorobenzene	1163280	4.73			
3114-55-4	Chlorobenzene-d5	1160310	9.69			
3855-82-1	1,4-Dichlorobenzene-d4	522189	13.39			

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	08/03/11
Project:	CTO WE08	Date Received:	08/05/11
Client Sample ID:	SA-PZ-136-080311-1435RE	SDG No.:	C3261
Lab Sample ID:	C3261-05RE	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG036758.D	1		08/18/11	VG081811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	08/04/11
Project:	CTO WE08	Date Received:	08/05/11
Client Sample ID:	SA-PZ-136-080411-1050	SDG No.:	C3261
Lab Sample ID:	C3261-07	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG036760.D	1		08/18/11	VG081811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.84	J	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	12		0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	8.6		0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	130		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	23		0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	08/04/11
Project:	CTO WE08	Date Received:	08/05/11
Client Sample ID:	SA-PZ-136-080411-1050	SDG No.:	C3261
Lab Sample ID:	C3261-07	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG036760.D	1		08/18/11	VG081811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	51.7		70 - 120	103%	SPK: 50
1868-53-7	Dibromofluoromethane	56.8		85 - 115	114%	SPK: 50
2037-26-5	Toluene-d8	50.1		85 - 120	100%	SPK: 50
460-00-4	4-Bromofluorobenzene	53.6		75 - 120	107%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	815018	3.92			
540-36-3	1,4-Difluorobenzene	1139410	4.73			
3114-55-4	Chlorobenzene-d5	1142810	9.69			
3855-82-1	1,4-Dichlorobenzene-d4	511718	13.39			
TENTATIVE IDENTIFIED COMPOUNDS						

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	08/04/11
Project:	CTO WE08	Date Received:	08/05/11
Client Sample ID:	SA-PZ-136-080411-1050	SDG No.:	C3261
Lab Sample ID:	C3261-07	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG036760.D	1		08/18/11	VG081811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
60-29-7	Diethyl Ether	0.69	J		1.33	ug/L
74-88-4	Methyl Iodide	1.7	J		1.5	ug/L

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/17/11
Project:	CTO WE08	Date Received:	08/05/11
Client Sample ID:	SA-TB01-061711	SDG No.:	C3261
Lab Sample ID:	C3261-01	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG036754.D	1		08/18/11	VG081811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	0.5	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	0.5	U	0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	0.5	U	0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/17/11
Project:	CTO WE08	Date Received:	08/05/11
Client Sample ID:	SA-TB01-061711	SDG No.:	C3261
Lab Sample ID:	C3261-01	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG036754.D	1		08/18/11	VG081811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	1	ug/L
123-91-1	1,4-Dioxane	10	U	20	20	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	50.2		70 - 120	100%	SPK: 50
1868-53-7	Dibromofluoromethane	53.6		85 - 115	107%	SPK: 50
2037-26-5	Toluene-d8	53.8		85 - 120	108%	SPK: 50
460-00-4	4-Bromofluorobenzene	54		75 - 120	108%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	822111	3.92			
540-36-3	1,4-Difluorobenzene	1167160	4.73			
3114-55-4	Chlorobenzene-d5	1166990	9.69			
3855-82-1	1,4-Dichlorobenzene-d4	529965	13.4			
TENTATIVE IDENTIFIED COMPOUNDS						

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	06/17/11
Project:	CTO WE08	Date Received:	08/05/11
Client Sample ID:	SA-TB01-061711	SDG No.:	C3261
Lab Sample ID:	C3261-01	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG036754.D	1		08/18/11	VG081811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
75-65-0	Tert butyl alcohol	10	J		2.04	ug/L
91-20-3	Naphthalene	0.66	J		16.94	ug/L

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

APPENDIX F

DATA VALIDATION REPORTS

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**D. BRAYACK**	**DATE:**	**MAY 6, 2011**
FROM:	**JOSEPH KALINYAK**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC / OVG**
NWIRP CALVERTON CTO WE08
SDG C1551

SAMPLES: 1 / Aqueous / VOC / TOC

CARBONIN-20110315

Overview

The sample set for NWIRP Calverton, SDG C1551 consisted of one (1) aqueous environmental sample. The aqueous sample was analyzed for volatile organic compounds (VOC) and total organic carbon (TOC). No field duplicate pair was included in this Sample Delivery Group (SDG).

The sample was collected by Tetra Tech on March 15, 2011 and analyzed by ChemTech. All analyses were conducted in accordance with EPA Method SW-846 8260B and 9060 analytical and reporting protocols. The data contained in this SDG were validated with regard to the following parameters:

*	•	Data completeness
*	•	Hold times
*	•	GC/MS System Tuning and Performance
	•	Initial/continuing calibrations
*	•	Laboratory Control Sample Recoveries
	•	Blank Results
*	•	Matrix Spike/Matrix Spike Duplicate Recoveries
*	•	Surrogate Spike Recoveries
*	•	Internal Standard Recoveries
*	•	Compound Identification
*	•	Compound Quantitation
*	•	Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter. Qualified analytical results are presented in Appendix A, results as reported by the laboratory are presented in Appendix B, Region II data validation forms are presented in Appendix C, and documentation supporting these findings is presented in Appendix D.

VOC

The initial calibration relative response factor (RRF) was less than the quality control limit of 0.05 for 1,4-dioxane for the instrument MSVOAF on 03/25/11. Additionally, all continuing calibration verifications (CCV) had RRFs less than the 0.05 quality control limit for 1,4-dioxane. All sample 1,4-dioxane results were non-detected and were qualified rejected, (UR).

Positive results below the LOD and above the detection limit were qualified as estimated, (J), due to uncertainty near the detection limit.

TOC

TOC was detected in the analysis blank CCB1 affecting the sample at the maximum concentration as indicated below:

Compound	Maximum Conc. (µg/L)	Action Level (µg/L)
TOC	0.106	0.530

An action level of 5X for TOC was established to evaluate laboratory contamination for the aforementioned compounds. Dilution factors and sample aliquots were taken into consideration during the application of all action levels. The sample was not qualified for blank contamination.

The MS %R was less than the quality control limit for TOC for spiked sample SA-PZ-159I1-20110308S. No action was taken as the MS %R non-compliance affected a sample not from this SDG.

Additional Comments

The sample CARBONIN-20110315 was analyzed for VOCs both undiluted and diluted 5X by the laboratory. Only the VOC analyte 1,1-dichloroethane result, which was higher than the highest calibration level in the undiluted sample, was reported from the dilution analysis.

EXECUTIVE SUMMARY

Laboratory Performance Issues: 1,4-Dioxane was qualified due initial and continuing calibration RRF non-compliances.

Other Factors Affecting Data Quality: Positive results below the Limit of Detection (LOD) and above the detection limit were qualified as estimated, (J), due to uncertainty near the detection limit.

The data for these analyses were reviewed with reference to the SOP #HW-24 Revision #2, October 2006, USEPA Region II Hazardous Waste Support Branch Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B (October 2006) and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009).

TetraTech NUS
Joseph Kalinyak
Chemist/Data Validator

TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C – Region II Data Validation Forms
4. Appendix D - Support Documentation

Appendix A

Qualified Analytical Results

Value Qualifier Key (Val Qual)

J – The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

UJ – The result is an estimated non-detected quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

U - Value is a non-detect as reported by the laboratory.

UR – Non-detected result is considered rejected, (UR), as a result of technical non-compliances.

DATA QUALIFICATION CODE (QUAL CODE)

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$ / ICP PDS Recovery Noncompliance
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02045	NSAMPLE	CARBONIN-20110315			CARBONIN-20110315DL		
SDG: C1551	LAB_ID	C1551-01			C1551-01DL		
FRACTION: OV	SAMP_DATE	3/15/2011			3/15/2011		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS						
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		24					
1,1,2,2-TETRACHLOROETHANE		0.5	U				
1,1,2-TRICHLOROETHANE		0.5	U				
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U				
1,1-DICHLOROETHANE					120		
1,1-DICHLOROETHENE		0.5	U				
1,2,3-TRICHLOROBENZENE		0.85	J	P			
1,2,4-TRICHLOROBENZENE		2.5					
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U				
1,2-DIBROMOETHANE		0.5	U				
1,2-DICHLOROBENZENE		1	J	P			
1,2-DICHLOROETHANE		0.5	U				
1,2-DICHLOROPROPANE		0.5	U				
1,3-DICHLOROBENZENE		0.72	J	P			
1,4-DICHLOROBENZENE		3.6					
1,4-DIOXANE		10	U				
2-BUTANONE		2.5	U				
2-HEXANONE		2.5	U				
4-METHYL-2-PENTANONE		2.5	U				
ACETONE		2.5	U				
BENZENE		0.69	J	P			
BROMOCHLOROMETHANE		0.5	U				
BROMODICHLOROMETHANE		0.5	U				
BROMOFORM		0.5	U				
BROMOMETHANE		0.5	U				
CARBON DISULFIDE		0.5	U				
CARBON TETRACHLORIDE		0.5	U				
CHLOROBENZENE		0.5	U				
CHLORODIBROMOMETHANE		0.5	U				
CHLOROETHANE		80					
CHLOROFORM		0.5	U				
CHLOROMETHANE		0.5	U				
CIS-1,2-DICHLOROETHENE		0.5	U				
CIS-1,3-DICHLOROPROPENE		0.5	U				
CYCLOHEXANE		0.5	U				

PROJ_NO: 02045	NSAMPLE	CARBONIN-20110315			CARBONIN-20110315DL		
SDG: C1551	LAB_ID	C1551-01			C1551-01DL		
FRACTION: OV	SAMP_DATE	3/15/2011			3/15/2011		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS						
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE		0.5	U				
ETHYLBENZENE		0.5	U				
ISOPROPYLBENZENE		0.5	U				
M+P-XYLENES		1	U				
METHYL ACETATE		0.5	U				
METHYL CYCLOHEXANE		0.5	U				
METHYL TERT-BUTYL ETHER		0.5	U				
METHYLENE CHLORIDE		0.5	U				
O-XYLENE		0.5	U				
STYRENE		0.5	U				
TETRACHLOROETHENE		0.5	U				
TOLUENE		0.5	U				
TRANS-1,2-DICHLOROETHENE		0.5	U				
TRANS-1,3-DICHLOROPROPENE		0.5	U				
TRICHLOROETHENE		0.5	U				
TRICHLOROFLUOROMETHANE		0.5	U				
VINYL CHLORIDE		0.5	U				

PROJ_NO: 02045	NSAMPLE	CARBONIN-20110315		
SDG: C1551	LAB_ID	C1551-01		
FRACTION: MISC	SAMP_DATE	3/15/2011		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	MG/L		
	PCT_SOLIDS			
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		1.9		

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Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**D. BRAYACK**	**DATE:**	**April 14, 2011**
FROM:	**M. CARSON**	**COPIES:**	**DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION – TOC**
NWIRP CALVERTON CTO WE08
SAMPLE DELIVERY GROUP (SDG) C1597

SAMPLES: 6/Aqueous/

SA-PZ-157I-20110321	SA-PZ-157I1-20110321
SA-PZ-158I-20110321	SA-PZ-158I1-20110321
SA-PZ-159I-20110321	SA-PZ-159I1-20110321

Overview

The sample set for NWIRP Calverton, CTO WE08, SDG C1597 consists of six (6) aqueous samples. All samples were analyzed for total organic carbon (TOC). This SDG contained no field duplicate pairs.

The samples were collected on March 21st, 2011 and analyzed by Chemtech. Analyses were conducted in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria. VOC analyses were conducted in accordance with SW-846 method 9060. The data contained in this SDG were validated with regard to the following parameters:

* • Data completeness
* • Holding times
* • Initial/Continuing Calibrations
* • Laboratory Method Blank Results
* • Laboratory Control/Laboratory Control Duplicate Sample Recoveries
* • Matrix Spike/Matrix Spike Duplicate Recoveries
* • Compound Quantitation
* • Compound Identification
* • Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter. Qualified analytical results are presented in Appendix A, results as reported by the laboratory are presented in Appendix B, and documentation supporting these findings is presented in Appendix C.

Total Organic Carbon

All sample results were within quality control limits.

Additional Comments

TO: R. Sok
DATE: 4/15/2011
SDG: C1597
PAGE: 2

EXECUTIVE SUMMARY

Laboratory Performance Issues: None.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to the Region II "Validation of Metals for the Contract Laboratory Program (CLP) based on ILMO5.3 (SOP Revision 13)",September 2006 and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories", April 2009.

The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech NUS
Megan Carson
Chemist/Data Validator

TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C - Support Documentation

Appendix A

Qualified Analytical Results

PROJ_NO: 02045	NSAMPLE	SA-PZ-157I1-20110321			SA-PZ-157I-20110321			SA-PZ-158I1-20110321			SA-PZ-158I-20110321		
SDG: C1597	LAB_ID	C1597-02			C1597-01			C1597-04			C1597-03		
FRACTION: MISC	SAMP_DATE	3/21/2011			3/21/2011			3/21/2011			3/21/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/L			MG/L			MG/L			MG/L		
	PCT_SOLIDS	100.0			100.0			100.0			100.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		3			1			3.2			1.2		

PROJ_NO: 02045	NSAMPLE	SA-PZ-159I1-20110321			SA-PZ-159I-20110321		
SDG: C1597	LAB_ID	C1597-06			C1597-05		
FRACTION: MISC	SAMP_DATE	3/21/2011			3/21/2011		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	MG/L			MG/L		
	PCT_SOLIDS	100.0			100.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		11			1.4		

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**D. BRAYACK**	**DATE:**	**May 23, 2011**
FROM:	**M. CARSON**	**COPIES:**	**DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION – TOC**
NWIRP CALVERTON CTO WE08
SAMPLE DELIVERY GROUP (SDG) C1664

SAMPLES: 6/Aqueous/

SA-PZ-157I-20110328	SA-PZ-157I1-20110328
SA-PZ-158I-20110328	SA-PZ-158I1-20110328
SA-PZ-159I-20110328	SA-PZ-159I1-20110328

Overview

The sample set for NWIRP Calverton, CTO WE08, SDG C1664consists of six (6) aqueous samples. All samples were analyzed for total organic carbon (TOC). This SDG contained no field duplicate pairs.

The samples were collected on March 28th, 2011 and analyzed by Chemtech. Analyses were conducted in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria. TOC analyses were conducted in accordance with Standard Method 9060. The data contained in this SDG were validated with regard to the following parameters:

* • Data completeness
* • Holding times
* • Initial/Continuing Calibrations
* • Laboratory Method Blank Results
* • Laboratory Control/Laboratory Control Duplicate Sample Recoveries
* • Matrix Spike/Matrix Spike Duplicate Recoveries
* • Field Duplicate Recoveries
* • Compound Quantitation
* • Compound Identification
* • Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter. Qualified analytical results are presented in Appendix A, results as reported by the laboratory are presented in Appendix B, Region II data validation forms are presented in Appendix C, and documentation supporting these findings is presented in Appendix D.

Total Organic Carbon

All sample results were within quality control limits.

TO: R. Sok
DATE: 5/23/2011
SDG: C1664
PAGE: 2

Additional Comments

EXECUTIVE SUMMARY

Laboratory Performance Issues: None.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference (to the extent applicable) to the Region II "Validation of Metals for the Contract Laboratory Program (CLP) based on ILMO5.3 (SOP Revision 13)",September 2006 and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories", April, 2009.

The text of this report has been formulated to address only those problem areas affecting data quality.

Megan Carson

Tetra Tech NUS
Megan Carson
Chemist/Data Validator

TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C – Region II Data Validation Forms
4. Appendix D - Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Data Validation Qualifier Codes:

A	=	Lab Blank Contamination
B	=	Field Blank Contamination
C	=	Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01	=	GC/MS Tuning Noncompliance
D	=	MS/MSD Recovery Noncompliance
E	=	LCS/LCSD Recovery Noncompliance
F	=	Lab Duplicate Imprecision
G	=	Field Duplicate Imprecision
H	=	Holding Time Exceedance
I	=	ICP Serial Dilution Noncompliance
J	=	GFAA PDS - GFAA MSA's $r < 0.995$
K	=	ICP Interference - includes ICS % R Noncompliance
L	=	Instrument Calibration Range Exceedance
M	=	Sample Preservation Noncompliance
N	=	Internal Standard Noncompliance
N01	=	Internal Standard Recovery Noncompliance Dioxins
N02	=	Recovery Standard Noncompliance Dioxins
N03	=	Clean-up Standard Noncompliance Dioxins
O	=	Poor Instrument Performance (e.g. base-line drifting)
P	=	Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q	=	Other problems (can be any number of issues; e.g. poor chromatography,interferences, etc.)
R	=	Surrogates Recovery Noncompliance
S	=	Pesticide/PCB Resolution
T	=	% Breakdown Noncompliance for DDT and Endrin
U	=	% Difference between columns/detectors >25% for positive results determined via GC/HPLC
V	=	Non-linear calibrations; correlation coefficient $r < 0.995$
W	=	EMPC result
X	=	Signal to noise response drop
Y	=	Percent solids <30%
Z	=	Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02045	NSAMPLE	SA-PZ-157I1-20110328			SA-PZ-157I-20110328			SA-PZ-158I1-20110328			SA-PZ-158I-20110328		
SDG: C1664	LAB_ID	C1664-01			C1664-02			C1664-04			C1664-03		
FRACTION: MISC	SAMP_DATE	3/28/2011			3/28/2011			3/28/2011			3/28/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/L			MG/L			MG/L			MG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		3.6			1.4			3.5			1.1		

PROJ_NO: 02045	NSAMPLE	SA-PZ-159I1-20110328			SA-PZ-159I-20110328		
SDG: C1664	LAB_ID	C1664-05			C1664-06		
FRACTION: MISC	SAMP_DATE	3/28/2011			3/28/2011		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	MG/L			MG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		5.9			1.2		

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**D. BRAYACK**	**DATE:**	**MAY 24, 2011**
FROM:	**MICHELLE L. ALLEN**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC**
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT (NWIRP), CALVERTON
CTO WE08
SAMPLE DELIVERY GROUP (SDG) C1740

SAMPLES: 1/Aqueous/VOC

CARBONIN-20110404

6/Aqueous/TOC

SA-PZ-157I-20110404	SA-PZ-157I1-20110404	SA-PZ-158I-20110404
SA-PZ-158I1-20110404	SA-PZ-159I-20110404	SA-PZ-159I1-20110404

Overview

The sample set for NWIRP Calverton SDG C1740 consisted of seven (7) aqueous environmental samples. One (1) aqueous sample was analyzed for select volatile organic compounds (VOC). Six (6) aqueous samples were analyzed for Total Organic Carbon (TOC). No field duplicate sample pairs were associated with this sample data group (SDG).

The samples were collected by Tetra Tech on April 4, 2011 and analyzed by Chemtech. All analyses were conducted in accordance with EPA Methods SW-846 8260B and 9060 analytical and reporting protocols. The data contained in this SDG was validated with regard to the following parameters:

*	•	Data completeness
*	•	Hold times
*	•	GC/MS System Tuning and Performance
	•	Initial/continuing calibrations
*	•	Laboratory Method Blank Results
*	•	Surrogate Spike Recoveries
*	•	Internal Standard Recoveries
*	•	Matrix Spike/Matrix Spike Duplicate Results
*	•	Laboratory Control Sample/Laboratory Control Sample Duplicate Results
*	•	Compound Identification
*	•	Compound Quantitation
*	•	Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter. Qualified analytical results are presented in Appendix A, results as reported by the laboratory are presented in Appendix B, Region II data validation forms are presented in Appendix C, and documentation supporting these findings is presented in Appendix D.

Volatile (VOC)

The initial and continuing calibrations performed on instrument MSVOAG had Relative Response Factors

(RRFs) less than the 0.05 quality control criteria for 1,4-dioxane. The non-detected result reported for 1,4-dioxane was rejected, (UR), in the affected sample, CARBONIN-20110404.

TOC

No issues were identified.

Additional Comments

1,1-Dichloroethane exceeded the instrument's linear calibration range in the initial analysis of sample CARBONIN-20110404. The sample was analyzed at a 5X dilution. The result for 1,1-dichloroethane from the diluted analysis was used in the data validation.

Positive results reported below the Limit of Quantitation (LOQ) but above the Method Detection Limit (MDL) were qualified as estimated, (J). Non-detected results are reported to the Limit of Detection (LOD).

The Region II Data Validation Standard Operating Procedure (SOP) for TOC analysis was not present on the EPA Region II internet site; therefore, EPA Region II worksheets are not included for this fraction in the data validation letter.

EXECUTIVE SUMMARY

Laboratory Performance Issues: The 1,4-dioxane result was rejected due to initial and continuing calibration RRFs below 0.05.

Other Factors Affecting Data Quality: Positive results reported below the LOQ but above the MDL were qualified as estimated, (J). Non-detected results are reported to the LOD. One sample was analyzed at a dilution.

The data for these analyses were reviewed with reference to the SOP #HW-24 Revision #2, October 2006, USEPA Region II Hazardous Waste Support Branch Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B (October 2006) and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009).

TetraTech NUS
Michelle L. Allen
Chemist/Data Validator

TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C – Region II Data Validation Forms
4. Appendix D - Support Documentation

Appendix A

Qualified Analytical Results

Data Validation Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$ / ICP PDS Recovery Noncompliance
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02045	NSAMPLE	CARBONIN-20110404			CARBONIN-20110404DL		
SDG: C1740	LAB_ID	C1740-07			C1740-07DL		
FRACTION: OV	SAMP_DATE	4/4/2011			4/4/2011		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		29					
1,1,2,2-TETRACHLOROETHANE		0.5	U				
1,1,2-TRICHLOROETHANE		0.5	U				
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U				
1,1-DICHLOROETHANE					150		
1,1-DICHLOROETHENE		10					
1,2,3-TRICHLOROBENZENE		0.5	U				
1,2,4-TRICHLOROBENZENE		2.2					
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U				
1,2-DIBROMOETHANE		0.5	U				
1,2-DICHLOROBENZENE		0.57	J	P			
1,2-DICHLOROETHANE		0.5	U				
1,2-DICHLOROPROPANE		0.5	U				
1,3-DICHLOROBENZENE		0.5	U				
1,4-DICHLOROBENZENE		1.7					
1,4-DIOXANE		10	UR	C			
2-BUTANONE		3.8	J	P			
2-HEXANONE		2.5	U				
4-METHYL-2-PENTANONE		2.5	U				
ACETONE		2.5	U				
BENZENE		0.59	J	P			
BROMOCHLOROMETHANE		0.5	U				
BROMODICHLOROMETHANE		0.5	U				
BROMOFORM		0.5	U				
BROMOMETHANE		0.5	U				
CARBON DISULFIDE		0.5	U				
CARBON TETRACHLORIDE		0.5	U				
CHLOROBENZENE		0.5	U				
CHLORODIBROMOMETHANE		0.5	U				
CHLOROETHANE		64					
CHLOROFORM		0.5	U				
CHLOROMETHANE		0.5	U				
CIS-1,2-DICHLOROETHENE		0.5	U				
CIS-1,3-DICHLOROPROPENE		0.5	U				
CYCLOHEXANE		0.5	U				

PROJ_NO: 02045	NSAMPLE	CARBONIN-20110404			CARBONIN-20110404DL		
SDG: C1740	LAB_ID	C1740-07			C1740-07DL		
FRACTION: OV	SAMP_DATE	4/4/2011			4/4/2011		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE		0.5	U				
ETHYLBENZENE		0.5	U				
ISOPROPYLBENZENE		0.5	U				
M+P-XYLENES		1	U				
METHYL ACETATE		0.5	U				
METHYL CYCLOHEXANE		0.5	U				
METHYL TERT-BUTYL ETHER		0.5	U				
METHYLENE CHLORIDE		0.5	U				
O-XYLENE		0.5	U				
STYRENE		0.5	U				
TETRACHLOROETHENE		0.5	U				
TOLUENE		0.5	U				
TRANS-1,2-DICHLOROETHENE		0.5	U				
TRANS-1,3-DICHLOROPROPENE		0.5	U				
TRICHLOROETHENE		0.5	U				
TRICHLOROFLUOROMETHANE		0.5	U				
VINYL CHLORIDE		0.5	U				

PROJ_NO: 02045	NSAMPLE	SA-PZ-157I1-20110404			SA-PZ-157I-20110404			SA-PZ-158I1-20110404			SA-PZ-158I-20110404		
SDG: C1740	LAB_ID	C1740-05			C1740-06			C1740-03			C1740-04		
FRACTION: MISC	SAMP_DATE	4/4/2011			4/4/2011			4/4/2011			4/4/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/L			MG/L			MG/L			MG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		2.9			2			3.3			1.7		

PROJ_NO: 02045	NSAMPLE	SA-PZ-159I1-20110404			SA-PZ-159I-20110404		
SDG: C1740	LAB_ID	C1740-01			C1740-02		
FRACTION: MISC	SAMP_DATE	4/4/2011			4/4/2011		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	MG/L			MG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		3.6			1.8		

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Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**D. BRAYACK**	**DATE:**	**JUNE 13, 2011**
FROM:	**EDWARD SEDLMYER**	**COPIES:**	**DV FILE**
SUBJECT:	**ORGANIC DATA VALIDATION – VOC/TOC** **NWIRP CALVERTON CTO WE08** **SDG C1836**		

SAMPLES: 1 / Aqueous / VOC

CARBONIN-20110411

6 / Aqueous / TOC

SA-PZ-157I-20110411 SA-PZ-157I1-20110411 SA-PZ-158I-20110411
SA-PZ-158I1-20110411 SA-PZ-159I-20110411 SA-PZ-159I1-20110411

Overview

The sample set for NWIRP Calverton, CTO WE08, SDG C1836 consists of seven (7) aqueous environmental samples. The aqueous samples were analyzed for volatile organic compounds (VOC). and total organic carbon (TOC) as stated above.

The samples were collected by Tetra Tech on April 11, 2011 and analyzed by CHEMTECH. All analyses were conducted in accordance with EPA Method SW-846 8260B and 9060 analytical and reporting protocols. The data contained in this SDG were validated with regard to the following parameters:

* • Data completeness
* • Holding times
• Initial/continuing calibrations
* • GC/MS Tuning
• Laboratory Method Blank Results
* • Surrogate Recoveries
• Matrix Spike / Matrix Spike Duplicate Recoveries
* • Laboratory Control Sample Recoveries
* • Laboratory Duplicate Precision
* • Internal Standard Recoveries
* • Compound Quantitation
* • Compound Identification
* • Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter. Qualified analytical results are presented in Appendix A, results as reported by the laboratory are presented in Appendix B, Region II data validation forms are presented in Appendix C, and documentation supporting these findings is presented in Appendix D.

Volatile Organic Compounds

The initial calibration and all continuing calibrations relative response factor (RRF) was less than the 0.05 quality control limit for 1,4-dioxane on instrument MSVOAG. The non-detected result for 1,4-dioxane was rejected (UR).

The VOC matrix spike / matrix spike duplicate (MS/MSD) associated with this sample delivery group (SDG) had a relative percent difference (RPD) greater than the quality control limit for chloromethane. No action was taken on this basis because the matrix spike was not performed on the sample in this SDG. All matrix spike recoveries were acceptable.

The initial calibration blank analyzed on 4/14/11 had a detection for TOC (0.178 mg/L). No action was taken on this basis because all sample results were greater than the blank action level of 0.89 mg/L.

Additional Comments

The results were reported to the limit of detection (LOD). Positive results below the limit of quantitation (LOQ) and above the detection limit (DL) were qualified as estimated, (J), due to uncertainty near the detection limit.

Sample CARBONIN-20110411 required a 5 time dilution fold due to a 1,1-dichloroethane concentration greater than the linear range of the instrument. All other results are reported from the undiluted analysis.

EXECUTIVE SUMMARY

Laboratory Performance Issues: Initial and continuing calibration RRF noncompliance resulted in the rejection of 1,4-dioxane result.

Other Factors Affecting Data Quality: Positive results below the limit of quantitation (LOQ) and above the detection limit (DL) were qualified as estimated, (J), due to uncertainty near the detection limit.

The data for these analyses were reviewed with reference to the USEPA Region II Standard Operating Procedures for Validating Volatile Organic Compounds by SW-846 Method 8260B HW-24 Revision #2 (August 2008) and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009).

The text of this report has been formulated to address only those problem areas affecting data quality.

TetraTech NUS
Edward Sedlmyer
Chemist/Data Validator

TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C – Region II Data Validation Forms
4. Appendix D - Support Documentation

Appendix A

Qualified Analytical Results

Data Validation Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$ / ICP PDS Recovery Noncompliance
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02045	NSAMPLE	CARBONIN-20110411			CARBONIN-20110411DL		
SDG: C1836	LAB_ID	C1836-07			C1836-07DL		
FRACTION: OV	SAMP_DATE	4/11/2011			4/11/2011		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		27					
1,1,2,2-TETRACHLOROETHANE		0.5	U				
1,1,2-TRICHLOROETHANE		0.5	U				
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U				
1,1-DICHLOROETHANE					150		
1,1-DICHLOROETHENE		10					
1,2,3-TRICHLOROBENZENE		0.63	J	P			
1,2,4-TRICHLOROBENZENE		3					
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U				
1,2-DIBROMOETHANE		0.5	U				
1,2-DICHLOROBENZENE		0.79	J	P			
1,2-DICHLOROETHANE		0.5	U				
1,2-DICHLOROPROPANE		0.5	U				
1,3-DICHLOROBENZENE		0.5	U				
1,4-DICHLOROBENZENE		1.7					
1,4-DIOXANE		10	UR	C			
2-BUTANONE		3.3	J	P			
2-HEXANONE		2.5	U				
4-METHYL-2-PENTANONE		2.5	U				
ACETONE		2.5	U				
BENZENE		0.58	J	P			
BROMOCHLOROMETHANE		0.5	U				
BROMODICHLOROMETHANE		0.5	U				
BROMOFORM		0.5	U				
BROMOMETHANE		0.5	U				
CARBON DISULFIDE		0.5	U				
CARBON TETRACHLORIDE		0.5	U				
CHLOROBENZENE		0.5	U				
CHLORODIBROMOMETHANE		0.5	U				
CHLOROETHANE		51					
CHLOROFORM		0.5	U				
CHLOROMETHANE		0.5	U				
CIS-1,2-DICHLOROETHENE		0.5	U				
CIS-1,3-DICHLOROPROPENE		0.5	U				
CYCLOHEXANE		0.5	U				

PROJ_NO: 02045	NSAMPLE	CARBONIN-20110411			CARBONIN-20110411DL		
SDG: C1836	LAB_ID	C1836-07			C1836-07DL		
FRACTION: OV	SAMP_DATE	4/11/2011			4/11/2011		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE		0.5	U				
ETHYLBENZENE		0.5	U				
ISOPROPYLBENZENE		0.5	U				
M+P-XYLENES		1	U				
METHYL ACETATE		0.5	U				
METHYL CYCLOHEXANE		0.5	U				
METHYL TERT-BUTYL ETHER		0.5	U				
METHYLENE CHLORIDE		0.5	U				
O-XYLENE		0.5	U				
STYRENE		0.5	U				
TETRACHLOROETHENE		0.5	U				
TOLUENE		0.5	U				
TRANS-1,2-DICHLOROETHENE		0.5	U				
TRANS-1,3-DICHLOROPROPENE		0.5	U				
TRICHLOROETHENE		0.5	U				
TRICHLOROFLUOROMETHANE		0.5	U				
VINYL CHLORIDE		0.5	U				

PROJ_NO: 02045	NSAMPLE	SA-PZ-157I1-20110411			SA-PZ-157I-20110411			SA-PZ-158I1-20110411			SA-PZ-158I-20110411		
SDG: C1836	LAB_ID	C1836-05			C1836-06			C1836-03			C1836-04		
FRACTION: MISC	SAMP_DATE	4/11/2011			4/11/2011			4/11/2011			4/11/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/L			MG/L			MG/L			MG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		2.7			1.9			3.1			0.999		

PROJ_NO: 02045	NSAMPLE	SA-PZ-159I1-20110411			SA-PZ-159I-20110411		
SDG: C1836	LAB_ID	C1836-01			C1836-02		
FRACTION: MISC	SAMP_DATE	4/11/2011			4/11/2011		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	MG/L			MG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		3.2			1.6		

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**D. BRAYACK**	**DATE:**	**JUNE 14, 2011**
FROM:	**EDWARD SEDLMYER**	**COPIES:**	**DV FILE**
SUBJECT:	**ORGANIC DATA VALIDATION – VOC/TOC** **NWIRP CALVERTON CTO WE08** **SDG C1952**		

SAMPLES: 4 / Aqueous / VOC

CARBONIN-20110420 SA-PZ-159I-20110419 SA-PZ-159I-20110420
SA-TB01-20110411

7 / Aqueous / TOC

CARBONIN-20110420 SA-PZ-157I-20110420 SA-PZ-157I1-20110420
SA-PZ-158I-20110420 SA-PZ-158I1-20110420 SA-PZ-159I-20110419
SA-PZ-159I1-20110420

Overview

The sample set for NWIRP Calverton, CTO WE08, SDG C1952 consists of one (1) trip blank and seven (7) aqueous environmental samples. The aqueous samples were analyzed for volatile organic compounds (VOC). and total organic carbon (TOC) as stated above.

The samples were collected by Tetra Tech on April 11,19, and 20, 2011 and analyzed by CHEMTECH. All analyses were conducted in accordance with EPA Method SW-846 8260B and 9060 analytical and reporting protocols. The data contained in this SDG were validated with regard to the following parameters:

* • Data completeness
* • Holding times
• Initial/continuing calibrations
* • GC/MS Tuning
• Laboratory Method Blank Results
• Surrogate Recoveries
• Matrix Spike / Matrix Spike Duplicate Recoveries
* • Laboratory Control Sample Recoveries
* • Laboratory Duplicate Precision
* • Internal Standard Recoveries
* • Compound Quantitation
* • Compound Identification
* • Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter. Qualified analytical results are presented in Appendix A, results as reported by the laboratory are presented in Appendix B, Region II data validation forms are presented in Appendix C, and documentation supporting these findings is presented in Appendix D.

Volatile Organic Compounds

All initial calibrations and all continuing calibrations relative response factor (RRF) was less than the 0.05 quality control limit for acetone and 1,4-dioxane on instrument MSVOAD. The non-detected results for

acetone and 1,4-dioxane were rejected (UR).

Continuing calibration percent differences (%Ds) were greater than the 20% quality control limit for dichlorodifluoromethane and bromoform on instrument MSVOAD, on 04/28/11 at 10:15. No action was taken on this basis because only a diluted sample and re-analysis samples were associated with it and these results were not used for validation.

The VOC matrix spike / matrix spike duplicate (MS/MSD) associated with this sample delivery group (SDG) had had high recovery for methyl acetate in the MSD and a relative percent difference for 1,4-dioxane that exceeded the quality control limit. No action was taken on this basis because the matrix spike was not performed on the sample in this SDG.

The surrogate 4-bromofluorobenzene had percent recoveries greater than the quality control limit for samples CARBONIN-20110420, SA-PZ-159I-20110419, and SA-PZ-159I-20110420. Sample CARBONIN-20110420 was analyzed at a 5 times dilution with acceptable surrogate recoveries. Samples SA-PZ-159I-20110419, and SA-PZ-159I-20110420 were re-analyzed and had low percent recoveries for surrogate toluene-d8. The original runs were used for validation. Positive results reported from the original runs were qualified as estimated (J).

The following contaminant was detected in the laboratory method and calibration blanks at the following maximum concentrations:

Contaminant	Maximum Concentration (mg/L)	Action Level (mg/L)
TOC(1)	0.276	1.38
TOC(2)	0.421	2.1

1 – TOC present in calibration blank CCB2 affecting all samples.
2 – TOC present in calibration blank CCB3 affecting sample CARBONIN-20110420.

An action level of 5X the maximum contaminant concentration of total organic carbon was established to evaluate the affected samples for laboratory method blank contamination. Sample aliquot and dilution factors were taken into consideration during application of the blank action level. The positive total organic carbon results less than the reporting limit and less than the action level were raised to the reporting limit and qualified as (U).

Additional Comments

The results were reported to the limit of detection (LOD). Positive results below the limit of quantitation (LOQ) and above the detection limit (DL) were qualified as estimated, (J), due to uncertainty near the detection limit.

Sample CARBONIN-20110420 required a 5 times dilution due to a 1,1-dichloroethane concentration greater than the linear range of the instrument. All other results are reported from the undiluted analysis.

EXECUTIVE SUMMARY

Laboratory Performance Issues: Initial and continuing calibration RRF noncompliance resulted in the rejection of 1,4-dioxane and acetone results. Surrogate percent recovery noncompliances resulted in the qualification of positive results for 3 samples. Blank contamination for TOC resulted in the qualification of

data.

Other Factors Affecting Data Quality: Positive results below the limit of quantitation (LOQ) and above the detection limit (DL) were qualified as estimated, (J), due to uncertainty near the detection limit.

The data for these analyses were reviewed with reference to the USEPA Region II Standard Operating Procedures for Validating Volatile Organic Compounds by SW-846 Method 8260B HW-24 Revision #2 (August 2008) and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009).

The text of this report has been formulated to address only those problem areas affecting data quality.

TetraTech NUS
Edward Sedlmyer
Chemist/Data Validator

TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C – Region II Data Validation Forms
4. Appendix D - Support Documentation

Appendix A

Qualified Analytical Results

Data Validation Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$ / ICP PDS Recovery Noncompliance
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02045	NSAMPLE	CARBONIN-20110420			CARBONIN-20110420DL			SA-PZ-159I-20110419			SA-PZ-159I-20110420		
SDG: C1952	LAB_ID	C1952-09			C1952-09DL			C1952-02			C1952-08		
FRACTION: OV	SAMP_DATE	4/20/2011			4/20/2011			4/19/2011			4/20/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		32	J	R				21	J	R	24	J	R
1,1,2,2-TETRACHLOROETHANE		0.5	U					0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	U					0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U					0.64	J	PR	0.59	J	PR
1,1-DICHLOROETHANE					130			89	J	R	100	J	R
1,1-DICHLOROETHENE		12	J	R				5.6	J	R	6.8	J	R
1,2,3-TRICHLOROBENZENE		0.61	J	PR				0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE		2.2	J	R				0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U					0.5	U		0.5	U	
1,2-DIBROMOETHANE		0.5	U					0.5	U		0.5	U	
1,2-DICHLOROBENZENE		0.61	J	PR				0.5	U		0.5	U	
1,2-DICHLOROETHANE		0.5	U					0.5	U		0.5	U	
1,2-DICHLOROPROPANE		0.5	U					0.5	U		0.5	U	
1,3-DICHLOROBENZENE		0.5	U					0.5	U		0.5	U	
1,4-DICHLOROBENZENE		1.5	J	R				0.5	U		0.5	U	
1,4-DIOXANE		10	UR	C				10	UR	C	10	UR	C
2-BUTANONE		2.5	U					2.5	U		2.5	U	
2-HEXANONE		2.5	U					2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U					2.5	U		2.5	U	
ACETONE		2.5	UR	C				2.5	UR	C	2.5	UR	C
BENZENE		0.67	J	PR				0.5	U		0.5	U	
BROMOCHLOROMETHANE		0.5	U					0.5	U		0.5	U	
BROMODICHLOROMETHANE		0.5	U					0.5	U		0.5	U	
BROMOFORM		0.5	U					0.5	U		0.5	U	
BROMOMETHANE		0.5	U					0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U					0.5	U		0.5	U	
CARBON TETRACHLORIDE		3.6	J	R				0.5	U		0.5	U	
CHLOROBENZENE		0.5	U					0.5	U		0.5	U	
CHLORODIBROMOMETHANE		0.5	U					0.5	U		0.5	U	
CHLOROETHANE		98	J	R				10	J	R	14	J	R
CHLOROFORM		0.5	U					0.5	U		0.5	U	
CHLOROMETHANE		0.5	U					0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	U					0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	U					0.5	U		0.5	U	
CYCLOHEXANE		0.5	U					0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-TB01-20110411
SDG: C1952	LAB_ID	C1952-01
FRACTION: OV	SAMP_DATE	4/11/2011
MEDIA: WATER	QC_TYPE	NM
	UNITS	UG/L
	PCT_SOLIDS	0.0
	DUP_OF	

PARAMETER	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE	0.5	U	
1,1,2,2-TETRACHLOROETHANE	0.5	U	
1,1,2-TRICHLOROETHANE	0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE	0.5	U	
1,1-DICHLOROETHANE	0.5	U	
1,1-DICHLOROETHENE	0.5	U	
1,2,3-TRICHLOROBENZENE	0.5	U	
1,2,4-TRICHLOROBENZENE	0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE	0.5	U	
1,2-DIBROMOETHANE	0.5	U	
1,2-DICHLOROBENZENE	0.5	U	
1,2-DICHLOROETHANE	0.5	U	
1,2-DICHLOROPROPANE	0.5	U	
1,3-DICHLOROBENZENE	0.5	U	
1,4-DICHLOROBENZENE	0.5	U	
1,4-DIOXANE	10	UR	C
2-BUTANONE	2.5	U	
2-HEXANONE	2.5	U	
4-METHYL-2-PENTANONE	2.5	U	
ACETONE	2.5	UR	C
BENZENE	0.5	U	
BROMOCHLOROMETHANE	0.5	U	
BROMODICHLOROMETHANE	0.5	U	
BROMOFORM	0.5	U	
BROMOMETHANE	0.5	U	
CARBON DISULFIDE	0.5	U	
CARBON TETRACHLORIDE	0.5	U	
CHLOROBENZENE	0.5	U	
CHLORODIBROMOMETHANE	0.5	U	
CHLOROETHANE	0.5	U	
CHLOROFORM	0.5	U	
CHLOROMETHANE	0.5	U	
CIS-1,2-DICHLOROETHENE	0.5	U	
CIS-1,3-DICHLOROPROPENE	0.5	U	
CYCLOHEXANE	0.5	U	

PROJ_NO: 02045	NSAMPLE	CARBONIN-20110420			CARBONIN-20110420DL			SA-PZ-159I-20110419			SA-PZ-159I-20110420		
SDG: C1952	LAB_ID	C1952-09			C1952-09DL			C1952-02			C1952-08		
FRACTION: OV	SAMP_DATE	4/20/2011			4/20/2011			4/19/2011			4/20/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE		0.5	U					0.5	U		0.5	U	
ETHYLBENZENE		0.5	U					0.5	U		0.5	U	
ISOPROPYLBENZENE		0.5	U					0.5	U		0.5	U	
M+P-XYLENES		1	U					1	U		1	U	
METHYL ACETATE		0.5	U					0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U					0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U					0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U					1.5	J	R	1.4	J	R
O-XYLENE		0.5	U					0.5	U		0.5	U	
STYRENE		0.5	U					0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	U					0.5	U		0.5	U	
TOLUENE		0.5	U					0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	U					0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	U					0.5	U		0.5	U	
TRICHLOROETHENE		0.5	U					0.5	U		0.5	U	
TRICHLOROFLUOROMETHANE		0.5	U					0.5	U		0.5	U	
VINYL CHLORIDE		0.5	U					0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-TB01-20110411		
SDG: C1952	LAB_ID	C1952-01		
FRACTION: OV	SAMP_DATE	4/11/2011		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE		0.5	U	
ETHYLBENZENE		0.5	U	
ISOPROPYLBENZENE		0.5	U	
M+P-XYLENES		1	U	
METHYL ACETATE		0.5	U	
METHYL CYCLOHEXANE		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U	
METHYLENE CHLORIDE		0.5	U	
O-XYLENE		0.5	U	
STYRENE		0.5	U	
TETRACHLOROETHENE		0.5	U	
TOLUENE		0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	U	
TRICHLOROETHENE		0.5	U	
TRICHLOROFLUOROMETHANE		0.5	U	
VINYL CHLORIDE		0.5	U	

PROJ_NO: 02045	NSAMPLE	CARBONIN-20110420			SA-PZ-157I1-20110420			SA-PZ-157I-20110420			SA-PZ-158I1-20110420		
SDG: C1952	LAB_ID	C1952-09			C1952-03			C1952-04			C1952-05		
FRACTION: MISC	SAMP_DATE	4/20/2011			4/20/2011			4/20/2011			4/20/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/L			MG/L			MG/L			MG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		1.2	U	A	1.8			1.2	U	A	2.3		

PROJ_NO: 02045	NSAMPLE	SA-PZ-158I-20110420			SA-PZ-159I1-20110420			SA-PZ-159I-20110419		
SDG: C1952	LAB_ID	C1952-06			C1952-07			C1952-02		
FRACTION: MISC	SAMP_DATE	4/20/2011			4/20/2011			4/19/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	MG/L			MG/L			MG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		1.2	U	A	2.2			1.3	U	A

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**D. BRAYACK**	**DATE:**	**JUNE 14, 2011**
FROM:	**JOSEPH KALINYAK**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC / TOC**
NWIRP CALVERTON CTO WE08
SDG C2167

SAMPLES: 8 / Aqueous / VOC

CARBONIN-20110509	SA-PZ-157I-20110509	SA-PZ-157I1-20110509
SA-PZ-158I-20110509	SA-PZ-158I1-20110509	SA-PZ-159I-20110509
SA-PZ-159I1-20110509	SA-TB01-2011411	

7 / Aqueous / TOC

CARBONIN-20110509	SA-PZ-157I-20110509	SA-PZ-157I1-20110509
SA-PZ-158I-20110509	SA-PZ-158I1-20110509	SA-PZ-159I-20110509
SA-PZ-159I1-20110509		

Overview

The sample set for NWIRP Calverton, SDG C2167 consisted of seven (7) aqueous environmental samples and one (1) aqueous QC trip blank sample. All aqueous samples were analyzed for volatile organic compounds (VOC) and the seven (7) aqueous environmental samples were analyzed for total organic carbon (TOC) as listed above. No field duplicate sample pairs were included with samples from this Sample Delivery Group (SDG).

The samples were collected by Tetra Tech on May 9, 2011 and analyzed by ChemTech laboratory. All analyses were conducted in accordance with EPA Method SW-846 8260B and 9060 analytical and reporting protocols. The data contained in this SDG were validated with regard to the following parameters:

*	•	Data completeness
*	•	Hold times
*	•	GC/MS System Tuning and Performance
	•	Initial/continuing calibrations
*	•	Laboratory Control Sample Recoveries
	•	Blank Results
*	•	Matrix Spike/Matrix Spike Duplicate Recoveries
	•	Surrogate Spike Recoveries
*	•	Internal Standard Recoveries
*	•	Compound Identification
*	•	Compound Quantitation
*	•	Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter. Qualified analytical results are presented in Appendix A, results as reported by the laboratory are presented in Appendix B, Region II data validation forms are presented in Appendix C, and documentation supporting these findings is presented in Appendix D.

VOC

The initial calibration relative response factors (RRF) were less than the quality control limit of 0.05 for 1,4-dioxane for the instrument MSVOAG on 05/11/11 and for instrument MSVOAH on 05/09/11. Additionally, all continuing calibration verifications (CCV) had RRFs less than the 0.05 quality control limit for 1,4-dioxane. All sample 1,4-dioxane results were non-detected and were qualified rejected, (UR).

The CCV percent difference (%D) was greater than the 20% quality control limit for acetone for instrument MSVOAH on 05/20/11 @ 12:12 affecting samples SA-PZ-157I-20110509, SA-PZ-157I-20110509 dilution analysis, SA-PZ-159I1-20110509, SA-PZ-157I1-20110509, and CARBONIN-20110509. The non-detected results for acetone for the aforementioned samples were qualified estimated, (UJ).

The CCV percent difference (%D) was greater than the 20% quality control limit for acetone for instrument MSVOAH on 05/22/11 @ 11:11 affecting samples SA-PZ-157I1-20110509 dilution analysis, SA-PZ-159I1-20110509 dilution analysis, SA-PZ-158I-20110509, SA-PZ-158I1-20110509, and SA-PZ-159I-20110509. The non-detected results for acetone for the aforementioned samples were qualified estimated, (UJ).

The surrogate toluene-d8 %R was less than the quality control limit for sample SA-PZ-157I-20110509. The sample was re-analyzed at a 10X dilution with surrogate %Rs less than the quality control limit for all the surrogates. Therefore, the original sample analysis was reported for all analytes except those which exceeded the highest calibration level in the undiluted sample analysis, 1,1-dichloroethane and chloroethane. All positive and non-detected VOC sample SA-PZ-157I-20110509 results were qualified estimated, (J) and (UJ), respectively. with the exception of 1,4-dioxane results which were rejected due to other quality control limit non-compliances.

The surrogates 1,2-dichloroethane-d4, dibromofluoromethane, and toluene-d8 %Rs were less than the quality control limit for sample SA-PZ-157I1-20110509. The sample was re-analyzed at a 10X dilution with surrogate %Rs within the quality control limits for all the surrogates. Due to the high dilution (10X), the original sample analysis was reported and all VOC analytes were qualified estimated, (J) and (UJ), respectively, except for the 1,4-dioxane result which was rejected due to another quality control limit non-compliance, and the dilution reported analytes 1,1-dichloroethane and chloroethane.

Positive results below the limit of detection (LOD) and above the detection limit were qualified as estimated, (J), due to uncertainty near the detection limit.

TOC

The following analyte was detected in the associated method blanks at the maximum concentrations as indicated below:

Compound	Maximum Conc. (mg/L)	Action Level (mg/L)
TOC	0.226	1.130

An action level of 5X for the blank TOC result was established to evaluate laboratory contamination for TOC. Dilution factors and sample aliquots were taken into consideration during the application of all action levels. Positive results less than the action level were qualified as non-detected, (U), as a result of laboratory blank contamination.

Additional Comments

Additional Comments

The following samples were analyzed for VOCs both undiluted and diluted by the laboratory. Only the results which were higher than the highest calibration level in the undiluted sample analyses were reported from the dilution analyses.

Sample	Dilution
SA-PZ-157I-20110509	1X, 10X
SA-PZ-157I1-20110509	1X, 10X
SA-PZ-159I1-20110509	1X, 10X

EXECUTIVE SUMMARY

Laboratory Performance Issues: All sample 1,4-dioxane VOC analyte non-detected results were rejected due to initial and continuing calibration RRF non-compliances. Some non-detected sample acetone results were qualified due to CCV %D quality control limit non-compliances. Sample VOC results were qualified due to surrogate %R quality control limit non-compliances. Sample TOC results were qualified for blank contamination.

Other Factors Affecting Data Quality: Positive results below the Limit of Detection (LOD) and above the detection limit were qualified as estimated, (J), due to uncertainty near the detection limit.

The data for these analyses were reviewed with reference to the USEPA Region II Hazardous Waste Support Branch Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B SOP #HW-24 Revision #2 August 2008 and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009).

TetraTech NUS
Joseph Kalinyak
Chemist/Data Validator

TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
Appendix A - Qualified Analytical Results
Appendix B - Results as Reported by the Laboratory
Appendix C – Region II Data Validation Forms
Appendix D - Support Documentation

Appendix A

Qualified Analytical Results

Value Qualifier Key (Val Qual)

J – The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

UJ – The result is an estimated non-detected quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

U - Value is a non-detect as reported by the laboratory.

UR – Non-detected result is considered rejected, (UR), as a result of technical non-compliances.

DATA QUALIFICATION CODE (QUAL CODE)

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$ / ICP PDS Recovery Noncompliance
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficent $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02045	NSAMPLE	CARBONIN-20110509			SA-PZ-157I1-20110509			SA-PZ-157I1-20110509DL			SA-PZ-157I-20110509		
SDG: C2167	LAB_ID	C2167-08			C2167-03			C2167-03DL			C2167-02		
FRACTION: OV	SAMP_DATE	5/9/2011			5/9/2011			5/9/2011			5/9/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		21			16	J	R				31	J	R
1,1,2,2-TETRACHLOROETHANE		0.5	U		0.5	UJ	R				0.5	UJ	R
1,1,2-TRICHLOROETHANE		0.5	U		0.5	UJ	R				0.5	UJ	R
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U		0.5	UJ	R				0.5	UJ	R
1,1-DICHLOROETHANE		110						140					
1,1-DICHLOROETHENE		7.3			13	J	R				17	J	R
1,2,3-TRICHLOROBENZENE		0.5	U		2.7	J	R				1.7	J	R
1,2,4-TRICHLOROBENZENE		0.5	U		8.6	J	R				5	J	R
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U		0.5	UJ	R				0.5	UJ	R
1,2-DIBROMOETHANE		0.5	U		0.5	UJ	R				0.5	UJ	R
1,2-DICHLOROBENZENE		0.5	U		9.8	J	R				1.9	J	R
1,2-DICHLOROETHANE		0.5	U		0.5	UJ	R				0.5	UJ	R
1,2-DICHLOROPROPANE		0.5	U		0.5	UJ	R				0.5	UJ	R
1,3-DICHLOROBENZENE		0.5	U		7.3	J	R				1.4	J	R
1,4-DICHLOROBENZENE		0.5	U		37	J	R				6.6	J	R
1,4-DIOXANE		10	UR	C	10	UR	C				10	UR	C
2-BUTANONE		2.5	U		2.5	U	R				2.5	UJ	R
2-HEXANONE		2.5	U		2.5	U	R				2.5	UJ	R
4-METHYL-2-PENTANONE		2.5	U		2.5	U	R				2.5	UJ	R
ACETONE		2.5	UJ	C	2.5	UJ	CR				2.5	UJ	CR
BENZENE		0.5	U		1.9	J	R				1.7	J	R
BROMOCHLOROMETHANE		0.5	U		0.5	UJ	R				0.5	UJ	R
BROMODICHLOROMETHANE		0.5	U		0.5	UJ	R				0.5	UJ	R
BROMOFORM		0.5	U		0.5	UJ	R				0.5	UJ	R
BROMOMETHANE		0.5	U		0.5	UJ	R				0.5	UJ	R
CARBON DISULFIDE		0.5	U		0.5	UJ	R				0.5	UJ	R
CARBON TETRACHLORIDE		0.5	U		0.5	UJ	R				0.5	UJ	R
CHLOROBENZENE		0.5	U		5.1	J	R				0.53	J	PR
CHLORODIBROMOMETHANE		0.5	U		0.5	UJ	R				0.5	UJ	R
CHLOROETHANE		38						130					
CHLOROFORM		0.5	U		0.5	UJ	R				0.5	UJ	R
CHLOROMETHANE		0.5	U		0.5	UJ	R				0.5	UJ	R
CIS-1,2-DICHLOROETHENE		0.5	U		0.96	J	PR				0.62	J	PR
CIS-1,3-DICHLOROPROPENE		0.5	U		0.5	UJ	R				0.5	UJ	R
CYCLOHEXANE		0.5	U		0.5	UJ	R				0.5	UJ	R

PROJ_NO: 02045	NSAMPLE	SA-PZ-157I-20110509DL			SA-PZ-158I1-20110509			SA-PZ-158I-20110509			SA-PZ-159I1-20110509		
SDG: C2167	LAB_ID	C2167-02DL			C2167-05			C2167-04			C2167-07		
FRACTION: OV	SAMP_DATE	5/9/2011			5/9/2011			5/9/2011			5/9/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE					6.5			14			9		
1,1,2,2-TETRACHLOROETHANE					0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE					0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE					0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHANE		280	J	R	110			71			150		
1,1-DICHLOROETHENE					8.5			5			13		
1,2,3-TRICHLOROBENZENE					2.4			0.5	U		5		
1,2,4-TRICHLOROBENZENE					6.6			0.5	U		12		
1,2-DIBROMO-3-CHLOROPROPANE					0.5	U		0.5	U		0.5	U	
1,2-DIBROMOETHANE					0.5	U		0.5	U		0.5	U	
1,2-DICHLOROBENZENE					7.6			0.5	U		17		
1,2-DICHLOROETHANE					0.5	U		0.5	U		0.5	U	
1,2-DICHLOROPROPANE					0.5	U		0.5	U		0.5	U	
1,3-DICHLOROBENZENE					6			0.5	U		14		
1,4-DICHLOROBENZENE					30			0.5	U		68		
1,4-DIOXANE					10	UR	C	10	UR	C	10	UR	C
2-BUTANONE					2.5	U		2.5	U		2.5	U	
2-HEXANONE					2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE					2.5	U		2.5	U		2.5	U	
ACETONE					2.5	UJ	C	2.5	UJ	C	2.5	UJ	C
BENZENE					1.5			0.5	U		2.5		
BROMOCHLOROMETHANE					0.5	U		0.5	U		0.5	U	
BROMODICHLOROMETHANE					0.5	U		0.5	U		0.5	U	
BROMOFORM					0.5	U		0.5	U		0.5	U	
BROMOMETHANE					0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE					0.5	U		0.5	U		0.5	U	
CARBON TETRACHLORIDE					0.5	U		0.5	U		0.5	U	
CHLOROBENZENE					4			0.5	U		9.6		
CHLORODIBROMOMETHANE					0.5	U		0.5	U		0.5	U	
CHLOROETHANE		200	J	R	130			14					
CHLOROFORM					0.5	U		0.5	U		0.5	U	
CHLOROMETHANE					0.5	U		0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE					0.64	J	P	0.5	U		0.85	J	P
CIS-1,3-DICHLOROPROPENE					0.5	U		0.5	U		0.5	U	
CYCLOHEXANE					0.5	U		0.5	U		0.79	J	P

PROJ_NO: 02045	NSAMPLE	SA-PZ-159I1-20110509DL			SA-PZ-159I-20110509			SA-TB01-2011411		
SDG: C2167	LAB_ID	C2167-07DL			C2167-06			C2167-01		
FRACTION: OV	SAMP_DATE	5/9/2011			5/9/2011			4/11/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE					16			0.5	U	
1,1,2,2-TETRACHLOROETHANE					0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE					0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE					0.5	U		0.5	U	
1,1-DICHLOROETHANE					90			0.5	U	
1,1-DICHLOROETHENE					6.2			0.5	U	
1,2,3-TRICHLOROBENZENE					0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE					0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE					0.5	U		0.5	U	
1,2-DIBROMOETHANE					0.5	U		0.5	U	
1,2-DICHLOROBENZENE					0.5	U		0.5	U	
1,2-DICHLOROETHANE					0.5	U		0.5	U	
1,2-DICHLOROPROPANE					0.5	U		0.5	U	
1,3-DICHLOROBENZENE					0.5	U		0.5	U	
1,4-DICHLOROBENZENE					0.5	U		0.5	U	
1,4-DIOXANE					10	UR	C	10	UR	C
2-BUTANONE					2.5	U		2.5	U	
2-HEXANONE					2.5	U		2.5	U	
4-METHYL-2-PENTANONE					2.5	U		2.5	U	
ACETONE					2.5	UJ	C	2.5	U	
BENZENE					0.5	U		0.5	U	
BROMOCHLOROMETHANE					0.5	U		0.5	U	
BROMODICHLOROMETHANE					0.5	U		0.5	U	
BROMOFORM					0.5	U		0.5	U	
BROMOMETHANE					0.5	U		0.5	U	
CARBON DISULFIDE					0.5	U		0.5	U	
CARBON TETRACHLORIDE					0.5	U		0.5	U	
CHLOROBENZENE					0.5	U		0.5	U	
CHLORODIBROMOMETHANE					0.5	U		0.5	U	
CHLOROETHANE		130			28			0.5	U	
CHLOROFORM					0.5	U		0.5	U	
CHLOROMETHANE					0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE					0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE					0.5	U		0.5	U	
CYCLOHEXANE					0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	CARBONIN-20110509			SA-PZ-157I1-20110509			SA-PZ-157I1-20110509DL			SA-PZ-157I-20110509		
SDG: C2167	LAB_ID	C2167-08			C2167-03			C2167-03DL			C2167-02		
FRACTION: OV	SAMP_DATE	5/9/2011			5/9/2011			5/9/2011			5/9/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE		0.5	U		0.5	UJ	R				0.5	UJ	R
ETHYLBENZENE		0.5	U		0.5	UJ	R				0.5	UJ	R
ISOPROPYLBENZENE		0.5	U		3	J	R				0.5	UJ	R
M+P-XYLENES		1	U		1	UJ	R				1	UJ	R
METHYL ACETATE		0.5	U		0.5	UJ	R				0.5	UJ	R
METHYL CYCLOHEXANE		0.5	U		0.5	UJ	R				0.5	UJ	R
METHYL TERT-BUTYL ETHER		0.5	U		0.5	UJ	R				0.5	UJ	R
METHYLENE CHLORIDE		0.5	U		0.5	UJ	R				0.5	UJ	R
O-XYLENE		0.5	U		0.5	UJ	R				0.5	UJ	R
STYRENE		0.5	U		0.5	UJ	R				0.5	UJ	R
TETRACHLOROETHENE		0.5	U		0.5	UJ	R				0.5	UJ	R
TOLUENE		0.5	U		0.5	UJ	R				0.5	UJ	R
TRANS-1,2-DICHLOROETHENE		0.5	U		0.5	UJ	R				0.5	UJ	R
TRANS-1,3-DICHLOROPROPENE		0.5	U		0.5	UJ	R				0.5	UJ	R
TRICHLOROETHENE		0.5	U		0.5	UJ	R				0.5	UJ	R
TRICHLOROFLUOROMETHANE		0.5	U		0.5	UJ	R				0.5	UJ	R
VINYL CHLORIDE		0.5	U		0.5	UJ	R				0.5	UJ	R

PROJ_NO: 02045	NSAMPLE	SA-PZ-157I-20110509DL			SA-PZ-158I1-20110509			SA-PZ-158I-20110509			SA-PZ-159I1-20110509		
SDG: C2167	LAB_ID	C2167-02DL			C2167-05			C2167-04			C2167-07		
FRACTION: OV	SAMP_DATE	5/9/2011			5/9/2011			5/9/2011			5/9/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE					0.5	U		0.5	U		0.5	U	
ETHYLBENZENE					0.5	U		0.5	U		0.5	U	
ISOPROPYLBENZENE					2.2			0.5	U		7.1		
M+P-XYLENES					1	U		1	U		1	U	
METHYL ACETATE					0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE					0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER					0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE					0.5	U		0.5	U		0.5	U	
O-XYLENE					0.5	U		0.5	U		0.5	U	
STYRENE					0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE					0.5	U		0.5	U		0.5	U	
TOLUENE					0.5	U		0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE					0.5	U		0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE					0.5	U		0.5	U		0.5	U	
TRICHLOROETHENE					0.5	U		0.5	U		0.5	U	
TRICHLOROFLUOROMETHANE					0.5	U		0.5	U		0.5	U	
VINYL CHLORIDE					0.5	U		0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-PZ-159I1-20110509DL			SA-PZ-159I-20110509			SA-TB01-2011411		
SDG: C2167	LAB_ID	C2167-07DL			C2167-06			C2167-01		
FRACTION: OV	SAMP_DATE	5/9/2011			5/9/2011			4/11/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE					0.5	U		0.5	U	
ETHYLBENZENE					0.5	U		0.5	U	
ISOPROPYLBENZENE					0.5	U		0.5	U	
M+P-XYLENES					1	U		1	U	
METHYL ACETATE					0.5	U		0.5	U	
METHYL CYCLOHEXANE					0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER					0.5	U		0.5	U	
METHYLENE CHLORIDE					0.5	U		0.5	U	
O-XYLENE					0.5	U		0.5	U	
STYRENE					0.5	U		0.5	U	
TETRACHLOROETHENE					0.5	U		0.5	U	
TOLUENE					0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE					0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE					0.5	U		0.5	U	
TRICHLOROETHENE					0.5	U		0.5	U	
TRICHLOROFLUOROMETHANE					0.5	U		0.5	U	
VINYL CHLORIDE					0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	CARBONIN-20110509			SA-PZ-157I1-20110509			SA-PZ-157I-20110509			SA-PZ-158I1-20110509		
SDG: C2167	LAB_ID	C2167-08			C2167-03			C2167-02			C2167-05		
FRACTION: MISC	SAMP_DATE	5/9/2011			5/9/2011			5/9/2011			5/9/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/L			MG/L			MG/L			MG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		0.783	U	A	2.1			2.4			2.7		

PROJ_NO: 02045	NSAMPLE	SA-PZ-158I-20110509			SA-PZ-159I1-20110509			SA-PZ-159I-20110509		
SDG: C2167	LAB_ID	C2167-04			C2167-07			C2167-06		
FRACTION: MISC	SAMP_DATE	5/9/2011			5/9/2011			5/9/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	MG/L			MG/L			MG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		0.961	U	A	1.9			1.2		

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**D. BRAYACK**	**DATE:**	**MAY 6, 2011**
FROM:	**JOSEPH KALINYAK**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC / OVG**
NWIRP CALVERTON CTO WE08
SDG C1497

SAMPLES: 21 / Aqueous / VOC

SA-DUP01-20110308	SA-DUP02-20110308	SA-PZ-133I-20110308
SA-PZ-135I-20110308	SA-PZ-136I-20110308	SA-PZ-138I-20110308
SA-PZ-138I1-20110308	SA-PZ-139I-20110308	SA-PZ-149I1-20110308
SA-PZ-151I1-20110308	SA-PZ-155I-20110307	SA-PZ-157I-20110307
SA-PZ-157I1-20110307	SA-PZ-158I-20110307	SA-PZ-158I1-20110307
SA-PZ-159I-20110307	SA-PZ-159I1-20110308	SA-PZ-160I-20110308
SA-PZ-160I1-20110308	SA-PZ-161I-20110308	SA-TB01-20110307

8 / Aqueous / OVG

SA-DUP01-20110308	SA-PZ-151I1-20110308	SA-PZ-155I-20110307
SA-PZ-157I-20110307	SA-PZ-157I1-20110307	SA-PZ-159I-20110307
SA-PZ-159I1-20110308	SA-PZ-160I-20110308	

Overview

The sample set for NWIRP Calverton, SDG C1497 consisted of twenty-one (21) aqueous environmental samples including one (1) aqueous trip blank sample. All aqueous samples were analyzed for volatile organic compounds (VOC) and eight (8) samples were analyzed for organic volatile gases (OVG). Two (2) field duplicate pairs were included in this Sample Delivery Group (SDG): SA-DUP01-20110308 / SA-PZ-151I1-20110308 and SA-DUP02-20110308 / SA-PZ-161I-20110308.

The samples were collected by Tetra Tech on March 7, and 8, 2011 and analyzed by ChemTech. All analyses were conducted in accordance with EPA Method SW-846 8260B and RSK-175 analytical and reporting protocols. The data contained in this SDG were validated with regard to the following parameters:

- Data completeness
- * Hold times
- * GC/MS System Tuning and Performance
- Initial/continuing calibrations
- Laboratory Control Sample Recoveries
- * Blank Results
- Matrix Spike/Matrix Spike Duplicate Recoveries
- Surrogate Spike Recoveries
- * Internal Standard Recoveries
- * Field Duplicate Precision
- * Compound Identification
- * Compound Quantitation
- * Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter. Qualified analytical results are presented in Appendix A, results as reported by the laboratory are presented in Appendix B, Region II data validation forms are presented in Appendix C, and documentation supporting these findings is presented in Appendix D.

VOC

The continuing calibration verification (CCV) percent difference (%D) was greater than the 20% quality control limit for 4-methyl-2-pentanone, 2-hexanone, bromoform, and 1,2-dibromo-3-chloropropane for instrument MSVOAG on 03/14/11 @ 13:15 affecting samples SA-PZ-158I-20110307, SA-PZ-158I1-20110307, SA-PZ-157I1-20110307, SA-PZ-151I1-20110308, SA-DUP01-20110308, and SA-PZ-160I-20110308. The non-detected 4-methyl-2-pentanone, 2-hexanone, bromoform, and 1,2-dibromo-3-chloropropane results for the aforementioned samples were qualified estimated, (UJ).

The CCV %D was greater than the 20% quality control limit for bromomethane for instrument MSVOAG on 03/16/11 @ 17:00 affecting samples SA-PZ-138I1-20110308, SA-PZ-160I1-20110308, SA-PZ-139I-20110308, SA-PZ-135I-20110308, SA-PZ-160I1-20110308, and SA-DUP02-20110308. The non-detected bromomethane results for the aforementioned samples were qualified estimated, (UJ).

The CCV %D was greater than the 20% quality control limit for acetone and bromomethane for instrument MSVOAG on 03/17/11 @ 09:23 affecting samples SA-PZ-136I-20110308, and SA-PZ-149I1-20110308. The non-detected acetone and bromo-methane results for the aforementioned samples were qualified estimated, (UJ).

The laboratory control sample (LCS) BSG0314W3 percent recovery (%R) was greater than the quality control limit for 4-methyl-2-pentanone. All affected samples had non-detected results for 4-methyl-2-pentanone and no action was taken.

The matrix spike (MS) and the MS duplicate (MSD) %Rs were less than the quality control limit for 1,1-dichloroethane and bromoform for the spiked sample SA-PZ-159I1-20110308. The positive 1,1-dichloroethane result for the sample was qualified estimated, (J), and the non-detected bromoform result for the sample was qualified estimated, (UJ).

The MSD %R was less than the quality control limit for o-xylene for the spiked sample SA-PZ-159I1-20110308. The non-detected o-xylene result for the sample was not qualified as the MS %R and the MS/MSD relative percent difference (RPD) were within the quality control limits.

The surrogate %Rs for dibromofluoromethane and toluene-d8 were less than the quality control limit for samples SA-PZ-158I-20110307 and SA-PZ-157I1-20110307. Sample SA-PZ-158I-20110307 was re-analyzed with an improved %R for dibromofluoromethane. The re-analysis results were reported. Sample SA-PZ-157I1-20110307 was not re-analyzed. Sample SA-PZ-158I-20110307 and SA-PZ-157I1-20110307 positive and non-detected VOC analytes were qualified estimated, (J) and (UJ), respectively.

Samples SA-PZ-158I1-20110307, SA-PZ-151I1-20110308, SA-DUP01-20110308, and SA-PZ-160I-20110308 also had surrogate %Rs for toluene-d8 less than the quality control limit. In samples SA-PZ-158I1-20110307, SA-PZ-151I1-20110308, SA-DUP01-20110308, and SA-PZ-160I-20110308, positive and non-detected VOC analytes were qualified estimated, (J) and (UJ), respectively.

Positive results below the limit of detection (LOD) and above the detection limit were qualified as estimated, (J), due to uncertainty near the detection limit.

OVG

The MS and MSD %Rs were less than the quality control limit for ethane and ethene for spiked sample SA-PZ-159I1-20110308. The non-detected ethane and ethene results for sample SA-PZ-159I1-20110308 were qualified estimated, (UJ).

The MS %R for methane was less than the quality control limit, the MSD %R was greater than the quality control limit for methane, and the MS/MSD relative percent difference (RPD) was greater than the quality control limit for spike sample SA-PZ-159I1-20110308. No action was taken as the concentration of the sample was more than 5X the concentration of the spike added to the sample.

Additional Comments

Positive results below the LOD and above the detection limit were qualified as estimated, (J), due to uncertainty near the detection limit.

Initial laboratory submitted Form I results for VOCs had sample analyte results for only twenty (20) VOC analytes. The electronic database (EDD) had sample results for forty-nine (49) VOC analytes. The project manager and the laboratory were contacted on this issue. The expanded list of VOCs was determined to be the correct list of VOCs to be analyzed for by the laboratory. The laboratory provided corrected Form I sample result, method blank, LCS, and MS/MSD forms.

The laboratory did not initially provide forms for the Laboratory Control Samples and the MS/MSD for the VOC analytes. The laboratory was contacted and provided the correct forms.

The following samples were analyzed for VOCs both undiluted and diluted by the laboratory. Only the VOC analyte results which were higher than the highest calibration level in the undiluted sample were reported from the dilution analyses.

Sample	Dilution
SA-DUP01-20110308	1X, 10X
SA-DUP02-20110308	1X, 5X
SA-PZ-138I1-20110308	1X, 20X
SA-PZ-151I1-20110308	1X, 10X
SA-PZ-157I1-20110307	1X, 5X
SA-PZ-160I-20110308	1X, 5X
SA-PZ-160I1-20101213	1X, 5X
SA-PZ-161I-20110308	1X, 5X

The following samples were analyzed for OVGs both undiluted and diluted by the laboratory due to high methane results in the undiluted analyses. Only the OVG analyte methane results were reported from the dilution analyses.

Sample	Dilution
SA-DUP01-20110308	1X, 10X
SA-PZ-151I1-20110308	1X, 10X
SA-PZ-157I1-20110307	1X, 10X
SA-PZ-159I1-20110308	1X, 5X

EXECUTIVE SUMMARY

Laboratory Performance Issues: VOC analyte results were qualified due to continuing calibration verification quality control limit non-compliances. Bromoform and 1,1-dichloroethane results for sample SA-PZ-159I1-20110308 were qualified due to MS/MSD quality control limit non-compliances. VOC analyte results for samples SA-PZ-158I-20110307, SA-PZ-157I1-20110307, SA-PZ-158I1-20110307, SA-PZ-151I1-20110308, SA-DUP01-20110308, and SA-PZ-160I-20110308 were qualified due to surrogate %R quality control limit non-compliances. The non-detected OVG gas ethane and ethene results for sample SA-PZ-159I1-20110308 were qualified estimated due to MS/MSD %R quality control limit non-compliances.

Other Factors Affecting Data Quality: Positive results below the Limit of Detection (LOD) and above the detection limit were qualified as estimated, (J), due to uncertainty near the detection limit.

The data for these analyses were reviewed with reference to the SOP #HW-24 Revision #2, October 2006, USEPA Region II Hazardous Waste Support Branch Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B (October 2006) and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009).

TetraTech NUS
Joseph Kalinyak
Chemist/Data Validator

TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C – Region II Data Validation Forms
4. Appendix D - Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Value Qualifier Key (Val Qual)

J – The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

UJ – The result is an estimated non-detected quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

U - Value is a non-detect as reported by the laboratory.

UR – Non-detected result is considered rejected, (UR), as a result of technical non-compliances.

DATA QUALIFICATION CODE (QUAL CODE)

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$ / ICP PDS Recovery Noncompliance
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02045	NSAMPLE	SA-DUP01-20110308			SA-DUP01-20110308DL			SA-DUP02-20110308			SA-DUP02-20110308DL		
SDG: C1497	LAB_ID	C1497-10			C1497-10DL			C1497-21			C1497-21DL		
FRACTION: OV	SAMP_DATE	3/8/2011			3/8/2011			3/8/2011			3/8/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	DUP_OF	SA-PZ-151I1-20110308			SA-PZ-151I1-20110308			SA-PZ-161I-20110308			SA-PZ-161I-20110308		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		39	J	R				30					
1,1,2,2-TETRACHLOROETHANE		0.5	UJ	R				0.5	U				
1,1,2-TRICHLOROETHANE		0.5	UJ	R				0.5	U				
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	UJ	R				0.5	U				
1,1-DICHLOROETHANE					310						140		
1,1-DICHLOROETHENE		22	J	R				10					
1,2,4-TRICHLOROBENZENE		11	J	R				0.5	U				
1,2-DIBROMO-3-CHLOROPROPANE		0.5	UJ	CR				0.5	U				
1,2-DIBROMOETHANE		0.5	UJ	R				0.5	U				
1,2-DICHLOROBENZENE		7.5	J	R				0.5	U				
1,2-DICHLOROETHANE		0.5	UJ	R				0.5	U				
1,2-DICHLOROPROPANE		0.5	UJ	R				0.5	U				
1,3-DICHLOROBENZENE		5.8	J	R				0.5	U				
1,4-DICHLOROBENZENE		26	J	R				0.5	U				
2-BUTANONE		2.5	UJ	R				2.5	U				
2-HEXANONE		2.5	UJ	CR				2.5	U				
4-METHYL-2-PENTANONE		2.5	UJ	CR				2.5	U				
ACETONE		2.5	UJ	R				2.5	U				
BENZENE		2.3	J	R				0.5	U				
BROMODICHLOROMETHANE		0.5	UJ	R				0.5	U				
BROMOFORM		0.5	UJ	CR				0.5	U				
BROMOMETHANE		0.5	UJ	R				0.5	UJ	C			
CARBON DISULFIDE		0.5	UJ	R				0.5	U				
CARBON TETRACHLORIDE		0.5	UJ	R				0.5	U				
CHLOROBENZENE		3	J	R				0.5	U				
CHLORODIBROMOMETHANE		0.5	UJ	R				0.5	U				
CHLOROETHANE					220			11					
CHLOROFORM		0.5	UJ	R				0.5	U				
CHLOROMETHANE		0.5	UJ	R				0.5	U				
CIS-1,2-DICHLOROETHENE		0.85	J	PR				0.5	U				
CIS-1,3-DICHLOROPROPENE		0.5	UJ	R				0.5	U				
CYCLOHEXANE		0.85	J	PR				0.5	U				
DICHLORODIFLUOROMETHANE		0.5	UJ	R				0.5	U				
ETHYLBENZENE		0.5	UJ	R				0.5	U				
ISOPROPYLBENZENE		2.7	J	R				0.5	U				

PROJ_NO: 02045	NSAMPLE	SA-PZ-133I-20110308			SA-PZ-135I-20110308			SA-PZ-136I-20110308			SA-PZ-138I1-20110308		
SDG: C1497	LAB_ID	C1497-20			C1497-18			C1497-16			C1497-13		
FRACTION: OV	SAMP_DATE	3/8/2011			3/8/2011			3/8/2011			3/8/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		11			7.3			0.5	U				
1,1,2,2-TETRACHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHANE		63			34			1.8					
1,1-DICHLOROETHENE		3.9			2.6			0.5	U		86		
1,2,4-TRICHLOROBENZENE		0.84	J	P	0.5	U		0.5	U		9.9		
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DIBROMOETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		3.7		
1,2-DICHLOROETHANE		0.5	U		0.5	U		0.5	U		1		
1,2-DICHLOROPROPANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,3-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		1.6		
1,4-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		7.2		
2-BUTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
2-HEXANONE		2.5	U		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
ACETONE		2.5	U		2.5	U		2.5	UJ	C	2.5	U	
BENZENE		0.5	U		0.5	U		0.5	U		2.6		
BROMODICHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOFORM		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	U		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON TETRACHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.55	J	P
CHLORODIBROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROETHANE		5.2			1.2			0.5	U				
CHLOROFORM		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	
CYCLOHEXANE		0.5	U		0.5	U		0.5	U		1.4		
DICHLORODIFLUOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
ETHYLBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
ISOPROPYLBENZENE		0.5	U		0.5	U		0.5	U		8.2		

PROJ_NO: 02045	NSAMPLE	SA-PZ-138I1-20110308DL			SA-PZ-138I-20110308			SA-PZ-139I-20110308			SA-PZ-149I1-20110308		
SDG: C1497	LAB_ID	C1497-13DL			C1497-11			C1497-17			C1497-15		
FRACTION: OV	SAMP_DATE	3/8/2011			3/8/2011			3/8/2011			3/8/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		340			0.5	U		0.5	U		0.5	U	
1,1,2,2-TETRACHLOROETHANE					0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE					0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE					0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHANE		1200			4.1			6.5			18		
1,1-DICHLOROETHENE					0.5	U		0.5	U		1.7		
1,2,4-TRICHLOROBENZENE					0.5	U		0.5	U		1.9		
1,2-DIBROMO-3-CHLOROPROPANE					0.5	U		0.5	U		0.5	U	
1,2-DIBROMOETHANE					0.5	U		0.5	U		0.5	U	
1,2-DICHLOROBENZENE					0.5	U		0.5	U		7.8		
1,2-DICHLOROETHANE					0.5	U		0.5	U		0.5	U	
1,2-DICHLOROPROPANE					0.5	U		0.5	U		0.5	U	
1,3-DICHLOROBENZENE					0.5	U		0.5	U		6		
1,4-DICHLOROBENZENE					0.5	U		0.5	U		28		
2-BUTANONE					2.5	U		2.5	U		2.5	U	
2-HEXANONE					2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE					2.5	U		2.5	U		2.5	U	
ACETONE					2.5	U		2.5	U		2.5	UJ	C
BENZENE					0.5	U		0.5	U		0.5	U	
BROMODICHLOROMETHANE					0.5	U		0.5	U		0.5	U	
BROMOFORM					0.5	U		0.5	U		0.5	U	
BROMOMETHANE					0.5	U		0.5	UJ	C	0.5	UJ	C
CARBON DISULFIDE					0.5	U		0.5	U		0.5	U	
CARBON TETRACHLORIDE					0.5	U		0.5	U		0.5	U	
CHLOROBENZENE					0.5	U		0.5	U		5.1		
CHLORODIBROMOMETHANE					0.5	U		0.5	U		0.5	U	
CHLOROETHANE		240			0.5	U		0.5	U		18		
CHLOROFORM					0.5	U		0.5	U		0.5	U	
CHLOROMETHANE					0.5	U		0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE					0.5	U		0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE					0.5	U		0.5	U		0.5	U	
CYCLOHEXANE					0.5	U		0.5	U		0.5	U	
DICHLORODIFLUOROMETHANE					0.5	U		0.5	U		0.5	U	
ETHYLBENZENE					0.5	U		0.5	U		0.5	U	
ISOPROPYLBENZENE					0.5	U		0.5	U		1.8		

PROJ_NO: 02045	NSAMPLE	SA-PZ-151I1-20110308			SA-PZ-151I1-20110308DL			SA-PZ-155I-20110307			SA-PZ-157I1-20110307		
SDG: C1497	LAB_ID	C1497-08			C1497-08DL			C1497-07			C1497-05		
FRACTION: OV	SAMP_DATE	3/8/2011			3/8/2011			3/7/2011			3/7/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		36	J	R				19			20	J	R
1,1,2,2-TETRACHLOROETHANE		0.5	UJ	R				0.5	U		0.5	UJ	R
1,1,2-TRICHLOROETHANE		0.5	UJ	R				0.5	U		0.5	UJ	R
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	UJ	R				0.5	U		0.5	UJ	R
1,1-DICHLOROETHANE					310			70					
1,1-DICHLOROETHENE		20	J	R				5.4			14	J	R
1,2,4-TRICHLOROBENZENE		9.6	J	R				0.5	U		9.4	J	R
1,2-DIBROMO-3-CHLOROPROPANE		0.5	UJ	CR				0.5	U		0.5	UJ	CR
1,2-DIBROMOETHANE		0.5	UJ	R				0.5	U		0.5	UJ	R
1,2-DICHLOROBENZENE		6.9	J	R				0.5	U		7.4	J	R
1,2-DICHLOROETHANE		0.5	UJ	R				0.5	U		0.5	UJ	R
1,2-DICHLOROPROPANE		0.5	UJ	R				0.5	U		0.5	UJ	R
1,3-DICHLOROBENZENE		5.3	J	R				0.5	U		5.6	J	R
1,4-DICHLOROBENZENE		23	J	R				0.5	U		26	J	R
2-BUTANONE		2.5	UJ	R				2.5	U		2.5	UJ	R
2-HEXANONE		2.5	UJ	CR				2.5	U		2.5	UJ	CR
4-METHYL-2-PENTANONE		2.5	UJ	CR				2.5	U		2.5	UJ	CR
ACETONE		2.5	UJ	R				2.5	U		2.5	UJ	R
BENZENE		2.1	J	R				0.5	U		1.7	J	R
BROMODICHLOROMETHANE		0.5	UJ	R				0.5	U		0.5	UJ	R
BROMOFORM		0.5	UJ	CR				0.5	U		0.5	UJ	CR
BROMOMETHANE		0.5	UJ	R				0.5	U		0.5	UJ	R
CARBON DISULFIDE		0.5	UJ	R				0.5	U		0.5	UJ	R
CARBON TETRACHLORIDE		0.5	UJ	R				0.5	U		0.5	UJ	R
CHLOROBENZENE		2.7	J	R				0.5	U		3	J	R
CHLORODIBROMOMETHANE		0.5	UJ	R				0.5	U		0.5	UJ	R
CHLOROETHANE					220			7.5					
CHLOROFORM		0.5	UJ	R				0.5	U		0.5	UJ	R
CHLOROMETHANE		0.5	UJ	R				0.5	U		0.5	UJ	R
CIS-1,2-DICHLOROETHENE		0.76	J	PR				0.5	U		0.59	J	PR
CIS-1,3-DICHLOROPROPENE		0.5	UJ	R				0.5	U		0.5	UJ	R
CYCLOHEXANE		0.82	J	PR				0.5	U		0.5	UJ	R
DICHLORODIFLUOROMETHANE		0.5	UJ	R				0.5	U		0.5	UJ	R
ETHYLBENZENE		0.5	UJ	R				0.5	U		0.5	UJ	R
ISOPROPYLBENZENE		2.5	J	R				0.5	U		1.7	J	R

PROJ_NO: 02045	NSAMPLE	SA-PZ-157I1-20110307DL			SA-PZ-157I-20110307			SA-PZ-158I1-20110307			SA-PZ-158I1-20110307DL		
SDG: C1497	LAB_ID	C1497-05DL			C1497-02			C1497-04			C1497-04DL		
FRACTION: OV	SAMP_DATE	3/7/2011			3/7/2011			3/7/2011			3/7/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE					21			21	J	R			
1,1,2,2-TETRACHLOROETHANE					0.5	U		0.5	UJ	R			
1,1,2-TRICHLOROETHANE					0.5	U		0.5	UJ	R			
1,1,2-TRICHLOROTRIFLUOROETHANE					0.5	U		0.5	UJ	R			
1,1-DICHLOROETHANE		190			71						170		
1,1-DICHLOROETHENE					5.2			12	J	R			
1,2,4-TRICHLOROBENZENE					0.5	U		6.9	J	R			
1,2-DIBROMO-3-CHLOROPROPANE					0.5	U		0.5	UJ	CR			
1,2-DIBROMOETHANE					0.5	U		0.5	UJ	R			
1,2-DICHLOROBENZENE					0.5	U		5	J	R			
1,2-DICHLOROETHANE					0.5	U		0.5	UJ	R			
1,2-DICHLOROPROPANE					0.5	U		0.5	UJ	R			
1,3-DICHLOROBENZENE					0.5	U		3.5	J	R			
1,4-DICHLOROBENZENE					0.5	U		17	J	R			
2-BUTANONE					2.5	U		2.5	UJ	R			
2-HEXANONE					2.5	U		2.5	UJ	CR			
4-METHYL-2-PENTANONE					2.5	U		2.5	UJ	CR			
ACETONE					2.5	U		2.5	UJ	R			
BENZENE					0.5	U		1.4	J	R			
BROMODICHLOROMETHANE					0.5	U		0.5	UJ	R			
BROMOFORM					0.5	U		0.5	UJ	CR			
BROMOMETHANE					0.5	U		0.5	UJ	R			
CARBON DISULFIDE					0.5	U		0.5	UJ	R			
CARBON TETRACHLORIDE					0.5	U		0.5	UJ	R			
CHLOROBENZENE					0.5	U		1.8	J	R			
CHLORODIBROMOMETHANE					0.5	U		0.5	UJ	R			
CHLOROETHANE		160			3.3						130		
CHLOROFORM					0.5	U		0.5	UJ	R			
CHLOROMETHANE					0.5	U		0.5	UJ	R			
CIS-1,2-DICHLOROETHENE					0.5	U		0.63	J	PR			
CIS-1,3-DICHLOROPROPENE					0.5	U		0.5	UJ	R			
CYCLOHEXANE					0.5	U		0.5	UJ	R			
DICHLORODIFLUOROMETHANE					0.5	U		0.5	UJ	R			
ETHYLBENZENE					0.5	U		0.5	UJ	R			
ISOPROPYLBENZENE					0.5	U		0.5	UJ	R			

PROJ_NO: 02045	NSAMPLE	SA-PZ-158I-20110307RE			SA-PZ-159I1-20110308			SA-PZ-159I-20110307			SA-PZ-160I1-20110308		
SDG: C1497	LAB_ID	C1497-03RE			C1497-09			C1497-06			C1497-14		
FRACTION: OV	SAMP_DATE	3/7/2011			3/8/2011			3/7/2011			3/8/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		11	J	R	13			18			47		
1,1,2,2-TETRACHLOROETHANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHANE		43	J	R	89	J	D	65					
1,1-DICHLOROETHENE		3	J	R	8.8			4.9			17		
1,2,4-TRICHLOROBENZENE		0.5	UJ	R	4.2			0.5	U		2.7		
1,2-DIBROMO-3-CHLOROPROPANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
1,2-DIBROMOETHANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
1,2-DICHLOROBENZENE		0.5	UJ	R	5			0.5	U		2.2		
1,2-DICHLOROETHANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
1,2-DICHLOROPROPANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
1,3-DICHLOROBENZENE		0.5	UJ	R	3.6			0.5	U		1.2		
1,4-DICHLOROBENZENE		0.5	UJ	R	17			0.5	U		5.2		
2-BUTANONE		2.5	UJ	R	2.5	U		2.5	U		1.5	J	P
2-HEXANONE		2.5	UJ	R	2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	UJ	R	2.5	U		2.5	U		2.5	U	
ACETONE		2.5	UJ	R	48			2.5	U		2.5	U	
BENZENE		0.5	UJ	R	0.98	J	P	0.5	U		0.82	J	P
BROMODICHLOROMETHANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
BROMOFORM		0.5	UJ	R	0.5	UJ	D	0.5	U		0.5	U	
BROMOMETHANE		0.5	UJ	R	0.5	U		0.5	U		0.5	UJ	C
CARBON DISULFIDE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
CARBON TETRACHLORIDE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
CHLOROBENZENE		0.5	UJ	R	2			0.5	U		0.66	J	P
CHLORODIBROMOMETHANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
CHLOROETHANE		1.6	J	R	87			3.3			55		
CHLOROFORM		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
CHLOROMETHANE		0.5	UJ	R	0.99	J	P	0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
CYCLOHEXANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
DICHLORODIFLUOROMETHANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
ETHYLBENZENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
ISOPROPYLBENZENE		0.5	UJ	R	0.63	J	P	0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-PZ-160I1-20110308DL			SA-PZ-160I-20110308			SA-PZ-160I-20110308DL			SA-PZ-161I-20110308		
SDG: C1497	LAB_ID	C1497-14DL			C1497-12			C1497-12DL			C1497-19		
FRACTION: OV	SAMP_DATE	3/8/2011			3/8/2011			3/8/2011			3/8/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS							100.0					
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE					30	J	R				26		
1,1,2,2-TETRACHLOROETHANE					0.5	UJ	R				0.5	U	
1,1,2-TRICHLOROETHANE					0.5	UJ	R				0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE					0.5	UJ	R				0.5	U	
1,1-DICHLOROETHANE		210						130					
1,1-DICHLOROETHENE					9.3	J	R				10		
1,2,4-TRICHLOROBENZENE					0.63	J	PR				0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE					0.5	UJ	CR				0.5	U	
1,2-DIBROMOETHANE					0.5	UJ	R				0.5	U	
1,2-DICHLOROBENZENE					0.5	UJ	R				0.5	U	
1,2-DICHLOROETHANE					0.5	UJ	R				0.5	U	
1,2-DICHLOROPROPANE					0.5	UJ	R				0.5	U	
1,3-DICHLOROBENZENE					0.5	UJ	R				0.5	U	
1,4-DICHLOROBENZENE					0.5	UJ	R				0.5	U	
2-BUTANONE					2.5	UJ	R				2.5	U	
2-HEXANONE					2.5	UJ	CR				2.5	U	
4-METHYL-2-PENTANONE					2.5	UJ	CR				2.5	U	
ACETONE					7	J	R				2.5	U	
BENZENE					0.5	UJ	R				0.5	U	
BROMODICHLOROMETHANE					0.5	UJ	R				0.5	U	
BROMOFORM					0.5	UJ	CR				0.5	U	
BROMOMETHANE					0.5	UJ	R				0.5	U	
CARBON DISULFIDE					0.5	UJ	R				0.5	U	
CARBON TETRACHLORIDE					0.5	UJ	R				0.5	U	
CHLOROBENZENE					0.5	UJ	R				0.5	U	
CHLORODIBROMOMETHANE					0.5	UJ	R				0.5	U	
CHLOROETHANE					11	J	R				9.5		
CHLOROFORM					0.5	UJ	R				0.5	U	
CHLOROMETHANE					0.5	UJ	R				0.5	U	
CIS-1,2-DICHLOROETHENE					0.5	UJ	R				0.5	U	
CIS-1,3-DICHLOROPROPENE					0.5	UJ	R				0.5	U	
CYCLOHEXANE					0.5	UJ	R				0.5	U	
DICHLORODIFLUOROMETHANE					0.5	UJ	R				0.5	U	
ETHYLBENZENE					0.5	UJ	R				0.5	U	
ISOPROPYLBENZENE					0.5	UJ	R				0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-PZ-161I-20110308DL			SA-TB01-20110307		
SDG: C1497	LAB_ID	C1497-19DL			C1497-01		
FRACTION: OV	SAMP_DATE	3/8/2011			3/7/2011		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS						
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE					0.5	U	
1,1,2,2-TETRACHLOROETHANE					0.5	U	
1,1,2-TRICHLOROETHANE					0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE					0.5	U	
1,1-DICHLOROETHANE		140			0.5	U	
1,1-DICHLOROETHENE					0.5	U	
1,2,4-TRICHLOROBENZENE					0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE					0.5	U	
1,2-DIBROMOETHANE					0.5	U	
1,2-DICHLOROBENZENE					0.5	U	
1,2-DICHLOROETHANE					0.5	U	
1,2-DICHLOROPROPANE					0.5	U	
1,3-DICHLOROBENZENE					0.5	U	
1,4-DICHLOROBENZENE					0.5	U	
2-BUTANONE					2.5	U	
2-HEXANONE					2.5	U	
4-METHYL-2-PENTANONE					2.5	U	
ACETONE					2.5	U	
BENZENE					0.5	U	
BROMODICHLOROMETHANE					0.5	U	
BROMOFORM					0.5	U	
BROMOMETHANE					0.5	U	
CARBON DISULFIDE					0.5	U	
CARBON TETRACHLORIDE					0.5	U	
CHLOROBENZENE					0.5	U	
CHLORODIBROMOMETHANE					0.5	U	
CHLOROETHANE					0.5	U	
CHLOROFORM					0.5	U	
CHLOROMETHANE					0.5	U	
CIS-1,2-DICHLOROETHENE					0.5	U	
CIS-1,3-DICHLOROPROPENE					0.5	U	
CYCLOHEXANE					0.5	U	
DICHLORODIFLUOROMETHANE					0.5	U	
ETHYLBENZENE					0.5	U	
ISOPROPYLBENZENE					0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-DUP01-20110308			SA-DUP01-20110308DL			SA-DUP02-20110308			SA-DUP02-20110308DL		
SDG: C1497	LAB_ID	C1497-10			C1497-10DL			C1497-21			C1497-21DL		
FRACTION: OV	SAMP_DATE	3/8/2011			3/8/2011			3/8/2011			3/8/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	DUP_OF	SA-PZ-151I1-20110308			SA-PZ-151I1-20110308			SA-PZ-161I-20110308			SA-PZ-161I-20110308		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
M+P-XYLENES		1	UJ	R				1	U				
METHYL ACETATE		0.5	UJ	R				0.5	U				
METHYL CYCLOHEXANE		0.5	UJ	R				0.5	U				
METHYL TERT-BUTYL ETHER		0.5	UJ	R				0.5	U				
METHYLENE CHLORIDE		0.5	UJ	R				0.5	U				
O-XYLENE		0.5	UJ	R				0.5	U				
STYRENE		0.5	UJ	R				0.5	U				
TETRACHLOROETHENE		0.5	UJ	R				0.5	U				
TOLUENE		0.5	UJ	R				0.5	U				
TRANS-1,2-DICHLOROETHENE		0.5	UJ	R				0.5	U				
TRANS-1,3-DICHLOROPROPENE		0.5	UJ	R				0.5	U				
TRICHLOROETHENE		0.58	J	PR				0.5	U				
TRICHLOROFLUOROMETHANE		0.5	UJ	R				0.5	U				
VINYL CHLORIDE		0.5	UJ	R				0.5	U				

PROJ_NO: 02045	NSAMPLE	SA-PZ-133I-20110308			SA-PZ-135I-20110308			SA-PZ-136I-20110308			SA-PZ-138I1-20110308		
SDG: C1497	LAB_ID	C1497-20			C1497-18			C1497-16			C1497-13		
FRACTION: OV	SAMP_DATE	3/8/2011			3/8/2011			3/8/2011			3/8/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
M+P-XYLENES		1	U		1	U		1	U		1	U	
METHYL ACETATE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	U	
STYRENE		0.5	U		0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
TOLUENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.97	J	P
TRICHLOROFLUOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
VINYL CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-PZ-138I1-20110308DL			SA-PZ-138I-20110308			SA-PZ-139I-20110308			SA-PZ-149I1-20110308		
SDG: C1497	LAB_ID	C1497-13DL			C1497-11			C1497-17			C1497-15		
FRACTION: OV	SAMP_DATE	3/8/2011			3/8/2011			3/8/2011			3/8/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
M+P-XYLENES					1	U		1	U		1	U	
METHYL ACETATE					0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE					0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER					0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE					0.5	U		0.5	U		0.5	U	
O-XYLENE					0.5	U		0.5	U		0.5	U	
STYRENE					0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE					0.5	U		0.5	U		0.5	U	
TOLUENE					0.5	U		0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE					0.5	U		0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE					0.5	U		0.5	U		0.5	U	
TRICHLOROETHENE					0.5	U		0.5	U		0.5	U	
TRICHLOROFLUOROMETHANE					0.5	U		0.5	U		0.5	U	
VINYL CHLORIDE					0.5	U		0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-PZ-151I1-20110308			SA-PZ-151I1-20110308DL			SA-PZ-155I-20110307			SA-PZ-157I1-20110307		
SDG: C1497	LAB_ID	C1497-08			C1497-08DL			C1497-07			C1497-05		
FRACTION: OV	SAMP_DATE	3/8/2011			3/8/2011			3/7/2011			3/7/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
M+P-XYLENES		1	UJ	R				1	U		1	UJ	R
METHYL ACETATE		0.5	UJ	R				0.5	U		0.5	UJ	R
METHYL CYCLOHEXANE		0.5	UJ	R				0.5	U		0.5	UJ	R
METHYL TERT-BUTYL ETHER		0.5	UJ	R				0.5	U		0.5	UJ	R
METHYLENE CHLORIDE		0.5	UJ	R				0.5	U		0.5	UJ	R
O-XYLENE		0.5	UJ	R				0.5	U		0.5	UJ	R
STYRENE		0.5	UJ	R				0.5	U		0.5	UJ	R
TETRACHLOROETHENE		0.5	UJ	R				0.5	U		0.5	UJ	R
TOLUENE		0.5	UJ	R				0.5	U		0.5	UJ	R
TRANS-1,2-DICHLOROETHENE		0.5	UJ	R				0.5	U		0.5	UJ	R
TRANS-1,3-DICHLOROPROPENE		0.5	UJ	R				0.5	U		0.5	UJ	R
TRICHLOROETHENE		0.53	J	PR				0.5	U		0.5	UJ	R
TRICHLOROFLUOROMETHANE		0.5	UJ	R				0.5	U		0.5	UJ	R
VINYL CHLORIDE		0.5	UJ	R				0.5	U		0.5	UJ	R

PROJ_NO: 02045	NSAMPLE	SA-PZ-157I1-20110307DL			SA-PZ-157I-20110307			SA-PZ-158I1-20110307			SA-PZ-158I1-20110307DL		
SDG: C1497	LAB_ID	C1497-05DL			C1497-02			C1497-04			C1497-04DL		
FRACTION: OV	SAMP_DATE	3/7/2011			3/7/2011			3/7/2011			3/7/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
M+P-XYLENES					1	U		1	UJ	R			
METHYL ACETATE					0.5	U		0.5	UJ	R			
METHYL CYCLOHEXANE					0.5	U		0.5	UJ	R			
METHYL TERT-BUTYL ETHER					0.5	U		0.5	UJ	R			
METHYLENE CHLORIDE					0.5	U		0.5	UJ	R			
O-XYLENE					0.5	U		0.5	UJ	R			
STYRENE					0.5	U		0.5	UJ	R			
TETRACHLOROETHENE					0.5	U		0.5	UJ	R			
TOLUENE					0.5	U		0.5	UJ	R			
TRANS-1,2-DICHLOROETHENE					0.5	U		0.5	UJ	R			
TRANS-1,3-DICHLOROPROPENE					0.5	U		0.5	UJ	R			
TRICHLOROETHENE					0.5	U		0.5	UJ	R			
TRICHLOROFLUOROMETHANE					0.5	U		0.5	UJ	R			
VINYL CHLORIDE					0.5	U		0.5	UJ	R			

PROJ_NO: 02045	NSAMPLE	SA-PZ-158I-20110307RE			SA-PZ-159I1-20110308			SA-PZ-159I-20110307			SA-PZ-160I1-20110308		
SDG: C1497	LAB_ID	C1497-03RE			C1497-09			C1497-06			C1497-14		
FRACTION: OV	SAMP_DATE	3/7/2011			3/8/2011			3/7/2011			3/8/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
M+P-XYLENES		1	UJ	R	1	U		1	U		1	U	
METHYL ACETATE		0.5	UJ	R	3.8			0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
STYRENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
TOLUENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
TRICHLOROETHENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
TRICHLOROFLUOROMETHANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
VINYL CHLORIDE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-PZ-160I1-20110308DL			SA-PZ-160I-20110308			SA-PZ-160I-20110308DL			SA-PZ-161I-20110308		
SDG: C1497	LAB_ID	C1497-14DL			C1497-12			C1497-12DL			C1497-19		
FRACTION: OV	SAMP_DATE	3/8/2011			3/8/2011			3/8/2011			3/8/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS							100.0					
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
M+P-XYLENES					1	UJ	R				1	U	
METHYL ACETATE					0.5	UJ	R				0.5	U	
METHYL CYCLOHEXANE					0.5	UJ	R				0.5	U	
METHYL TERT-BUTYL ETHER					0.5	UJ	R				0.5	U	
METHYLENE CHLORIDE					0.5	UJ	R				0.5	U	
O-XYLENE					0.5	UJ	R				0.5	U	
STYRENE					0.5	UJ	R				0.5	U	
TETRACHLOROETHENE					0.5	UJ	R				0.5	U	
TOLUENE					0.5	UJ	R				0.5	U	
TRANS-1,2-DICHLOROETHENE					0.5	UJ	R				0.5	U	
TRANS-1,3-DICHLOROPROPENE					0.5	UJ	R				0.5	U	
TRICHLOROETHENE					0.5	UJ	R				0.5	U	
TRICHLOROFLUOROMETHANE					0.5	UJ	R				0.5	U	
VINYL CHLORIDE					0.5	UJ	R				0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-PZ-161I-20110308DL			SA-TB01-20110307		
SDG: C1497	LAB_ID	C1497-19DL			C1497-01		
FRACTION: OV	SAMP_DATE	3/8/2011			3/7/2011		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS						
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
M+P-XYLENES					1	U	
METHYL ACETATE					0.5	U	
METHYL CYCLOHEXANE					0.5	U	
METHYL TERT-BUTYL ETHER					0.5	U	
METHYLENE CHLORIDE					0.5	U	
O-XYLENE					0.5	U	
STYRENE					0.5	U	
TETRACHLOROETHENE					0.5	U	
TOLUENE					0.5	U	
TRANS-1,2-DICHLOROETHENE					0.5	U	
TRANS-1,3-DICHLOROPROPENE					0.5	U	
TRICHLOROETHENE					0.5	U	
TRICHLOROFLUOROMETHANE					0.5	U	
VINYL CHLORIDE					0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-DUP01-20110308			SA-DUP01-20110308DL			SA-PZ-151I1-20110308			SA-PZ-151I1-20110308DL		
SDG: C1497	LAB_ID	C1497-10			C1497-10DL			C1497-08			C1497-08DL		
FRACTION: OVG	SAMP_DATE	3/8/2011			3/8/2011			3/8/2011			3/8/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	DUP_OF	SA-PZ-151I1-20110308			SA-PZ-151I1-20110308								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ETHANE		2.5	U					2.5	U				
ETHENE		2.5	U					2.5	U				
METHANE					319.5						402.2		

PROJ_NO: 02045	NSAMPLE	SA-PZ-155I-20110307			SA-PZ-157I1-20110307			SA-PZ-157I1-20110307DL			SA-PZ-157I-20110307		
SDG: C1497	LAB_ID	C1497-07			C1497-05			C1497-05DL			C1497-02		
FRACTION: OVG	SAMP_DATE	3/7/2011			3/7/2011			3/7/2011			3/7/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ETHANE		2.5	U		2.5	U					2.5	U	
ETHENE		2.5	U		2.5	U					2.5	U	
METHANE		8.1						258.4			2.5	U	

PROJ_NO: 02045	NSAMPLE	SA-PZ-159I1-20110308			SA-PZ-159I1-20110308DL			SA-PZ-159I-20110307			SA-PZ-160I-20110308		
SDG: C1497	LAB_ID	C1497-09			C1497-09DL			C1497-06			C1497-12		
FRACTION: OVG	SAMP_DATE	3/8/2011			3/8/2011			3/7/2011			3/8/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ETHANE		2.5	UJ	D				2.5	U		2.5	U	
ETHENE		2.5	UJ	D				2.5	U		2.5	U	
METHANE					195.4			2.5	U		4.2		

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**D. BRAYACK**	**DATE:**	**May 6, 2011**
FROM:	**MEGAN CARSON**	**COPIES:**	**DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION – IRON, MANGANESE, AND TOTAL ORGANIC CARBON**
CTO WE08 NWIRP CALVERTON
SAMPLE DELIVERY GROUPS (SDG) – C1497

SAMPLES: 8/Aqueous/

SA-DUP01-20110308	SA-PZ-151I1-20110308
SA-PZ-155I-20110307	SA-PZ-157I-20110307
SA-PZ-157I1-20110307	SA-PZ-159I-20110307
SA-PZ-159I1-20110308	SA-PZ-160I-20110308

Overview

The sample set for NWIRP Calverton, CTO WE08, SDG C1497, consists of eight (8) aqueous environmental samples. This SDG contained one field duplicate pair: SA-DUP01-20110308/SA-PZ-151I1-20110308.

All samples were analyzed for iron, manganese, and total organic carbon. The samples were collected by Tetra Tech NUS on March 7th and 8th, 2011 and analyzed by Chemtech under Naval Facilities Engineering Service Center (NFESC) Quality Assurance / Quality Control (QA/QC) criteria. Metals analyses were conducted using SW-846 method 6010B. Total organic carbon analyses were conducted using method 9060.

These data were evaluated based on the following parameters:

* • Data Completeness
* • Holding Times
* • Initial and Continuing Calibration Verification Results
* • Laboratory Method / Preparation Blank Analyses
* • ICP Interference Results
• Matrix Spike / Matrix Spike Duplicate Recoveries
* • Laboratory Duplicate Results
* • Laboratory Control Standard Results
• ICP Serial Dilution Results
* • Detection Limits
* • Analyte Quantitation

* - All quality control criteria were met for this parameter.

Metals

The matrix spike and matrix spike duplicate had a percent recovery >120% for iron. All samples were affected. Positive results were qualified as estimated (J).

The serial dilution had a percent difference > 10% for iron. All samples were affected. Positive results were qualified as estimated (J).

Miscellaneous Parameters

The matrix spike and matrix spike duplicate had a percent recovery <80% for TOC. All samples were affected. Positive results were qualified as estimated (J).

Notes

The following contaminant was detected in the laboratory method/preparation blanks at the following maximum concentrations:

Analyte	Maximum Concentration	Action Level
Manganese	0.1 ug/L	0.5 ug/L

An action level of 5X the maximum contaminant level has been used to evaluate sample data for blank contamination. Sample aliquot, percent solids and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. No validation action was taken as sample results were greater than the blank action levels.

Sample SA-PZ-159I-20110307 was analyzed at a 10X dilution of TOC.

Executive Summary

Laboratory Performance: The serial dilution non-compliance for iron resulted in the qualification of sample results.

Other Factors Affecting Data Quality: Matrix spike non-compliances for iron and TOC resulted in the qualification of sample results.

The data for these analyses were reviewed with reference to the Region II "Evaluation of Metals Data (SOP-HW-02, Revision13)", September 2006 and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories", April 2009.

The text of this report has been formulated to address only those problem areas affecting data quality.

Megan Carson

Tetra Tech NUS
Megan Carson
Chemist I/Data Validator

Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C – Region II Worksheets
3. Appendix D - Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Data Validation Qualifier Codes:

A	=	Lab Blank Contamination
B	=	Field Blank Contamination
C	=	Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01	=	GC/MS Tuning Noncompliance
D	=	MS/MSD Recovery Noncompliance
E	=	LCS/LCSD Recovery Noncompliance
F	=	Lab Duplicate Imprecision
G	=	Field Duplicate Imprecision
H	=	Holding Time Exceedance
I	=	ICP Serial Dilution Noncompliance
J	=	GFAA PDS - GFAA MSA's $r < 0.995$
K	=	ICP Interference - includes ICS % R Noncompliance
L	=	Instrument Calibration Range Exceedance
M	=	Sample Preservation Noncompliance
N	=	Internal Standard Noncompliance
N01	=	Internal Standard Recovery Noncompliance Dioxins
N02	=	Recovery Standard Noncompliance Dioxins
N03	=	Clean-up Standard Noncompliance Dioxins
O	=	Poor Instrument Performance (e.g. base-line drifting)
P	=	Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q	=	Other problems (can be any number of issues; e.g. poor chromatography,interferences, etc.)
R	=	Surrogates Recovery Noncompliance
S	=	Pesticide/PCB Resolution
T	=	% Breakdown Noncompliance for DDT and Endrin
U	=	% Difference between columns/detectors >25% for positive results determined via GC/HPLC
V	=	Non-linear calibrations; correlation coefficient $r < 0.995$
W	=	EMPC result
X	=	Signal to noise response drop
Y	=	Percent solids <30%
Z	=	Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02045	NSAMPLE	SA-DUP01-20110308			SA-PZ-151I1-20110308			SA-PZ-155I-20110307			SA-PZ-157I1-20110307		
SDG: C1497	LAB_ID	C1497-10			C1497-08			C1497-07			C1497-05		
FRACTION: M	SAMP_DATE	3/8/2011			3/8/2011			3/7/2011			3/7/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	100.0			100.0			100.0			100.0		
	DUP_OF	SA-PZ-151I1-20110308											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
IRON		225	J	DI	214	J	DI	499	J	DI	1150	J	DI
MANGANESE		5750			5460			340			5580		

PROJ_NO: 02045	NSAMPLE	SA-PZ-157I-20110307			SA-PZ-159I1-20110308			SA-PZ-159I-20110307			SA-PZ-160I-20110308		
SDG: C1497	LAB_ID	C1497-02			C1497-09			C1497-06			C1497-12		
FRACTION: M	SAMP_DATE	3/7/2011			3/8/2011			3/7/2011			3/8/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	100.0			100.0			100.0			100.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
IRON		3090	J	DI	5380	J	DI	7440	J	DI	8060	J	DI
MANGANESE		533			7910			707			1070		

PROJ_NO: 02045	NSAMPLE	SA-DUP01-20110308			SA-PZ-151I1-20110308			SA-PZ-155I-20110307			SA-PZ-157I1-20110307		
SDG: C1497	LAB_ID	C1497-10			C1497-08			C1497-07			C1497-05		
FRACTION: MISC	SAMP_DATE	3/8/2011			3/8/2011			3/7/2011			3/7/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/L			MG/L			MG/L			MG/L		
	PCT_SOLIDS	100.0			100.0			100.0			100.0		
	DUP_OF	SA-PZ-151I1-20110308											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		3.2	J	D	2.6	J	D	0.989	J	D	2.5	J	D

PROJ_NO: 02045	NSAMPLE	SA-PZ-157I-20110307			SA-PZ-159I1-20110308DL			SA-PZ-159I-20110307			SA-PZ-160I-20110308		
SDG: C1497	LAB_ID	C1497-02			C1497-09DL			C1497-06			C1497-12		
FRACTION: MISC	SAMP_DATE	3/7/2011			3/8/2011			3/7/2011			3/8/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/L			MG/L			MG/L			MG/L		
	PCT_SOLIDS	100.0			100.0			100.0			100.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		1.1	J	D	26	J	D	1.5	J	D	2.8	J	D

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**D. BRAYACK**	**DATE:**	**AUGUST 16, 2011**
FROM:	**MICHELLE L. ALLEN**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC**
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT (NWIRP), CALVERTON
CTO WE08
SAMPLE DELIVERY GROUP (SDG) C2506

SAMPLES: 22/Aqueous/VOC

FC-MW-05I-20110602	FC-MW-05I1-20110602	FC-MW-05S-20110603
FD-TB02-20110602	FD-TW118-1620	FD-TW118-2125
FD-TW118-2630	SA-DUP01-20110602	SA-TW401-1115
SA-TW401-2125	SA-TW401-2630	SA-TW401-3135
SA-TW402-1115	SA-TW402-2125	SA-TW402-2630
SA-TW402-3135	SA-TW403-1115	SA-TW403-2125
SA-TW403-2630	SA-TW403-3135	SA-TW404-2125
SA-TW404-3135		

Overview

The sample set for NWIRP Calverton SDG C2506 consisted of twenty-one (21) aqueous environmental samples and one (1) trip blank. All twenty-two (22) aqueous samples were analyzed for Target Compound List (TCL) volatile organic compounds (VOC). One field duplicate sample pair was associated with this sample data group (SDG); SA-DUP01-20110602/SA-TW402-2630.

The samples were collected by Tetra Tech on June 2 and 3, 2011 and analyzed by Chemtech. All analyses were conducted in accordance with EPA Methods SW-846 8260B analytical and reporting protocols. The data contained in this SDG was validated with regard to the following parameters:

- * Data completeness
- * Hold times
- * GC/MS System Tuning and Performance
- Initial/continuing calibrations
- Laboratory Method and Field Blank Results
- Surrogate Spike Recoveries
- * Internal Standard Results
- Matrix Spike/Matrix Spike Duplicate Results
- Laboratory Control Sample Results
- * Field Duplicate Precision
- * Compound Identification
- * Compound Quantitation
- * Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter. Qualified analytical results are presented in Appendix A, results as reported by the laboratory are presented in Appendix B, Region II data validation forms are presented in Appendix C, and documentation supporting these findings is presented in Appendix D.

Volatiles (VOC)

The 14 day holding time was exceeded in the diluted analyses of samples, SA-TW402-2125 and SA-TW402 -3135, and the reanalysis of sample SA-DUP01-20110602. The results from the reanalysis of sample SA-DUP01-20110602 were not used in the data validation; therefore, no actions were necessary. The results used from the diluted analyses of samples, SA-TW402-2125 and SA-TW402-3135, were qualified as estimated, (J).

The initial and continuing calibrations performed on instruments MSVOAG and MSVOAH had Relative Response Factors (RRFs) less than the 0.05 quality control criteria for 1,4-dioxane. All samples were affected. Only non-detected results were reported for 1,4-dioxane in the affected samples and these non-detects were qualified as rejected, (UR).

The continuing calibration performed on instrument MSVOAG on 06/15/11 @ 14:18 had a Percent Drift (%Drift) for bromomethane was above the 20% quality control limit. The non-detected results reported for this compound in the affected samples, FC-MW-05I1-20110602, FD-TB02-20110602, FD-TW118-1620, FD-TW118-2125, and FD-TW118-2630, were qualified as estimated, (UJ).

The %Drift from the continuing calibration performed on instrument MSVOAG on 06/16/11 @ 11:23 for bromomethane was above the 20% quality control limit. Samples FC-MW-05I-20110602, SA-DUP01-20110602, SA-TW401-2125, SA-TW402-1115, SA-TW402-2125, SA-TW402-2630, SA-TW402-3135, SA-TW403-1115, SA-TW403-2125, SA-TW403-2630, and SA-TW403-3135 were affected. Only non-detected results were reported for this compound in the affected samples, and these non-detects were qualified as estimated, (UJ).

The continuing calibration performed on instrument MSVOAG on 06/17/11 @ 01:50 had Percent Differences (%Ds) for methyl acetate, bromochloromethane, and tetrachloroethene exceeded the 20% quality control criteria. In addition, the %Drift for bromomethane was greater than the 20% quality control limit. Samples FC-MW-05S-20110603 and SA-TW401-2630 were affected. The non-detected results reported for these compounds in the affected samples were qualified as estimated, (UJ).

The continuing calibration performed on instrument MSVOAH on 6/17/11 @ 16:00 had %Ds or %Drifts greater than the 20% quality control limit for dichlorofluoromethane, 4-methyl-2-pentanone, 1,4-dioxane, and acetone. Samples SA-TW401-1115, SA-TW401-3135, SA-TW404-2125, and SA-TW404-3135 were affected. The non-detected results reported for these compounds, with the exception of 1,4-dioxane, were qualified as estimated, (UJ). No action was necessary for the 1,4-dioxane results because they were rejected for a more severe calibration noncompliance.

The Percent Recovery (%R) for the surrogate spike compound, toluene-d8, was below the lower quality control limit in sample, SA-DUP01-20110602. The sample was reanalyzed with acceptable surrogate %Rs; however, the sample was outside of reanalyzed outside the 14 day holding time. The results from the initial analysis were used in the data validation. The positive and non-detected results reported from the initial analysis of this sample were qualified as estimated, (J) and (UJ), respectively.

The LCS, BSH0617W1, had a %R for acetone above the upper quality control limit. The positive result reported for acetone in associated sample, SA-TW402-3135, was qualified as estimated, (J). No action was taken for the non-detected results reported in the remaining associated samples

Additional Comments

The following analyte was detected in the associated trip blank at the maximum concentration as indicated

below:

Analyte	Maximum Conc. (µg/L)	Action Level (µg/L)
Methylene Chloride [1]	1.4	14

[1] Maximum concentration detected in the trip blank, FD-TB02-20110602, affecting all samples in this SDG.

An action level of 10X the maximum concentration was established to evaluate laboratory contamination for the common laboratory contaminant, methylene chloride. Dilution factors and sample aliquots were taken into consideration during the application of all action levels. No action was taken because no positive results were reported for methylene chloride in the affected samples.

The Matrix Spike/Matrix Spike Duplicate (MS/MSD) had %Rs for 1,1,1-trichloroethane and 1,1,-dichloroethane below the lower quality control limit. The Relative Percent Differences (RPDs) were also above the 30% quality control limit for these compounds. No action was taken because the concentrations of these compounds were 2X greater in the parent sample, SA-TW402-3135, and the associated Laboratory Control Sample (LCS) had acceptable %Rs and RPDs for 1,1,1-trichloroethane and 1,1,-dichloroethane.

1,2-Dichlorobenzene was detected in the field duplicate sample, SA-DUP01-20110602, but not in the environmental sample, SA-TW402-2630. No action was taken for field duplicate imprecision because the difference between the positive and non-detected results was less than 2X the Limit of Quantitation (LOQ).

The following samples were diluted due to target compounds exceeding the instrument's linear calibration range:

Sample	Compound	Dilution
FC-MW-05I1-20110602	1,1,1-Trichloroethane	10X
	1,1-Dichloroethane	10X
	Chloroethane	10X
SA-TW402-2125	1,1,1-Trichloroethane	20X
	1,1-Dichloroethane	20X
	Chloroethane	20X
	Ethylbenzene	20X
SA-TW402-3135	1,1-Dichloroethane	10X

The diluted results for these compounds were used in the data validation.

Positive results reported below the LOQ but above the Method Detection Limit (MDL) were qualified as estimated, (J). Non-detected results are reported to the Limit of Detection (LOD).

EXECUTIVE SUMMARY

Laboratory Performance Issues: Holding times were exceeded for the reanalysis of three samples. The 1,4-dioxane results were rejected due to initial and continuing calibration RRFs below 0.05. Several continuing calibration %Ds and %Drifts exceeded the 20% quality control limit. An LCS %R for acetone was above the upper quality control limit.

Other Factors Affecting Data Quality: Methylene chloride was detected in the trip blank. One sample had a low surrogate %R. The MS/MSD had noncompliant %Rs and RPDs for 1,1,1-trichloroethane and 1,1-

dichloroethane. Positive results reported below the LOQ but above the MDL were qualified as estimated. Some samples were analyzed at a dilution due to linear calibration range exceedences.

The data for these analyses were reviewed with reference to the SOP #HW-24 Revision #2, USEPA Region II Hazardous Waste Support Branch Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B (August 2008), and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009).

TetraTech NUS
Michelle L. Allen
Chemist/Data Validator

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Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C – Region II Data Validation Forms
4. Appendix D - Support Documentation

Appendix A

Qualified Analytical Results

Data Validation Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$ / ICP PDS Recovery Noncompliance
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02045 SDG: C2506 FRACTION: OV MEDIA: WATER	NSAMPLE	FC-MW-05I1-20110602			FC-MW-05I1-20110602DL			FC-MW-05I-20110602			FC-MW-05S-20110603		
	LAB_ID	C2506-05			C2506-05DL			C2506-17			C2506-22		
	SAMP_DATE	6/2/2011			6/2/2011			6/2/2011			6/3/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE					530			0.5	U		0.5	U	
1,1,2,2-TETRACHLOROETHANE		0.5	U					0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	U					0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U					0.5	U		0.5	U	
1,1-DICHLOROETHANE					1000			0.55	J	P	0.5	U	
1,1-DICHLOROETHENE		75						0.5	U		0.5	U	
1,2,3-TRICHLOROBENZENE		0.5	U					0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE		0.5	U					0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U					0.5	U		0.5	U	
1,2-DIBROMOETHANE		0.5	U					0.5	U		0.5	U	
1,2-DICHLOROBENZENE		2						0.5	U		0.5	U	
1,2-DICHLOROETHANE		0.5	U					0.5	U		0.5	U	
1,2-DICHLOROPROPANE		0.5	U					0.5	U		0.5	U	
1,3-DICHLOROBENZENE		0.5	U					0.5	U		0.5	U	
1,4-DICHLOROBENZENE		0.5	U					0.5	U		0.5	U	
1,4-DIOXANE		10	UR	C				10	UR	C	10	UR	C
2-BUTANONE		2.5	U					2.5	U		2.5	U	
2-HEXANONE		2.5	U					2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U					2.5	U		2.5	U	
ACETONE		2.5	U					2.5	U		2.5	U	
BENZENE		18						0.5	U		0.5	U	
BROMOCHLOROMETHANE		0.5	U					0.5	U		0.5	UJ	C
BROMODICHLOROMETHANE		0.5	U					0.5	U		0.5	U	
BROMOFORM		0.5	U					0.5	U		0.5	U	
BROMOMETHANE		0.5	UJ	C				0.5	UJ	C	0.5	UJ	C
CARBON DISULFIDE		0.5	U					0.5	U		0.5	U	
CARBON TETRACHLORIDE		0.5	U					0.5	U		0.5	U	
CHLOROBENZENE		0.5	U					0.5	U		0.5	U	
CHLORODIBROMOMETHANE		0.5	U					0.5	U		0.5	U	
CHLOROETHANE					220			0.5	U		0.5	U	
CHLOROFORM		0.5	U					0.5	U		0.5	U	
CHLOROMETHANE		2.2						0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	U					0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	U					0.5	U		0.5	U	
CYCLOHEXANE		2.3						0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	FC-MW-05I1-20110602			FC-MW-05I1-20110602DL			FC-MW-05I-20110602			FC-MW-05S-20110603		
SDG: C2506	LAB_ID	C2506-05			C2506-05DL			C2506-17			C2506-22		
FRACTION: OV	SAMP_DATE	6/2/2011			6/2/2011			6/2/2011			6/3/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE		0.5	U					0.5	U		0.5	U	
ETHYLBENZENE		78						0.5	U		0.5	U	
ISOPROPYLBENZENE		38						0.5	U		2.9		
M+P-XYLENES		21						1	U		1	U	
METHYL ACETATE		0.5	U					0.5	U		0.5	UJ	C
METHYL CYCLOHEXANE		0.5	U					0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U					0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U					0.5	U		0.5	U	
O-XYLENE		0.5	U					0.5	U		0.5	U	
STYRENE		0.5	U					0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	U					0.5	U		0.5	UJ	C
TOLUENE		0.7	J	P				0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	U					0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	U					0.5	U		0.5	U	
TRICHLOROETHENE		0.92	J	P				0.5	U		0.5	U	
TRICHLOROFLUOROMETHANE		0.5	U					0.5	U		0.5	U	
VINYL CHLORIDE		0.5	U					0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	FD-TB02-20110602			FD-TW118-1620			FD-TW118-2125			FD-TW118-2630		
SDG: C2506	LAB_ID	C2506-01			C2506-02			C2506-03			C2506-04		
FRACTION: OV	SAMP_DATE	6/2/2011			6/2/2011			6/2/2011			6/2/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2,2-TETRACHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2,3-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DIBROMOETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROPROPANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,3-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,4-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,4-DIOXANE		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
2-HEXANONE		2.5	U		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
ACETONE		2.5	U		2.5	U		2.5	U		2.5	U	
BENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOCHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMODICHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOFORM		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON TETRACHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLORODIBROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROFORM		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	
CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	FD-TB02-20110602			FD-TW118-1620			FD-TW118-2125			FD-TW118-2630		
SDG: C2506	LAB_ID	C2506-01			C2506-02			C2506-03			C2506-04		
FRACTION: OV	SAMP_DATE	6/2/2011			6/2/2011			6/2/2011			6/2/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
ETHYLBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
ISOPROPYLBENZENE		0.5	U		0.51	J	P	1			0.5	U	
M+P-XYLENES		1	U		1	U		1	U		1	U	
METHYL ACETATE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		1.4			0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	U	
STYRENE		0.5	U		0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
TOLUENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRICHLOROFLUOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
VINYL CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-DUP01-20110602			SA-TW401-1115			SA-TW401-2125			SA-TW401-2630		
SDG: C2506	LAB_ID	C2506-16			C2506-18			C2506-19			C2506-20		
FRACTION: OV	SAMP_DATE	6/2/2011			6/3/2011			6/3/2011			6/3/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF	SA-TW402-2630											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		43	J	R	0.5	U		0.5	U		5		
1,1,2,2-TETRACHLOROETHANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHANE		100	J	R	0.5	U		0.5	U		2.2		
1,1-DICHLOROETHENE		6.9	J	R	0.5	U		0.5	U		0.5	U	
1,2,3-TRICHLOROBENZENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE		4.6	J	R	0.5	U		0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
1,2-DIBROMOETHANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
1,2-DICHLOROBENZENE		1.1	J	R	0.5	U		0.5	U		0.5	U	
1,2-DICHLOROETHANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
1,2-DICHLOROPROPANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
1,3-DICHLOROBENZENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
1,4-DICHLOROBENZENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
1,4-DIOXANE		10	UR	CR	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	UJ	R	2.5	U		2.5	U		2.5	U	
2-HEXANONE		2.5	UJ	R	2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	UJ	R	2.5	UJ	C	2.5	U		2.5	U	
ACETONE		2.5	UJ	R	2.5	UJ	C	6.6			26		
BENZENE		5.9	J	R	0.5	U		0.5	U		0.87	J	P
BROMOCHLOROMETHANE		0.5	UJ	R	0.5	U		0.5	U		0.5	UJ	C
BROMODICHLOROMETHANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
BROMOFORM		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	UJ	CR	0.5	U		0.5	UJ	C	0.5	UJ	C
CARBON DISULFIDE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
CARBON TETRACHLORIDE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
CHLOROBENZENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
CHLORODIBROMOMETHANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
CHLOROETHANE		54	J	R	0.5	U		0.9	J	P	1.4		
CHLOROFORM		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
CHLOROMETHANE		0.5	UJ	R	0.5	U		0.72	J	P	0.58	J	P
CIS-1,2-DICHLOROETHENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
CYCLOHEXANE		0.5	UJ	R	0.5	U		0.5	U		2.8		

PROJ_NO: 02045	NSAMPLE	SA-DUP01-20110602			SA-TW401-1115			SA-TW401-2125			SA-TW401-2630		
SDG: C2506	LAB_ID	C2506-16			C2506-18			C2506-19			C2506-20		
FRACTION: OV	SAMP_DATE	6/2/2011			6/3/2011			6/3/2011			6/3/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF	SA-TW402-2630											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE		0.5	UJ	R	0.5	UJ	C	0.5	U		0.5	U	
ETHYLBENZENE		0.5	UJ	R	0.5	U		3.7			69		
ISOPROPYLBENZENE		23	J	R	0.5	U		12			53		
M+P-XYLENES		1	UJ	R	1	U		1	U		1	U	
METHYL ACETATE		0.5	UJ	R	0.5	U		0.5	U		0.5	UJ	C
METHYL CYCLOHEXANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	UJ	R	0.5	U		0.5	U		4.9		
STYRENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	UJ	R	0.5	U		0.5	U		0.5	UJ	C
TOLUENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
TRICHLOROETHENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
TRICHLOROFLUOROMETHANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
VINYL CHLORIDE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-TW401-3135			SA-TW402-1115			SA-TW402-2125			SA-TW402-2125DL		
SDG: C2506	LAB_ID	C2506-21			C2506-10			C2506-11			C2506-11DL		
FRACTION: OV	SAMP_DATE	6/3/2011			6/2/2011			6/2/2011			6/2/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		23			0.5	U					270	J	H
1,1,2,2-TETRACHLOROETHANE		0.5	U		0.5	U		0.5	U				
1,1,2-TRICHLOROETHANE		0.5	U		0.5	U		0.5	U				
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U		0.5	U		0.5	U				
1,1-DICHLOROETHANE		24			0.86	J	P				660	J	H
1,1-DICHLOROETHENE		2.6			0.5	U		49					
1,2,3-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U				
1,2,4-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U				
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U		0.5	U		0.5	U				
1,2-DIBROMOETHANE		0.5	U		0.5	U		0.5	U				
1,2-DICHLOROBENZENE		0.5	U		0.5	U		1.2					
1,2-DICHLOROETHANE		0.5	U		0.5	U		0.5	U				
1,2-DICHLOROPROPANE		0.5	U		0.5	U		0.5	U				
1,3-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U				
1,4-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U				
1,4-DIOXANE		10	UR	C	10	UR	C	10	UR	C			
2-BUTANONE		2.5	U		2.5	U		2.5	U				
2-HEXANONE		2.5	U		2.5	U		2.5	U				
4-METHYL-2-PENTANONE		2.5	UJ	C	2.5	U		2.5	U				
ACETONE		2.5	UJ	C	2.5	U		2.5	U				
BENZENE		5.3			0.5	U		20					
BROMOCHLOROMETHANE		0.5	U		0.5	U		0.5	U				
BROMODICHLOROMETHANE		0.5	U		0.5	U		0.5	U				
BROMOFORM		0.5	U		0.5	U		0.5	U				
BROMOMETHANE		0.5	U		0.5	UJ	C	0.5	UJ	C			
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U				
CARBON TETRACHLORIDE		0.5	U		0.5	U		0.5	U				
CHLOROBENZENE		0.5	U		0.5	U		0.5	U				
CHLORODIBROMOMETHANE		0.5	U		0.5	U		0.5	U				
CHLOROETHANE		10			2.1						160	J	H
CHLOROFORM		0.5	U		0.5	U		0.5	U				
CHLOROMETHANE		0.5	U		0.5	U		2					
CIS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U				
CIS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U				
CYCLOHEXANE		0.5	U		0.5	U		2.2					

PROJ_NO: 02045	NSAMPLE	SA-TW401-3135			SA-TW402-1115			SA-TW402-2125			SA-TW402-2125DL		
SDG: C2506	LAB_ID	C2506-21			C2506-10			C2506-11			C2506-11DL		
FRACTION: OV	SAMP_DATE	6/3/2011			6/2/2011			6/2/2011			6/2/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE		0.5	UJ	C	0.5	U		0.5	U				
ETHYLBENZENE		23			0.5	U					140	J	H
ISOPROPYLBENZENE		23			0.5	U		42					
M+P-XYLENES		9.4			1	U		70					
METHYL ACETATE		0.5	U		0.5	U		0.5	U				
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U				
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U				
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U				
O-XYLENE		7.7			0.5	U		9.1					
STYRENE		0.5	U		0.5	U		0.5	U				
TETRACHLOROETHENE		0.5	U		0.5	U		0.5	U				
TOLUENE		0.5	U		0.5	U		1.3					
TRANS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U				
TRANS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U				
TRICHLOROETHENE		0.5	U		0.5	U		0.85	J	P			
TRICHLOROFLUOROMETHANE		0.5	U		0.5	U		0.5	U				
VINYL CHLORIDE		0.5	U		0.5	U		0.5	U				

PROJ_NO: 02045	NSAMPLE	SA-TW402-2630			SA-TW402-3135			SA-TW402-3135DL			SA-TW403-1115		
SDG: C2506	LAB_ID	C2506-12			C2506-13			C2506-13DL			C2506-06		
FRACTION: OV	SAMP_DATE	6/2/2011			6/2/2011			6/2/2011			6/2/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		46			110						0.5	U	
1,1,2,2-TETRACHLOROETHANE		0.5	U		0.5	U					0.5	U	
1,1,2-TRICHLOROETHANE		0.5	U		0.5	U					0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U		0.5	U					0.5	U	
1,1-DICHLOROETHANE		100						280	J	H	1.6		
1,1-DICHLOROETHENE		7.2			17						0.5	U	
1,2,3-TRICHLOROBENZENE		0.5	U		7.2						0.5	U	
1,2,4-TRICHLOROBENZENE		4.8			24						0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U		0.5	U					0.5	U	
1,2-DIBROMOETHANE		0.5	U		0.5	U					0.5	U	
1,2-DICHLOROBENZENE		0.5	U		6.1						0.5	U	
1,2-DICHLOROETHANE		0.5	U		0.5	U					0.5	U	
1,2-DICHLOROPROPANE		0.5	U		0.5	U					0.5	U	
1,3-DICHLOROBENZENE		0.5	U		3.2						0.5	U	
1,4-DICHLOROBENZENE		0.5	U		13						0.5	U	
1,4-DIOXANE		10	UR	C	10	UR	C				10	UR	C
2-BUTANONE		2.5	U		2.5	U					2.5	U	
2-HEXANONE		2.5	U		2.5	U					2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U					2.5	U	
ACETONE		2.5	U		12	J	E				2.5	U	
BENZENE		6.2			4.7						0.5	U	
BROMOCHLOROMETHANE		0.5	U		0.5	U					0.5	U	
BROMODICHLOROMETHANE		0.5	U		0.5	U					0.5	U	
BROMOFORM		0.5	U		0.5	U					0.5	U	
BROMOMETHANE		0.5	UJ	C	0.5	UJ	C				0.5	UJ	C
CARBON DISULFIDE		0.5	U		0.5	U					0.5	U	
CARBON TETRACHLORIDE		0.5	U		0.5	U					0.5	U	
CHLOROBENZENE		0.5	U		0.5	U					0.5	U	
CHLORODIBROMOMETHANE		0.5	U		0.5	U					0.5	U	
CHLOROETHANE		58			79						1.9		
CHLOROFORM		0.5	U		0.5	U					0.5	U	
CHLOROMETHANE		0.5	U		0.68	J	P				0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	U		0.5	U					0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	U		0.5	U					0.5	U	
CYCLOHEXANE		0.5	U		1.2						0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-TW402-2630			SA-TW402-3135			SA-TW402-3135DL			SA-TW403-1115		
SDG: C2506	LAB_ID	C2506-12			C2506-13			C2506-13DL			C2506-06		
FRACTION: OV	SAMP_DATE	6/2/2011			6/2/2011			6/2/2011			6/2/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE		0.5	U		0.5	U					0.5	U	
ETHYLBENZENE		0.5	U		23						0.5	U	
ISOPROPYLBENZENE		24			21						1.8		
M+P-XYLENES		1	U		2.1						1	U	
METHYL ACETATE		0.5	U		0.5	U					0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U					0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U					0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U					0.5	U	
O-XYLENE		0.5	U		0.5	U					0.5	U	
STYRENE		0.5	U		0.5	U					0.5	U	
TETRACHLOROETHENE		0.5	U		0.5	U					0.5	U	
TOLUENE		0.5	U		0.5	U					0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	U		0.5	U					0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	U		0.5	U					0.5	U	
TRICHLOROETHENE		0.5	U		0.5	U					0.5	U	
TRICHLOROFLUOROMETHANE		0.5	U		0.5	U					0.5	U	
VINYL CHLORIDE		0.5	U		0.5	U					0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-TW403-2125			SA-TW403-2630			SA-TW403-3135			SA-TW404-2125		
SDG: C2506	LAB_ID	C2506-07			C2506-08			C2506-09			C2506-23		
FRACTION: OV	SAMP_DATE	6/2/2011			6/2/2011			6/2/2011			6/3/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.5	U		8.6			15			0.5	U	
1,1,2,2-TETRACHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHANE		1.7			26			56			0.5	U	
1,1-DICHLOROETHENE		0.5	U		1.4			3.3			0.5	U	
1,2,3-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE		0.59	J	P	0.5	U		0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DIBROMOETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROPROPANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,3-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,4-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,4-DIOXANE		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
2-HEXANONE		2.5	U		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U		2.5	UJ	C
ACETONE		2.5	U		4.5	J	P	7.6			2.5	UJ	C
BENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOCHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMODICHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOFORM		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C	0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON TETRACHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLORODIBROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROETHANE		3.9			0.5	U		1.2			0.5	U	
CHLOROFORM		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	
CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-TW403-2125			SA-TW403-2630			SA-TW403-3135			SA-TW404-2125		
SDG: C2506	LAB_ID	C2506-07			C2506-08			C2506-09			C2506-23		
FRACTION: OV	SAMP_DATE	6/2/2011			6/2/2011			6/2/2011			6/3/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	UJ	C
ETHYLBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
ISOPROPYLBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
M+P-XYLENES		1	U		1	U		1	U		1	U	
METHYL ACETATE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	U	
STYRENE		0.5	U		0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	U		0.5	U		0.5	U		3.8		
TOLUENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRICHLOROFLUOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
VINYL CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-TW404-3135
SDG: C2506	LAB_ID	C2506-24
FRACTION: OV	SAMP_DATE	6/3/2011
MEDIA: WATER	QC_TYPE	NM
	UNITS	UG/L
	PCT_SOLIDS	0.0
	DUP_OF	

PARAMETER	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE	0.5	U	
1,1,2,2-TETRACHLOROETHANE	0.5	U	
1,1,2-TRICHLOROETHANE	0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE	0.5	U	
1,1-DICHLOROETHANE	0.5	U	
1,1-DICHLOROETHENE	0.5	U	
1,2,3-TRICHLOROBENZENE	0.5	U	
1,2,4-TRICHLOROBENZENE	0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE	0.5	U	
1,2-DIBROMOETHANE	0.5	U	
1,2-DICHLOROBENZENE	0.5	U	
1,2-DICHLOROETHANE	0.5	U	
1,2-DICHLOROPROPANE	0.5	U	
1,3-DICHLOROBENZENE	0.5	U	
1,4-DICHLOROBENZENE	0.5	U	
1,4-DIOXANE	10	UR	C
2-BUTANONE	2.5	U	
2-HEXANONE	2.5	U	
4-METHYL-2-PENTANONE	2.5	UJ	C
ACETONE	2.5	UJ	C
BENZENE	0.5	U	
BROMOCHLOROMETHANE	0.5	U	
BROMODICHLOROMETHANE	0.5	U	
BROMOFORM	0.5	U	
BROMOMETHANE	0.5	U	
CARBON DISULFIDE	0.5	U	
CARBON TETRACHLORIDE	0.5	U	
CHLOROBENZENE	0.5	U	
CHLORODIBROMOMETHANE	0.5	U	
CHLOROETHANE	0.5	U	
CHLOROFORM	0.5	U	
CHLOROMETHANE	0.5	U	
CIS-1,2-DICHLOROETHENE	0.5	U	
CIS-1,3-DICHLOROPROPENE	0.5	U	
CYCLOHEXANE	0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-TW404-3135		
SDG: C2506	LAB_ID	C2506-24		
FRACTION: OV	SAMP_DATE	6/3/2011		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE		0.5	UJ	C
ETHYLBENZENE		0.5	U	
ISOPROPYLBENZENE		0.5	U	
M+P-XYLENES		1	U	
METHYL ACETATE		0.5	U	
METHYL CYCLOHEXANE		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U	
METHYLENE CHLORIDE		0.5	U	
O-XYLENE		0.5	U	
STYRENE		0.5	U	
TETRACHLOROETHENE		8.9		
TOLUENE		0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	U	
TRICHLOROETHENE		0.5	U	
TRICHLOROFLUOROMETHANE		0.5	U	
VINYL CHLORIDE		0.5	U	

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**D. BRAYACK**	**DATE:**	**AUGUST 16, 2011**
FROM:	**MICHELLE L. ALLEN**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC**
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT (NWIRP), CALVERTON
CTO WE08
SAMPLE DELIVERY GROUP (SDG) C2595

SAMPLES: 20/Aqueous/VOC

SA-PZ136I-20110607	SA-RB01-20110607	SA-TB03-20110606
SA-TW405-2125	SA-TW405-3135	SA-TW406-2125
SA-TW406-3135	SA-TW407-2125	SA-TW407-3135
SA-TW414-3337	SA-TW414-3842	SA-TW414-4347
SA-TW415-3337	SA-TW415-3842	SA-TW415-4347
SA-TW416-3337	SA-TW416-3842	SA-TW416-4347
SA-TW416-4852	SADUP02-20110606	

Overview

The sample set for NWIRP Calverton SDG C2595 consisted of eighteen (18) aqueous environmental samples, one (1) rinsate blank, and one (1) trip blank. All twenty (20) aqueous samples were analyzed for Target Compound List (TCL) volatile organic compounds (VOC). One field duplicate sample pair was associated with this sample data group (SDG); SADUP02-20110606/SA-TW405-2125.

The samples were collected by Tetra Tech on May 6 and 7, 2011 and analyzed by Chemtech. All analyses were conducted in accordance with EPA Methods SW-846 8260B analytical and reporting protocols. The data contained in this SDG was validated with regard to the following parameters:

* • Data completeness
* • Hold times
* • GC/MS System Tuning and Performance
• Initial/continuing calibrations
• Laboratory Method and Field Blank Results
• Surrogate Spike Recoveries
* • Internal Standard Results
• Matrix Spike/Matrix Spike Duplicate Results
• Laboratory Control Sample Results
* • Field Duplicate Precision
* • Compound Identification
* • Compound Quantitation
* • Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter. Qualified analytical results are presented in Appendix A, results as reported by the laboratory are presented in Appendix B, Region II data validation forms are presented in Appendix C, and documentation supporting these findings is presented in Appendix D.

Volatiles (VOC)

The initial and continuing calibrations performed on instrument MSVOAD had Relative Response Factors (RRFs) less than the 0.05 quality control criteria for acetone. All samples with the exception of sample, SA-TW415-4347, were affected. Only non-detected results were reported for acetone in the affected samples and these non-detects were qualified as rejected, (UR).

The initial and continuing calibrations performed on instrument MSVOAD and MSVOAG had RRFs less than the 0.05 quality control criteria for 1,4-dioxane. All samples were affected. Only non-detected results were reported for 1,4-dioxane in the affected samples and these non-detects were qualified as rejected, (UR).

The continuing calibration Percent Difference (%D) performed on instrument MSVOAD on 06/16/11 @ 13:44 for 1,2-dichloroethane was above the 20% quality control limit. The non-detected result reported for this compound in the affected sample, SA-TW416-3337, was qualified as estimated, (UJ).

The continuing calibration %Ds performed on instrument MSVOAD on 06/17/11 @ 11:18 for trichlorofluoromethane, carbon tetrachloride, 1,2-dichloroethane, dibromochloromethane and bromoform exceeded the 20% quality control criteria. Samples SA-PZ136I-20110607 , SA-RB01-20110607, SA-TW416-4852, SA-TW415-3337, SA-TW415-3842, SA-TW414-3337, SA-TW414-3842, and SA-TW414-4347 were affected. The positive and non-detected results reported for these compounds in the affected samples were qualified as estimated, (J) and (UJ), respectively.

The Percent Recoveries (%Rs) for the surrogate spike compound, dibromofluoromethane, were above the upper quality control limit in samples, SA-TW414-4347 and SA-TW415-3337. The samples were reanalyzed at a dilution with acceptable results. The positive results reported from the undiluted analyses of these samples were qualified as estimated, (J). No action was necessary for the positive results used in the data validation from the diluted analyses.

The Laboratory Control Sample (LCS), BSD0615W3, had a %R for chloroethane above the upper quality control limit. Samples SA-TB03-20110606, SA-TW405-2125, SA-TW405-3135, SA-TW406-2125, SA-TW406-3135, SA-TW407-2125, SA-TW407-3135, SA-TW416-3842, SA-TW416-4347, and SADUP02-20110606 were affected. The positive results reported for chloroethane in the affected samples were qualified as estimated, (J). Non-detects were not affected.

The LCS, BSD0606W1, had a %R for chloroethane above the upper quality control limit. Sample SA-TW416-3337 was affected. The positive result reported for chloroethane in the affected sample was qualified as estimated, (J).

The LCS, BSD0617W2, had a %R for chloroethane above the upper quality control limit. Samples SA-PZ136I-20110607, SA-RB01-20110607, SA-TW414-3337, SA-TW414-3842, SA-TW414-4347, SA-TW415-3337, SA-TW415-3842 and SA-TW416-4852 were affected. The positive results reported for chloroethane in the affected samples were qualified as estimated, (J). Non-detects were not affected.

The Matrix Spike/Matrix Spike Duplicate (MS/MSD) %Rs for chloroethane were below the lower quality control limit. The associated LCS had a noncompliant %R for chloroethane. The positive result reported for chloroethane in the parent sample, SA-TW416-3337, was qualified as estimated, (J).

Additional Comments

The continuing calibration performed on instrument MSVOAD on 06/18/11 @ 15:00 had several %Ds outside the quality control limit. No action was taken for these noncompliances because the results for these

compounds in the associated samples were not used in the data validation.

The following analyte was detected in the associated trip blank at the maximum concentration as indicated below:

Analyte	Maximum Conc. (µg/L)	Action Level (µg/L)
Methylene Chloride [1]	6	60

[1] Maximum concentration detected in the trip blank, SA-TB03-20110606, affecting all samples in this SDG.

An action level of 10X the maximum concentration was established to evaluate laboratory contamination for the common laboratory contaminant, methylene chloride. Dilution factors and sample aliquots were taken into consideration during the application of all action levels. No action was taken because no positive results were reported for methylene chloride in the affected samples.

Toluene was detected in the rinsate blank. Field blanks were not used to qualify environmental sample results.

The following samples were diluted due to target compounds exceeding the instrument's linear calibration range:

Sample	Compound	Dilution
SA-TW406-3135	Tetrachloroethene	5X
SA-TW414-3337	1,1-Dichloroethene	20X
SA-TW414-3842	1,1,1-Trichloroethane	20X
	1,1-Dichloroethene	20X
SA-TW414-4347	1,1,1-Trichloroethane	20X
	1,1-Dichloroethene	20X
SA-TW415-3337	1,1,1-Trichloroethane	20X
	1,1-Dichloroethene	20X
SA-TW415-3842	1,1-Dichloroethene	10X
SA-TW416-3842	1,1-Dichloroethene	10X
SA-TW416-4347	1,1-Dichloroethene	10X

The diluted results for these compounds were used in the data validation.

Positive results reported below the Limit of Quantitation (LOQ) but above the Method Detection Limit (MDL) were qualified as estimated, (J). Non-detected results are reported to the Limit of Detection (LOD).

EXECUTIVE SUMMARY

Laboratory Performance Issues: The acetone and 1,4-dioxane results were rejected due to initial and continuing calibration RRFs below 0.05, with the exception of one acetone result. Several continuing calibration %Ds exceeded the 20% quality control limit. Some LCS %Rs for chloroethane were above the upper quality control limit.

Other Factors Affecting Data Quality: The MS/MSD had low %Rs for chloroethane. Methylene chloride was detected in the trip blank. Two samples had high surrogate %Rs. Positive results reported below the

LOQ but above the MDL were qualified as estimated, (J). Several samples were analyzed at a dilution due to linear calibration range exceedences.

The data for these analyses were reviewed with reference to the SOP #HW-24 Revision #2, USEPA Region II Hazardous Waste Support Branch Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B (August 2008), and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009).

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Chemist/Data Validator

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Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C – Region II Data Validation Forms
4. Appendix D - Support Documentation

Appendix A

Qualified Analytical Results

Data Validation Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's r < 0.995 / ICP PDS Recovery Noncompliance
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient r < 0.995
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02045	NSAMPLE	SADUP02-20110606			SA-PZ136I-20110607			SA-RB01-20110607			SA-TB03-20110606		
SDG: C2595	LAB_ID	C2595-04			C2595-15			C2595-14			C2595-01		
FRACTION: OV	SAMP_DATE	6/6/2011			6/7/2011			6/7/2011			6/6/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF	SA-TW405-2125											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2,2-TETRACHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2,3-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DIBROMOETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROETHANE		0.5	U		0.5	UJ	C	0.5	UJ	C	0.5	U	
1,2-DICHLOROPROPANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,3-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,4-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,4-DIOXANE		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
2-HEXANONE		2.5	U		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
ACETONE		2.5	UR	C	2.5	UR	C	2.5	UR	C	2.5	UR	C
BENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOCHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMODICHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOFORM		0.5	U		0.5	UJ	C	0.5	UJ	C	0.5	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON TETRACHLORIDE		0.5	U		0.5	UJ	C	0.5	UJ	C	0.5	U	
CHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLORODIBROMOMETHANE		0.5	U		0.5	UJ	C	0.5	UJ	C	0.5	U	
CHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROFORM		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	
CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	SADUP02-20110606			SA-PZ136I-20110607			SA-RB01-20110607			SA-TB03-20110606		
SDG: C2595	LAB_ID	C2595-04			C2595-15			C2595-14			C2595-01		
FRACTION: OV	SAMP_DATE	6/6/2011			6/7/2011			6/7/2011			6/6/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF	SA-TW405-2125											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
ETHYLBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
ISOPROPYLBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
M+P-XYLENES		1	U		1	U		1	U		1	U	
METHYL ACETATE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		6		
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	U	
STYRENE		0.5	U		0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
TOLUENE		0.5	U		0.5	U		0.53	J	P	0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRICHLOROFLUOROMETHANE		0.5	U		0.5	UJ	C	0.5	UJ	C	0.5	U	
VINYL CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-TW405-2125			SA-TW405-3135			SA-TW406-2125			SA-TW406-3135		
SDG: C2595	LAB_ID	C2595-03			C2595-02			C2595-07			C2595-08		
FRACTION: OV	SAMP_DATE	6/6/2011			6/6/2011			6/6/2011			6/6/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2,2-TETRACHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2,3-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DIBROMOETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROPROPANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,3-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,4-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,4-DIOXANE		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
2-HEXANONE		2.5	U		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
ACETONE		2.5	UR	C	2.5	UR	C	2.5	UR	C	2.5	UR	C
BENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOCHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMODICHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOFORM		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON TETRACHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLORODIBROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROFORM		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	
CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-TW405-2125			SA-TW405-3135			SA-TW406-2125			SA-TW406-3135		
SDG: C2595	LAB_ID	C2595-03			C2595-02			C2595-07			C2595-08		
FRACTION: OV	SAMP_DATE	6/6/2011			6/6/2011			6/6/2011			6/6/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
ETHYLBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
ISOPROPYLBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
M+P-XYLENES		1	U		1	U		1	U		1	U	
METHYL ACETATE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	U	
STYRENE		0.5	U		0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	U		0.93	J	P	2					
TOLUENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRICHLOROFLUOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
VINYL CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02045 SDG: C2595 FRACTION: OV MEDIA: WATER	NSAMPLE	SA-TW406-3135DL			SA-TW407-2125			SA-TW407-3135			SA-TW414-3337		
	LAB_ID	C2595-08DL			C2595-06			C2595-05			C2595-20		
	SAMP_DATE	6/6/2011			6/6/2011			6/6/2011			6/7/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE					0.5	U		0.5	U		150		
1,1,2,2-TETRACHLOROETHANE					0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE					0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE					0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHANE					0.5	U		0.5	U				
1,1-DICHLOROETHENE					0.5	U		0.5	U		41		
1,2,3-TRICHLOROBENZENE					0.5	U		0.5	U		2.7		
1,2,4-TRICHLOROBENZENE					0.5	U		0.5	U		9.1		
1,2-DIBROMO-3-CHLOROPROPANE					0.5	U		0.5	U		0.5	U	
1,2-DIBROMOETHANE					0.5	U		0.5	U		0.5	U	
1,2-DICHLOROBENZENE					0.5	U		0.5	U		6.1		
1,2-DICHLOROETHANE					0.5	U		0.5	U		0.72	J	CP
1,2-DICHLOROPROPANE					0.5	U		0.5	U		0.5	U	
1,3-DICHLOROBENZENE					0.5	U		0.5	U		3.5		
1,4-DICHLOROBENZENE					0.5	U		0.5	U		16		
1,4-DIOXANE					10	UR	C	10	UR	C	10	UR	C
2-BUTANONE					2.5	U		2.5	U		2.5	U	
2-HEXANONE					2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE					2.5	U		2.5	U		2.5	U	
ACETONE					2.5	UR	C	2.5	UR	C	2.5	UR	C
BENZENE					0.5	U		0.5	U		2.1		
BROMOCHLOROMETHANE					0.5	U		0.5	U		0.5	U	
BROMODICHLOROMETHANE					0.5	U		0.5	U		0.5	U	
BROMOFORM					0.5	U		0.5	U		0.5	UJ	C
BROMOMETHANE					0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE					0.5	U		0.5	U		0.5	U	
CARBON TETRACHLORIDE					0.5	U		0.5	U		0.5	UJ	C
CHLOROBENZENE					0.5	U		0.5	U		1.6		
CHLORODIBROMOMETHANE					0.5	U		0.5	U		0.5	UJ	C
CHLOROETHANE					0.5	U		0.5	U		110	J	E
CHLOROFORM					0.5	U		0.5	U		0.5	U	
CHLOROMETHANE					0.5	U		0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE					0.5	U		0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE					0.5	U		0.5	U		0.5	U	
CYCLOHEXANE					0.5	U		0.5	U		1.2		

PROJ_NO: 02045	NSAMPLE	SA-TW406-3135DL			SA-TW407-2125			SA-TW407-3135			SA-TW414-3337		
SDG: C2595	LAB_ID	C2595-08DL			C2595-06			C2595-05			C2595-20		
FRACTION: OV	SAMP_DATE	6/6/2011			6/6/2011			6/6/2011			6/7/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE					0.5	U		0.5	U		0.5	U	
ETHYLBENZENE					0.5	U		0.5	U		0.5	U	
ISOPROPYLBENZENE					0.5	U		0.5	U		6.2		
M+P-XYLENES					1	U		1	U		1	U	
METHYL ACETATE					0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE					0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER					0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE					0.5	U		0.5	U		0.5	U	
O-XYLENE					0.5	U		0.5	U		0.5	U	
STYRENE					0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE		180			0.5	U		0.5	U		0.5	U	
TOLUENE					0.5	U		0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE					0.5	U		0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE					0.5	U		0.5	U		0.5	U	
TRICHLOROETHENE					0.5	U		0.5	U		0.69	J	P
TRICHLOROFLUOROMETHANE					0.5	U		0.5	U		0.5	UJ	C
VINYL CHLORIDE					0.5	U		0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-TW414-3337DL			SA-TW414-3842			SA-TW414-3842DL			SA-TW414-4347		
SDG: C2595	LAB_ID	C2595-20DL			C2595-21			C2595-21DL			C2595-22		
FRACTION: OV	SAMP_DATE	6/7/2011			6/7/2011			6/7/2011			6/7/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE								160					
1,1,2,2-TETRACHLOROETHANE					0.5	U					0.5	U	
1,1,2-TRICHLOROETHANE					0.5	U					0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE					0.5	U					0.5	U	
1,1-DICHLOROETHANE		710						530					
1,1-DICHLOROETHENE					37						34	J	R
1,2,3-TRICHLOROBENZENE					0.51	J	P				0.53	J	PR
1,2,4-TRICHLOROBENZENE					1.6						1.4	J	R
1,2-DIBROMO-3-CHLOROPROPANE					0.5	U					0.5	U	
1,2-DIBROMOETHANE					0.5	U					0.5	U	
1,2-DICHLOROBENZENE					1.4						1.9	J	R
1,2-DICHLOROETHANE					0.72	J	CP				0.55	J	CPR
1,2-DICHLOROPROPANE					0.5	U					0.5	U	
1,3-DICHLOROBENZENE					0.5	U					0.79	J	PR
1,4-DICHLOROBENZENE					2						3.6	J	R
1,4-DIOXANE					10	UR	C				10	UR	C
2-BUTANONE					2.5	U					2.5	U	
2-HEXANONE					2.5	U					2.5	U	
4-METHYL-2-PENTANONE					2.5	U					2.5	U	
ACETONE					2.5	UR	C				2.5	UR	C
BENZENE					1.3						1.4	J	R
BROMOCHLOROMETHANE					0.5	U					0.5	U	
BROMODICHLOROMETHANE					0.5	U					0.5	U	
BROMOFORM					0.5	UJ	C				0.5	UJ	C
BROMOMETHANE					0.5	U					0.5	U	
CARBON DISULFIDE					0.5	U					0.5	U	
CARBON TETRACHLORIDE					0.5	UJ	C				0.5	UJ	C
CHLOROBENZENE					0.5	U					0.5	U	
CHLORODIBROMOMETHANE					0.5	UJ	C				0.5	UJ	C
CHLOROETHANE					79	J	E				88	J	ER
CHLOROFORM					0.5	U					0.5	U	
CHLOROMETHANE					0.5	U					0.5	U	
CIS-1,2-DICHLOROETHENE					0.5	U					0.5	U	
CIS-1,3-DICHLOROPROPENE					0.5	U					0.5	U	
CYCLOHEXANE					0.5	U					0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-TW414-3337DL			SA-TW414-3842			SA-TW414-3842DL			SA-TW414-4347		
SDG: C2595	LAB_ID	C2595-20DL			C2595-21			C2595-21DL			C2595-22		
FRACTION: OV	SAMP_DATE	6/7/2011			6/7/2011			6/7/2011			6/7/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE					0.5	U					0.5	U	
ETHYLBENZENE					0.5	U					0.5	U	
ISOPROPYLBENZENE					0.5	U					0.62	J	PR
M+P-XYLENES					1	U					1	U	
METHYL ACETATE					0.5	U					0.5	U	
METHYL CYCLOHEXANE					0.5	U					0.5	U	
METHYL TERT-BUTYL ETHER					0.5	U					0.5	U	
METHYLENE CHLORIDE					0.5	U					0.5	U	
O-XYLENE					0.5	U					0.5	U	
STYRENE					0.5	U					0.5	U	
TETRACHLOROETHENE					0.5	U					0.5	U	
TOLUENE					0.5	U					0.5	U	
TRANS-1,2-DICHLOROETHENE					0.5	U					0.5	U	
TRANS-1,3-DICHLOROPROPENE					0.5	U					0.5	U	
TRICHLOROETHENE					0.5	U					0.5	U	
TRICHLOROFLUOROMETHANE					0.5	UJ	C				0.5	UJ	C
VINYL CHLORIDE					0.5	U					0.5	U	

PROJ_NO: 02045 SDG: C2595 FRACTION: OV MEDIA: WATER	NSAMPLE	SA-TW414-4347DL			SA-TW415-3337			SA-TW415-3337DL			SA-TW415-3842		
	LAB_ID	C2595-22DL			C2595-17			C2595-17DL			C2595-18		
	SAMP_DATE	6/7/2011			6/7/2011			6/7/2011			6/7/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		150						210			56		
1,1,2,2-TETRACHLOROETHANE					0.5	U					0.5	U	
1,1,2-TRICHLOROETHANE					0.5	U					0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE					0.5	U					0.5	U	
1,1-DICHLOROETHANE		580						850					
1,1-DICHLOROETHENE					45	J	R				9.9		
1,2,3-TRICHLOROBENZENE					1.1	J	R				0.5	U	
1,2,4-TRICHLOROBENZENE					3.7	J	R				0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE					0.5	U					0.5	U	
1,2-DIBROMOETHANE					0.5	U					0.5	U	
1,2-DICHLOROBENZENE					2.6	J	R				0.5	U	
1,2-DICHLOROETHANE					0.5	UJ	C				0.5	UJ	C
1,2-DICHLOROPROPANE					0.5	U					0.5	U	
1,3-DICHLOROBENZENE					0.8	J	PR				0.5	U	
1,4-DICHLOROBENZENE					3.3	J	R				0.5	U	
1,4-DIOXANE					10	UR	C				10	UR	C
2-BUTANONE					2.5	U					2.5	U	
2-HEXANONE					2.5	U					2.5	U	
4-METHYL-2-PENTANONE					2.5	U					2.5	U	
ACETONE					2.5	UR	C				2.5	UR	C
BENZENE					2	J	R				0.5	U	
BROMOCHLOROMETHANE					0.5	U					0.5	U	
BROMODICHLOROMETHANE					0.5	U					0.5	U	
BROMOFORM					0.5	UJ	C				0.5	UJ	C
BROMOMETHANE					0.5	U					0.5	U	
CARBON DISULFIDE					0.5	U					0.5	U	
CARBON TETRACHLORIDE					0.5	UJ	C				0.5	UJ	C
CHLOROBENZENE					0.5	U					0.5	U	
CHLORODIBROMOMETHANE					0.5	UJ	C				0.5	UJ	C
CHLOROETHANE					100	J	ER				20	J	E
CHLOROFORM					0.5	U					0.5	U	
CHLOROMETHANE					0.5	U					0.5	U	
CIS-1,2-DICHLOROETHENE					0.5	U					0.5	U	
CIS-1,3-DICHLOROPROPENE					0.5	U					0.5	U	
CYCLOHEXANE					0.5	U					0.5	U	

PROJ_NO: 02045 SDG: C2595 FRACTION: OV MEDIA: WATER	NSAMPLE	SA-TW414-4347DL			SA-TW415-3337			SA-TW415-3337DL			SA-TW415-3842		
	LAB_ID	C2595-22DL			C2595-17			C2595-17DL			C2595-18		
	SAMP_DATE	6/7/2011			6/7/2011			6/7/2011			6/7/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE					0.5	U					0.5	U	
ETHYLBENZENE					0.5	U					0.5	U	
ISOPROPYLBENZENE					3.4	J	R				0.5	U	
M+P-XYLENES					1	U					1	U	
METHYL ACETATE					0.5	U					0.5	U	
METHYL CYCLOHEXANE					0.5	U					0.5	U	
METHYL TERT-BUTYL ETHER					0.5	U					0.5	U	
METHYLENE CHLORIDE					0.5	U					0.5	U	
O-XYLENE					0.5	U					0.5	U	
STYRENE					0.5	U					0.5	U	
TETRACHLOROETHENE					0.5	U					0.5	U	
TOLUENE					0.5	U					0.5	U	
TRANS-1,2-DICHLOROETHENE					0.5	U					0.5	U	
TRANS-1,3-DICHLOROPROPENE					0.5	U					0.5	U	
TRICHLOROETHENE					0.5	U					0.5	U	
TRICHLOROFLUOROMETHANE					0.5	UJ	C				0.5	UJ	C
VINYL CHLORIDE					0.5	U					0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-TW415-3842DL			SA-TW415-4347			SA-TW416-3337			SA-TW416-3842		
SDG: C2595	LAB_ID	C2595-18DL			C2595-19			C2595-09			C2595-12		
FRACTION: OV	SAMP_DATE	6/7/2011			6/7/2011			6/6/2011			6/6/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE					0.5	U		32			120		
1,1,2,2-TETRACHLOROETHANE					0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE					0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE					0.59	J	P	0.5	U		0.5	U	
1,1-DICHLOROETHANE		170			6.9			140					
1,1-DICHLOROETHENE					0.53	J	P	5.9			18		
1,2,3-TRICHLOROBENZENE					0.5	U		0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE					0.5	U		0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE					0.5	U		0.5	U		0.5	U	
1,2-DIBROMOETHANE					0.5	U		0.5	U		0.5	U	
1,2-DICHLOROBENZENE					0.5	U		0.5	U		0.77	J	P
1,2-DICHLOROETHANE					0.5	U		0.5	UJ	C	0.5	U	
1,2-DICHLOROPROPANE					0.5	U		0.5	U		0.5	U	
1,3-DICHLOROBENZENE					0.5	U		0.5	U		0.5	U	
1,4-DICHLOROBENZENE					0.5	U		0.5	U		0.5	U	
1,4-DIOXANE					10	UR	C	10	UR	C	10	UR	C
2-BUTANONE					2.5	U		2.5	U		2.5	U	
2-HEXANONE					2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE					2.5	U		2.5	U		2.5	U	
ACETONE					2.5	U		2.5	UR	C	2.5	UR	C
BENZENE					0.5	U		0.5	U		1		
BROMOCHLOROMETHANE					0.5	U		0.5	U		0.5	U	
BROMODICHLOROMETHANE					0.5	U		0.5	U		0.5	U	
BROMOFORM					0.5	U		0.5	U		0.5	U	
BROMOMETHANE					0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE					0.5	U		0.5	U		0.5	U	
CARBON TETRACHLORIDE					0.5	U		0.5	U		0.5	U	
CHLOROBENZENE					0.5	U		0.5	U		0.5	U	
CHLORODIBROMOMETHANE					0.5	U		0.5	U		0.5	U	
CHLOROETHANE					1			50	J	DE	80	J	E
CHLOROFORM					0.5	U		0.5	U		0.5	U	
CHLOROMETHANE					0.5	U		0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE					0.5	U		0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE					0.5	U		0.5	U		0.5	U	
CYCLOHEXANE					0.5	U		0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-TW415-3842DL			SA-TW415-4347			SA-TW416-3337			SA-TW416-3842		
SDG: C2595	LAB_ID	C2595-18DL			C2595-19			C2595-09			C2595-12		
FRACTION: OV	SAMP_DATE	6/7/2011			6/7/2011			6/6/2011			6/6/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE					0.5	U		0.5	U		0.5	U	
ETHYLBENZENE					0.5	U		0.5	U		0.5	U	
ISOPROPYLBENZENE					0.5	U		0.5	U		0.7	J	P
M+P-XYLENES					1	U		1	U		1	U	
METHYL ACETATE					0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE					0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER					0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE					0.5	U		0.5	U		0.5	U	
O-XYLENE					0.5	U		0.5	U		0.5	U	
STYRENE					0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE					0.5	U		0.5	U		0.5	U	
TOLUENE					0.5	U		0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE					0.5	U		0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE					0.5	U		0.5	U		0.5	U	
TRICHLOROETHENE					0.5	U		0.5	U		0.5	U	
TRICHLOROFLUOROMETHANE					0.5	U		0.5	U		0.5	U	
VINYL CHLORIDE					0.5	U		0.5	U		0.5	U	

PROJ_NO: 02045 SDG: C2595 FRACTION: OV MEDIA: WATER	NSAMPLE	SA-TW416-3842DL			SA-TW416-4347			SA-TW416-4347DL			SA-TW416-4852		
	LAB_ID	C2595-12DL			C2595-13			C2595-13DL			C2595-16		
	SAMP_DATE	6/6/2011			6/6/2011			6/6/2011			6/7/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE					120						0.5	U	
1,1,2,2-TETRACHLOROETHANE					0.5	U					0.5	U	
1,1,2-TRICHLOROETHANE					0.5	U					0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE					0.5	U					0.71	J	P
1,1-DICHLOROETHANE		440						390			1.9		
1,1-DICHLOROETHENE					17						0.5	U	
1,2,3-TRICHLOROBENZENE					0.5	U					0.5	U	
1,2,4-TRICHLOROBENZENE					0.5	U					0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE					0.5	U					0.5	U	
1,2-DIBROMOETHANE					0.5	U					0.5	U	
1,2-DICHLOROBENZENE					0.74	J	P				0.5	U	
1,2-DICHLOROETHANE					0.5	U					0.5	UJ	C
1,2-DICHLOROPROPANE					0.5	U					0.5	U	
1,3-DICHLOROBENZENE					0.5	U					0.5	U	
1,4-DICHLOROBENZENE					0.5	U					0.5	U	
1,4-DIOXANE					10	UR	C				10	UR	C
2-BUTANONE					2.5	U					2.5	U	
2-HEXANONE					2.5	U					2.5	U	
4-METHYL-2-PENTANONE					2.5	U					2.5	U	
ACETONE					2.5	UR	C				2.5	UR	C
BENZENE					0.5	U					0.5	U	
BROMOCHLOROMETHANE					0.5	U					0.5	U	
BROMODICHLOROMETHANE					0.5	U					0.5	U	
BROMOFORM					0.5	U					0.5	UJ	C
BROMOMETHANE					0.5	U					0.5	U	
CARBON DISULFIDE					0.5	U					0.5	U	
CARBON TETRACHLORIDE					0.5	U					0.5	UJ	C
CHLOROBENZENE					0.5	U					0.5	U	
CHLORODIBROMOMETHANE					0.5	U					0.5	UJ	C
CHLOROETHANE					76	J	E				0.5	U	
CHLOROFORM					0.5	U					0.5	U	
CHLOROMETHANE					0.5	U					0.5	U	
CIS-1,2-DICHLOROETHENE					0.5	U					0.5	U	
CIS-1,3-DICHLOROPROPENE					0.5	U					0.5	U	
CYCLOHEXANE					0.5	U					0.5	U	

PROJ_NO: 02045 SDG: C2595 FRACTION: OV MEDIA: WATER	NSAMPLE	SA-TW416-3842DL			SA-TW416-4347			SA-TW416-4347DL			SA-TW416-4852		
	LAB_ID	C2595-12DL			C2595-13			C2595-13DL			C2595-16		
	SAMP_DATE	6/6/2011			6/6/2011			6/6/2011			6/7/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE					0.5	U					0.5	U	
ETHYLBENZENE					0.5	U					0.5	U	
ISOPROPYLBENZENE					1.1						0.5	U	
M+P-XYLENES					1	U					1	U	
METHYL ACETATE					0.5	U					0.5	U	
METHYL CYCLOHEXANE					0.5	U					0.5	U	
METHYL TERT-BUTYL ETHER					0.5	U					0.5	U	
METHYLENE CHLORIDE					0.5	U					0.5	U	
O-XYLENE					0.5	U					0.5	U	
STYRENE					0.5	U					0.5	U	
TETRACHLOROETHENE					0.5	U					0.5	U	
TOLUENE					0.5	U					0.5	U	
TRANS-1,2-DICHLOROETHENE					0.5	U					0.5	U	
TRANS-1,3-DICHLOROPROPENE					0.5	U					0.5	U	
TRICHLOROETHENE					0.5	U					0.5	U	
TRICHLOROFLUOROMETHANE					0.5	U					0.5	UJ	C
VINYL CHLORIDE					0.5	U					0.5	U	

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**D. BRAYACK**	**DATE:**	**AUGUST 17, 2011**
FROM:	**EDWARD SEDLMYER**	**COPIES:**	**DV FILE**
SUBJECT:	**ORGANIC DATA VALIDATION – VOC** **NWIRP CALVERTON CTO WE08** **SDG C2596**		

SAMPLES: 13 / Aqueous / VOC

SA-DUP03-20110608	SA-PZ135I-20110607	SA-PZ137I-20110608
SA-SB01-20110608	SA-TW411-3337	SA-TW411-3842
SA-TW411-4347	SA-TW412-3337	SA-TW412-3842
SA-TW412-4347	SA-TW413-3337	SA-TW413-3842
SA-TW413-4347		

Overview

The sample set for NWIRP Calverton, CTO WE08, SDG C2596 consists of thirteen (13) aqueous environmental samples. The aqueous samples were analyzed for volatile organic compounds (VOC). The following field duplicate pair was associated with this SDG: SA-TW413-3842 / SA-DUP03-20110608.

The samples were collected by Tetra Tech on June 6 and 7, 2011 and analyzed by CHEMTECH. All analyses were conducted in accordance with EPA Method SW-846 8260B analytical and reporting protocols. The data contained in this SDG were validated with regard to the following parameters:

*	•	Data completeness
*	•	Holding times
	•	Initial/continuing calibrations
*	•	GC/MS Tuning
*	•	Laboratory Method Blank Results
	•	Surrogate Recoveries
	•	Matrix Spike / Matrix Spike Duplicate Recoveries
	•	Laboratory Control Sample Recoveries
*	•	Field Duplicate Results
*	•	Internal Standard Recoveries
*	•	Compound Quantitation
*	•	Compound Identification
*	•	Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter. Qualified analytical results are presented in Appendix A, results as reported by the laboratory are presented in Appendix B, Region II data validation forms are presented in Appendix C, and documentation supporting these findings is presented in Appendix D.

Volatile Organic Compounds

All initial calibrations and all continuing calibrations relative response factors (RRF) were less than the 0.05 quality control limit for 1,4-dioxane on instrument MSVOAG. The non-detected results for 1,4-dioxane were rejected (UR).

Continuing calibration percent differences (%Ds) were greater than the 20% quality control limit for methyl acetate, bromochloromethane, and tetrachloroethene on instrument MSVOAG, on 06/17/11 at 1:50. The nondetected results for the aforementioned compounds in samples SA-PZ135I-20110607, SA-PZ137I-20110608, SA-SB01-20110608, SA-TW413-3337, SA-TW413-3842, SA-TW413-4347, SA-DUP03-20110608, SA-TW412-3337, and SA-TW412-3842 were qualified as estimated (UJ).

Continuing calibration percent differences (%Ds) were greater than the 20% quality control limit for carbon disulfide, methyl acetate, bromochloromethane, bromomethane, chloroethane, acetone, and 2-buranone on instrument MSVOAG, on 06/17/11 at 17:26. The positive and nondetected results for the aforementioned compounds in samples SA-TW411-3337, SA-TW411-3842, and SA-TW411-4347 were qualified as estimated (J) and (UJ), respectively.

Continuing calibration percent differences (%Ds) were greater than the 20% quality control limit for bromoform on instrument MSVOAG, on 06/21/11 at 11:48. The nondetected result for bromoform in sample SA-TW412-4347 was qualified as estimated (UJ).

The surrogate toluene-d8 had percent recoveries less than the quality control limit for samples SA-SB01-20110608, SA-TW413-3337, SA-TW413-3842, SA-TW413-4347, SA-DUP03-20110608, SA-TW412-3337, SA-TW412-3842, SA-TW411-3337, and SA-TW411-3842. The samples were reanalyzed with similar results. The positive and nondetected results for the aforementioned samples were qualified as estimated (J) and (UJ), respectively.

The surrogates 1,2-dichloroethane-d4 and toluene-d8 had percent recoveries less than the quality control limit for sample SA-TW411-4347 The sample was reanalyzed with similar results. The positive and nondetected results for sample SA-TW411-4347 were qualified as estimated (J) and (UJ), respectively.

The laboratory control sample (LCS), BSG0616W3 had a percent recovery greater than the quality control limit for bromochloromethane. No action was taken on this basis because all bromochloromethane results are nondetect.

The laboratory control sample (LCS), BSG0617W1 had a percent recovery greater than the quality control limit for chloroethane, acetone, methyl acetate, methylene chloride, 2-butanone, and bromochloromethane. The positive acetone and chloroethane results for samples SA-TW411-3337 and SA-TW411-4347 were qualified as estimated (J). No action was taken on the nondetected results.

The VOC matrix spike / matrix spike duplicate (MS/MSD) associated with this sample delivery group (SDG) had a relative percent difference (RPD) for acetone that exceeded the quality control limit. No action was taken on this basis because the matrix spike was not performed on the sample in this SDG.

Additional Comments

The results were reported to the limit of detection (LOD). Positive results below the limit of quantitation (LOQ) and above the detection limit (DL) were qualified as estimated, (J), due to uncertainty near the detection limit.

Samples SA-DUP03-20110608, SA-TW413-3337, SA-TW413-3842, and SA-TW413-4347 required dilutions due to 1,1-dichloroethane concentrations greater than the linear calibration range of the instrument. All other results are reported from the undiluted analysis.

The source blank (SA-SB01-20110608) contained positive results for acetone, bromoform, and chlorodibromomethane. No results were qualified because of field quality control blanks. Typically, field quality control blanks are not used to establish blank action levels.

EXECUTIVE SUMMARY

Laboratory Performance Issues: Initial and continuing calibration RRF noncompliance resulted in the rejection of 1,4-dioxane results. Surrogate percent recovery noncompliances resulted in the qualification of results for nine samples. LCS percent recovery noncompliances resulted in the qualification of acetone in two samples.

Other Factors Affecting Data Quality: Positive results below the limit of quantitation (LOQ) and above the detection limit (DL) were qualified as estimated, (J), due to uncertainty near the detection limit.

The data for these analyses were reviewed with reference to the USEPA Region II Standard Operating Procedures for Validating Volatile Organic Compounds by SW-846 Method 8260B HW-24 Revision #2 (August 2008) and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009).

The text of this report has been formulated to address only those problem areas affecting data quality.

Edward Sedlmyer

TetraTech NUS
Edward Sedlmyer
Chemist/Data Validator

TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C – Region II Data Validation Forms
4. Appendix D - Support Documentation

Appendix A

Qualified Analytical Results

Data Validation Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$ / ICP PDS Recovery Noncompliance
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02045	NSAMPLE	SA-DUP03-20110608			SA-DUP03-20110608DL			SA-PZ135I-20110607			SA-PZ137I-20110608		
SDG: C2596	LAB_ID	C2596-07			C2596-07DL			C2596-01			C2596-02		
FRACTION: OV	SAMP_DATE	6/8/2011			6/8/2011			6/7/2011			6/8/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			100.0			0.0			0.0		
	DUP_OF	SA-TW413-3842			SA-TW413-3842								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		53	J	R				5.6			0.5	U	
1,1,2,2-TETRACHLOROETHANE		0.5	UJ	R				0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	UJ	R				0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	UJ	R				0.5	U		0.5	U	
1,1-DICHLOROETHANE					260	J	R	35			1.2		
1,1-DICHLOROETHENE		18	J	R				2.8			0.5	U	
1,2,3-TRICHLOROBENZENE		0.5	UJ	R				0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE		0.84	J	PR				0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	UJ	R				0.5	U		0.5	U	
1,2-DIBROMOETHANE		0.5	UJ	R				0.5	U		0.5	U	
1,2-DICHLOROBENZENE		0.5	UJ	R				0.5	U		0.5	U	
1,2-DICHLOROETHANE		0.5	UJ	R				0.5	U		0.5	U	
1,2-DICHLOROPROPANE		0.5	UJ	R				0.5	U		0.5	U	
1,3-DICHLOROBENZENE		0.5	UJ	R				0.5	U		0.5	U	
1,4-DICHLOROBENZENE		0.5	UJ	R				0.5	U		0.5	U	
1,4-DIOXANE		10	UR	C				10	UR	C	10	UR	C
2-BUTANONE		2.5	UJ	R				2.5	U		2.5	U	
2-HEXANONE		2.5	UJ	R				2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	UJ	R				2.5	U		2.5	U	
ACETONE		4.6	J	PR				4.4	J	P	2.5	U	
BENZENE		0.5	UJ	R				0.5	U		0.5	U	
BROMOCHLOROMETHANE		0.5	UJ	CR				0.5	UJ	C	0.5	UJ	C
BROMODICHLOROMETHANE		0.5	UJ	R				0.5	U		0.5	U	
BROMOFORM		0.5	UJ	R				0.5	U		0.5	U	
BROMOMETHANE		0.5	UJ	R				0.5	U		0.5	U	
CARBON DISULFIDE		0.5	UJ	R				0.5	U		0.5	U	
CARBON TETRACHLORIDE		0.5	UJ	R				0.5	U		0.5	U	
CHLOROBENZENE		0.5	UJ	R				0.5	U		0.5	U	
CHLORODIBROMOMETHANE		0.5	UJ	R				0.5	U		0.5	U	
CHLOROETHANE		33	J	R				1.8			0.5	U	
CHLOROFORM		0.5	UJ	R				0.5	U		0.5	U	
CHLOROMETHANE		0.5	UJ	R				0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	UJ	R				0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	UJ	R				0.5	U		0.5	U	
CYCLOHEXANE		0.5	UJ	R				0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-DUP03-20110608			SA-DUP03-20110608DL			SA-PZ135I-20110607			SA-PZ137I-20110608		
SDG: C2596	LAB_ID	C2596-07			C2596-07DL			C2596-01			C2596-02		
FRACTION: OV	SAMP_DATE	6/8/2011			6/8/2011			6/7/2011			6/8/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF	SA-TW413-3842			SA-TW413-3842								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		53	J	R				5.6			0.5	U	
1,1,2,2-TETRACHLOROETHANE		0.5	UJ	R				0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	UJ	R				0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	UJ	R				0.5	U		0.5	U	
1,1-DICHLOROETHANE					260	J	R	35			1.2		
1,1-DICHLOROETHENE		18	J	R				2.8			0.5	U	
1,2,3-TRICHLOROBENZENE		0.5	UJ	R				0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE		0.84	J	PR				0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	UJ	R				0.5	U		0.5	U	
1,2-DIBROMOETHANE		0.5	UJ	R				0.5	U		0.5	U	
1,2-DICHLOROBENZENE		0.5	UJ	R				0.5	U		0.5	U	
1,2-DICHLOROETHANE		0.5	UJ	R				0.5	U		0.5	U	
1,2-DICHLOROPROPANE		0.5	UJ	R				0.5	U		0.5	U	
1,3-DICHLOROBENZENE		0.5	UJ	R				0.5	U		0.5	U	
1,4-DICHLOROBENZENE		0.5	UJ	R				0.5	U		0.5	U	
1,4-DIOXANE		10	UR	C				10	UR	C	10	UR	C
2-BUTANONE		2.5	UJ	R				2.5	U		2.5	U	
2-HEXANONE		2.5	UJ	R				2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	UJ	R				2.5	U		2.5	U	
ACETONE		4.6	J	PR				4.4	J	P	2.5	U	
BENZENE		0.5	UJ	R				0.5	U		0.5	U	
BROMOCHLOROMETHANE		0.5	UJ	CR				0.5	UJ	C	0.5	UJ	C
BROMODICHLOROMETHANE		0.5	UJ	R				0.5	U		0.5	U	
BROMOFORM		0.5	UJ	R				0.5	U		0.5	U	
BROMOMETHANE		0.5	UJ	R				0.5	U		0.5	U	
CARBON DISULFIDE		0.5	UJ	R				0.5	U		0.5	U	
CARBON TETRACHLORIDE		0.5	UJ	R				0.5	U		0.5	U	
CHLOROBENZENE		0.5	UJ	R				0.5	U		0.5	U	
CHLORODIBROMOMETHANE		0.5	UJ	R				0.5	U		0.5	U	
CHLOROETHANE		33	J	R				1.8			0.5	U	
CHLOROFORM		0.5	UJ	R				0.5	U		0.5	U	
CHLOROMETHANE		0.5	UJ	R				0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	UJ	R				0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	UJ	R				0.5	U		0.5	U	
CYCLOHEXANE		0.5	UJ	R				0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-SB01-20110608			SA-TW411-3337			SA-TW411-3842			SA-TW411-4347		
SDG: C2596	LAB_ID	C2596-03			C2596-11			C2596-12			C2596-13		
FRACTION: OV	SAMP_DATE	6/8/2011			6/8/2011			6/8/2011			6/8/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.5	UJ	R	2.5	J	R	0.5	UJ	R	0.5	UJ	R
1,1,2,2-TETRACHLOROETHANE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
1,1,2-TRICHLOROETHANE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
1,1-DICHLOROETHANE		0.5	UJ	R	64	J	R	10	J	R	48	J	R
1,1-DICHLOROETHENE		0.5	UJ	R	2.9	J	R	0.62	J	PR	2.3	J	R
1,2,3-TRICHLOROBENZENE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
1,2,4-TRICHLOROBENZENE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
1,2-DIBROMO-3-CHLOROPROPANE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
1,2-DIBROMOETHANE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
1,2-DICHLOROBENZENE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
1,2-DICHLOROETHANE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
1,2-DICHLOROPROPANE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
1,3-DICHLOROBENZENE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
1,4-DICHLOROBENZENE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
1,4-DIOXANE		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	UJ	R	2.5	UJ	CR	2.5	UJ	CR	2.5	UJ	CR
2-HEXANONE		2.5	UJ	R	2.5	UJ	R	2.5	UJ	R	2.5	UJ	R
4-METHYL-2-PENTANONE		2.5	UJ	R	2.5	UJ	R	2.5	UJ	R	2.5	UJ	R
ACETONE		6.6	J	R	8.2	J	CER	2.5	UJ	CR	7.3	J	CER
BENZENE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
BROMOCHLOROMETHANE		0.5	UJ	CR	0.5	UJ	CR	0.5	UJ	CR	0.5	UJ	CR
BROMODICHLOROMETHANE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
BROMOFORM		3.6	J	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
BROMOMETHANE		0.5	UJ	R	0.5	UJ	CR	0.5	UJ	CR	0.5	UJ	CR
CARBON DISULFIDE		0.5	UJ	R	0.5	UJ	CR	0.5	UJ	CR	0.5	UJ	CR
CARBON TETRACHLORIDE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
CHLOROBENZENE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
CHLORODIBROMOMETHANE		1.9	J	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
CHLOROETHANE		0.5	UJ	R	10	J	CER	0.5	UJ	CR	7.9	J	CER
CHLOROFORM		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
CHLOROMETHANE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
CIS-1,2-DICHLOROETHENE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
CIS-1,3-DICHLOROPROPENE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
CYCLOHEXANE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R

PROJ_NO: 02045	NSAMPLE	SA-TW412-3337			SA-TW412-3842			SA-TW412-4347			SA-TW413-3337		
SDG: C2596	LAB_ID	C2596-08			C2596-09			C2596-10			C2596-04		
FRACTION: OV	SAMP_DATE	6/8/2011			6/8/2011			6/8/2011			6/8/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		5.3	J	R	18	J	R	2.1			75	J	R
1,1,2,2-TETRACHLOROETHANE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
1,1,2-TRICHLOROETHANE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
1,1-DICHLOROETHANE		89	J	R	100	J	R	25					
1,1-DICHLOROETHENE		5.4	J	R	7.6	J	R	1.3			27	J	R
1,2,3-TRICHLOROBENZENE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
1,2,4-TRICHLOROBENZENE		0.74	J	PR	0.9	J	PR	0.5	U		1.8	J	R
1,2-DIBROMO-3-CHLOROPROPANE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
1,2-DIBROMOETHANE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
1,2-DICHLOROBENZENE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.91	J	PR
1,2-DICHLOROETHANE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
1,2-DICHLOROPROPANE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
1,3-DICHLOROBENZENE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
1,4-DICHLOROBENZENE		0.8	J	PR	1.1	J	R	0.5	U		1.7	J	R
1,4-DIOXANE		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	UJ	R	7	J	R	2.5	U		2.5	UJ	R
2-HEXANONE		2.5	UJ	R	2.5	UJ	R	2.5	U		2.5	UJ	R
4-METHYL-2-PENTANONE		2.5	UJ	R	2.5	UJ	R	2.5	U		2.5	UJ	R
ACETONE		2.5	UJ	R	8	J	R	2.5	U		11	J	R
BENZENE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.71	J	PR
BROMOCHLOROMETHANE		0.5	UJ	CR	0.5	UJ	CR	0.5	U		0.5	UJ	CR
BROMODICHLOROMETHANE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
BROMOFORM		0.5	UJ	R	0.5	UJ	R	0.5	UJ	C	0.5	UJ	R
BROMOMETHANE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
CARBON DISULFIDE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
CARBON TETRACHLORIDE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
CHLOROBENZENE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
CHLORODIBROMOMETHANE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
CHLOROETHANE		15	J	R	16	J	R	1.4			63	J	R
CHLOROFORM		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
CHLOROMETHANE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
CIS-1,2-DICHLOROETHENE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
CIS-1,3-DICHLOROPROPENE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
CYCLOHEXANE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R

PROJ_NO: 02045	NSAMPLE	SA-TW413-3337DL			SA-TW413-3842			SA-TW413-3842DL			SA-TW413-4347		
SDG: C2596	LAB_ID	C2596-04DL			C2596-05			C2596-05DL			C2596-06		
FRACTION: OV	SAMP_DATE	6/8/2011			6/8/2011			6/8/2011			6/8/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE					55	J	R				23	J	R
1,1,2,2-TETRACHLOROETHANE					0.5	UJ	R				0.5	UJ	R
1,1,2-TRICHLOROETHANE					0.5	UJ	R				0.5	UJ	R
1,1,2-TRICHLOROTRIFLUOROETHANE					0.5	UJ	R				0.5	UJ	R
1,1-DICHLOROETHANE		360	J	R				280	J	R			
1,1-DICHLOROETHENE					19	J	R				11	J	R
1,2,3-TRICHLOROBENZENE					0.5	UJ	R				0.5	UJ	R
1,2,4-TRICHLOROBENZENE					0.75	J	PR				0.5	UJ	R
1,2-DIBROMO-3-CHLOROPROPANE					0.5	UJ	R				0.5	UJ	R
1,2-DIBROMOETHANE					0.5	UJ	R				0.5	UJ	R
1,2-DICHLOROBENZENE					0.5	UJ	R				0.5	UJ	R
1,2-DICHLOROETHANE					0.5	UJ	R				0.5	UJ	R
1,2-DICHLOROPROPANE					0.5	UJ	R				0.5	UJ	R
1,3-DICHLOROBENZENE					0.5	UJ	R				0.5	UJ	R
1,4-DICHLOROBENZENE					0.5	UJ	R				0.5	UJ	R
1,4-DIOXANE					10	UR	C				10	UR	C
2-BUTANONE					2.5	UJ	R				2.5	UJ	R
2-HEXANONE					2.5	UJ	R				2.5	UJ	R
4-METHYL-2-PENTANONE					2.5	UJ	R				2.5	UJ	R
ACETONE					6.6	J	R				5.2	J	R
BENZENE					0.5	UJ	R				0.5	UJ	R
BROMOCHLOROMETHANE					0.5	UJ	CR				0.5	UJ	CR
BROMODICHLOROMETHANE					0.5	UJ	R				0.5	UJ	R
BROMOFORM					0.5	UJ	R				0.5	UJ	R
BROMOMETHANE					0.5	UJ	R				0.5	UJ	R
CARBON DISULFIDE					0.5	UJ	R				0.5	UJ	R
CARBON TETRACHLORIDE					0.5	UJ	R				0.5	UJ	R
CHLOROBENZENE					0.5	UJ	R				0.5	UJ	R
CHLORODIBROMOMETHANE					0.5	UJ	R				0.5	UJ	R
CHLOROETHANE					30	J	R				19	J	R
CHLOROFORM					0.5	UJ	R				0.5	UJ	R
CHLOROMETHANE					0.5	UJ	R				0.5	UJ	R
CIS-1,2-DICHLOROETHENE					0.5	UJ	R				0.5	UJ	R
CIS-1,3-DICHLOROPROPENE					0.5	UJ	R				0.5	UJ	R
CYCLOHEXANE					0.5	UJ	R				0.5	UJ	R

PROJ_NO: 02045	NSAMPLE	SA-TW413-4347DL		
SDG: C2596	LAB_ID	C2596-06DL		
FRACTION: OV	SAMP_DATE	6/8/2011		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE				
1,1,2,2-TETRACHLOROETHANE				
1,1,2-TRICHLOROETHANE				
1,1,2-TRICHLOROTRIFLUOROETHANE				
1,1-DICHLOROETHANE		180	J	R
1,1-DICHLOROETHENE				
1,2,3-TRICHLOROBENZENE				
1,2,4-TRICHLOROBENZENE				
1,2-DIBROMO-3-CHLOROPROPANE				
1,2-DIBROMOETHANE				
1,2-DICHLOROBENZENE				
1,2-DICHLOROETHANE				
1,2-DICHLOROPROPANE				
1,3-DICHLOROBENZENE				
1,4-DICHLOROBENZENE				
1,4-DIOXANE				
2-BUTANONE				
2-HEXANONE				
4-METHYL-2-PENTANONE				
ACETONE				
BENZENE				
BROMOCHLOROMETHANE				
BROMODICHLOROMETHANE				
BROMOFORM				
BROMOMETHANE				
CARBON DISULFIDE				
CARBON TETRACHLORIDE				
CHLOROBENZENE				
CHLORODIBROMOMETHANE				
CHLOROETHANE				
CHLOROFORM				
CHLOROMETHANE				
CIS-1,2-DICHLOROETHENE				
CIS-1,3-DICHLOROPROPENE				
CYCLOHEXANE				

PROJ_NO: 02045	NSAMPLE	SA-DUP03-20110608			SA-DUP03-20110608DL			SA-PZ135I-20110607			SA-PZ137I-20110608		
SDG: C2596	LAB_ID	C2596-07			C2596-07DL			C2596-01			C2596-02		
FRACTION: OV	SAMP_DATE	6/8/2011			6/8/2011			6/7/2011			6/8/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF	SA-TW413-3842			SA-TW413-3842								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE		0.5	UJ	R				0.5	U		0.5	U	
ETHYLBENZENE		0.5	UJ	R				0.5	U		0.5	U	
ISOPROPYLBENZENE		0.5	UJ	R				0.5	U		0.5	U	
M+P-XYLENES		1	UJ	R				1	U		1	U	
METHYL ACETATE		0.5	UJ	CR				0.5	UJ	C	0.5	UJ	C
METHYL CYCLOHEXANE		0.5	UJ	R				0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	UJ	R				0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	UJ	R				0.5	U		0.5	U	
O-XYLENE		0.5	UJ	R				0.5	U		0.5	U	
STYRENE		0.5	UJ	R				0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	UJ	CR				0.5	UJ	C	0.5	UJ	C
TOLUENE		0.5	UJ	R				0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	UJ	R				0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	UJ	R				0.5	U		0.5	U	
TRICHLOROETHENE		0.5	UJ	R				0.5	U		0.5	U	
TRICHLOROFLUOROMETHANE		0.5	UJ	R				0.5	U		0.5	U	
VINYL CHLORIDE		0.5	UJ	R				0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-SB01-20110608			SA-TW411-3337			SA-TW411-3842			SA-TW411-4347		
SDG: C2596	LAB_ID	C2596-03			C2596-11			C2596-12			C2596-13		
FRACTION: OV	SAMP_DATE	6/8/2011			6/8/2011			6/8/2011			6/8/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
ETHYLBENZENE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
ISOPROPYLBENZENE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
M+P-XYLENES		1	UJ	R	1	UJ	R	1	UJ	R	1	UJ	R
METHYL ACETATE		0.5	UJ	CR	0.5	UJ	CR	0.5	UJ	CR	0.5	UJ	CR
METHYL CYCLOHEXANE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
METHYL TERT-BUTYL ETHER		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
METHYLENE CHLORIDE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
O-XYLENE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
STYRENE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
TETRACHLOROETHENE		0.5	UJ	CR	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
TOLUENE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
TRANS-1,2-DICHLOROETHENE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
TRANS-1,3-DICHLOROPROPENE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
TRICHLOROETHENE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
TRICHLOROFLUOROMETHANE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
VINYL CHLORIDE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R

PROJ_NO: 02045	NSAMPLE	SA-TW412-3337			SA-TW412-3842			SA-TW412-4347			SA-TW413-3337		
SDG: C2596	LAB_ID	C2596-08			C2596-09			C2596-10			C2596-04		
FRACTION: OV	SAMP_DATE	6/8/2011			6/8/2011			6/8/2011			6/8/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
ETHYLBENZENE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
ISOPROPYLBENZENE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
M+P-XYLENES		1	UJ	R	1	UJ	R	1	U		1	UJ	R
METHYL ACETATE		0.5	UJ	CR	0.5	UJ	CR	0.5	U		0.5	UJ	CR
METHYL CYCLOHEXANE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
METHYL TERT-BUTYL ETHER		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
METHYLENE CHLORIDE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
O-XYLENE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
STYRENE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
TETRACHLOROETHENE		0.5	UJ	CR	0.5	UJ	CR	0.5	U		0.5	UJ	CR
TOLUENE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
TRANS-1,2-DICHLOROETHENE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
TRANS-1,3-DICHLOROPROPENE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
TRICHLOROETHENE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
TRICHLOROFLUOROMETHANE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
VINYL CHLORIDE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R

PROJ_NO: 02045	NSAMPLE	SA-TW413-3337DL			SA-TW413-3842			SA-TW413-3842DL			SA-TW413-4347		
SDG: C2596	LAB_ID	C2596-04DL			C2596-05			C2596-05DL			C2596-06		
FRACTION: OV	SAMP_DATE	6/8/2011			6/8/2011			6/8/2011			6/8/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE					0.5	UJ	R				0.5	UJ	R
ETHYLBENZENE					0.5	UJ	R				0.5	UJ	R
ISOPROPYLBENZENE					0.5	UJ	R				0.5	UJ	R
M+P-XYLENES					1	UJ	R				1	UJ	R
METHYL ACETATE					0.5	UJ	CR				0.5	UJ	CR
METHYL CYCLOHEXANE					0.5	UJ	R				0.5	UJ	R
METHYL TERT-BUTYL ETHER					0.5	UJ	R				0.5	UJ	R
METHYLENE CHLORIDE					0.5	UJ	R				0.5	UJ	R
O-XYLENE					0.5	UJ	R				0.5	UJ	R
STYRENE					0.5	UJ	R				0.5	UJ	R
TETRACHLOROETHENE					0.5	UJ	CR				0.5	UJ	CR
TOLUENE					0.5	UJ	R				0.5	UJ	R
TRANS-1,2-DICHLOROETHENE					0.5	UJ	R				0.5	UJ	R
TRANS-1,3-DICHLOROPROPENE					0.5	UJ	R				0.5	UJ	R
TRICHLOROETHENE					0.5	UJ	R				0.5	UJ	R
TRICHLOROFLUOROMETHANE					0.5	UJ	R				0.5	UJ	R
VINYL CHLORIDE					0.5	UJ	R				0.5	UJ	R

PROJ_NO: 02045	NSAMPLE	SA-TW413-4347DL
SDG: C2596	LAB_ID	C2596-06DL
FRACTION: OV	SAMP_DATE	6/8/2011
MEDIA: WATER	QC_TYPE	NM
	UNITS	UG/L
	PCT_SOLIDS	0.0
	DUP_OF	

PARAMETER	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE			
ETHYLBENZENE			
ISOPROPYLBENZENE			
M+P-XYLENES			
METHYL ACETATE			
METHYL CYCLOHEXANE			
METHYL TERT-BUTYL ETHER			
METHYLENE CHLORIDE			
O-XYLENE			
STYRENE			
TETRACHLOROETHENE			
TOLUENE			
TRANS-1,2-DICHLOROETHENE			
TRANS-1,3-DICHLOROPROPENE			
TRICHLOROETHENE			
TRICHLOROFLUOROMETHANE			
VINYL CHLORIDE			

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**D. BRAYACK**	**DATE:**	**AUGUST 18, 2011**
FROM:	**JOSEPH KALINYAK**	**COPIES:**	**DV FILE**
SUBJECT:	**ORGANIC DATA VALIDATION – VOC NWIRP CALVERTON CTO WE08 SDG C2634**		

SAMPLES: 14 / Aqueous / VOC

SA-DUP04-20110609	SA-PZ133I-20110609	SA-PZ133I1-20110609
SA-PZ139I-20110610	SA-TB04-20110609	SA-TW408-3337
SA-TW408-3842	SA-TW408-4347	SA-TW409-3337
SA-TW409-3842	SA-TW409-4347	SA-TW410-3337
SA-TW410-3842	SA-TW410-4347	

Overview

The sample set for NWIRP Calverton, CTO WE08, SDG C2634 consisted of fourteen (14) aqueous samples including one (1) aqueous trip blank sample. All aqueous samples were analyzed for volatile organic compounds (VOC). One (1) field duplicate sample pair was included in this Sample Delivery Group (SDG); SA-DUP04-20110609 / SA-TW410-3842.

The samples were collected by Tetra Tech on June 9 and 10, 2011 and analyzed by ChemTech laboratory. All analyses were conducted in accordance with EPA Method SW-846 8260B analytical and reporting protocols. The data contained in this SDG were validated with regard to the following parameters:

* • Data completeness
* • Hold times
* • GC/MS System Tuning and Performance
• Initial/continuing calibrations
• Laboratory Control Sample Recoveries
• Blank Results
• Surrogate Spike Recoveries
* • Internal Standard Recoveries
* • Compound Identification
* • Compound Quantitation
* • Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter. Qualified analytical results are presented in Appendix A, results as reported by the laboratory are presented in Appendix B, Region II data validation forms are presented in Appendix C, and documentation supporting these findings is presented in Appendix D.

VOC

The initial calibration relative response factor (RRF) was less than the quality control limit of 0.05 for 1,4-dioxane for the instrument MSVOAG on 06/18/11 and the instrument MSVOAH on 06/15/11. Additionally, the continuing calibration verifications (CCV) had RRFs less than the 0.05 quality control limit for 1,4-dioxane. All sample 1,4-dioxane results were non-detected and were qualified rejected, (UR).

The continuing calibration verification (CCV) percent difference (%D) was greater than the 20% quality control limit for dichlorodifluoromethane and tetrachloroethene for instrument MSVOAG on 06/20/11 @ 02:48 affecting sample SA-TW409-4347. The non-detected results for dichlorodifluoromethane and tetrachloroethene for sample SA-TW409-4347 were qualified estimated, (UJ).

The CCV %D was greater than the 20% quality control limit for dichlorodifluoromethane, chloromethane, vinyl chloride, acetone, methyl acetate, methylene chloride, and 4-methyl-2-pentanone for instrument MSVOAH on 06/18/11 @ 15:54.

Affecting samples: SA-PZ133I-20110609, SA-TB04-20110609, SA-TW410-3337, SA-TW410-4347, SA-DUP04-20110609, SA-PZ133I1-20110609, SA-TW408-3842, SA-TW408-4347, and SA-TW409-3842

Action: All samples had non-detected results for the aforementioned analytes which were qualified estimated, (UJ).

The CCV %D was greater than the 20% quality control limit for acetone, methyl acetate, methylene chloride, and 4-methyl-2-pentanone for instrument MSVOAH on 06/19/11 @ 11:09.

Affecting samples: SA-PZ133I1-20110609 dilution, SA-PZ139I-20110610, SA-TW409-3337, SA-TB04-20110609 re-analysis, SA-TW410-3842, SA-TW408-3337, SA-TW408-3842 dilution, and SA-PZ139I-20110610 re-analysis

Action: The aforementioned analytes were not reported for samples SA-PZ133I1-20110609 dilution, SA-TB04-20110609 re-analysis, SA-TW408-3842 dilution, and SA-PZ139I-20110610 re-analysis as the undiluted or initial sample analysis results were reported. Samples SA-PZ139I-20110610, SA-TW409-3337, SA-TW410-3842, and SA-TW408-3337 had non-detected results for the aforementioned analytes which were qualified estimated, (UJ).

The surrogate (system monitoring compound) %Rs were greater than the quality control limit for samples as listed below.

Sample	Surrogate(s)
SA-TB04-20110609	1,2-dichloroethane-d4
SA-PZ133I1-20110609	1,2-dichloroethane-d4, 4-bromofluorobenzene
SA-PZ139I-20110610	1,2-dichloroethane-d4
SA-TB04-20110609RE	1,2-dichloroethane-d4
SA-PZ139I-20110610RE	1,2-dichloroethane-d4

Affecting samples: SA-TB04-20110609, SA-PZ133I1-20110609, and SA-PZ139I-20110610

Actions: As the re-analysis samples SA-TB04-20110609RE and SA-PZ139I-20110610RE had no improvement in the surrogate %Rs, the re-analysis sample results were not reported. The non-detected results for samples SA-TB04-20110609, SA-PZ133I1-20110609, and SA-PZ139I-20110610 were not qualified. The positive results for the samples SA-PZ133I1-20110609 and SA-PZ139I-20110610 were qualified estimated, (J).

Positive results below the limit of quantitation (LOQ) and above the method detection limit were qualified as estimated, (J), due to uncertainty near the detection limit.

Additional Comments

Methylene chloride was detected in the laboratory method blank VBH0619W1 affecting all samples at the following maximum concentration as indicated below:

Compound	Maximum Conc. (µg/L)	Action Level (µg/L)
Methylene chloride	25	250

An action level of 10X for the common laboratory contaminant methylene chloride was established to evaluate for laboratory contamination. Dilution factors and sample aliquots were taken into consideration during the application of all action levels. No samples were qualified for method blank contamination as all samples had non-detected results for methylene chloride.

The laboratory control sample (LCS) percent recovery (%R) was greater than the quality control limit for acetone and methylene chloride for LCS BSH0618W1.

Affecting samples: SA-PZ133I-20110609, SA-TB04-20110609, SA-TW410-3337, SA-TW410-4347, SA-DUP04-20110609, SA-PZ133I1-20110609, SA-TW408-3842, SA-TW408-4347, and SA-TW409-3842

Action: No action as all aforementioned samples had non-detected results for acetone and methylene chloride.

The LCS %R was greater than the quality control limit for chloromethane, acetone, and methylene chloride for LCS BSH0619W1.

Affecting samples: SA-PZ133I1-20110609 dilution, SA-PZ139I-20110610, SA-TW409-3337, SA-TB04-20110609 re-analysis, SA-TW410-3842, SA-TW408-3337, SA-TW408-3842 dilution, and SA-PZ139I-20110610 re-analysis

Action: No action as all aforementioned samples had non-detected results for chloromethane, acetone, and methylene chloride.

The matrix spike (MS) and MS duplicate (MSD) %Rs were greater than the quality control limit for chloromethane for spiked sample SA-TW409-3842.

Affecting sample: SA-TW409-3842

Action: No action as the sample SA-TW409-3842 had a non-detected result for chloromethane.

The matrix spike (MS) and MS duplicate (MSD) %Rs were less than the quality control limit for analytes as listed below for spiked sample SA-TW409-3842.

Analyte	MS	MSD
1,2,4-Trichlorobenzene	62	------
1,4-Dioxane	59	50

Affecting sample: SA-TW409-3842

Action: No action was taken for the 1,2,4-trichlorbenzene result. No action was taken for the non-detected 1,4-dioxane result as it was rejected for the RRF quality control limit non-compliance.

Samples listed below were diluted due to high VOC results in the undiluted sample analysis. Only those VOC results which exceeded the highest calibration level for the undiluted sample analyses were reported from the dilution analyses.

Sample	Dilution
SA-PZ133I1-20110609	1X, 10X
SA-TW408-3842	1X, 10X

Fifty-two (52) analytes were reported for VOCs.

Non-detected sample results were reported to the LOD.

EXECUTIVE SUMMARY

Laboratory Performance Issues: All sample 1,4-dioxane VOC non-detected analyte results were rejected due to initial and continuing calibration RRF quality control limit non-compliances. Sample VOC results were qualified for CCV %D and surrogate quality control limit non-compliances.

Other Factors Affecting Data Quality: Positive results below the Limit of Detection (LOD) and above the method detection limit were qualified as estimated, (J), due to uncertainty near the detection limit.

The data for these analyses were reviewed with reference to the USEPA Region II Hazardous Waste Support Branch Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B SOP #HW-24 Revision #2 August 2008, USEPA SW-846 Method 8260B, and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009).

TetraTech NUS
Joseph Kalinyak
Chemist/Data Validator

TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
Appendix A - Qualified Analytical Results
Appendix B - Results as Reported by the Laboratory
Appendix C – Region II Data Validation Forms
Appendix D - Support Documentation

Appendix A

Qualified Analytical Results

Value Qualifier Key (Val Qual)

J – The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

UJ – The result is an estimated non-detected quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

U - Value is a non-detect as reported by the laboratory.

UR – Non-detected result is considered rejected, (UR), as a result of technical non-compliances.

DATA QUALIFICATION CODE (QUAL CODE)

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$ / ICP PDS Recovery Noncompliance
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficent $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02045	NSAMPLE	SA-DUP04-20110609			SA-PZ133I1-20110609			SA-PZ133I1-20110609DL			SA-PZ133I-20110609		
SDG: C2634	LAB_ID	C2634-06			C2634-12			C2634-12DL			C2634-02		
FRACTION: OV	SAMP_DATE	6/9/2011			6/9/2011			6/9/2011			6/9/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF	SA-TW410-3842											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.5	U		22	J	R				9.5		
1,1,2,2-TETRACHLOROETHANE		0.5	U		0.5	U					0.5	U	
1,1,2-TRICHLOROETHANE		0.5	U		0.5	U					0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U		0.5	U					0.5	U	
1,1-DICHLOROETHANE		10						120			76		
1,1-DICHLOROETHENE		0.76	J	P	13	J	R				4.3		
1,2,3-TRICHLOROBENZENE		0.5	U		0.5	U					0.5	U	
1,2,4-TRICHLOROBENZENE		0.5	U		0.5	U					0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U		0.5	U					0.5	U	
1,2-DIBROMOETHANE		0.5	U		0.5	U					0.5	U	
1,2-DICHLOROBENZENE		0.5	U		0.5	U					0.5	U	
1,2-DICHLOROETHANE		0.5	U		0.5	U					0.5	U	
1,2-DICHLOROPROPANE		0.5	U		0.5	U					0.5	U	
1,3-DICHLOROBENZENE		0.5	U		0.5	U					0.5	U	
1,4-DICHLOROBENZENE		0.5	U		0.5	U					0.5	U	
1,4-DIOXANE		10	UR	C	10	UR	C				10	UR	C
2-BUTANONE		2.5	U		2.5	U					2.5	U	
2-HEXANONE		2.5	U		2.5	U					2.5	U	
4-METHYL-2-PENTANONE		2.5	UJ	C	2.5	UJ	C				2.5	UJ	C
ACETONE		2.5	UJ	C	2.5	UJ	C				2.5	UJ	C
BENZENE		0.5	U		0.5	U					0.5	U	
BROMOCHLOROMETHANE		0.5	U		0.5	U					0.5	U	
BROMODICHLOROMETHANE		0.5	U		0.5	U					0.5	U	
BROMOFORM		0.5	U		0.5	U					0.5	U	
BROMOMETHANE		0.5	U		0.5	U					0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U					0.5	U	
CARBON TETRACHLORIDE		0.5	U		0.5	U					0.5	U	
CHLOROBENZENE		0.5	U		0.5	U					0.5	U	
CHLORODIBROMOMETHANE		0.5	U		0.5	U					0.5	U	
CHLOROETHANE		0.5	U		22	J	R				6.7		
CHLOROFORM		0.5	U		0.5	U					0.5	U	
CHLOROMETHANE		0.5	UJ	C	0.5	UJ	C				0.5	UJ	C
CIS-1,2-DICHLOROETHENE		0.5	U		0.5	U					0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	U		0.5	U					0.5	U	
CYCLOHEXANE		0.5	U		0.5	U					0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-DUP04-20110609			SA-PZ133I1-20110609			SA-PZ133I1-20110609DL			SA-PZ133I-20110609		
SDG: C2634	LAB_ID	C2634-06			C2634-12			C2634-12DL			C2634-02		
FRACTION: OV	SAMP_DATE	6/9/2011			6/9/2011			6/9/2011			6/9/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF	SA-TW410-3842											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE		0.5	UJ	C	0.5	UJ	C				0.5	UJ	C
ETHYLBENZENE		0.5	U		0.5	U					0.5	U	
ISOPROPYLBENZENE		0.5	U		0.5	U					0.5	U	
M+P-XYLENES		1	U		1	U					1	U	
METHYL ACETATE		0.5	UJ	C	0.5	UJ	C				0.5	UJ	C
METHYL CYCLOHEXANE		0.5	U		0.5	U					0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U					0.5	U	
METHYLENE CHLORIDE		0.5	UJ	C	0.5	UJ	C				0.5	UJ	C
O-XYLENE		0.5	U		0.5	U					0.5	U	
STYRENE		0.5	U		0.5	U					0.5	U	
TETRACHLOROETHENE		0.5	U		0.5	U					0.5	U	
TOLUENE		0.5	U		0.5	U					0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	U		0.5	U					0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	U		0.5	U					0.5	U	
TRICHLOROETHENE		0.5	U		0.5	U					0.5	U	
TRICHLOROFLUOROMETHANE		0.5	U		0.5	U					0.5	U	
VINYL CHLORIDE		0.5	UJ	C	0.5	UJ	C				0.5	UJ	C

PROJ_NO: 02045	NSAMPLE	SA-PZ139I-20110610			SA-TB04-20110609			SA-TW408-3337			SA-TW408-3842		
SDG: C2634	LAB_ID	C2634-13			C2634-01			C2634-14			C2634-15		
FRACTION: OV	SAMP_DATE	6/10/2011			6/9/2011			6/10/2011			6/10/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.5	U		0.5	U		0.5	U		19		
1,1,2,2-TETRACHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHANE		5.9	J	R	0.5	U		34					
1,1-DICHLOROETHENE		0.5	U		0.5	U		3.3			11		
1,2,3-TRICHLOROBENZENE		0.5	U		0.5	U		1.3			1.4		
1,2,4-TRICHLOROBENZENE		0.5	U		0.5	U		3.7			4.3		
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DIBROMOETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROBENZENE		0.5	U		0.5	U		6.4			1.2		
1,2-DICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROPROPANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,3-DICHLOROBENZENE		0.5	U		0.5	U		4.7			0.64	J	P
1,4-DICHLOROBENZENE		0.5	U		0.5	U		26			2.9		
1,4-DIOXANE		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
2-HEXANONE		2.5	U		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	UJ	C	2.5	UJ	C	2.5	UJ	C	2.5	UJ	C
ACETONE		2.5	UJ	C	2.5	UJ	C	2.5	UJ	C	2.5	UJ	C
BENZENE		0.5	U		0.5	U		0.75	J	P	1.1		
BROMOCHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMODICHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOFORM		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON TETRACHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROBENZENE		0.5	U		0.5	U		3.8			0.5	U	
CHLORODIBROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROETHANE		0.5	U		0.5	U		46			110		
CHLOROFORM		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROMETHANE		0.5	U		0.5	UJ	C	0.5	U		0.5	UJ	C
CIS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.61	J	P	0.6	J	P
CIS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	
CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-PZ139I-20110610			SA-TB04-20110609			SA-TW408-3337			SA-TW408-3842		
SDG: C2634	LAB_ID	C2634-13			C2634-01			C2634-14			C2634-15		
FRACTION: OV	SAMP_DATE	6/10/2011			6/9/2011			6/10/2011			6/10/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE		0.5	U		0.5	UJ	C	0.5	U		0.5	UJ	C
ETHYLBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
ISOPROPYLBENZENE		0.5	U		0.5	U		0.62	J	P	0.5	U	
M+P-XYLENES		1	U		1	U		1	U		1	U	
METHYL ACETATE		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	U	
STYRENE		0.5	U		0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
TOLUENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRICHLOROFLUOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
VINYL CHLORIDE		0.5	U		0.5	UJ	C	0.5	U		0.5	UJ	C

PROJ_NO: 02045	NSAMPLE	SA-TW408-3842DL			SA-TW408-4347			SA-TW409-3337			SA-TW409-3842		
SDG: C2634	LAB_ID	C2634-15DL			C2634-16			C2634-07			C2634-08		
FRACTION: OV	SAMP_DATE	6/10/2011			6/10/2011			6/9/2011			6/9/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE					11			0.5	U		0.5	U	
1,1,2,2-TETRACHLOROETHANE					0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE					0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE					0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHANE		190			50			13			3.7		
1,1-DICHLOROETHENE					3.3			0.83	J	P	0.5	U	
1,2,3-TRICHLOROBENZENE					0.5	U		0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE					0.5	U		0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE					0.5	U		0.5	U		0.5	U	
1,2-DIBROMOETHANE					0.5	U		0.5	U		0.5	U	
1,2-DICHLOROBENZENE					0.5	U		0.5	U		0.5	U	
1,2-DICHLOROETHANE					0.5	U		0.5	U		0.5	U	
1,2-DICHLOROPROPANE					0.5	U		0.5	U		0.5	U	
1,3-DICHLOROBENZENE					0.5	U		0.5	U		0.5	U	
1,4-DICHLOROBENZENE					0.5	U		0.5	U		0.5	U	
1,4-DIOXANE					10	UR	C	10	UR	C	10	UR	C
2-BUTANONE					2.5	U		2.5	U		2.5	U	
2-HEXANONE					2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE					2.5	UJ	C	2.5	UJ	C	2.5	UJ	C
ACETONE					2.5	UJ	C	2.5	UJ	C	2.5	UJ	C
BENZENE					0.5	U		0.5	U		0.5	U	
BROMOCHLOROMETHANE					0.5	U		0.5	U		0.5	U	
BROMODICHLOROMETHANE					0.5	U		0.5	U		0.5	U	
BROMOFORM					0.5	U		0.5	U		0.5	U	
BROMOMETHANE					0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE					0.5	U		0.5	U		0.5	U	
CARBON TETRACHLORIDE					0.5	U		0.5	U		0.5	U	
CHLOROBENZENE					0.5	U		0.5	U		0.5	U	
CHLORODIBROMOMETHANE					0.5	U		0.5	U		0.5	U	
CHLOROETHANE					4.7			0.5	U		0.5	U	
CHLOROFORM					0.5	U		0.5	U		0.5	U	
CHLOROMETHANE					0.5	UJ	C	0.5	U		0.5	UJ	C
CIS-1,2-DICHLOROETHENE					0.5	U		0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE					0.5	U		0.5	U		0.5	U	
CYCLOHEXANE					0.5	U		0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-TW408-3842DL			SA-TW408-4347			SA-TW409-3337			SA-TW409-3842		
SDG: C2634	LAB_ID	C2634-15DL			C2634-16			C2634-07			C2634-08		
FRACTION: OV	SAMP_DATE	6/10/2011			6/10/2011			6/9/2011			6/9/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE					0.5	UJ	C	0.5	U		0.5	UJ	C
ETHYLBENZENE					0.5	U		0.5	U		0.5	U	
ISOPROPYLBENZENE					0.5	U		0.5	U		0.5	U	
M+P-XYLENES					1	U		1	U		1	U	
METHYL ACETATE					0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
METHYL CYCLOHEXANE					0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER					0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE					0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
O-XYLENE					0.5	U		0.5	U		0.5	U	
STYRENE					0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE					0.5	U		0.5	U		0.5	U	
TOLUENE					0.5	U		0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE					0.5	U		0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE					0.5	U		0.5	U		0.5	U	
TRICHLOROETHENE					0.5	U		0.5	U		0.5	U	
TRICHLOROFLUOROMETHANE					0.5	U		0.5	U		0.5	U	
VINYL CHLORIDE					0.5	UJ	C	0.5	U		0.5	UJ	C

PROJ_NO: 02045	NSAMPLE	SA-TW409-4347			SA-TW410-3337			SA-TW410-3842			SA-TW410-4347		
SDG: C2634	LAB_ID	C2634-11			C2634-03			C2634-04			C2634-05		
FRACTION: OV	SAMP_DATE	6/9/2011			6/9/2011			6/9/2011			6/9/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2,2-TETRACHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHANE		7.2			22			11			25		
1,1-DICHLOROETHENE		0.5	U		1.3			0.93	J	P	1.2		
1,2,3-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DIBROMOETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROPROPANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,3-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,4-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,4-DIOXANE		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
2-HEXANONE		2.5	U		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	UJ	C	2.5	UJ	C	2.5	UJ	C
ACETONE		2.5	U		2.5	UJ	C	2.5	UJ	C	2.5	UJ	C
BENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOCHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMODICHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOFORM		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON TETRACHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLORODIBROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROETHANE		0.5	U		5.2			0.5	U		0.5	U	
CHLOROFORM		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROMETHANE		0.5	U		0.5	UJ	C	0.5	U		0.5	UJ	C
CIS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	
CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-TW409-4347			SA-TW410-3337			SA-TW410-3842			SA-TW410-4347		
SDG: C2634	LAB_ID	C2634-11			C2634-03			C2634-04			C2634-05		
FRACTION: OV	SAMP_DATE	6/9/2011			6/9/2011			6/9/2011			6/9/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE		0.5	UJ	C	0.5	UJ	C	0.5	U		0.5	UJ	C
ETHYLBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
ISOPROPYLBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
M+P-XYLENES		1	U		1	U		1	U		1	U	
METHYL ACETATE		0.5	U		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	U	
STYRENE		0.5	U		0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	UJ	C	0.5	U		0.5	U		0.5	U	
TOLUENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRICHLOROFLUOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
VINYL CHLORIDE		0.5	U		0.5	UJ	C	0.5	U		0.5	UJ	C

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**D. BRAYACK**	**DATE:**	**SEPTEMBER 28, 2011**
FROM:	**MICHELLE L. ALLEN**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC/OVG**
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT (NWIRP), CALVERTON
CTO WE63
SAMPLE DELIVERY GROUP (SDG) C2798

SAMPLES: 13/Aqueous/VOC

SA-DUP01-20110621	SA-DUP02-20110621	SA-PZ138I-20110621
SA-PZ138I1-20110621	SA-PZ151I1-20110622	SA-PZ155I-20110622
SA-PZ157I-20110621	SA-PZ157I1-20110621	SA-PZ159I-20110621
SA-PZ159I1-20110621	SA-PZ160I-20110621	SA-PZ160I1-20110621
SA-PZ408-20110622		

9/Aqueous/OVG

SA-DUP01-20110621	SA-PZ151I1-20110622	SA-PZ155I-20110622
SA-PZ157I-20110621	SA-PZ157I1-20110621	SA-PZ159I-20110621
SA-PZ159I1-20110621	SA-PZ160I-20110621	SA-PZ408-20110622

Overview

The sample set for NWIRP Calverton SDG C2798 consisted of thirteen (13) aqueous environmental samples trip blank. All thirteen (13) aqueous samples were analyzed for Target Compound List (TCL) volatile organic compounds (VOC). Nine (9) aqueous samples were analyzed for organic volatile gases (OVG). Two field duplicate sample pairs were associated with this sample data group (SDG): SA-DUP01-20110621/SA-PZ159I1-20110621 and SA-DUP02-20110621/SA-PZ138I1-20110621.

The samples were collected by Tetra Tech on June 21 and 22, 2011 and analyzed by Chemtech. All analyses were conducted in accordance with EPA Method SW-846 8260B and method RSK 175 analytical and reporting protocols. The data contained in this SDG was validated with regard to the following parameters:

* • Data completeness
* • Hold times
* • GC/MS System Tuning and Performance
• Initial/continuing calibrations
• Laboratory Method Blank Results
• Surrogate Spike Recoveries
• Internal Standard Results
• Matrix Spike/Matrix Spike Duplicate Results
• Laboratory Control Sample/Laboratory Control Sample Duplicate Results
• Field Duplicate Precision
* • Compound Identification
* • Compound Quantitation
* • Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter. Qualified analytical results are presented in Appendix A, results as reported by the laboratory are presented in Appendix B, Region II data validation forms are presented in Appendix C, and documentation supporting these findings is presented in Appendix D.

Volatiles (VOC)

The initial and continuing calibrations performed on instrument MSVOAG Relative Response Factors (RRFs) less than the 0.05 quality control criteria for 1,4-dioxane. All samples were affected. Only non-detected results were reported for 1,4-dioxane in the affected samples and these non-detects were qualified as rejected, (UR).

The Percent Drifts (%Drifts) for chloroethane, 2-butanone, and cyclohexane from the continuing calibration performed on 06/28/11 @ 15:28 exceeded the 20% quality control limit. The positive and non-detected results reported for these compounds in the affected sample, SA-PZ157I-20110621, were qualified as estimated, (J) and (UJ), respectively.

The continuing calibration performed on 06/30/11 @ 12:30 had %Drifts for acetone and 2-butanone above the 20% quality control limit. Samples SA-PZ151I1-20110622 and SA-PZ408-20110622 were affected. The non-detected results reported for these compounds in the affected samples were qualified as estimated, (UJ).

The Matrix Spike/Matrix Spike Duplicate (MS/MSD) analyses performed on sample SA-PZ157I-20110621 yielded Percent Recoveries (%Rs) for bromoform below the lower quality control limit. The non-detected result reported for bromoform in the unspiked sample was qualified as estimated, (UJ).

Positive results reported below the Limit of Quantitation (LOQ) but above the Method Detection Limit (MDL) were qualified as estimated, (J).

Organic Volatile Gases (OVG)

The MS/MSD analyses performed on sample SA-PZ157I-20110621 had %Rs for ethane and ethene below the lower quality control limits. Only non-detected results were reported for these gases in the parent sample and these non-detects were qualified as estimated, (UJ).

The Relative Percent Difference (RPD) for methane exceeded the 30% quality control limit in the field duplicate pair, SA-DUP01-20110621/SA-PZ159I1-20110621. The positive results reported for methane in the field duplicate pair were qualified as estimated, (J).

Additional Comments

Sample SA-PZ138I1-20110620 was initially run at a 20X dilution in the VOC fraction resulting in the elevation of detection limits for target compounds.

Methane exceeded the instrument's linear calibration range in the undiluted analyses of samples SA-PZ151I1-20110622, SA-PZ157I1-20110621, SA-PZ159I1-20110621, and SA-PZ408-20110622. The samples were analyzed at a 10X dilution. The methane results from the 10X dilution were used in the data validation.

The Region II Data Validation Standard Operating Procedures (SOPs) for the OVG analyses were not present on the EPA Region II internet site; therefore, EPA Region II worksheets are not included for these

fractions in the data validation letter.

Non-detected results are reported to the Limit of Detection (LOD).

EXECUTIVE SUMMARY

Laboratory Performance Issues: The 1,4-dioxane results were rejected due to initial and continuing calibration RRFs below 0.05. Several continuing calibration %Drifts exceeded the 20% quality control limit.

Other Factors Affecting Data Quality: The MS/MSD analyses had low %Rs for bromoform, ethane, and ethene. Field duplicate imprecision was noted for methane. Positive results reported below the LOQ but above the MDL were qualified as estimated. Some samples were analyzed at a dilution due to linear calibration range exceedences.

The data for these analyses were reviewed with reference to the SOP #HW-24 Revision #2, USEPA Region II Hazardous Waste Support Branch Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B (August 2008), EPA Method SW-846 8260B and method RSK 175 analytical and reporting protocols, and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009).

TetraTech NUS
Michelle L. Allen
Chemist/Data Validator

TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C – Region II Data Validation Forms
4. Appendix D - Support Documentation

Appendix A

Qualified Analytical Results

Data Validation Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$ / ICP PDS Recovery Noncompliance
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02750	NSAMPLE	SA-DUP01-20110621			SA-DUP02-20110621			SA-PZ138I1-20110621			SA-PZ138I-20110621		
SDG: C2798	LAB_ID	C2798-11			C2798-12			C2798-10			C2798-09		
FRACTION: OV	SAMP_DATE	6/21/2011			6/21/2011			6/21/2011			6/21/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	100.0			100.0			100.0			100.0		
	DUP_OF	SA-PZ159I1-20110621			SA-PZ138I1-20110621								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		2.8			300			320			1.5		
1,1,2,2-TETRACHLOROETHANE		0.5	U		10	U		10	U		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	U		10	U		10	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U		10	U		10	U		0.5	U	
1,1-DICHLOROETHANE		62			1500			1500			9.6		
1,1-DICHLOROETHENE		3.7			85			100			0.6	J	P
1,2,3-TRICHLOROBENZENE		2.8			10	U		10	U		0.5	U	
1,2,4-TRICHLOROBENZENE		2.8			10	U		10	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U		10	U		10	U		0.5	U	
1,2-DIBROMOETHANE		0.5	U		10	U		10	U		0.5	U	
1,2-DICHLOROBENZENE		6			10	U		10	U		0.5	U	
1,2-DICHLOROETHANE		0.5	U		10	U		10	U		0.5	U	
1,2-DICHLOROPROPANE		0.5	U		10	U		10	U		0.5	U	
1,3-DICHLOROBENZENE		4.4			10	U		10	U		0.5	U	
1,4-DICHLOROBENZENE		22			10	U		10	U		0.5	U	
1,4-DIOXANE		10	UR	C	200	UR	C	200	UR	C	10	UR	C
2-BUTANONE		2.5	U		50	U		50	U		2.5	U	
2-HEXANONE		2.5	U		50	U		50	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		50	U		50	U		2.5	U	
ACETONE		2.5	U		50	U		50	U		2.5	U	
BENZENE		0.79	J	P	10	U		10	U		0.5	U	
BROMOCHLOROMETHANE		0.5	U		10	U		10	U		0.5	U	
BROMODICHLOROMETHANE		0.5	U		10	U		10	U		0.5	U	
BROMOFORM		0.5	U		10	U		10	U		0.5	U	
BROMOMETHANE		0.5	U		10	U		10	U		0.5	U	
CARBON DISULFIDE		0.5	U		10	U		10	U		0.5	U	
CARBON TETRACHLORIDE		0.5	U		10	U		10	U		0.5	U	
CHLOROBENZENE		3.8			10	U		10	U		0.5	U	
CHLORODIBROMOMETHANE		0.5	U		10	U		10	U		0.5	U	
CHLOROETHANE		70			280			250			0.5	U	
CHLOROFORM		0.5	U		10	U		10	U		0.5	U	
CHLOROMETHANE		0.5	U		10	U		10	U		0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	U		10	U		10	U		0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	U		10	U		10	U		0.5	U	
CYCLOHEXANE		0.5	U		10	U		10	U		0.5	U	

PROJ_NO: 02750	NSAMPLE	SA-PZ151I1-20110622			SA-PZ155I-20110622			SA-PZ157I1-20110621			SA-PZ157I-20110621		
SDG: C2798	LAB_ID	C2798-13			C2798-15			C2798-06			C2798-03		
FRACTION: OV	SAMP_DATE	6/22/2011			6/22/2011			6/21/2011			6/21/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	100.0			100.0			100.0			100.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		10	U		7.8			23			9.7		
1,1,2,2-TETRACHLOROETHANE		10	U		0.5	U		5	U		0.5	U	
1,1,2-TRICHLOROETHANE		10	U		0.5	U		5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		10	U		0.5	U		5	U		0.7	J	P
1,1-DICHLOROETHANE		390			43			280			45		
1,1-DICHLOROETHENE		24			2.4			19			3.4		
1,2,3-TRICHLOROBENZENE		10	U		0.5	U		5	U		0.5	U	
1,2,4-TRICHLOROBENZENE		10	U		0.5	U		6.3	J	P	0.85	J	P
1,2-DIBROMO-3-CHLOROPROPANE		10	U		0.5	U		5	U		0.5	U	
1,2-DIBROMOETHANE		10	U		0.5	U		5	U		0.5	U	
1,2-DICHLOROBENZENE		10	U		0.5	U		7.4	J	P	0.5	U	
1,2-DICHLOROETHANE		10	U		0.5	U		5	U		0.5	U	
1,2-DICHLOROPROPANE		10	U		0.5	U		5	U		0.5	U	
1,3-DICHLOROBENZENE		10	U		0.5	U		5.9	J	P	0.5	U	
1,4-DICHLOROBENZENE		10	U		0.5	U		26			0.5	U	
1,4-DIOXANE		200	UR	C	10	UR	C	100	UR	C	10	UR	C
2-BUTANONE		50	UJ	C	2.5	U		25	U		2.5	UJ	C
2-HEXANONE		50	U		2.5	U		25	U		2.5	U	
4-METHYL-2-PENTANONE		50	U		2.5	U		25	U		2.5	U	
ACETONE		50	UJ	C	2.5	U		25	U		2.5	U	
BENZENE		10	U		0.5	U		5	U		0.5	U	
BROMOCHLOROMETHANE		10	U		0.5	U		5	U		0.5	U	
BROMODICHLOROMETHANE		10	U		0.5	U		5	U		0.5	U	
BROMOFORM		10	U		0.5	U		5	U		0.5	UJ	D
BROMOMETHANE		10	U		0.5	U		5	U		0.5	U	
CARBON DISULFIDE		10	U		0.5	U		5	U		0.5	U	
CARBON TETRACHLORIDE		10	U		0.5	U		5	U		0.5	U	
CHLOROBENZENE		10	U		0.5	U		5	U		0.5	U	
CHLORODIBROMOMETHANE		10	U		0.5	U		5	U		0.5	U	
CHLOROETHANE		260			2.2			200			3.4	J	C
CHLOROFORM		10	U		0.5	U		5	U		0.5	U	
CHLOROMETHANE		10	U		0.5	U		5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		10	U		0.5	U		5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE		10	U		0.5	U		5	U		0.5	U	
CYCLOHEXANE		10	U		0.5	U		5	U		0.5	UJ	C

PROJ_NO: 02750	NSAMPLE	SA-PZ159I1-20110621			SA-PZ159I-20110621			SA-PZ160I1-20110621			SA-PZ160I-20110621		
SDG: C2798	LAB_ID	C2798-01			C2798-02			C2798-08			C2798-07		
FRACTION: OV	SAMP_DATE	6/21/2011			6/21/2011			6/21/2011			6/21/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	100.0			100.0			100.0			100.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		3.2			15			16			14		
1,1,2,2-TETRACHLOROETHANE		0.5	U		0.5	U		5	U		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	U		0.5	U		5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U		0.5	U		5	U		0.5	U	
1,1-DICHLOROETHANE		59			130			190			85		
1,1-DICHLOROETHENE		3.6			7.3			13			4.8		
1,2,3-TRICHLOROBENZENE		2.6			2			5	U		0.5	U	
1,2,4-TRICHLOROBENZENE		2.7			1.2			5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U		0.5	U		5	U		0.5	U	
1,2-DIBROMOETHANE		0.5	U		0.5	U		5	U		0.5	U	
1,2-DICHLOROBENZENE		6.4			0.72	J	P	5.2	J	P	0.5	U	
1,2-DICHLOROETHANE		0.5	U		0.5	U		5	U		0.5	U	
1,2-DICHLOROPROPANE		0.5	U		0.5	U		5	U		0.5	U	
1,3-DICHLOROBENZENE		4.3			0.5	U		5	U		0.5	U	
1,4-DICHLOROBENZENE		21			2.3			5	U		0.5	U	
1,4-DIOXANE		10	UR	C	10	UR	C	100	UR	C	10	UR	C
2-BUTANONE		2.5	U		2.5	U		25	U		2.5	U	
2-HEXANONE		2.5	U		2.5	U		25	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U		25	U		2.5	U	
ACETONE		2.5	U		2.5	U		25	U		2.5	U	
BENZENE		0.91	J	P	0.81	J	P	5	U		0.5	U	
BROMOCHLOROMETHANE		0.5	U		0.5	U		5	U		0.5	U	
BROMODICHLOROMETHANE		0.5	U		0.5	U		5	U		0.5	U	
BROMOFORM		0.5	U		0.5	U		5	U		0.5	U	
BROMOMETHANE		0.5	U		0.5	U		5	U		0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U		5	U		0.5	U	
CARBON TETRACHLORIDE		0.5	U		0.5	U		5	U		0.5	U	
CHLOROBENZENE		3.9			0.5	U		5	U		0.5	U	
CHLORODIBROMOMETHANE		0.5	U		0.5	U		5	U		0.5	U	
CHLOROETHANE		66			99			140			6		
CHLOROFORM		0.5	U		0.5	U		5	U		0.5	U	
CHLOROMETHANE		0.5	U		0.5	U		5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	U		0.5	U		5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		5	U		0.5	U	
CYCLOHEXANE		0.5	U		0.5	U		5	U		0.5	U	

PROJ_NO: 02750	NSAMPLE	SA-PZ408-20110622
SDG: C2798	LAB_ID	C2798-14
FRACTION: OV	SAMP_DATE	6/22/2011
MEDIA: WATER	QC_TYPE	NM
	UNITS	UG/L
	PCT_SOLIDS	100.0
	DUP_OF	

PARAMETER	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE	5	U	
1,1,2,2-TETRACHLOROETHANE	5	U	
1,1,2-TRICHLOROETHANE	5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE	5	U	
1,1-DICHLOROETHANE	160		
1,1-DICHLOROETHENE	13		
1,2,3-TRICHLOROBENZENE	5	U	
1,2,4-TRICHLOROBENZENE	5	U	
1,2-DIBROMO-3-CHLOROPROPANE	5	U	
1,2-DIBROMOETHANE	5	U	
1,2-DICHLOROBENZENE	5	U	
1,2-DICHLOROETHANE	5	U	
1,2-DICHLOROPROPANE	5	U	
1,3-DICHLOROBENZENE	5	U	
1,4-DICHLOROBENZENE	5	U	
1,4-DIOXANE	100	UR	C
2-BUTANONE	25	UJ	C
2-HEXANONE	25	U	
4-METHYL-2-PENTANONE	25	U	
ACETONE	25	UJ	C
BENZENE	5	U	
BROMOCHLOROMETHANE	5	U	
BROMODICHLOROMETHANE	5	U	
BROMOFORM	5	U	
BROMOMETHANE	5	U	
CARBON DISULFIDE	5	U	
CARBON TETRACHLORIDE	5	U	
CHLOROBENZENE	5	U	
CHLORODIBROMOMETHANE	5	U	
CHLOROETHANE	130		
CHLOROFORM	5	U	
CHLOROMETHANE	5	U	
CIS-1,2-DICHLOROETHENE	5	U	
CIS-1,3-DICHLOROPROPENE	5	U	
CYCLOHEXANE	5	U	

PROJ_NO: 02750	NSAMPLE	SA-DUP01-20110621			SA-DUP02-20110621			SA-PZ138I1-20110621			SA-PZ138I-20110621		
SDG: C2798	LAB_ID	C2798-11			C2798-12			C2798-10			C2798-09		
FRACTION: OV	SAMP_DATE	6/21/2011			6/21/2011			6/21/2011			6/21/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	100.0			100.0			100.0			100.0		
	DUP_OF	SA-PZ159I1-20110621			SA-PZ138I1-20110621								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE		0.5	U		10	U		10	U		0.5	U	
ETHYLBENZENE		0.5	U		10	U		10	U		0.5	U	
ISOPROPYLBENZENE		2.5			10	U		10	U		0.5	U	
M+P-XYLENES		1	U		20	U		20	U		1	U	
METHYL ACETATE		0.5	U		10	U		10	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		10	U		10	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		10	U		10	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		10	U		10	U		0.5	U	
O-XYLENE		0.5	U		10	U		10	U		0.5	U	
STYRENE		0.5	U		10	U		10	U		0.5	U	
TETRACHLOROETHENE		0.5	U		10	U		10	U		0.5	U	
TOLUENE		0.5	U		10	U		10	U		0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	U		10	U		10	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	U		10	U		10	U		0.5	U	
TRICHLOROETHENE		0.5	U		10	U		10	U		0.5	U	
TRICHLOROFLUOROMETHANE		0.5	U		10	U		10	U		0.5	U	
VINYL CHLORIDE		0.5	U		10	U		10	U		0.5	U	

PROJ_NO: 02750	NSAMPLE	SA-PZ151I1-20110622			SA-PZ155I-20110622			SA-PZ157I1-20110621			SA-PZ157I-20110621		
SDG: C2798	LAB_ID	C2798-13			C2798-15			C2798-06			C2798-03		
FRACTION: OV	SAMP_DATE	6/22/2011			6/22/2011			6/21/2011			6/21/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	100.0			100.0			100.0			100.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE		10	U		0.5	U		5	U		0.5	U	
ETHYLBENZENE		10	U		0.5	U		5	U		0.5	U	
ISOPROPYLBENZENE		10	U		0.5	U		5	U		0.5	U	
M+P-XYLENES		20	U		1	U		10	U		1	U	
METHYL ACETATE		10	U		0.5	U		5	U		0.5	U	
METHYL CYCLOHEXANE		10	U		0.5	U		5	U		0.5	U	
METHYL TERT-BUTYL ETHER		10	U		0.5	U		5	U		0.5	U	
METHYLENE CHLORIDE		10	U		0.5	U		5	U		0.5	U	
O-XYLENE		10	U		0.5	U		5	U		0.5	U	
STYRENE		10	U		0.5	U		5	U		0.5	U	
TETRACHLOROETHENE		10	U		0.5	U		5	U		0.5	U	
TOLUENE		10	U		0.5	U		5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE		10	U		0.5	U		5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		10	U		0.5	U		5	U		0.5	U	
TRICHLOROETHENE		10	U		0.5	U		5	U		0.5	U	
TRICHLOROFLUOROMETHANE		10	U		0.5	U		5	U		0.5	U	
VINYL CHLORIDE		10	U		0.5	U		5	U		0.5	U	

PROJ_NO: 02750	NSAMPLE	SA-PZ159I1-20110621			SA-PZ159I-20110621			SA-PZ160I1-20110621			SA-PZ160I-20110621		
SDG: C2798	LAB_ID	C2798-01			C2798-02			C2798-08			C2798-07		
FRACTION: OV	SAMP_DATE	6/21/2011			6/21/2011			6/21/2011			6/21/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	100.0			100.0			100.0			100.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE		0.5	U		0.5	U		5	U		0.5	U	
ETHYLBENZENE		0.5	U		0.5	U		5	U		0.5	U	
ISOPROPYLBENZENE		2.6			0.5	U		5	U		0.5	U	
M+P-XYLENES		1	U		1	U		10	U		1	U	
METHYL ACETATE		0.5	U		0.5	U		5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U		5	U		0.5	U	
STYRENE		0.5	U		0.5	U		5	U		0.5	U	
TETRACHLOROETHENE		0.5	U		0.5	U		5	U		0.5	U	
TOLUENE		0.5	U		0.5	U		5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	U		0.5	U		5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		5	U		0.5	U	
TRICHLOROETHENE		0.5	U		0.5	U		5	U		0.5	U	
TRICHLOROFLUOROMETHANE		0.5	U		0.5	U		5	U		0.5	U	
VINYL CHLORIDE		0.5	U		0.5	U		5	U		0.5	U	

PROJ_NO: 02750	NSAMPLE	SA-PZ408-20110622
SDG: C2798	LAB_ID	C2798-14
FRACTION: OV	SAMP_DATE	6/22/2011
MEDIA: WATER	QC_TYPE	NM
	UNITS	UG/L
	PCT_SOLIDS	100.0
	DUP_OF	

PARAMETER	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE	5	U	
ETHYLBENZENE	5	U	
ISOPROPYLBENZENE	5	U	
M+P-XYLENES	10	U	
METHYL ACETATE	5	U	
METHYL CYCLOHEXANE	5	U	
METHYL TERT-BUTYL ETHER	5	U	
METHYLENE CHLORIDE	5	U	
O-XYLENE	5	U	
STYRENE	5	U	
TETRACHLOROETHENE	5	U	
TOLUENE	5	U	
TRANS-1,2-DICHLOROETHENE	5	U	
TRANS-1,3-DICHLOROPROPENE	5	U	
TRICHLOROETHENE	5	U	
TRICHLOROFLUOROMETHANE	5	U	
VINYL CHLORIDE	5	U	

PROJ_NO: 02750	NSAMPLE	SA-DUP01-20110621			SA-DUP01-20110621DL			SA-PZ151I1-20110622			SA-PZ151I1-20110622DL		
SDG: C2798	LAB_ID	C2798-11			C2798-11DL			C2798-13			C2798-13DL		
FRACTION: OVG	SAMP_DATE	6/21/2011			6/21/2011			6/22/2011			6/22/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	100.0			100.0			100.0			100.0		
	DUP_OF	SA-PZ159I1-20110621			SA-PZ159I1-20110621								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ETHANE		0.5	U					0.5	U				
ETHENE		0.5	U					0.5	U				
METHANE					264	J	G				344.1		

PROJ_NO: 02750	NSAMPLE	SA-PZ155I-20110622			SA-PZ157I1-20110621			SA-PZ157I1-20110621DL			SA-PZ157I-20110621		
SDG: C2798	LAB_ID	C2798-15			C2798-06			C2798-06DL			C2798-03		
FRACTION: OVG	SAMP_DATE	6/22/2011			6/21/2011			6/21/2011			6/21/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	100.0			100.0			100.0			100.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ETHANE		0.5	U		0.5	U					0.5	UJ	D
ETHENE		0.5	U		0.5	U					0.5	UJ	D
METHANE		0.5	U					207.53	1		0.5	U	

PROJ_NO: 02750	NSAMPLE	SA-PZ159I1-20110621			SA-PZ159I1-20110621DL			SA-PZ159I-20110621			SA-PZ160I-20110621		
SDG: C2798	LAB_ID	C2798-01			C2798-01DL			C2798-02			C2798-07		
FRACTION: OVG	SAMP_DATE	6/21/2011			6/21/2011			6/21/2011			6/21/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	100.0			100.0			100.0			100.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ETHANE		0.5	U					0.5	U		0.5	U	
ETHENE		0.5	U					0.5	U		0.5	U	
METHANE					182.16	J	G	39.01			0.5	U	

PROJ_NO: 02750	NSAMPLE	SA-PZ408-20110622			SA-PZ408-20110622DL		
SDG: C2798	LAB_ID	C2798-14			C2798-14DL		
FRACTION: OVG	SAMP_DATE	6/22/2011			6/22/2011		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	100.0			100.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
ETHANE		0.5	U				
ETHENE		0.5	U				
METHANE					180.24		

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**D. BRAYACK**	**DATE:**	**SEPTEMBER 29, 2011**
FROM:	**MICHELLE L. ALLEN**	**COPIES:**	**DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION – TAL METALS, CHLORIDE, NITRATE, NITRITE, TOC, SULFIDE**
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT (NWIRP), CALVERTON
CTO WE63
SAMPLE DELIVERY GROUP (SDG) – C2798

SAMPLES: 9/Aqueous/TAL Metals/Chloride/Nitrate/Nitrite/TOC/Sulfide

SA-DUP01-20110621	SA-PZ151I1-20110622	SA-PZ155I-20110622
SA-PZ157I-20110621	SA-PZ157I1-20110621	SA-PZ159I-20110621
SA-PZ159I1-20110621	SA-PZ160I-20110621	SA-PZ408-20110622

4/Aqueous/Iron & Manganese/

SA-DUP02-20110621	SA-PZ138I-20110621	SA-PZ138I1-20110621
SA-PZ160I1-20110621		

Overview

The sample set for NWIRP Calverton, CTO WE63, SDG C2798, consists of thirteen (13) aqueous environmental samples. Nine (9) aqueous samples were analyzed for Target Analyte List (TAL) metals, chloride, nitrate, nitrite, total organic carbon (TOC), and sulfide. Four (4) aqueous environmental samples were analyzed for iron and manganese only. Two field duplicate pairs were included in the sample delivery group (SDG); SA-DUP01-20110621/SA-PZ159I1-20110621 and SA-DUP02-20110621/SA-PZ138I-20110621.

The samples were collected by Tetra Tech NUS on June 21 and June 22, 2011 and analyzed by TestAmerica. All analyses were conducted using SW-846 Method 6010C, 7470A, 9030B, 9056, and 9060 analytical and reporting protocols.

These data were evaluated based on the following parameters:

* • Data Completeness
* • Holding Times
• Initial and Continuing Calibrations
• Laboratory Method/Preparation Blanks
* • ICP Interference Analysis
* • Laboratory Control Sample Results
• Matrix Spike/Matrix Spike Duplicate Results
• Laboratory Duplicate Results
• Field Duplicate Results
* • ICP Serial Dilution Results
* • Detection Limits
* • Analyte Quantitation

* - All quality control criteria were met for this parameter.

Qualified (if applicable) analytical results are summarized in Appendix A. Results as reported by the laboratory are presented in Appendix B. Appendix C contains the documentation to support the findings as discussed in this validation report.

TAL Metals (including Iron & Manganese only)

The Percent Recovery (%R) for Contract Required Detection Limit (CRDL) standard for mercury exceeded the 180% Region II quality control limit. The positive results reported for mercury greater than 2X the Contract Required Quantitation Limit (CRQL) but less than the Initial Calibration Verification/Continuing Calibration Verification (ICV/CCV) in the affected samples, SA-DUP01-20110621, SA-PZ157I-20110621, and SA-PZ160I-20110621 were qualified as estimated, (J). The positive result reported for mercury less than 2XCRQL in sample SA-PZ151I1-20110622 was qualified for blank contamination; therefore, no action was warranted. No action was taken for samples SA-DUP01-20110621 and SA-PZ157I1-20110621 because the positive mercury results were rejected for more severe noncompliances.

The following analytes were detected in the laboratory preparation blank at the following maximum concentrations:

Analyte	Maximum Concentration (µg/L)
Chromium (1)	8.979
Iron (1)	44.306
Nickel (1)	5.895
Sodium (1)	95.311

(1) - Detected in blank from preparation batch # PB56374, affecting all samples in this SDG.

Positive results for chromium and iron less than the CRQL were qualified as non-detected, (U). Results greater than the Method Detection Limit (MDL) and less than the Limit of Detection were raised to the LOD. No action was taken for nickel or sodium.

The following analytes were detected in the initial and continuing calibration blanks at the following maximum concentration:

Analyte	Maximum Concentration (µg/L)
Thallium (1)	5.2
Aluminum (2)	23.3
Arsenic (2)	6.2
Barium (2)	11.1
Cadmium (2)	2.4
Calcium (2)	42.2
Copper (2)	4.3
Iron (2)	31.4
Lead (2)	4.9
Magnesium (2)	41.2
Manganese (2)	3.2
Mercury (2)	0.17
Potassium (2)	55.2
Selenium (2)	5.1
Silver (2)	1.6

Sodium [2]	133.6
Thallium [2]	11.7
Thallium [3]	57.6

[1] - Detected in the initial calibration blank, ICB01, affecting all samples.
[2] - Detected in the continuing calibration blanks below the CRQL, affecting all samples.
[3] - Detected above the CRQL in continuing calibration blank affecting samples SA-DUP01-20110621, SA-PZ151I1-20110622, SA-PZ155I-20110622, and SA-PZ408-20110622.

The positive results reported for these analytes below the CRQL in the affected samples were qualified as non-detected, (U). The results reported above the MDL but below the LOD were changed to the Limit of Detection (LOD).

The Matrix Spike/Matrix Spike Duplicate (MS/MSD) associated with yielded a low %R for mercury. In addition, the %R for sodium was greater than the upper quality control limit. All samples were associated with this preparation batch. No action was taken for sodium because the sample concentrations for this analyte ware 4X greater than the spiked amount. The positive and non-detected results reported for mercury in the affected samples were qualified as estimated, (J) and (UJ), respectively.

The absolute difference between the sample result and the laboratory duplicate sample result for mercury was greater than 2X the CRQL in sample SA-PZ157I-20110621. The positive result reported for this sample was qualified as rejected, (R), as instructed in the Region II guidelines.

Mercury was detected in the field duplicate sample, SA-DUP01-20110621, but not in the environmental sample, SA-PZ159I1-20110621. The difference between the positive and non-detected results was greater than 2X the CRQL. As required by the Region II field duplicate guidance, the positive and non-detected results were rejected, qualified as (R) and (UR), respectively, in the field duplicate pair.

Chloride, Nitrate, Nitrite, Sulfide, TOC

No issues were noted.

Notes

Positive results reported less than the Detection Limit (DL) but greater than the LOQ were qualified as estimated, (UJ). Non-detected results are reported to the Limit of Detection (LOD).

Executive Summary

Laboratory Performance: The CRDL sample yielded a high mercury %R. Several analytes were detected in the laboratory preparation blank, initial calibration blank, and continuing calibration blanks. The absolute difference for mercury between a sample result and duplicate result was greater than 2X CRQL.

Other Factors Affecting Data Quality: The MS/MSD had a low %R for mercury. Field duplicate imprecision was noted for mercury in the field duplicate pair.

The data for these analyses were reviewed with reference to the Region II "Validation of Metals for the Contract Laboratory Program (CLP) based on ILMO5.3 (SOP Revision 13, September 2006)", SW-846 Method 6010C, 7470A, 9030B, 9056 and 9060 analytical and reporting protocols, and the DOD document entitled "Quality System Manual (QSM) for Environmental Laboratories" (April 2009).

The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech NUS
Michelle L. Allen
Chemist/Data Validator

Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

Attachments:

Appendix A - Qualified Analytical Results
Appendix B - Results as Reported by the Laboratory
Appendix C - Regional Worksheets
Appendix C - Support Documentation

Appendix A

Qualified Analytical Results

Data Validation Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$ / ICP PDS Recovery Noncompliance
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02750	NSAMPLE	SA-DUP01-20110621			SA-DUP02-20110621			SA-PZ138I1-20110621			SA-PZ138I-20110621		
SDG: C2798	LAB_ID	C2798-11			C2798-12			C2798-10			C2798-09		
FRACTION: M	SAMP_DATE	6/21/2011			6/21/2011			6/21/2011			6/21/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	100.0			100.0			100.0			100.0		
	DUP_OF	SA-PZ159I1-20110621			SA-PZ138I1-20110621								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		25	U										
ANTIMONY		12.5	U										
ARSENIC		5.43	U	A									
BARIUM		25	U	A									
BERYLLIUM		1.5	U										
CADMIUM		1.5	U										
CALCIUM		13300											
CHROMIUM		2.5	U										
COBALT		7.5	U										
COPPER		5	U										
IRON		1400			25	U	A	25	U	A	25	U	A
LEAD		3	U										
MAGNESIUM		1020											
MANGANESE		4560			5260			5220			731		
MERCURY		0.61	R	G									
NICKEL		10	U										
POTASSIUM		2300											
SELENIUM		5	U										
SILVER		2.5	U										
SODIUM		6190											
THALLIUM		10	U	A									
VANADIUM		10	U										
ZINC		10	U										

PROJ_NO: 02750	NSAMPLE	SA-PZ151I1-20110622			SA-PZ155I-20110622			SA-PZ157I1-20110621			SA-PZ157I-20110621		
SDG: C2798	LAB_ID	C2798-13			C2798-15			C2798-06			C2798-03		
FRACTION: M	SAMP_DATE	6/22/2011			6/22/2011			6/21/2011			6/21/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	100.0			100.0			100.0			100.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		25	U		25	U	A	49.9	U	A	25	U	
ANTIMONY		12.5	U		12.5	U		12.5	U		12.5	U	
ARSENIC		5	U		5	U		5	U		5	U	
BARIUM		26	U	A	25	U	A	25	U	A	25	U	A
BERYLLIUM		1.5	U		1.5	U		1.5	U		1.5	U	
CADMIUM		1.5	U		1.5	U		1.5	U		1.5	U	
CALCIUM		16000			6810			15900			6420		
CHROMIUM		2.5	U		2.5	U		2.5	U	A	2.5	U	
COBALT		7.5	U		7.5	U		7.5	U		7.5	U	
COPPER		5	U		5	U		5	U		5	U	
IRON		612			205			776			978		
LEAD		3	U		3	U		3	U		3	U	
MAGNESIUM		1100			1820			1130			1440		
MANGANESE		5270			291			5200			1050		
MERCURY		0.17	U	A	0.1	UJ	D	0.42	J	CD	0.62	R	F
NICKEL		10	U		10	U		10	U		10	U	
POTASSIUM		3080			935	J	P	2820			1420		
SELENIUM		5	U		5	U		5	U		5	U	
SILVER		2.5	U		2.5	U		2.5	U		2.5	U	
SODIUM		6460			8830			5990			9530		
THALLIUM		10	U		10	U		10	U		10	U	
VANADIUM		10	U		10	U		10	U		8.39	J	P
ZINC		11.7	J	P	10	U		10	U		7.12	J	P

PROJ_NO: 02750	NSAMPLE	SA-PZ159I1-20110621			SA-PZ159I-20110621			SA-PZ160I1-20110621			SA-PZ160I-20110621		
SDG: C2798	LAB_ID	C2798-01			C2798-02			C2798-08			C2798-07		
FRACTION: M	SAMP_DATE	6/21/2011			6/21/2011			6/21/2011			6/21/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	100.0			100.0			100.0			100.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		25	U	A	25	U					25	U	A
ANTIMONY		12.5	U		12.5	U					12.5	U	
ARSENIC		5	U	A	11.9						19.4		
BARIUM		25	U	A	25.4	U	A				25	U	A
BERYLLIUM		1.5	U		1.5	U					1.5	U	
CADMIUM		1.5	U		1.5	U					1.5	U	A
CALCIUM		15100			7100						8350		
CHROMIUM		2.5	U		2.5	U					2.5	U	
COBALT		7.5	U		7.5	U					7.5	U	
COPPER		5	U	A	5	U					5	U	
IRON		1460			7910			2300			11800		
LEAD		3	U		3	U					3	U	
MAGNESIUM		1120			2040						1890		
MANGANESE		4690			845			3900			660		
MERCURY		0.1	UR	G	0.1	UJ	D				0.7	J	CD
NICKEL		10	U		10	U					10	U	
POTASSIUM		2370			1160						971	J	P
SELENIUM		5	U		5	U					5	U	
SILVER		2.5	U		2.5	U					2.5	U	
SODIUM		5400			8520						9000		
THALLIUM		10	U	A	10	U					10	U	A
VANADIUM		10	U		10	U					10	U	
ZINC		6.87	J	P	10	U					10	U	

PROJ_NO: 02750	NSAMPLE	SA-PZ408-20110622		
SDG: C2798	LAB_ID	C2798-14		
FRACTION: M	SAMP_DATE	6/22/2011		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	100.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
ALUMINUM		34.5	U	A
ANTIMONY		12.5	U	
ARSENIC		5	U	
BARIUM		25	U	A
BERYLLIUM		1.5	U	
CADMIUM		1.5	U	
CALCIUM		14900		
CHROMIUM		2.5	U	
COBALT		7.5	U	
COPPER		5	U	
IRON		1400		
LEAD		3	U	
MAGNESIUM		988	J	P
MANGANESE		5000		
MERCURY		0.1	UJ	D
NICKEL		10	U	
POTASSIUM		2920		
SELENIUM		5	U	
SILVER		2.5	U	
SODIUM		7570		
THALLIUM		10	U	
VANADIUM		10	U	
ZINC		6.85	J	P

PROJ_NO: 02750	NSAMPLE	SA-DUP01-20110621			SA-PZ151I1-20110622			SA-PZ155I-20110622			SA-PZ157I1-20110621		
SDG: C2798	LAB_ID	C2798-11			C2798-13			C2798-15			C2798-06		
FRACTION: MISC	SAMP_DATE	6/21/2011			6/22/2011			6/22/2011			6/21/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/L			MG/L			MG/L			MG/L		
	PCT_SOLIDS	100.0			100.0			100.0			100.0		
	DUP_OF	SA-PZ159I1-20110621											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CHLORIDE		2.97			5.02			7.42			4.51		
NITRATE-N		0.05	U		0.05	U		2.11			0.05	U	
NITRITE-N		0.075	U		0.075	U		0.226			0.075	U	
SULFIDE		0.5	U		0.5	U		0.5	U		0.5	U	
TOTAL ORGANIC CARBON		1.6			2.1			0.662			1.9		

PROJ_NO: 02750	NSAMPLE	SA-PZ157I-20110621			SA-PZ159I1-20110621			SA-PZ159I-20110621			SA-PZ160I-20110621		
SDG: C2798	LAB_ID	C2798-03			C2798-01			C2798-02			C2798-07		
FRACTION: MISC	SAMP_DATE	6/21/2011			6/21/2011			6/21/2011			6/21/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/L			MG/L			MG/L			MG/L		
	PCT_SOLIDS	100.0			100.0			100.0			100.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CHLORIDE		7.48			3			6.28			7.6		
NITRATE-N		1.02			0.05	U		0.05	U		0.05	U	
NITRITE-N		0.236			0.075	U		0.075	U		0.075	U	
SULFIDE		0.5	U		0.5	U		0.5	U		0.5	U	
TOTAL ORGANIC CARBON		0.599			1.7			1.1			1.1		

PROJ_NO: 02750	NSAMPLE	SA-PZ408-20110622		
SDG: C2798	LAB_ID	C2798-14		
FRACTION: MISC	SAMP_DATE	6/22/2011		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	MG/L		
	PCT_SOLIDS	100.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
CHLORIDE		5.21		
NITRATE-N		1.13		
NITRITE-N		0.075	U	
SULFIDE		0.5	U	
TOTAL ORGANIC CARBON		1.6		

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**D. BRAYACK**	**DATE:**	**AUGUST 25, 2011**
FROM:	**MICHELLE L. ALLEN**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC**
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT (NWIRP), CALVERTON
CTO WE08
SAMPLE DELIVERY GROUP (SDG) C2797

SAMPLES: 10/Aqueous/VOC

SA-PZ133I-20110621	SA-PZ133I120110621	SA-PZ135I-20110621
SA-PZ136I-20110621	SA-PZ139I-20110620	SA-PZ149I1-20110620
SA-PZ158I-20110620	SA-PZ158I1-20110620	SA-PZ161I-20110621
SA-TB20110620		

Overview

The sample set for NWIRP Calverton SDG C2797 consisted of nine (9) aqueous environmental samples and one (1) trip blank. All ten (10) aqueous samples were analyzed for Target Compound List (TCL) volatile organic compounds (VOC). No field duplicate sample pair was associated with this sample data group (SDG).

The samples were collected by Tetra Tech on June 20 and 21, 2011 and analyzed by Chemtech. All analyses were conducted in accordance with EPA Method SW-846 8260B analytical and reporting protocols. The data contained in this SDG was validated with regard to the following parameters:

* • Data completeness
* • Hold times
* • GC/MS System Tuning and Performance
• Initial/continuing calibrations
• Laboratory Method and Field Blank Results
• Surrogate Spike Recoveries
• Internal Standard Results
• Laboratory Control Sample/Laboratory Control Sample Duplicate Results
* • Compound Identification
* • Compound Quantitation
* • Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter. Qualified analytical results are presented in Appendix A, results as reported by the laboratory are presented in Appendix B, Region II data validation forms are presented in Appendix C, and documentation supporting these findings is presented in Appendix D.

Volatiles (VOC)

The initial and continuing calibrations performed on instruments MSVOAG and MSVOAH had Relative Response Factors (RRFs) less than the 0.05 quality control criteria for 1,4-dioxane. All samples were affected. Only non-detected results were reported for 1,4-dioxane in the affected samples and these non-detects were qualified as rejected, (UR).

The continuing calibration performed on instrument MSVOAG on 06/30/11 @ 12:30 had Percent Drifts (%Drifts) for acetone and 2-butanone above the 20% quality control limit. The non-detected results reported for these compounds in the affected samples, SA-PZ133I120110621, SA-PZ135I-20110621, SA-PZ136I-20110621, SA-PZ139I-20110620, and SA-PZ158I1-20110620, were qualified as estimated, (UJ).

The continuing calibration performed on instrument MSVOAH on 06/28/11 @ 17:29 had Percent Differences (%Ds) for carbon disulfide, 4-methyl-2-pentanone, and 1,2-dibromo-3-chloropropane which exceeded the 20% quality control criteria. In addition, the %Drift for acetone was greater than the 20% quality control limit. Sample SA-PZ133I-20110621 was affected. The non-detected results reported for these compounds in the affected sample were qualified as estimated, (UJ).

The continuing calibration performed on instrument MSVOAH on 6/29/11 @ 16:14 had %Ds or %Drifts greater than the 20% quality control limit for chloromethane, 2-butanone, chloroform, 1,1,1-trichloroethane, 4-methyl-2-pentanone, 1,1,2,2-tetrachloroethane, and acetone. The reanalyses of samples SA-PZ149I1-20110620, SA-PZ158I-20110620 and SA-TB20110620 were affected. The positive and non-detected results reported for these compounds were qualified as estimated, (J) and (UJ), respectively.

The Percent Recovery (%R) for the surrogate spike compounds, dibromofluoromethane, toluene-d8 and 4-bromofluorobenzene, were below the lower quality control limits in samples, SA-PZ149I1-20110620, SA-PZ158I-20110620 and SA-TB20110620. The samples were reanalyzed with low surrogate %Rs for dibromofluoromethane and high %Rs for 4-bromofluorobenzene. In conjunction with internal standard results, the results from the reanalyses of these samples were used in the data validation. The positive and non-detected results reported from the reanalyses were qualified as estimated, (J) and (UJ), respectively.

The %R for the surrogate spike compound, 1,2-dichloroethane-d4, was above the upper quality control limit in sample SA-PZ133I-20110621. No improvement was noted in the surrogate %Rs in the reanalysis of this sample; therefore, the results from the initial analysis were used in the data validation. The positive results reported for the target compounds in the affected sample were qualified as estimated, (J).

The %R for the surrogate spike compound, 1,2-dichloroethane-d4, was above the upper quality control limit in sample SA-PZ161I-20110621. The sample was diluted and reanalyzed. No improvement was noted in the surrogate %Rs in the reanalysis of this sample. The results from the initial analysis were used in the data validation with the exception 1,1-dichloroethane, which exceeded the instrument's linear calibration range. The positive results, including the positive result for 1,1-dichloroethane, reported for the target compounds in the affected sample were qualified as estimated, (J), due to surrogate %R noncompliance.

Positive results reported below the LOQ but above the Method Detection Limit (MDL) were qualified as estimated, (J).

Additional Comments

The following compounds were detected in the laboratory method and associated trip blank at the maximum concentrations as indicated below:

Compound	Maximum Conc. (µg/L)	Action Level (µg/L)
2-Butanone	2.5	25
Methylene Chloride [1]	4.4	44

[1] Maximum concentration detected in the trip blank, SA-TB20110620, affecting all samples in this SDG.

An action level of 10X the maximum concentration was established to evaluate laboratory contamination for the common laboratory contaminants, 2-butanone and methylene chloride. Dilution factors and sample aliquots were taken into consideration during the application of all action levels. No action was taken because no positive results were reported for these compounds in the affected samples.

The internal standard areas for all four internal standards, pentafluorobenzene, 1,4-difluorobenzene, chlorobenzene-d5, and 1,4-dichlorobenzene-d4, were below the lower quality control limit in samples SA-PZ149I1-20110620 and SA-TB20110620. In addition, sample, SA-PZ158I-20110620, had a 1,4-dichlorobenzene-d5 internal standard area below the lower quality control limit. The samples were reanalyzed with acceptable internal standard areas. The results from the reanalyses were used in the validation of the data. No qualification was necessary to the reanalyzed results.

The Laboratory Control Sample (LCS) and Laboratory Control Sample Duplicate (LCSD), BSH0629W1 and BSH0629W2, had %Rs for acetone and chloromethane above the upper quality control limits. The LCSD %R for methyl acetate and the Relative Percent Difference (RPD) for 1,4-dioxane were also above the quality control limits. No action necessary in the affected samples because no positive results were reported for these compounds.

The following samples were diluted due to target compounds exceeding the instrument's linear calibration range:

Sample	Compound	Dilution
SA-PZ133I-20110621	1,1-dichloroethane	10X
SA-PZ161I-20110621	1,1-dichloroethane	10X

The diluted results for these compounds were used in the data validation.

Sample SA-PZ158I1-20110620 was initially run at a 10X dilution resulting in the elevation of detection limits for target compounds.

Non-detected results are reported to the Limit of Detection (LOD).

EXECUTIVE SUMMARY

Laboratory Performance Issues: The 1,4-dioxane results were rejected due to initial and continuing calibration RRFs below 0.05. Several continuing calibration %Ds and %Drifts exceeded the 20% quality control limit. LCS and/or LCSD %Rs for acetone, chloromethane, and methyl acetate were above the upper quality control limit.

Other Factors Affecting Data Quality: 2-Butanone and methylene chloride were detected in the trip blank. Several samples had noncompliant surrogate %Rs. Low internal standard areas were noted in the initial analyses of three samples. Positive results reported below the LOQ but above the MDL were qualified as estimated. Some samples were analyzed at a dilution due to linear calibration range exceedences.

The data for these analyses were reviewed with reference to the SOP #HW-24 Revision #2, USEPA Region II Hazardous Waste Support Branch Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B (August 2008), and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009).

TetraTech NUS
Michelle L. Allen
Chemist/Data Validator

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Joseph A. Samchuck
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Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C – Region II Data Validation Forms
4. Appendix D - Support Documentation

Appendix A

Qualified Analytical Results

Data Validation Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$ / ICP PDS Recovery Noncompliance
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors > 25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02045	NSAMPLE	SA-PZ133I120110621			SA-PZ133I120110621DL			SA-PZ133I-20110621			SA-PZ135I-20110621		
SDG: C2797	LAB_ID	C2797-08			C2797-08DL			C2797-07			C2797-09		
FRACTION: OV	SAMP_DATE	6/21/2011			6/21/2011			6/21/2011			6/21/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		14						10	J	R	4.6		
1,1,2,2-TETRACHLOROETHANE		0.5	U					0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	U					0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U					0.5	U		0.69	J	P
1,1-DICHLOROETHANE					170			90	J	R	27		
1,1-DICHLOROETHENE		8.3						4.2	J	R	1.9		
1,2,3-TRICHLOROBENZENE		0.5	U					0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE		0.5	U					0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U					0.5	UJ	C	0.5	U	
1,2-DIBROMOETHANE		0.5	U					0.5	U		0.5	U	
1,2-DICHLOROBENZENE		0.5	U					0.5	U		0.5	U	
1,2-DICHLOROETHANE		0.5	U					0.5	U		0.5	U	
1,2-DICHLOROPROPANE		0.5	U					0.5	U		0.5	U	
1,3-DICHLOROBENZENE		0.5	U					0.5	U		0.5	U	
1,4-DICHLOROBENZENE		0.5	U					0.5	U		0.5	U	
1,4-DIOXANE		10	UR	C				10	UR	C	10	UR	C
2-BUTANONE		2.5	UJ	C				2.5	U		2.5	UJ	C
2-HEXANONE		2.5	U					2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U					2.5	UJ	C	2.5	U	
ACETONE		2.5	UJ	C				2.5	UJ	C	2.5	UJ	C
BENZENE		0.5	U					0.5	U		0.5	U	
BROMOCHLOROMETHANE		0.5	U					0.5	U		0.5	U	
BROMODICHLOROMETHANE		0.5	U					0.5	U		0.5	U	
BROMOFORM		0.5	U					0.5	U		0.5	U	
BROMOMETHANE		0.5	U					0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U					0.5	UJ	C	0.5	U	
CARBON TETRACHLORIDE		0.5	U					0.5	U		0.5	U	
CHLOROBENZENE		0.5	U					0.5	U		0.5	U	
CHLORODIBROMOMETHANE		0.5	U					0.5	U		0.5	U	
CHLOROETHANE		15						7.4	J	R	2.1		
CHLOROFORM		0.5	U					0.5	U		0.5	U	
CHLOROMETHANE		0.5	U					0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	U					0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	U					0.5	U		0.5	U	
CYCLOHEXANE		0.5	U					0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-PZ136I-20110621			SA-PZ139I-20110620			SA-PZ149I1-20110620RE			SA-PZ158I1-20110620		
SDG: C2797	LAB_ID	C2797-10			C2797-05			C2797-04RE			C2797-01		
FRACTION: OV	SAMP_DATE	6/21/2011			6/20/2011			6/20/2011			6/20/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.5	U		0.5	U		0.5	UJ	CR	5	U	
1,1,2,2-TETRACHLOROETHANE		0.5	U		0.5	U		0.5	UJ	CR	5	U	
1,1,2-TRICHLOROETHANE		0.5	U		0.5	U		0.5	UJ	R	5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.65	J	P	0.5	U		0.5	UJ	R	5	U	
1,1-DICHLOROETHANE		1.5			4.6			12	J	R	190		
1,1-DICHLOROETHENE		0.5	U		0.5	U		1.3	J	R	15		
1,2,3-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	UJ	R	5	U	
1,2,4-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	UJ	R	6.8	J	P
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U		0.5	U		0.5	UJ	R	5	U	
1,2-DIBROMOETHANE		0.5	U		0.5	U		0.5	UJ	R	5	U	
1,2-DICHLOROBENZENE		0.5	U		0.5	U		3.2	J	R	5.3	J	P
1,2-DICHLOROETHANE		0.5	U		0.5	U		0.5	UJ	R	5	U	
1,2-DICHLOROPROPANE		0.5	U		0.5	U		0.5	UJ	R	5	U	
1,3-DICHLOROBENZENE		0.5	U		0.5	U		2.5	J	R	5	U	
1,4-DICHLOROBENZENE		0.5	U		0.5	U		12	J	R	5	U	
1,4-DIOXANE		10	UR	C	10	UR	C	10	UR	CR	100	UR	C
2-BUTANONE		2.5	UJ	C	2.5	UJ	C	2.5	UJ	CR	25	UJ	C
2-HEXANONE		2.5	U		2.5	U		2.5	UJ	R	25	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	UJ	CR	25	U	
ACETONE		2.5	UJ	C	2.5	UJ	C	2.5	UJ	CR	25	UJ	C
BENZENE		0.5	U		0.5	U		0.5	UJ	R	5	U	
BROMOCHLOROMETHANE		0.5	U		0.5	U		0.5	UJ	R	5	U	
BROMODICHLOROMETHANE		0.5	U		0.5	U		0.5	UJ	R	5	U	
BROMOFORM		0.5	U		0.5	U		0.5	UJ	R	5	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	UJ	R	5	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	UJ	R	5	U	
CARBON TETRACHLORIDE		0.5	U		0.5	U		0.5	UJ	R	5	U	
CHLOROBENZENE		0.5	U		0.5	U		1.5	J	R	5	U	
CHLORODIBROMOMETHANE		0.5	U		0.5	U		0.5	UJ	R	5	U	
CHLOROETHANE		0.5	U		0.5	U		14	J	R	170		
CHLOROFORM		0.5	U		0.5	U		0.5	UJ	CR	5	U	
CHLOROMETHANE		0.5	U		0.5	U		0.5	UJ	CR	5	U	
CIS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	UJ	R	5	U	
CIS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	UJ	R	5	U	
CYCLOHEXANE		0.5	U		0.5	U		0.5	UJ	R	5	U	

PROJ_NO: 02045	NSAMPLE	SA-PZ158I-20110620RE			SA-PZ161I-20110621			SA-PZ161I-20110621DL			SA-TB20110620RE		
SDG: C2797	LAB_ID	C2797-02RE			C2797-06			C2797-06DL			C2797-03RE		
FRACTION: OV	SAMP_DATE	6/20/2011			6/21/2011			6/21/2011			6/20/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		13	J	CR	35	J	R				0.5	UJ	CR
1,1,2,2-TETRACHLOROETHANE		0.5	UJ	CR	0.5	U					0.5	UJ	CR
1,1,2-TRICHLOROETHANE		0.5	UJ	R	0.5	U					0.5	UJ	R
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	UJ	R	0.5	U					0.5	UJ	R
1,1-DICHLOROETHANE		63	J	R				290	J	R	0.5	UJ	R
1,1-DICHLOROETHENE		4.6	J	R	13	J	R				0.5	UJ	R
1,2,3-TRICHLOROBENZENE		0.5	UJ	R	0.5	U					0.5	UJ	R
1,2,4-TRICHLOROBENZENE		0.5	UJ	R	0.5	U					0.5	UJ	R
1,2-DIBROMO-3-CHLOROPROPANE		0.5	UJ	R	0.5	U					0.5	UJ	R
1,2-DIBROMOETHANE		0.5	UJ	R	0.5	U					0.5	UJ	R
1,2-DICHLOROBENZENE		0.5	UJ	R	0.5	U					0.5	UJ	R
1,2-DICHLOROETHANE		0.5	UJ	R	0.5	U					0.5	UJ	R
1,2-DICHLOROPROPANE		0.5	UJ	R	0.5	U					0.5	UJ	R
1,3-DICHLOROBENZENE		0.5	UJ	R	0.5	U					0.5	UJ	R
1,4-DICHLOROBENZENE		0.5	UJ	R	0.5	U					0.5	UJ	R
1,4-DIOXANE		10	UR	CR	10	UR	C				10	UR	CR
2-BUTANONE		2.5	UJ	CR	2.5	U					2.5	J	CPR
2-HEXANONE		2.5	UJ	R	2.5	U					2.5	UJ	R
4-METHYL-2-PENTANONE		2.5	UJ	CR	2.5	U					2.5	UJ	CR
ACETONE		2.5	UJ	CR	2.5	U					2.5	UJ	CR
BENZENE		0.5	UJ	R	0.5	U					0.5	UJ	R
BROMOCHLOROMETHANE		0.5	UJ	R	0.5	U					0.5	UJ	R
BROMODICHLOROMETHANE		0.5	UJ	R	0.5	U					0.5	UJ	R
BROMOFORM		0.5	UJ	R	0.5	U					0.5	UJ	R
BROMOMETHANE		0.5	UJ	R	0.5	U					0.5	UJ	R
CARBON DISULFIDE		0.5	UJ	R	0.5	U					0.5	UJ	R
CARBON TETRACHLORIDE		0.5	UJ	R	0.5	U					0.5	UJ	R
CHLOROBENZENE		0.5	UJ	R	0.5	U					0.5	UJ	R
CHLORODIBROMOMETHANE		0.5	UJ	R	0.5	U					0.5	UJ	R
CHLOROETHANE		11	J	R	16	J	R				0.5	UJ	R
CHLOROFORM		0.5	UJ	CR	0.5	U					0.5	UJ	CR
CHLOROMETHANE		0.5	UJ	CR	0.5	U					0.5	UJ	CR
CIS-1,2-DICHLOROETHENE		0.5	UJ	R	0.5	U					0.5	UJ	R
CIS-1,3-DICHLOROPROPENE		0.5	UJ	R	0.5	U					0.5	UJ	R
CYCLOHEXANE		0.5	UJ	R	0.5	U					0.5	UJ	R

PROJ_NO: 02045	NSAMPLE	SA-PZ133I120110621			SA-PZ133I120110621DL			SA-PZ133I-20110621			SA-PZ135I-20110621		
SDG: C2797	LAB_ID	C2797-08			C2797-08DL			C2797-07			C2797-09		
FRACTION: OV	SAMP_DATE	6/21/2011			6/21/2011			6/21/2011			6/21/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE		0.5	U					0.5	U		0.5	U	
ETHYLBENZENE		0.5	U					0.5	U		0.5	U	
ISOPROPYLBENZENE		0.5	U					0.5	U		0.5	U	
M+P-XYLENES		1	U					1	U		1	U	
METHYL ACETATE		0.5	U					0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U					0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U					0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U					0.5	U		0.5	U	
O-XYLENE		0.5	U					0.5	U		0.5	U	
STYRENE		0.5	U					0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	U					0.5	U		0.5	U	
TOLUENE		0.5	U					0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	U					0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	U					0.5	U		0.5	U	
TRICHLOROETHENE		0.5	U					0.5	U		0.5	U	
TRICHLOROFLUOROMETHANE		0.5	U					0.5	U		0.5	U	
VINYL CHLORIDE		0.5	U					0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-PZ136I-20110621			SA-PZ139I-20110620			SA-PZ149I1-20110620RE			SA-PZ158I1-20110620		
SDG: C2797	LAB_ID	C2797-10			C2797-05			C2797-04RE			C2797-01		
FRACTION: OV	SAMP_DATE	6/21/2011			6/20/2011			6/20/2011			6/20/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE		0.5	U		0.5	U		0.5	UJ	R	5	U	
ETHYLBENZENE		0.5	U		0.5	U		0.5	UJ	R	5	U	
ISOPROPYLBENZENE		0.5	U		0.5	U		0.5	UJ	R	5	U	
M+P-XYLENES		1	U		1	U		1	UJ	R	10	U	
METHYL ACETATE		0.5	U		0.5	U		0.5	UJ	R	5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	UJ	R	5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	UJ	R	5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	UJ	R	5	U	
O-XYLENE		0.5	U		0.5	U		0.5	UJ	R	5	U	
STYRENE		0.5	U		0.5	U		0.5	UJ	R	5	U	
TETRACHLOROETHENE		0.5	U		0.5	U		0.5	UJ	R	5	U	
TOLUENE		0.5	U		0.5	U		0.5	UJ	R	5	U	
TRANS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	UJ	R	5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	UJ	R	5	U	
TRICHLOROETHENE		0.5	U		0.5	U		0.5	UJ	R	5	U	
TRICHLOROFLUOROMETHANE		0.5	U		0.5	U		0.5	UJ	R	5	U	
VINYL CHLORIDE		0.5	U		0.5	U		0.5	UJ	R	5	U	

PROJ_NO: 02045	NSAMPLE	SA-PZ158I-20110620RE			SA-PZ161I-20110621			SA-PZ161I-20110621DL			SA-TB20110620RE		
SDG: C2797	LAB_ID	C2797-02RE			C2797-06			C2797-06DL			C2797-03RE		
FRACTION: OV	SAMP_DATE	6/20/2011			6/21/2011			6/21/2011			6/20/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE		0.5	UJ	R	0.5	U					0.5	UJ	R
ETHYLBENZENE		0.5	UJ	R	0.5	U					0.5	UJ	R
ISOPROPYLBENZENE		0.5	UJ	R	0.5	U					0.5	UJ	R
M+P-XYLENES		1	UJ	R	1	U					1	UJ	R
METHYL ACETATE		0.5	UJ	R	0.5	U					0.5	UJ	R
METHYL CYCLOHEXANE		0.5	UJ	R	0.5	U					0.5	UJ	R
METHYL TERT-BUTYL ETHER		0.5	UJ	R	0.5	U					0.5	UJ	R
METHYLENE CHLORIDE		0.5	UJ	R	0.5	U					4.4	J	R
O-XYLENE		0.5	UJ	R	0.5	U					0.5	UJ	R
STYRENE		0.5	UJ	R	0.5	U					0.5	UJ	R
TETRACHLOROETHENE		0.5	UJ	R	0.5	U					0.5	UJ	R
TOLUENE		0.5	UJ	R	0.5	U					0.5	UJ	R
TRANS-1,2-DICHLOROETHENE		0.5	UJ	R	0.5	U					0.5	UJ	R
TRANS-1,3-DICHLOROPROPENE		0.5	UJ	R	0.5	U					0.5	UJ	R
TRICHLOROETHENE		0.5	UJ	R	0.5	U					0.5	UJ	R
TRICHLOROFLUOROMETHANE		0.5	UJ	R	0.5	U					0.5	UJ	R
VINYL CHLORIDE		0.5	UJ	R	0.5	U					0.5	UJ	R

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**D. BRAYACK**	**DATE:**	**AUGUST 15, 2011**
FROM:	**TERRI L. SOLOMON**	**COPIES:**	**DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION – IRON, MANGANESE**
CTO WE08 NWIRP CALVERTON
SAMPLE DELIVERY GROUP (SDG) – C2797

SAMPLES: 9/Aqueous/

SA-PZ133I-20110621	SA-PZ133I1-20110621
SA-PZ135I-20110621	SA-PZ136I-20110621
SA-PZ139I-20110620	SA-PZ149I1-20110620
SA-PZ158I-20110620	SA-PZ158I1-20110620
SA-PZ161I-20110621	

Overview

The sample set for NWIRP Calverton, CTO WE08, SDG C2797, consists of nine (9) aqueous environmental samples. No field duplicate pairs were included in this SDG.

All samples were analyzed for iron and manganese. The samples were collected by Tetra Tech on June 20 and 21, 2011 and analyzed by ChemTech under Naval Facilities Engineering Service Center (NFESC) Quality Assurance / Quality Control (QA/QC) criteria. Metals analyses were conducted using SW-846 method 6010B.

These data were evaluated based on the following parameters:

* • Data Completeness
* • Holding Times
* • Initial and Continuing Calibration Verification Results
* • Laboratory Method / Preparation Blank Analyses
* • ICP Interference Results
* • Matrix Spike / Matrix Spike Duplicate Recoveries
* • Laboratory Duplicate Results
* • Laboratory Control Standard Results
* • ICP Serial Dilution Results
* • Detection Limits
* • Analyte Quantitation

* - All quality control criteria were met for this parameter.

Notes

Positive results less than the limit of quantitation (LOQ) but greater than the method detection limit (MDL) were qualified as estimated, "J".

Executive Summary

Laboratory Performance: None.

Other Factors Affecting Data Quality: Positive results less than the LOQ but greater than the MDL were qualified as estimated.

The data for these analyses were reviewed with reference to the Region II "Validation of Metals for the Contract Laboratory Program (CLP) based on ILMO5.3 (SOP Revision 13)",September 2006 and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories", April 2009.

The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech NUS
Terri L. Solomon
Environmental Scientist

Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C – Region II Worksheets
3. Appendix D - Support Documentation

APPENDIX A
QUALIFIED ANALYTICAL RESULTS

Data Validation Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS-GFAA MSA's r < 0.995 / ICP PDS Recovery Noncompliance
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O - Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DOT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient r < 0.995
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02045	NSAMPLE	SA-PZ133I1-20110621			SA-PZ133I-20110621			SA-PZ135I-20110621			SA-PZ136I-20110621		
SDG: C2797	LAB_ID	C2797-08			C2797-07			C2797-09			C2797-10		
FRACTION: M	SAMP_DATE	6/21/2011			6/21/2011			6/21/2011			6/21/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
IRON		46.1	J	P	45.1	J	P	26.7	J	P	877		
MANGANESE		2760			870			927			1600		

PROJ_NO: 02045	NSAMPLE	SA-PZ139I-20110620			SA-PZ149I1-20110620			SA-PZ158I1-20110620			SA-PZ158I-20110620		
SDG: C2797	LAB_ID	C2797-05			C2797-04			C2797-01			C2797-02		
FRACTION: M	SAMP_DATE	6/20/2011			6/20/2011			6/20/2011			6/20/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
IRON		40.7	J	P	112			1370			6110		
MANGANESE		172			1630			5450			708		

PROJ_NO: 02045	NSAMPLE	SA-PZ161I-20110621		
SDG: C2797	LAB_ID	C2797-06		
FRACTION: M	SAMP_DATE	6/21/2011		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
IRON		11800		
MANGANESE		2770		

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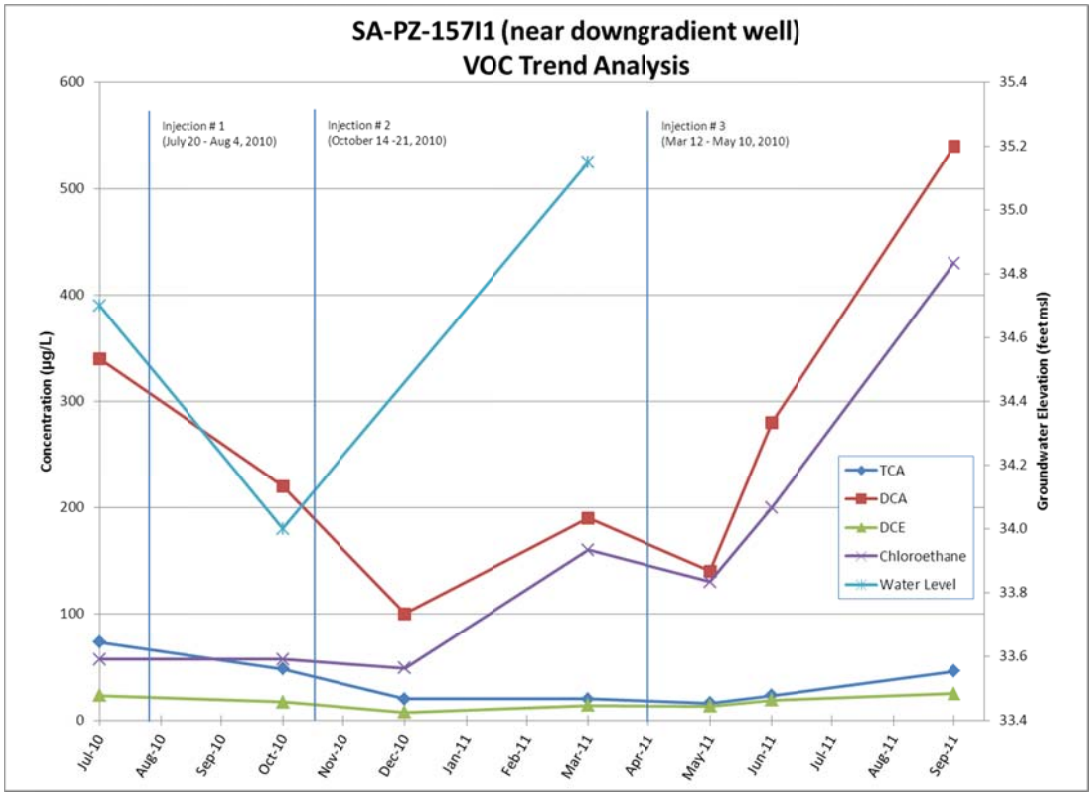
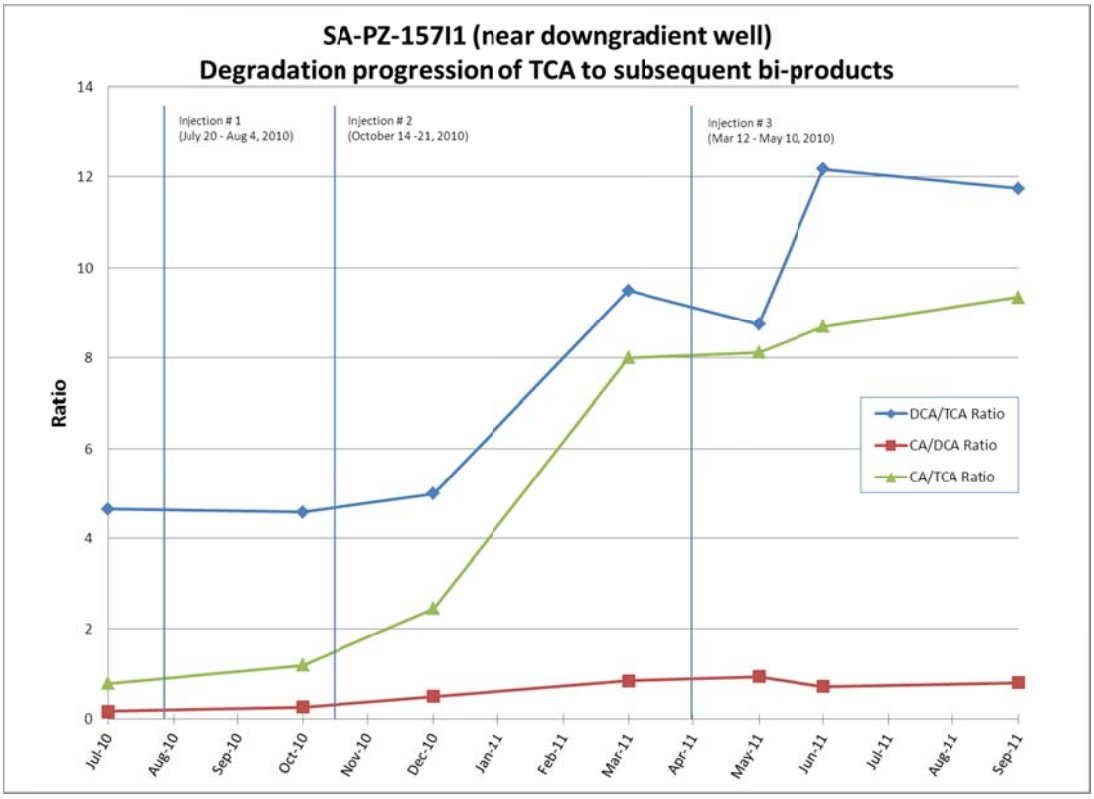
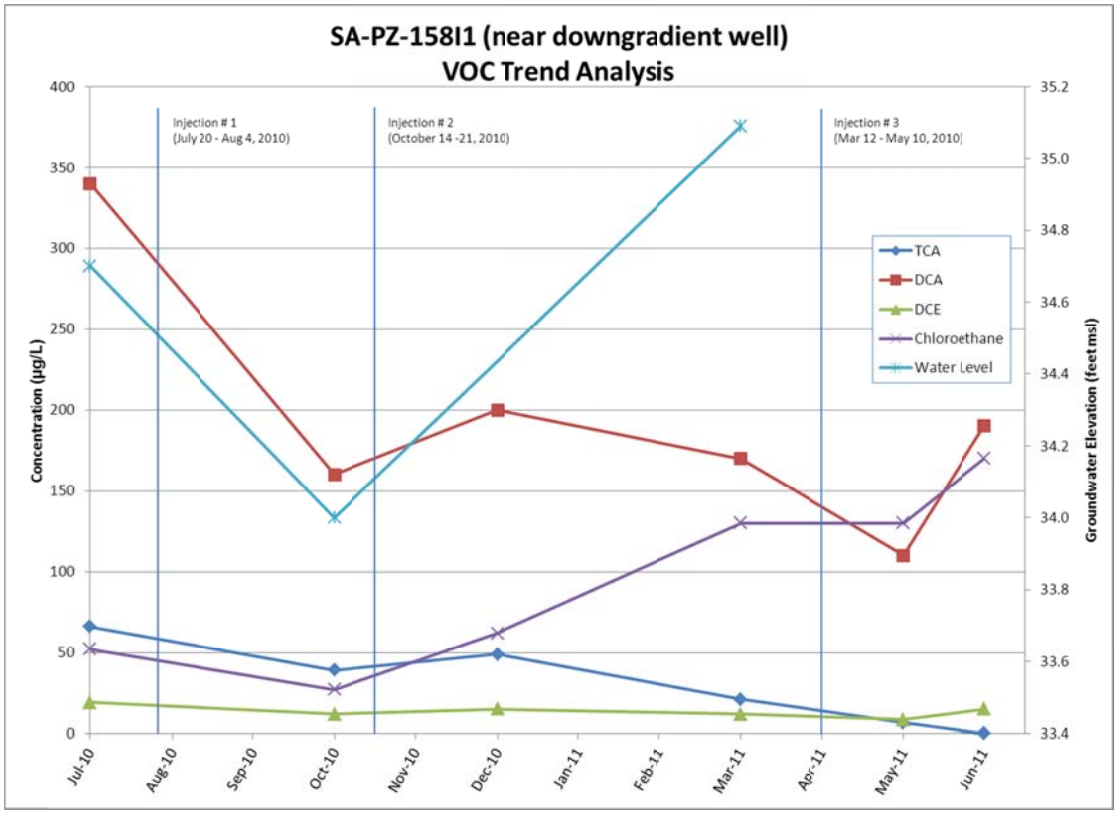
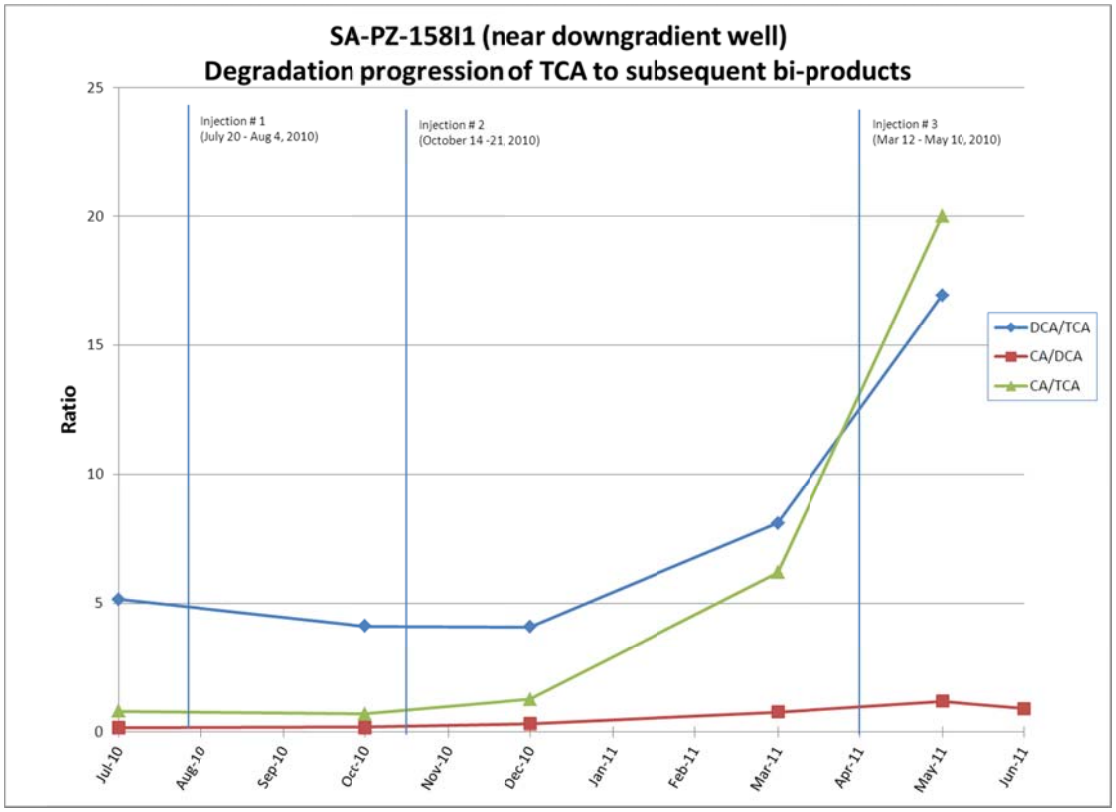
APPENDIX G

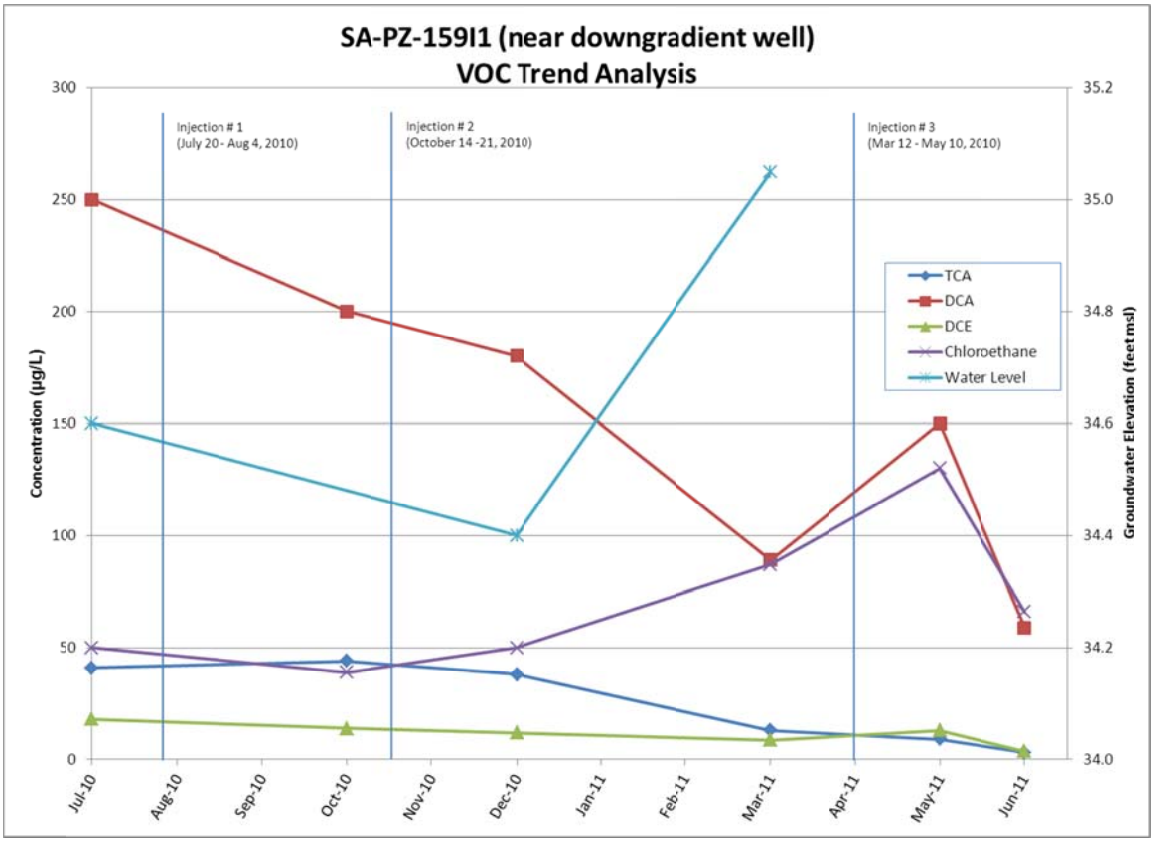
DATA GRAPHS

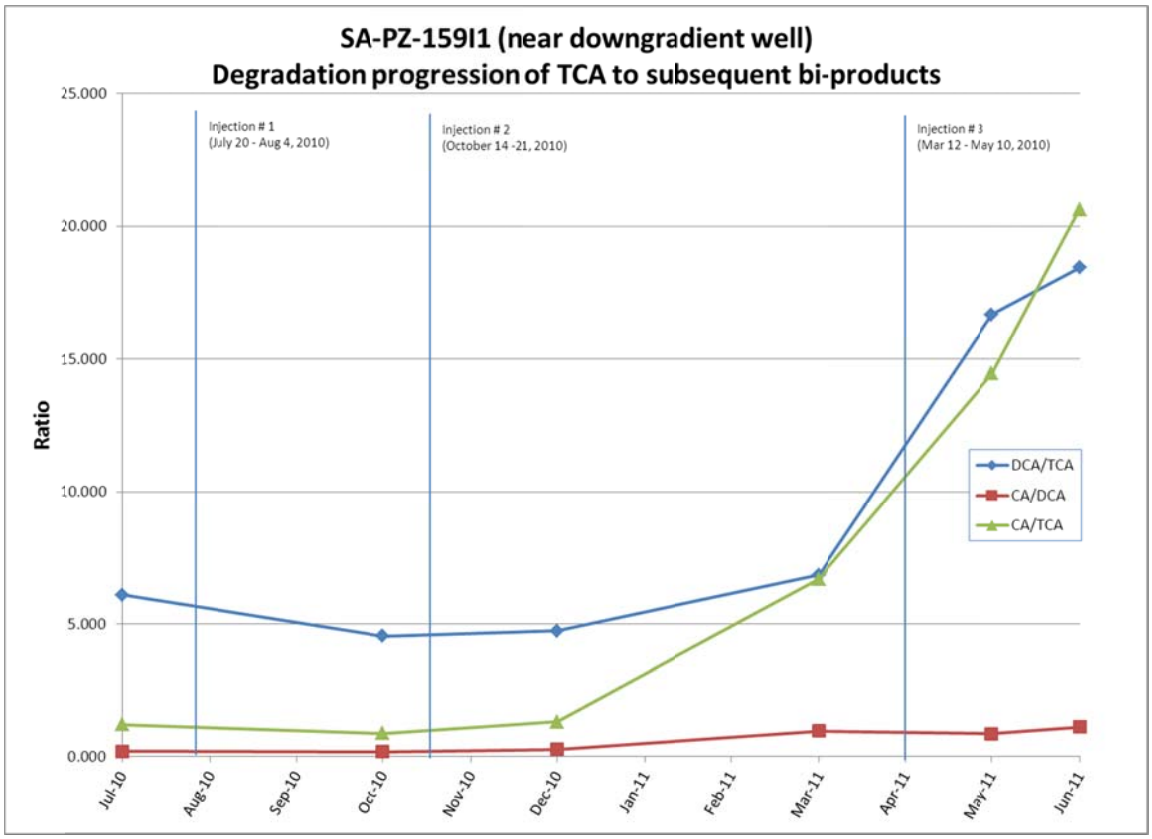

SA-PZ-157I1 (near downgradient well)
VOC Trend Analysis
Injection # 1
(July 20 - Aug 4, 2010)
Injection # 2
(October 14 -21, 2010)
Injection # 3
(Mar 12 - May 10, 2010)
Concentration (µg/L)
Groundwater Elevation (feet msl)
TCA
DCA
DCE
Chloroethane
Water Level
Jul-10
Aug-10
Sep-10
Oct-10
Nov-10
Dec-10
Jan-11
Feb-11
Mar-11
Apr-11
May-11
Jun-11
Jul-11
Aug-11
Sep-11


SA-PZ-157I1 (near downgradient well)
Degradation progression of TCA to subsequent bi-products
Injection # 1
(July 20 - Aug 4, 2010)
Injection # 2
(October 14 -21, 2010)
Injection # 3
(Mar 12 - May 10, 2010)
Ratio
DCA/TCA Ratio
CA/DCA Ratio
CA/TCA Ratio
Jul-10
Aug-10
Sep-10
Oct-10
Nov-10
Dec-10
Jan-11
Feb-11
Mar-11
Apr-11
May-11
Jun-11
Jul-11
Aug-11
Sep-11


SA-PZ-158I1 (near downgradient well)
VOC Trend Analysis
Injection # 1
(July 20 - Aug 4, 2010)
Injection # 2
(October 14 -21, 2010)
Injection # 3
(Mar 12 - May 10, 2010)
TCA
DCA
DCE
Chloroethane
Water Level
Concentration (µg/L)
Groundwater Elevation (feet msl)
400
350
300
250
200
150
100
50
0
35.2
35.0
34.8
34.6
34.4
34.2
34.0
33.8
33.6
33.4
Jul-10
Aug-10
Sep-10
Oct-10
Nov-10
Dec-10
Jan-11
Feb-11
Mar-11
Apr-11
May-11
Jun-11


SA-PZ-158I1 (near downgradient well)
Degradation progression of TCA to subsequent bi-products
Injection # 1
(July 20 - Aug 4, 2010)
Injection # 2
(October 14 -21, 2010)
Injection # 3
(Mar 12 - May 10, 2010)
DCA/TCA
CA/DCA
CA/TCA
Ratio
25
20
15
10
5
0
Jul-10
Aug-10
Sep-10
Oct-10
Nov-10
Dec-10
Jan-11
Feb-11
Mar-11
Apr-11
May-11
Jun-11


SA-PZ-159I1 (near downgradient well)
VOC Trend Analysis
Injection # 1
(July 20- Aug 4, 2010)
Injection # 2
(October 14 -21, 2010)
Injection # 3
(Mar 12 - May 10, 2010)
TCA
DCA
DCE
Chloroethane
Water Level
Concentration (µg/L)
Groundwater Elevation (feet msl)
300
250
200
150
100
50
0
35.2
35.0
34.8
34.6
34.4
34.2
34.0
Jul-10
Aug-10
Sep-10
Oct-10
Nov-10
Dec-10
Jan-11
Feb-11
Mar-11
Apr-11
May-11
Jun-11


SA-PZ-159I1 (near downgradient well)
Degradation progression of TCA to subsequent bi-products
Injection # 1
(July 20 - Aug 4, 2010)
Injection # 2
(October 14 -21, 2010)
Injection # 3
(Mar 12 - May 10, 2010)
DCA/TCA
CA/DCA
CA/TCA
Ratio
25.000
20.000
15.000
10.000
5.000
0.000
Jul-10
Aug-10
Sep-10
Oct-10
Nov-10
Dec-10
Jan-11
Feb-11
Mar-11
Apr-11
May-11
Jun-11