

**STABILIZATION CONCRETE PAD RISK ASSESSMENT
SOLVENT SAVERS SUPERFUND SITE
CHENANGO COUNTY, NEW YORK**



Prepared by

**U.S. Environmental Protection Agency
Region 2
New York, New York
September 2017**

Evaluation of Risks from Exposure to Paint, Water, and concrete from Stabilization Concrete Pad at the Solvent Savers Superfund Site

The goal of this assessment is to evaluate potential cancer risks and non-cancer hazards associated with exposures to water found under and above the HDPE cover, exposures to paint on the concrete pad, and exposures to the concrete pad. The receptors evaluated include maintenance workers who may maintain the pad and trespassers who may contact the pad. The results of this risk assessment will be used to inform the remedial decision for this pad.

Risk Assessment.

A screening assessment was developed to determine the risks associated with exposures to the water, paint, and concrete samples. The assessment followed the four steps of the risk assessment process as described below.

Hazard Identification – this step uses the analytical data collected to identify the contaminants of potential concern. The primary contaminants found at the Site, based on sampling, were PCBs and VOCs in water, paint, and concrete. Based on the size of the data set the maximum concentrations were used in the assessment to calculate cancer risks and non-cancer hazards.

Exposure Assessment - estimates the magnitude of actual and/or potential human exposures, the frequency and duration of these exposures, and the exposure pathways (e.g., ingestion and dermal contact) by which humans are potentially exposed. The exposure assumptions listed below represent current and future exposures to the Reasonably Maximally Exposed individual.

Potential exposed individuals include:

- Workers (outdoor) who may contact pad paint and/or concrete during maintenance activities. Expected routes of exposure including dermal contact and incidental ingestion.
- Trespasser – an adolescent may trespass on the site and be exposed under a future scenario. Routes of exposure include dermal contact and incidental ingestion.

Workers are considered to be exposed under current and future conditions. Worker exposures may occur while maintaining the pad. The outdoor worker was evaluated assuming exposures of 52 days/year e.g., once per week as part of a maintenance activity, for a 25 year period. Based on the exposure frequency and duration, a screening level was calculated using the Regional Screening Level calculator available at: <https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables-june-2017>. Using the calculator and the exposure assumptions listed above, in addition to standard default exposure assumptions for other parameters, screening levels were calculated and the output is provided in Attachment B. The calculated screening level for the outdoor worker is 4.67 ppm based on a cancer risk of 10^{-6} (one in a million) from exposure to Aroclor 1254. The screening level concentration associated with a non-cancer Hazard Index (HI) = 1 based on Aroclor 1254 is 70.5 ppm.

In addition, there is a potential that an adolescent may trespass into the area, although it is fenced, and come into contact with the pad by touching the paint or concrete (e.g., dermal and ingestion). A screening level calculation was conducted using the Regional Screening Level Calculator assuming an

adolescent (10 to 18 years of age) may be exposed 52 days/year while recreating in this area. Attachment C provides the output from the analysis for the adolescent trespasser. As indicated in Attachment C, the screening levels associated with a cancer risk of 10^{-6} was 9.85 ppm. The concentration associated with a non-cancer HI = 1 for Aroclor 1254 is 45.9 ppm.

Toxicity Assessment – this step determines the types of adverse health effects associated with chemical exposures, and the relationship between magnitude of exposure (dose) and severity of adverse effects (response). The Integrated Risk Information System (IRIS), EPA's toxicity database, was used as the basis for the toxicity values used in the calculations. IRIS chemicals files are available for PCBs and Aroclor 1254 and these values were used in the assessment of cancer risks and non-cancer hazards, respectively.

Risk Characterization - summarizes and combines outputs of the exposure and toxicity assessments to provide a quantitative estimate of Site risks. The risk characterization also identifies contaminants with concentrations which exceed acceptable levels, defined by the National Contingency Plan (NCP) as an excess lifetime cancer risk greater than 1×10^{-6} – 1×10^{-4} or a HI greater than the goal of protection of an HI = 1.0. Also included in this section is a discussion of the uncertainties associated with the calculate risks and hazards.

The paint, concrete, and water sample data reports are contained in Attachment A.

Concrete Pad Paint Samples.

Exposures to the Outdoor Worker conducting maintenance in the area of the pad. The concentrations found in the concrete pad samples for PCBs (Aroclor 1242) ranged from 90 to 660 ppm. Considering occupational exposures by an outdoor worker based on exposure assumptions listed above e.g., 52 days/year for an eight-hour period on the maintenance day for a 25 year period these sample results exceeded the calculated screening levels of 4.67 ppm associated with a cancer risk of 10^{-6} and 70.5 ppm associated with a non-cancer HI = 1. Under these exposure assumptions the maximum concentration of 660 ppm found in the paint samples, exceeded a risk of 1×10^{-4} (one in ten thousand) and the concentration associated with the goal of protection of a HI = 1 of 70.5 ppm.

The majority of the VOC samples were non-detects at low detection limits. The maximum detected concentration was compared to screening levels for outdoor workers at a risk level of 10^{-6} and a HI = 1 using the assumptions provided above. The results of this comparison shown in the Table below indicate that the concentrations for 1,1,1-trichloroethane, 1,2-dichlorobenzene, ethylbenzene, methyl acetate, tetrachloroethylene, toluene, trichloroethylene, and xylenes were below their respective screening levels for the outdoor worker. Trifluorotrachloroethane (CFC-113) was not evaluated based on a lack of toxicity information.

Chemical	Concentration (ppm)	Screening Level (ppm)	Conclusion
1,1,1-Trichloroethane	0.510	1.71E+05 (NC)	Below screening level
1,2-dichlorobenzene	0.310	4.48E+04 (NC)	Below screening level
Ethylbenzene	0.091	1.22E+02 ca	Below screening level
Methyl acetate	0.170	5.62E+06 (NC)	Below screening level
Tetrachloroethylene	0.200	4.97E+02 (NC)	Below screening level
Toluene	0.370	2.25E+05 (NC)	Below screening level
Trichloroethylene	0.560	2.91E+01 ca	Below screening level

CFC-113	0.055		No toxicity value for screening.
Xylenes	0.520 ppm	1.20E+04 (NC)	Below screening level

Adolescent. Considering recreational exposures by an adolescent trespasser (ages 10 to 18 years) based on exposures of 52 days/year for a 8 year period. The screening level for this exposure is 9.85 ppm based on a cancer risk of 10^{-6} . The concentration associated with a non-cancer HI = 1 based on Aroclor 1254 is 45.9 ppm. Under these exposure assumptions the concentrations found in the concrete pad paint samples ranged from 90 to 660 ppm. The maximum concentration of 660 ppm is within the risk range of 10^{-4} to 10^{-6} while the maximum concentration exceeded a non-cancer goal of protection of an HI = 1.

The majority of the VOC samples were non-detects at low detection limits. The Table below shows the maximum detected concentration compared to screening levels for adolescent trespassers at a risk level of 10^{-6} and a HI = 1. The results of this comparison indicate that the concentrations for 1,1,1-trichloroethane, 1,2-dichlorobenzene, ethylbenzene, methyl acetate, tetrachloroethylene, toluene, trichloroethylene, and xylenes were below their respective screening levels for the outdoor worker. Trifluorotrichloroethane (CFC-113) was not evaluated based on a lack of toxicity information.

Chemical	Concentration (ppm)	Screening Level (ppm)	Conclusion
1,1,1-Trichloroethane	0.082	3.31E+05 (NC)	Below screening level
1,2-dichlorobenzene	0.045	7.57E+04 (NC)	Below screening level
Methyl acetate	2.5	3.65E+06 (NC)	Below screening level
Methylene Chloride	0.210	4.44E+03 (NC)	Below screening level
Tetrachloroethylene	0.100	2.73E+03 (NC)	Below screening level
Toluene	0.290	2.21E+05 (NC)	Below screening level
Trichloroethylene	1.0	1.05E+02 (Cancer)	Below Screening Level
CFC-113	0.055		No toxicity value for screening.
Xylenes	0.520 ppm	2.34E+04 (NC)	Below screening level

Concrete Pad Core Samples.

Outdoor Worker. The concrete core sample concentrations ranged from 0.044 to 13 ppm. Considering occupational exposures by an outdoor worker based on exposure assumptions listed above e.g., 52 days/year for an eight-hour period on the maintenance day for a 25 year period the maximum concentration of 13 ppm exceeded the calculated screening levels of 4.67 ppm associated with a cancer risk of 10^{-6} and is below the screening level of 70.5 ppm associated with a non-cancer HI = 1.

The results of the comparison of VOC data indicates that the concentrations for 1,1,1-trichloroethane, 1,2-dichlorobenzene, ethylbenzene, methyl acetate, tetrachloroethylene, toluene, trichloroethylene, and xylenes were below their respective screening levels. Trifluorotrichloroethane (CFC-113) was not quantitatively evaluated based on the lack of a toxicity value to include in the calculation.

Adolescent trespasser. As described above, the exposure assessment assumed an adolescent trespasser is exposed 52 days/year for an 8-year period. The screening level for exposures to the adolescent is 9.85 ppm based on a cancer risk of 10^{-6} . The concentration associated with a non-cancer HI = 1 based on Aroclor 1254 is 45.9 ppm. The concentrations found in the concrete core samples are within the risk range and below the non-cancer HI = 1.

The majority of the VOC samples were non-detects at low detection limits. The maximum detected concentration for the individual VOCs was compared to screening levels for the adolescent trespasser (Attachment C) at a risk level of 10^{-6} and a HI = 1. The results of this comparison indicate that the concentrations for 1,1,1-trichloroethane, 1,2-dichlorobenzene, ethylbenzene, methyl acetate, tetrachloroethylene, toluene, trichloroethylene, and xylenes were below their respective screening levels for the outdoor worker. Trifluorotrichloroethane (CFC-113) was not evaluated based on a lack of toxicity information.

Sample Results – Water on the HDPE Liner

Water samples collected above the HDPE covered pad in May and July 2017 were compared to risk based residential values for drinking water consumption. The results are provided in the table below:

Chemical	Sample Result (ug/l)	Risk Based Comparison Value*
Toluene	0.14 J	1,100
Aroclor 1016	0.022 J	0.22 (Cancer) 1.4 (Non-Cancer)
	0.029 J	0.22 (Cancer) 1.4 (Non-Cancer)

*Risk based values are based on residential exposures of 350 days/year for a total of 26 years for an adult and young child (cancer) and young child (non-cancer). The values assume daily consumptions of water from a water supply. The values are provided for comparison purposes only.

As shown in the Table, the concentrations are below the Residential Risk Based Comparison Values based on risks of 10^{-6} and an HI = 1.

Water Pumped from Beneath the HDPE cover.

The actions of pumping out the water and storing it before final disposal have interrupted potential exposures to the water below the HDPE cover.

Conclusions.

This analysis found that in the absence of actions to limit exposures e.g., use of personal protective equipment, there is a potential for workers to be exposed to the paint on the pad at levels exceeding the risk range at a level of 10^{-4} and a non-cancer HI = 1. This finding supports continued implementation of appropriate plans to limit or interrupt exposure to the paint chips through the use of PPE. In addition, it is important to prevent potential trespassing of adolescents onto the site where they may be exposed to the pad at levels above the risk range.

Other exposures to the concrete samples were found to be within the risk range and below the goal of protection of an HI = 1 for the outdoor worker and the adolescent trespasser. Evaluation of

exposures to VOC in water were found to be within the risk range and below an HI = 1 based on the exposure assumptions used in this assessment.

There are a number of uncertainties associated with the assessment of the worker and adolescent trespasser including: limited number of samples, lack of information regarding the frequency and duration of exposure, other activities at the pad that were not evaluated in this assessment, and age ranges and activities of potential adolescent receptors. Based on these assumptions, the calculated screening levels may result in either an underestimate or overestimate of cancer risks and non-cancer hazards.

An assessment of potential exposures is limited based on uncertainties in information regarding activities on this pad¹. Another concern is that under Superfund, there is a requirement to address concentrations of PCBs greater than 50 ppm in soil (see EPA Guidance on Remedial Action for Superfund Sites with PCB Contamination (USEPA, 1990)) that may require further evaluation.

It is recommended that continued actions be taken to limit potential exposures to workers based on the elevated concentrations identified in the paint samples on the pad. Actions include continued use of PPE to reduce potential direct contact; limiting the number of days/year an individual is exposed. Removal of the pad would also interrupt potential exposures.

It is recommended that further consideration be given to evaluating potential exposures to the adolescent trespasser. Considerations include the frequency of reports of trespassing on the Site and how to limit or prevent potential exposures. Considerations may include maintaining fences to deter potential exposures to the pad.

¹ During construction of the groundwater remedy, the pad may be used as a laydown area for construction materials (e.g., well riser, piping, and skid mounted equipment) and may also be used during the operation of groundwater treatment system as a platform for the treatment system components and/or treatment system materials/supplies (e.g., precipitation chemicals, treatment system media, spare equipment, etc.). However, the PRPs have not provided details such as timeframes and number of days and activities of workers in the pad area.

ATTACHMENT A- STABILIZATION CONCRETE PAD SAMPLING RESULTS



February 16, 2016

Reference No. 002077-60

Ms. Lisa Wong
Central New York Remediation Branch
Emergency and Remedial Response Division
U.S. Environmental Protection Agency, Region II
290 Broadway, 20th Floor
New York, New York 10007-1866

Dear Ms. Wong:

**Re: Sealed Concrete Pad – Analytical Results
Solvent Savers Superfund Site, Lincklaen, New York**

This letter includes a summary of the Sealed Concrete Pad maintenance activities performed at the Solvent Savers Site (Site) in November and December 2015 and presents the analytical results for the water, paint, and concrete core samples collected during those maintenance activities. The maintenance activities were performed and the samples were collected and analyzed in accordance with the USEPA-approved work plan, "*Sealed Concrete Pad – 2015 Maintenance Plan*" (Maintenance Plan), dated December 1, 2015.

Water beneath HDPE Cover in the Sump

Prior to removing the water from beneath the HDPE cover in the sump, GHD personnel collected a sample of the standing water from above the HDPE cover on November 12, 2015 and submitted the samples to the laboratory to be analyzed for PCBs and VOCs using EPA Methods 608 and 624, respectively. The analytical data for this sample are summarized in Table 1 and the laboratory report is presented in Attachment A. These data were previously provided to USEPA on November 20, 2015. Based upon a review of the analyses, PCB and VOC concentrations met both New York State DEC Environmental Remediation (DER) groundwater quality standards (Part 703 standards), DER effluent limitations, and EPA's National Primary Drinking Water Regulations (NPDWRs).

On December 15, 2015, GHD personnel pumped all standing water from above the HDPE cover and discharged it to the ground surface on Site in accordance with the procedures presented in the Maintenance Plan. After all standing water above the HDPE cover was removed; on December 16, 2015, GHD personnel cut an approximate 18-inch by 18-inch square hole into the HDPE cover along a side wall of the sump to facilitate access to water located beneath the HDPE cover. A pump was lowered through the hole in the side wall of the sump and the water was pumped from beneath the HDPE cover in the sump and transferred to 55-gallon drums. In total, approximately 180 gallons of water was pumped from beneath the HDPE cover in the sump and is staged within four 55-gallon drums contained within over pack drums within the designated on-Site staging area adjacent to the pad.

On December 16, 2015, GHD personnel collected two composite samples of the water for waste characterization sampling. One sample was submitted to the laboratory to be analyzed for PCBs and VOCs using EPA Methods 608 and 624, respectively, and the second sample was submitted to the laboratory for waste characterization analyses. At the same time, GHD personnel also collected a composite samples of water generated during monitoring well purging activities during a groundwater sampling event conducted at the Site in July 2015. In total, approximately 100 gallons of purge water is staged within two 55-gallon drums contained within over pack drums within the designated on-Site staging area adjacent to the pad. The analytical data for these samples are summarized in Table 1 and the laboratory reports are presented in Attachment A.

Based upon a review of the analyses, PCB and VOC concentrations exceed the DER Part 703 standards, DER effluent limitations, and/or NPDWRs; thus, the water will be transported to an EPA-approved off-Site facility for treatment and/or disposal. In a letter dated February 1, 2016, GHD requested NYSDEC to provide a "contained-in" determination for the approximate 280 gallons of purge/waste water staged at the Site, such that it could be disposed off Site at CWM Chemical Services, LLC, Model City, New York facility as non-hazardous waste water. NYSDEC provided the contained-in determination to GHD in a letter dated February 8, 2016 (see Attachment B). Upon receiving the contained-in determination from NYSDEC, a waste profile for the non-hazardous water was submitted on February 8, 2016 to CWM for their approval. Approval was received from CWM in a letter dated February 12, 2016 (see Attachment B). Therefore, subject to receiving USEPA approval, the staged waters will be transported off Site for disposal as non-hazardous waste water at the CWM Model City facility.

Eliminate Suspected Leakage to the Sump Associated with Bollards

On December 16, 2015, the bollards installed around the sump area, which were suspected as being potential points of leakage to the sump, were removed and were recycled off-Site as scrap metal. The anchor bolts were cut flush with the concrete and the HDPE cover was restored using extrusion welds and new 60-mil HDPE material consistent with the existing cover in accordance with the procedures presented in the Maintenance Plan. The bollards were removed by Abscope Environmental Inc. from Canastota, New York and the liner repairs were completed by Chenango Contracting from Johnson City, New York, under the supervision of GHD. A copy of the HDPE extrusion weld peel and shear QA data is provided in Attachment C.

Sampling of Concrete Pad and Paint

On December 15 and 16, 2015, GHD personnel collected samples of the sealed concrete pad and paint to determine PCB and VOC concentrations for assessing potential future use of the pad and restoration of the pad, if necessary, or potential disposal off Site. Six paint samples and 12 core samples were collected at the locations shown on Figure 1. Prior to collecting the concrete and paint samples, a rinsate sample was collected from the sampling equipment brought on Site. All concrete, paint and rinsate samples were submitted to the laboratory to be analyzed for PCBs and VOCs using EPA Methods SW846 8082A and 8260B, respectively.

An approximate 18-inch by 18-inch square hole was cut in the HDPE cover at each sample location, including the base of the sump. An approximate 4-inch by 6-inch area of paint was scraped off and collected at each location (the laboratory required a minimum of 30 g of material to analyze). The concrete was then sampled by collecting two 2-inch diameter cores advanced no deeper than 3 inches at each location.

Core samples were collected using a hand-held rotary core drilling machine with a 2-inch diameter single-tube core barrel/bit. The drill was steadied, and the core barrel was advanced perpendicular to the concrete surface. Deionized water was used to lubricate and cool the core bit while flushing drill cuttings. Water was used sparingly and collected at each sample location using sorbent pads placed around the core bit. Sorbent pads were containerized in a 55-gallon drum for off-Site disposal. Core samples were placed in a separate plastic bag for each location, and sample identification labels were applied to the plastic bags.

Both cores collected from each location were submitted to the laboratory. The laboratory was instructed to cut off the top 0.5-centimeter (cm) interval and the 0.5-cm to 2-cm interval of one of the cores from each location and to analyze each interval for PCBs and VOCs. The laboratory was instructed to store (freeze) the second core from each location for potential future waste characterization analysis, if necessary. Between each unique sample location, the core barrel was decontaminated consistent with procedures used throughout the Pre-Excavation Confirmatory Soil Sampling Program. Once the samples at each location were collected, the concrete was repaired using high-strength non-shrink grout. The finish was brushed to approximately match adjacent surface texture.

Following the collection of the core samples at each location, the 18-inch by 18-inch square openings (and the opening used to remove the water from beneath the liner) were restored using extrusion welds and new 60-mil HDPE material consistent with the existing cover in accordance with the installation and quality control procedures presented in the Maintenance Plan. At the conclusion of the liner repair, the protective grating temporarily removed from the sump area was reinstalled. The concrete repair was performed by Abscope Environmental Inc. from Canastota, New York and the liner repairs were completed by Chenango Contracting from Johnson City, New York under the supervision of GHD. A copy of the HDPE extrusion weld peel and shear QA data is provided in Attachment C and a photographic log of the Sealed Concrete Pad maintenance activities is presented in Attachment D.

The analytical data for the paint and concrete core samples are summarized in Tables 2 and 3, respectively, and the laboratory reports are presented in Attachment A. Based upon a review of the data summarized in Tables 2 and 3, PCBs are found to be >1 mg/kg in the paint and in the concrete. Therefore consistent with the Maintenance Plan, the HDPE cover will be maintained and inspected in accordance with the draft Soil Operation and Maintenance Manual.

Should you have any questions on the above, please do not hesitate to contact us.

Sincerely,

GHD

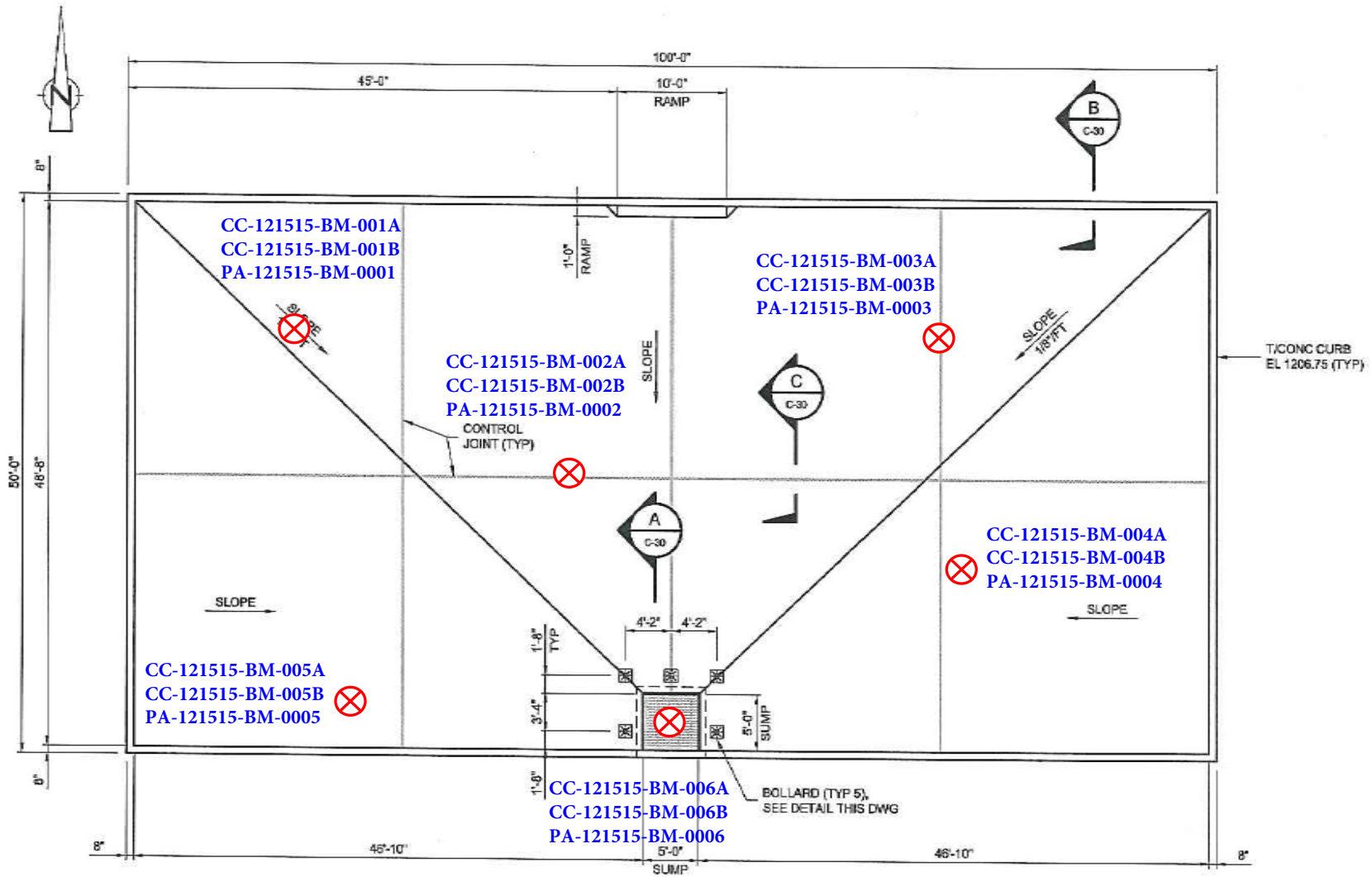
A handwritten signature in blue ink, appearing to read "Ed Roberts", is positioned above the printed name.

Edward S. Roberts, P. Eng.

ESR/jh/23

Encl. Figure 1 - Sample Locations
Attachment A – Laboratory Data Reports
Attachment B – NYSDEC Contained-in Determination/CWM Disposal Approval
Attachment C – Geomembrane Trial Seam Log
Attachment D – Sealed Concrete Pad Maintenance Photo log

cc: Demetrios Klerides, PE, HDR
Jess LaClair, NYSDEC
Rod Sutch, de maximis, inc.
Jason Davenport, PE, GHD



⊗ - Sample Location

Figure 1 – Sample Locations

**Summary of Waste Water and Purge Water Waste Characterization Data
Solvent Savers Site, Lincklaen, New York**

		Waste Water above HDPE Cover (EPA Methods 608/624) PW-111215-BM-0002 11/12/2015	Waste Water beneath HDPE Liner (EPA Methods 608/624) W-1121615-BM-0002 12/16/2015	Waste Water beneath HDPE Liner (SW846) W-121615-BM-0001 12/16/2015	Monitoring Well Purge Water (SW846) W-121615-BM-0003 12/16/2015
Sample Location:					
Sample ID:					
Sample Date:					
Parameters	Units				
Volatiles					
1,1,1-Trichloroethane	µg/L	ND (1.0)	23 J	21 J	ND (100)
1,1,2,2-Tetrachloroethane	µg/L	ND (1.0)	ND (25)	ND (25)	ND (100)
1,1,2-Trichloroethane	µg/L	ND (1.0)	ND (25)	ND (25)	ND (100)
1,1-Dichloroethane	µg/L	ND (1.0)	ND (25)	ND (25)	ND (100)
1,1-Dichloroethene	µg/L	ND (1.0)	ND (25)	ND (25)	ND (100)
1,2,4-Trichlorobenzene	µg/L	ND (1.0)	ND (25)	ND (25)	ND (100)
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	ND (1.0)	ND (25)	ND (25)	ND (100)
1,2-Dibromoethane (Ethylene dibromide)	µg/L	ND (1.0)	ND (25)	ND (25)	ND (100)
1,2-Dichlorobenzene	µg/L	ND (1.0)	ND (25)	ND (25)	ND (100)
1,2-Dichloroethane	µg/L	ND (1.0)	ND (25)	ND (25)	ND (100)
1,2-Dichloroethene (total)	µg/L	ND (1.0)	-	-	-
1,2-Dichloropropane	µg/L	ND (1.0)	ND (25)	ND (25)	ND (100)
1,3-Dichlorobenzene	µg/L	ND (1.0)	ND (25)	ND (25)	ND (100)
1,4-Dichlorobenzene	µg/L	ND (1.0)	ND (25)	ND (25)	ND (100)
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	ND (5.0)	ND (130)	ND (130)	ND (500)
2-Hexanone	µg/L	ND (5.0)	ND (130)	ND (130)	ND (500)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	ND (5.0)	ND (130)	ND (130)	ND (500)
Acetone	µg/L	ND (5.0)	470	530	ND (500)
Benzene	µg/L	ND (1.0)	ND (25)	ND (25)	ND (100)
Bromodichloromethane	µg/L	ND (1.0)	ND (25)	ND (25)	ND (100)
Bromoform	µg/L	ND (1.0)	ND (25)	ND (25)	ND (100)
Bromomethane (Methyl bromide)	µg/L	ND (1.0)	ND (25)	ND (25)	ND (100)
Carbon disulfide	µg/L	ND (1.0)	ND (25)	ND (25)	ND (100)
Carbon tetrachloride	µg/L	ND (1.0)	ND (25)	ND (25)	ND (100)
Chlorobenzene	µg/L	ND (1.0)	ND (25)	ND (25)	ND (100)
Chloroethane	µg/L	ND (1.0)	ND (25)	ND (25)	ND (100)
Chloroform (Trichloromethane)	µg/L	ND (1.0)	ND (25)	ND (25)	ND (100)
Chloromethane (Methyl chloride)	µg/L	ND (1.0)	ND (25)	ND (25)	ND (100)
cis-1,2-Dichloroethene	µg/L	ND (1.0)	ND (25)	ND (25)	71 J
cis-1,3-Dichloropropene	µg/L	ND (1.0)	ND (25)	ND (25)	ND (100)
Cyclohexane	µg/L	ND (1.0)	ND (25)	ND (25)	99 J
Dibromochloromethane	µg/L	ND (1.0)	ND (25)	ND (25)	ND (100)
Dichlorodifluoromethane (CFC-12)	µg/L	ND (1.0)	ND (25)	ND (25)	ND (100)
Ethylbenzene	µg/L	ND (1.0)	ND (25)	ND (25)	ND (100)
Isopropyl benzene	µg/L	ND (1.0)	ND (25)	ND (25)	ND (100)
m&p-Xylenes	µg/L	ND (2.0)	ND (50)	-	-
Methyl acetate	µg/L	ND (1.0)	ND (25)	ND (25)	ND (100)
Methyl cyclohexane	µg/L	ND (1.0)	ND (25)	ND (25)	ND (100)
Methyl tert butyl ether (MTBE)	µg/L	ND (1.0)	ND (25)	ND (25)	ND (100)
Methylene chloride	µg/L	ND (1.0)	36 B	75	190
o-Xylene	µg/L	ND (1.0)	ND (25)	-	-
Styrene	µg/L	ND (1.0)	ND (25)	ND (25)	ND (100)
Tetrachloroethene	µg/L	ND (1.0)	ND (25)	ND (25)	ND (100)
Toluene	µg/L	ND (1.0)	6.5 J	5.4 J	ND (100)
trans-1,2-Dichloroethene	µg/L	ND (1.0)	ND (25)	ND (25) *	ND (100) *
trans-1,3-Dichloropropene	µg/L	ND (1.0)	ND (25)	ND (25)	ND (100)
Trichloroethene	µg/L	ND (1.0)	13 J	14 J	19 J
Trichlorofluoromethane (CFC-11)	µg/L	ND (1.0)	ND (25)	ND (25)	ND (100)
Trifluorotrichloroethane (CFC-113)	µg/L	ND (1.0)	ND (25)	ND (25) *	ND (100) *
Vinyl chloride	µg/L	ND (1.0)	ND (25)	ND (25)	ND (100)
Xylenes (total)	µg/L	ND (3.0)	ND (75)	ND (75)	ND (300)
PCBs					
Aroclor-1016 (PCB-1016)	µg/L	ND (0.086)	ND (0.085)	ND (0.085)	ND (0.086)
Aroclor-1221 (PCB-1221)	µg/L	ND (0.086)	ND (0.085)	ND (0.085)	ND (0.086)
Aroclor-1232 (PCB-1232)	µg/L	ND (0.086)	ND (0.085)	ND (0.085)	ND (0.086)
Aroclor-1242 (PCB-1242)	µg/L	ND (0.086)	0.93	0.75	ND (0.086)
Aroclor-1248 (PCB-1248)	µg/L	ND (0.086)	ND (0.085)	ND (0.085)	ND (0.086)
Aroclor-1254 (PCB-1254)	µg/L	ND (0.086)	ND (0.085)	ND (0.085)	ND (0.086)
Aroclor-1260 (PCB-1260)	µg/L	ND (0.086)	ND (0.085)	ND (0.085)	ND (0.086)
Total PCBs	µg/L	ND (0.086)	0.93	0.75	ND (0.086)

**Summary of Waste Water and Purge Water Waste Characterization Data
Solvent Savers Site, Lincklaen, New York**

		Waste Water above HDPE Cover (EPA Methods 608/624) PW-111215-BM-0002 11/12/2015	Waste Water beneath HDPE Liner (EPA Methods 608/624) W-121615-BM-0002 12/16/2015	Waste Water beneath HDPE Liner (SW846) W-121615-BM-0001 12/16/2015	Monitoring Well Purge Water (SW846) W-121615-BM-0003 12/16/2015
Sample Location:					
Sample ID:					
Sample Date:					
Parameters	Units				
Metals					
Aluminum	µg/L	-	-	900	400
Antimony	µg/L	-	-	9.6 J	ND (10)
Arsenic	µg/L	-	-	18	ND (10)
Barium	µg/L	-	-	5.8 J	23 J
Beryllium	µg/L	-	-	ND (4.0)	ND (4.0)
Cadmium	µg/L	-	-	ND (5.0)	ND (5.0)
Calcium	µg/L	-	-	5100	40000
Chromium	µg/L	-	-	40	3.3 J
Cobalt	µg/L	-	-	4.6 J	4.7 J
Copper	µg/L	-	-	40	4.2 J
Iron	µg/L	-	-	1200	4600
Lead	µg/L	-	-	ND (10)	5.7 J
Magnesium	µg/L	-	-	280 J	3600 J
Manganese	µg/L	-	-	36	900
Mercury	µg/L	-	-	0.092 J	ND (0.20) F1
Nickel	µg/L	-	-	12 J	8.8 J
Potassium	µg/L	-	-	1200000	10000
Selenium	µg/L	-	-	5.1 J	2.6 J
Silver	µg/L	-	-	ND (5.0)	ND (5.0)
Sodium	µg/L	-	-	350000	24000
Thallium	µg/L	-	-	ND (20)	ND (20)
Vanadium	µg/L	-	-	250	ND (50)
Zinc	µg/L	-	-	130	630
General Chemistry					
pH, lab	s.u.	-	-	10.6 HF	7.59 HF

Notes:

- ND Not detected at the associated reporting limit.
 J Estimated concentration.
 B Compound was found in the blank and sample.
 F1 MS and/or MSD Recovery is outside acceptance limits.
 * LCS or LCSD is outside acceptance limits.
 HF Analyzed outside hold time.

Table 2

**Summary of VOC and PCB Data
Concrete Pad Paint Samples
Solvent Savers Site, Lincklaen, New York**

Sample Location: Sample ID: Sample Date:	Concrete Paint Sample 1 PA-121515-BM-0001 12/15/2015	Concrete Paint Sample 2 PA-121515-BM-0002 12/15/2015	Concrete Paint Sample 3 PA-121515-BM-0003 12/15/2015	Concrete Paint Sample 4 PA-121515-BM-0004 12/15/2015	Concrete Paint Sample 5 PA-121515-BM-0005 12/15/2015	Concrete Paint Sample 6 PA-121615-BM-0006 12/16/2015
Parameters	Units					
Volatiles						
1,1,1-Trichloroethane	µg/kg	ND (250)	430	ND (250)	510	ND (250)
1,1,2,2-Tetrachloroethane	µg/kg	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
1,1,2-Trichloroethane	µg/kg	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
1,1-Dichloroethane	µg/kg	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
1,1-Dichloroethene	µg/kg	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
1,2,4-Trichlorobenzene	µg/kg	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
1,2-Dibromo-3-chloropropane (DBCP)	µg/kg	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
1,2-Dibromoethane (Ethylene dibromide)	µg/kg	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
1,2-Dichlorobenzene	µg/kg	ND (250)	280	47 J	310	ND (250)
1,2-Dichloroethane	µg/kg	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
1,2-Dichloropropane	µg/kg	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
1,3-Dichlorobenzene	µg/kg	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
1,4-Dichlorobenzene	µg/kg	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
2-Butanone (Methyl ethyl ketone) (MEK)	µg/kg	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
2-Hexanone	µg/kg	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/kg	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
Acetone	µg/kg	ND (1000)	ND (1000)	ND (1000)	ND (1000)	ND (1000)
Benzene	µg/kg	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
Bromodichloromethane	µg/kg	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
Bromoform	µg/kg	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
Bromomethane (Methyl bromide)	µg/kg	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
Carbon disulfide	µg/kg	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
Carbon tetrachloride	µg/kg	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
Chlorobenzene	µg/kg	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
Chloroethane	µg/kg	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
Chloroform (Trichloromethane)	µg/kg	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
Chloromethane (Methyl chloride)	µg/kg	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
cis-1,2-Dichloroethene	µg/kg	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
cis-1,3-Dichloropropene	µg/kg	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
Cyclohexane	µg/kg	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
Dibromochloromethane	µg/kg	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
Dichlorodifluoromethane (CFC-12)	µg/kg	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
Ethylbenzene	µg/kg	ND (250)	91 J	ND (250)	74 J	ND (250)
Isopropyl benzene	µg/kg	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
Methyl acetate	µg/kg	ND (1200)	170 J	ND (1200)	ND (1200)	ND (1200)
Methyl cyclohexane	µg/kg	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
Methyl tert butyl ether (MTBE)	µg/kg	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
Methylene chloride	µg/kg	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
Styrene	µg/kg	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
Tetrachloroethene	µg/kg	ND (250)	200 J	ND (250)	130 J	ND (250)
Toluene	µg/kg	ND (250)	370	45 J	320	ND (250)
trans-1,2-Dichloroethene	µg/kg	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
trans-1,3-Dichloropropene	µg/kg	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
Trichloroethene	µg/kg	ND (250)	560	41 J	550	ND (250)
Trichlorofluoromethane (CFC-11)	µg/kg	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
Trifluorotrichloroethane (CFC-113)	µg/kg	ND (250)	55 J	ND (250)	55 J	ND (250)
Vinyl chloride	µg/kg	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
Xylenes (total)	µg/kg	ND (500)	520	ND (500)	460 J	ND (500)
PCBs						
Aroclor-1016 (PCB-1016)	µg/kg	ND (10000)	ND (4100)	ND (5000)	ND (4800)	ND (1700)
Aroclor-1221 (PCB-1221)	µg/kg	ND (10000)	ND (4100)	ND (5000)	ND (4800)	ND (1700)
Aroclor-1232 (PCB-1232)	µg/kg	ND (10000)	ND (4100)	ND (5000)	ND (4800)	ND (1700)
Aroclor-1242 (PCB-1242)	µg/kg	660000	320000	360000	400000	90000
Aroclor-1248 (PCB-1248)	µg/kg	ND (10000)	ND (4100)	ND (5000)	ND (4800)	ND (1700)
Aroclor-1254 (PCB-1254)	µg/kg	ND (10000)	ND (4100)	ND (5000)	ND (4800)	ND (1700)
Aroclor-1260 (PCB-1260)	µg/kg	ND (10000)	ND (4100)	ND (5000)	ND (4800)	ND (1700)
Total PCBs		660000	320000	360000	400000	90000

Notes:

ND Not detected at the associated reporting limit.
J Estimated concentration.
* LCS or LCSD is outside acceptance limits.

Table 3
Summary of VOC and PCB Data
Concrete Pad Core Samples
Solvent Savers Site, Lincklaen, New York

Sample Location:	Concrete Core Sample 1	Concrete Core Sample 1	Concrete Core Sample 2	Concrete Core Sample 2	Concrete Core Sample 3	Concrete Core Sample 3	Concrete Core Sample 4
Sample ID:	CC-121515-BM-001A-INTERVAL1	CC-121515-BM-001A-INTERVAL2	CC-121515-BM-002A-INTERVAL1	CC-121515-BM-002A-INTERVAL2	CC-121515-BM-003A-INTERVAL1	CC-121515-BM-003A-INTERVAL2	CC-121515-BM-004A-INTERVAL1
Sample Date:	12/15/2015	12/15/2015	12/15/2015	12/15/2015	12/15/2015	12/15/2015	12/15/2015
Sample Depth:	0-0.5 cm	0.5-2 cm	0-0.5 cm	0.5-2 cm	0-0.5 cm	0.5-2 cm	0-0.5 cm
Parameters	Units						
Volatiles							
1,1,1-Trichloroethane	µg/kg	ND (240)	ND (250)	ND (250)	82 J	ND (250)	ND (250)
1,1,2,2-Tetrachloroethane	µg/kg	ND (240)	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
1,1,2-Trichloroethane	µg/kg	ND (240)	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
1,1-Dichloroethane	µg/kg	ND (240)	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
1,1-Dichloroethene	µg/kg	ND (240)	ND (250)	ND (250)	ND (250) F1	ND (250)	ND (250)
1,2,4-Trichlorobenzene	µg/kg	ND (240)	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
1,2-Dibromo-3-chloropropane (DBCP)	µg/kg	ND (240)	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
1,2-Dibromoethane (Ethylene dibromide)	µg/kg	ND (240)	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
1,2-Dichlorobenzene	µg/kg	ND (240)	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
1,2-Dichloroethane	µg/kg	ND (240)	ND (250)	ND (250)	37 J	ND (250)	45 J
1,2-Dichloropropane	µg/kg	ND (240)	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
1,3-Dichlorobenzene	µg/kg	ND (240)	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
1,4-Dichlorobenzene	µg/kg	ND (240)	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
2-Butanone (Methyl ethyl ketone) (MEK)	µg/kg	ND (240)	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
2-Hexanone	µg/kg	ND (240)	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/kg	ND (240)	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
Acetone	µg/kg	ND (980)	ND (990)	ND (1000)	ND (990)	ND (1000)	ND (1000)
Benzene	µg/kg	ND (240)	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
Bromodichloromethane	µg/kg	ND (240)	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
Bromoform	µg/kg	ND (240)	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
Bromomethane (Methyl bromide)	µg/kg	ND (240)	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
Carbon disulfide	µg/kg	ND (240)	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
Carbon tetrachloride	µg/kg	ND (240)	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
Chlorobenzene	µg/kg	ND (240)	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
Chloroethane	µg/kg	ND (240)	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
Chloroform (Trichloromethane)	µg/kg	ND (240)	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
Chloromethane (Methyl chloride)	µg/kg	ND (240)	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
cis-1,2-Dichloroethene	µg/kg	ND (240)	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
cis-1,3-Dichloropropene	µg/kg	ND (240)	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
Cyclohexane	µg/kg	ND (240)	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
Dibromochloromethane	µg/kg	ND (240)	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
Dichlorodifluoromethane (CFC-12)	µg/kg	ND (240)	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
Ethylbenzene	µg/kg	ND (240)	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
Isopropyl benzene	µg/kg	ND (240)	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
Methyl acetate	µg/kg	ND (1200)	ND (1200)	ND (1200)	2500	ND (1200)	ND (1300)
Methyl cyclohexane	µg/kg	ND (240)	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
Methyl tert butyl ether (MTBE)	µg/kg	ND (240)	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
Methylene chloride	µg/kg	ND (240)	ND (250)	74 J	170 J	ND (250)	ND (250)
Styrene	µg/kg	ND (240)	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
Tetrachloroethene	µg/kg	ND (240)	ND (250)	54 J	ND (250)	ND (250)	59 J
Toluene	µg/kg	ND (240)	ND (250)	180 J	100 JF2	290	170 J
trans-1,2-Dichloroethene	µg/kg	ND (240)	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
trans-1,3-Dichloropropene	µg/kg	ND (240)	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
Trichloroethene	µg/kg	100 J	44 J	440	180 J	1000	220 J
Trichlorofluoromethane (CFC-11)	µg/kg	ND (240)	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
Trifluorotrichloroethane (CFC-113)	µg/kg	ND (240)	ND (250)	ND (250)	ND (250)	18 J	ND (250)
Vinyl chloride	µg/kg	ND (240)	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)
Xylenes (total)	µg/kg	ND (490)	ND (500)	ND (500)	ND (500)	100 J	ND (500)
PCBs							
Aroclor-1016 (PCB-1016)	µg/kg	ND (330)	ND (16)	ND (81)	ND (83)	ND (17)	ND (81)
Aroclor-1221 (PCB-1221)	µg/kg	ND (330)	ND (16)	ND (81)	ND (83)	ND (17)	ND (81)
Aroclor-1232 (PCB-1232)	µg/kg	ND (330)	ND (16)	ND (81)	ND (83)	ND (17)	ND (81)
Aroclor-1242 (PCB-1242)	µg/kg	13000	44	2400	3300	23	2100
Aroclor-1248 (PCB-1248)	µg/kg	ND (330)	ND (16)	ND (81)	ND (83)	ND (17)	ND (81)
Aroclor-1254 (PCB-1254)	µg/kg	ND (330)	ND (16)	ND (81)	ND (83)	ND (17)	ND (81)
Aroclor-1260 (PCB-1260)	µg/kg	ND (330)	ND (16)	ND (81)	ND (83)	ND (17)	ND (81)
Total PCBs	µg/kg	13000	44	2400	3300	23	2100

Notes:

- ND Not detected at the associated reporting limit.
J Estimated concentration.
F1 MS and/or MSD Recovery is outside acceptance limits.
F2 MS/MSD RPD exceeds control limits.
p The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
* LCS or LCSD is outside acceptance limits.

Table 3
Summary of VOC and PCB Data
Concrete Pad Core Samples
Solvent Savers Site, Lincklaen, New York

Sample Location:	Concrete Core Sample 4		Concrete Core Sample 5		Concrete Core Sample 5		Concrete Core Sample 6		Concrete Core Sample 6		Rinse Blank
Sample ID:	CC-121515-BM-004A-INTERVAL2		CC-121515-BM-005A-INTERVAL1		CC-121515-BM-005A-INTERVAL2		CC-121615-BM-006A-INTERVAL1		CC-121615-BM-006A-INTERVAL2		RB-121515-BM-0001
Sample Date:	12/15/2015		12/15/2015		12/15/2015		12/16/2015		12/16/2015		12/15/2015
Sample Depth:	0.5-2 cm		0-0.5 cm		0.5-2 cm		0-0.5 cm		0.5-2 cm		ug/L
Parameters	Units										
Volatiles											
1,1,1-Trichloroethane	µg/kg	ND (250)		ND (250)		ND (250)		56 J		ND (250)	ND (5.0)
1,1,2,2-Tetrachloroethane	µg/kg	ND (250)		ND (250)		ND (250)		ND (250)		ND (250)	ND (5.0)
1,1,2-Trichloroethane	µg/kg	ND (250)		ND (250)		ND (250)		ND (250)		ND (250)	ND (5.0)
1,1-Dichloroethane	µg/kg	ND (250)		ND (250)		ND (250)		ND (250)		ND (250)	ND (5.0)
1,1-Dichloroethene	µg/kg	ND (250)		ND (250)		ND (250)		ND (250)		ND (250)	ND (5.0)
1,2,4-Trichlorobenzene	µg/kg	ND (250)		ND (250)		ND (250)		ND (250)		ND (250)	ND (5.0)
1,2-Dibromo-3-chloropropane (DBCP)	µg/kg	ND (250)		ND (250)		ND (250)		ND (250)		ND (250)	ND (5.0)
1,2-Dibromoethane (Ethylene dibromide)	µg/kg	ND (250)		ND (250)		ND (250)		ND (250)		ND (250)	ND (5.0)
1,2-Dichlorobenzene	µg/kg	ND (250)		ND (250)		ND (250)		150 J		ND (250)	ND (5.0)
1,2-Dichloroethane	µg/kg	ND (250)		ND (250)		ND (250)		ND (250)		ND (250)	ND (5.0)
1,2-Dichloropropane	µg/kg	ND (250)		ND (250)		ND (250)		ND (250)		ND (250)	ND (5.0)
1,3-Dichlorobenzene	µg/kg	ND (250)		ND (250)		ND (250)		ND (250)		ND (250)	ND (5.0)
1,4-Dichlorobenzene	µg/kg	ND (250)		ND (250)		ND (250)		ND (250)		ND (250)	ND (5.0)
2-Butanone (Methyl ethyl ketone) (MEK)	µg/kg	ND (250)		ND (250)		ND (250)		ND (250)		ND (250)	ND (5.0)
2-Hexanone	µg/kg	ND (250)		ND (250)		ND (250)		ND (250)		ND (250)	ND (5.0)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/kg	ND (250)		ND (250)		ND (250)		ND (250)		ND (250)	ND (5.0)
Acetone	µg/kg	ND (1000)		ND (1000)		ND (1000)		ND (1000) *		ND (1000) *	ND (20)
Benzene	µg/kg	ND (250)		ND (250)		ND (250)		ND (250)		ND (250)	ND (5.0)
Bromodichloromethane	µg/kg	ND (250)		ND (250)		ND (250)		ND (250)		ND (250)	ND (5.0) *
Bromoform	µg/kg	ND (250)		ND (250)		ND (250)		ND (250)		ND (250)	ND (5.0)
Bromomethane (Methyl bromide)	µg/kg	ND (250)		ND (250)		ND (250)		ND (250)		ND (250)	ND (5.0)
Carbon disulfide	µg/kg	ND (250)		ND (250)		ND (250)		ND (250)		ND (250)	ND (5.0)
Carbon tetrachloride	µg/kg	ND (250)		ND (250)		ND (250)		ND (250)		ND (250)	ND (5.0)
Chlorobenzene	µg/kg	ND (250)		ND (250)		ND (250)		ND (250)		ND (250)	ND (5.0)
Chloroethane	µg/kg	ND (250)		ND (250)		ND (250)		ND (250)		ND (250)	ND (5.0)
Chloroform (Trichloromethane)	µg/kg	ND (250)		ND (250)		ND (250)		ND (250)		ND (250)	ND (5.0)
Chloromethane (Methyl chloride)	µg/kg	ND (250)		ND (250)		ND (250)		ND (250)		ND (250)	ND (5.0)
cis-1,2-Dichloroethene	µg/kg	ND (250)		ND (250)		ND (250)		ND (250)		ND (250)	ND (5.0)
cis-1,3-Dichloropropene	µg/kg	ND (250)		ND (250)		ND (250)		ND (250)		ND (250)	ND (5.0)
Cyclohexane	µg/kg	ND (250)		ND (250)		ND (250)		ND (250)		ND (250)	ND (5.0)
Dibromochloromethane	µg/kg	ND (250)		ND (250)		ND (250)		ND (250)		ND (250)	ND (5.0) *
Dichlorodifluoromethane (CFC-12)	µg/kg	ND (250)		ND (250)		ND (250)		ND (250)		ND (250)	ND (5.0)
Ethylbenzene	µg/kg	ND (250)		ND (250)		ND (250)		ND (250)		ND (250)	ND (5.0)
Isopropyl benzene	µg/kg	ND (250)		ND (250)		ND (250)		ND (250)		ND (250)	ND (5.0)
Methyl acetate	µg/kg	ND (1200)		ND (1300)		ND (1300)		110 J		ND (1200)	ND (25)
Methyl cyclohexane	µg/kg	ND (250)		ND (250)		ND (250)		ND (250)		ND (250)	ND (5.0)
Methyl tert butyl ether (MTBE)	µg/kg	ND (250)		ND (250)		ND (250)		ND (250)		ND (250)	ND (5.0)
Methylene chloride	µg/kg	ND (250)		ND (250)		ND (250)		ND (250)		ND (250)	ND (5.0)
Styrene	µg/kg	ND (250)		ND (250)		ND (250)		ND (250)		ND (250)	ND (5.0)
Tetrachloroethene	µg/kg	53 J		ND (250)		ND (250)		75 J		ND (250)	ND (5.0)
Toluene	µg/kg	170 J		ND (250)		ND (250)		51 J		ND (250)	ND (5.0)
trans-1,2-Dichloroethene	µg/kg	ND (250)		ND (250)		ND (250)		ND (250)		ND (250)	ND (5.0)
trans-1,3-Dichloropropene	µg/kg	ND (250)		ND (250)		ND (250)		ND (250)		ND (250)	ND (5.0)
Trichloroethene	µg/kg	400		ND (250)		ND (250)		57 J		ND (250)	ND (5.0)
Trichlorofluoromethane (CFC-11)	µg/kg	ND (250)		ND (250)		ND (250)		ND (250)		ND (250)	ND (5.0) *
Trifluorotrichloroethane (CFC-113)	µg/kg	ND (250)		ND (250)		ND (250)		26 J		ND (250)	ND (5.0)
Vinyl chloride	µg/kg	ND (250)		ND (250)		ND (250)		ND (250)		ND (250)	ND (5.0)
Xylenes (total)	µg/kg	ND (500)		ND (500)		ND (500)		180 J		ND (500)	ND (10)
PCBs											
Aroclor-1016 (PCB-1016)	µg/kg	ND (17)		ND (190)		ND (83)		ND (270)		ND (16)	ND (0.38)
Aroclor-1221 (PCB-1221)	µg/kg	ND (17)		ND (190)		ND (83)		ND (270)		ND (16)	ND (0.38)
Aroclor-1232 (PCB-1232)	µg/kg	ND (17)		ND (190)		ND (83)		ND (270)		ND (16)	ND (0.38)
Aroclor-1242 (PCB-1242)	µg/kg	11 Jp		4300		720		7400		47	ND (0.38)
Aroclor-1248 (PCB-1248)	µg/kg	ND (17)		ND (190)		ND (83)		ND (270)		ND (16)	ND (0.38)
Aroclor-1254 (PCB-1254)	µg/kg	ND (17)		ND (190)		ND (83)		ND (270)		ND (16)	ND (0.38)
Aroclor-1260 (PCB-1260)	µg/kg	ND (17)		ND (190)		ND (83)		ND (270)		ND (16)	ND (0.38)
Total PCBs	µg/kg	11 Jp		4300		720		7400		47	ND

Notes:

ND Not detected at the associated reporting limit.

J Estimated concentration.

F1 MS and/or MSD Recovery is outside acceptance limits.

F2 MS/MSD RPD exceeds control limits.

p The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.

* LCS or LCSD is outside acceptance limits.

Attachment A

Laboratory Data Reports

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pittsburgh

301 Alpha Drive

RIDC Park

Pittsburgh, PA 15238

Tel: (412)963-7058

TestAmerica Job ID: 180-49786-1

Client Project/Site: 2077-20, Solvent Savers

For:

GHD Services Inc.

2055 Niagara Falls Blvd., Suite 3

Niagara Falls, New York 14304

Attn: Mr. Paul McMahon



Authorized for release by:

11/20/2015 1:46:32 PM

Jill Colussy, Project Manager I

(412)963-2444

jill.colussy@testamericainc.com

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www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: GHD Services Inc.
Project/Site: 2077-20, Solvent Savers

TestAmerica Job ID: 180-49786-1

Job ID: 180-49786-1

Laboratory: TestAmerica Pittsburgh

Narrative

Job Narrative 180-49786-1

Receipt

The samples were received on 11/13/2015 8:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.9° C.

The chain of custody did not list a sampling time for the TRIP BLANK. The sample time was logged in.

The chain of custody did not list parameters for the TRIP BLANK. This sample was logged in for VOA analysis.

GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

PCBS

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: GHD Services Inc.
Project/Site: 2077-20, Solvent Savers

TestAmerica Job ID: 180-49786-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Certification Summary

Client: GHD Services Inc.
Project/Site: 2077-20, Solvent Savers

TestAmerica Job ID: 180-49786-1

Laboratory: TestAmerica Pittsburgh

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
New York	NELAP	2	11182	03-31-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
624		Water	1,1,2-Trichloro-1,2,2-trifluoroethane
624		Water	1,2,4-Trichlorobenzene
624		Water	1,2-Dibromo-3-Chloropropane
624		Water	1,2-Dibromoethane
624		Water	2-Butanone (MEK)
624		Water	2-Hexanone
624		Water	4-Methyl-2-pentanone (MIBK)
624		Water	Acetone
624		Water	Carbon disulfide
624		Water	Cyclohexane
624		Water	Isopropylbenzene
624		Water	Methyl acetate
624		Water	Methyl tert-butyl ether
624		Water	Methylcyclohexane

Sample Summary

Client: GHD Services Inc.
Project/Site: 2077-20, Solvent Savers

TestAmerica Job ID: 180-49786-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-49786-1	PW-111215-BM-0002	Water	11/12/15 11:55	11/13/15 08:00
180-49786-2	TRIP BLANK	Water	11/12/15 11:55	11/13/15 08:00

Method Summary

Client: GHD Services Inc.
Project/Site: 2077-20, Solvent Savers

TestAmerica Job ID: 180-49786-1

Method	Method Description	Protocol	Laboratory
624	Volatile Organic Compounds (GC/MS)	40CFR136A	TAL PIT
608	Polychlorinated Biphenyls (PCBs) (GC)	40CFR136A	TAL PIT

Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

Laboratory References:

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 2077-20, Solvent Savers

TestAmerica Job ID: 180-49786-1

Client Sample ID: PW-111215-BM-0002

Date Collected: 11/12/15 11:55

Date Received: 11/13/15 08:00

Lab Sample ID: 180-49786-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	5 mL	5 mL	160650	11/16/15 19:03	DLF	TAL PIT
		Instrument ID: CHHP5								
Total/NA	Prep	608			1050 mL	1.0 mL	160750	11/14/15 07:45	CBY	TAL PIT
Total/NA	Analysis	608		1	1050 mL	1.0 mL	160715	11/17/15 17:09	AKG	TAL PIT
		Instrument ID: CHGC8								

Client Sample ID: TRIP BLANK

Date Collected: 11/12/15 11:55

Date Received: 11/13/15 08:00

Lab Sample ID: 180-49786-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	5 mL	5 mL	160650	11/16/15 19:51	DLF	TAL PIT
		Instrument ID: CHHP5								

Laboratory References:

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PIT

Batch Type: Prep

CBY = Charles Yushinski

Batch Type: Analysis

AKG = Ashok Gupta

DLF = Donald Ferguson

Client Sample Results

Client: GHD Services Inc.
Project/Site: 2077-20, Solvent Savers

TestAmerica Job ID: 180-49786-1

Client Sample ID: PW-111215-BM-0002

Lab Sample ID: 180-49786-1

Date Collected: 11/12/15 11:55

Matrix: Water

Date Received: 11/13/15 08:00

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.29 ug/L			11/16/15 19:03	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.20 ug/L			11/16/15 19:03	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.32 ug/L			11/16/15 19:03	1
1,1,2-Trichloroethane	ND		1.0	0.20 ug/L			11/16/15 19:03	1
1,1-Dichloroethane	ND		1.0	0.12 ug/L			11/16/15 19:03	1
1,1-Dichloroethene	ND		1.0	0.30 ug/L			11/16/15 19:03	1
1,2,4-Trichlorobenzene	ND		1.0	0.27 ug/L			11/16/15 19:03	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.14 ug/L			11/16/15 19:03	1
1,2-Dichlorobenzene	ND		1.0	0.15 ug/L			11/16/15 19:03	1
1,2-Dichloroethane	ND		1.0	0.21 ug/L			11/16/15 19:03	1
1,2-Dichloroethene, Total	ND		1.0	0.51 ug/L			11/16/15 19:03	1
1,2-Dichloropropane	ND		1.0	0.095 ug/L			11/16/15 19:03	1
1,3-Dichlorobenzene	ND		1.0	0.11 ug/L			11/16/15 19:03	1
1,4-Dichlorobenzene	ND		1.0	0.21 ug/L			11/16/15 19:03	1
2-Butanone (MEK)	ND		5.0	0.55 ug/L			11/16/15 19:03	1
2-Hexanone	ND		5.0	0.16 ug/L			11/16/15 19:03	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.53 ug/L			11/16/15 19:03	1
Acetone	ND		5.0	2.5 ug/L			11/16/15 19:03	1
Benzene	ND		1.0	0.11 ug/L			11/16/15 19:03	1
Bromoform	ND		1.0	0.19 ug/L			11/16/15 19:03	1
Bromomethane	ND		1.0	0.31 ug/L			11/16/15 19:03	1
Carbon disulfide	ND		1.0	0.21 ug/L			11/16/15 19:03	1
Carbon tetrachloride	ND		1.0	0.14 ug/L			11/16/15 19:03	1
Chlorobenzene	ND		1.0	0.14 ug/L			11/16/15 19:03	1
Chlorodibromomethane	ND		1.0	0.14 ug/L			11/16/15 19:03	1
Chloroform	ND		1.0	0.17 ug/L			11/16/15 19:03	1
Chloromethane	ND		1.0	0.28 ug/L			11/16/15 19:03	1
Chloroethane	ND		1.0	0.21 ug/L			11/16/15 19:03	1
cis-1,2-Dichloroethene	ND		1.0	0.24 ug/L			11/16/15 19:03	1
cis-1,3-Dichloropropene	ND		1.0	0.19 ug/L			11/16/15 19:03	1
Cyclohexane	ND		1.0	0.25 ug/L			11/16/15 19:03	1
Dichlorobromomethane	ND		1.0	0.13 ug/L			11/16/15 19:03	1
Dichlorodifluoromethane	ND		1.0	0.19 ug/L			11/16/15 19:03	1
Ethylbenzene	ND		1.0	0.23 ug/L			11/16/15 19:03	1
1,2-Dibromoethane	ND		1.0	0.18 ug/L			11/16/15 19:03	1
Isopropylbenzene	ND		1.0	0.16 ug/L			11/16/15 19:03	1
Methyl acetate	ND		1.0	0.14 ug/L			11/16/15 19:03	1
Methyl tert-butyl ether	ND		1.0	0.18 ug/L			11/16/15 19:03	1
Methylcyclohexane	ND		1.0	0.26 ug/L			11/16/15 19:03	1
Methylene Chloride	ND		1.0	0.15 ug/L			11/16/15 19:03	1
m-Xylene & p-Xylene	ND		2.0	0.41 ug/L			11/16/15 19:03	1
o-Xylene	ND		1.0	0.11 ug/L			11/16/15 19:03	1
Styrene	ND		1.0	0.097 ug/L			11/16/15 19:03	1
Tetrachloroethene	ND		1.0	0.15 ug/L			11/16/15 19:03	1
Toluene	ND		1.0	0.15 ug/L			11/16/15 19:03	1
trans-1,2-Dichloroethene	ND		1.0	0.17 ug/L			11/16/15 19:03	1
trans-1,3-Dichloropropene	ND		1.0	0.15 ug/L			11/16/15 19:03	1
Trichloroethene	ND		1.0	0.14 ug/L			11/16/15 19:03	1
Trichlorofluoromethane	ND		1.0	0.20 ug/L			11/16/15 19:03	1

TestAmerica Pittsburgh

Client Sample Results

Client: GHD Services Inc.
Project/Site: 2077-20, Solvent Savers

TestAmerica Job ID: 180-49786-1

Client Sample ID: PW-111215-BM-0002

Lab Sample ID: 180-49786-1

Date Collected: 11/12/15 11:55

Matrix: Water

Date Received: 11/13/15 08:00

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	ND		3.0	0.49 ug/L			11/16/15 19:03	1
Vinyl chloride	ND		1.0	0.23 ug/L			11/16/15 19:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		58 - 135		11/16/15 19:03	1
4-Bromofluorobenzene (Surr)	105		62 - 123		11/16/15 19:03	1
Dibromofluoromethane (Surr)	100		64 - 128		11/16/15 19:03	1
Toluene-d8 (Surr)	100		71 - 118		11/16/15 19:03	1

Method: 608 - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.086	0.0035 ug/L		11/14/15 07:45	11/17/15 17:09	1
PCB-1221	ND		0.086	0.0056 ug/L		11/14/15 07:45	11/17/15 17:09	1
PCB-1232	ND		0.086	0.0057 ug/L		11/14/15 07:45	11/17/15 17:09	1
PCB-1242	ND		0.086	0.0032 ug/L		11/14/15 07:45	11/17/15 17:09	1
PCB-1248	ND		0.086	0.0030 ug/L		11/14/15 07:45	11/17/15 17:09	1
PCB-1254	ND		0.086	0.0042 ug/L		11/14/15 07:45	11/17/15 17:09	1
PCB-1260	ND		0.086	0.0027 ug/L		11/14/15 07:45	11/17/15 17:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	138		20 - 150	11/14/15 07:45	11/17/15 17:09	1
Tetrachloro-m-xylene (Surr)	116		20 - 150	11/14/15 07:45	11/17/15 17:09	1
DCB Decachlorobiphenyl (Surr)	136		44 - 150	11/14/15 07:45	11/17/15 17:09	1
DCB Decachlorobiphenyl (Surr)	126		44 - 150	11/14/15 07:45	11/17/15 17:09	1

Client Sample ID: TRIP BLANK

Lab Sample ID: 180-49786-2

Date Collected: 11/12/15 11:55

Matrix: Water

Date Received: 11/13/15 08:00

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.29 ug/L			11/16/15 19:51	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.20 ug/L			11/16/15 19:51	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.32 ug/L			11/16/15 19:51	1
1,1,2-Trichloroethane	ND		1.0	0.20 ug/L			11/16/15 19:51	1
1,1-Dichloroethane	ND		1.0	0.12 ug/L			11/16/15 19:51	1
1,1-Dichloroethene	ND		1.0	0.30 ug/L			11/16/15 19:51	1
1,2,4-Trichlorobenzene	ND		1.0	0.27 ug/L			11/16/15 19:51	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.14 ug/L			11/16/15 19:51	1
1,2-Dichlorobenzene	ND		1.0	0.15 ug/L			11/16/15 19:51	1
1,2-Dichloroethane	ND		1.0	0.21 ug/L			11/16/15 19:51	1
1,2-Dichloroethene, Total	ND		1.0	0.51 ug/L			11/16/15 19:51	1
1,2-Dichloropropane	ND		1.0	0.095 ug/L			11/16/15 19:51	1
1,3-Dichlorobenzene	ND		1.0	0.11 ug/L			11/16/15 19:51	1
1,4-Dichlorobenzene	ND		1.0	0.21 ug/L			11/16/15 19:51	1
2-Butanone (MEK)	ND		5.0	0.55 ug/L			11/16/15 19:51	1
2-Hexanone	ND		5.0	0.16 ug/L			11/16/15 19:51	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.53 ug/L			11/16/15 19:51	1
Acetone	5.2		5.0	2.5 ug/L			11/16/15 19:51	1
Benzene	ND		1.0	0.11 ug/L			11/16/15 19:51	1

TestAmerica Pittsburgh

Client Sample Results

Client: GHD Services Inc.
Project/Site: 2077-20, Solvent Savers

TestAmerica Job ID: 180-49786-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 180-49786-2

Date Collected: 11/12/15 11:55

Matrix: Water

Date Received: 11/13/15 08:00

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Bromoform	ND		1.0	0.19 ug/L			11/16/15 19:51	1
Bromomethane	ND		1.0	0.31 ug/L			11/16/15 19:51	1
Carbon disulfide	ND		1.0	0.21 ug/L			11/16/15 19:51	1
Carbon tetrachloride	ND		1.0	0.14 ug/L			11/16/15 19:51	1
Chlorobenzene	ND		1.0	0.14 ug/L			11/16/15 19:51	1
Chlorodibromomethane	ND		1.0	0.14 ug/L			11/16/15 19:51	1
Chloroform	ND		1.0	0.17 ug/L			11/16/15 19:51	1
Chloromethane	ND		1.0	0.28 ug/L			11/16/15 19:51	1
Chloroethane	ND		1.0	0.21 ug/L			11/16/15 19:51	1
cis-1,2-Dichloroethene	ND		1.0	0.24 ug/L			11/16/15 19:51	1
cis-1,3-Dichloropropene	ND		1.0	0.19 ug/L			11/16/15 19:51	1
Cyclohexane	ND		1.0	0.25 ug/L			11/16/15 19:51	1
Dichlorobromomethane	ND		1.0	0.13 ug/L			11/16/15 19:51	1
Dichlorodifluoromethane	ND		1.0	0.19 ug/L			11/16/15 19:51	1
Ethylbenzene	ND		1.0	0.23 ug/L			11/16/15 19:51	1
1,2-Dibromoethane	ND		1.0	0.18 ug/L			11/16/15 19:51	1
Isopropylbenzene	ND		1.0	0.16 ug/L			11/16/15 19:51	1
Methyl acetate	ND		1.0	0.14 ug/L			11/16/15 19:51	1
Methyl tert-butyl ether	ND		1.0	0.18 ug/L			11/16/15 19:51	1
Methylcyclohexane	ND		1.0	0.26 ug/L			11/16/15 19:51	1
Methylene Chloride	2.1		1.0	0.15 ug/L			11/16/15 19:51	1
m-Xylene & p-Xylene	ND		2.0	0.41 ug/L			11/16/15 19:51	1
o-Xylene	ND		1.0	0.11 ug/L			11/16/15 19:51	1
Styrene	ND		1.0	0.097 ug/L			11/16/15 19:51	1
Tetrachloroethene	ND		1.0	0.15 ug/L			11/16/15 19:51	1
Toluene	ND		1.0	0.15 ug/L			11/16/15 19:51	1
trans-1,2-Dichloroethene	ND		1.0	0.17 ug/L			11/16/15 19:51	1
trans-1,3-Dichloropropene	ND		1.0	0.15 ug/L			11/16/15 19:51	1
Trichloroethene	ND		1.0	0.14 ug/L			11/16/15 19:51	1
Trichlorofluoromethane	ND		1.0	0.20 ug/L			11/16/15 19:51	1
Xylenes, Total	ND		3.0	0.49 ug/L			11/16/15 19:51	1
Vinyl chloride	ND		1.0	0.23 ug/L			11/16/15 19:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		58 - 135		11/16/15 19:51	1
4-Bromofluorobenzene (Surr)	100		62 - 123		11/16/15 19:51	1
Dibromofluoromethane (Surr)	99		64 - 128		11/16/15 19:51	1
Toluene-d8 (Surr)	98		71 - 118		11/16/15 19:51	1

TestAmerica Pittsburgh

QC Sample Results

Client: GHD Services Inc.
Project/Site: 2077-20, Solvent Savers

TestAmerica Job ID: 180-49786-1

Method: 624 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 180-160650/4

Matrix: Water

Analysis Batch: 160650

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.29 ug/L			11/16/15 16:14	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.20 ug/L			11/16/15 16:14	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.32 ug/L			11/16/15 16:14	1
1,1,2-Trichloroethane	ND		1.0	0.20 ug/L			11/16/15 16:14	1
1,1-Dichloroethane	ND		1.0	0.12 ug/L			11/16/15 16:14	1
1,1-Dichloroethene	ND		1.0	0.30 ug/L			11/16/15 16:14	1
1,2,4-Trichlorobenzene	ND		1.0	0.27 ug/L			11/16/15 16:14	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.14 ug/L			11/16/15 16:14	1
1,2-Dichlorobenzene	ND		1.0	0.15 ug/L			11/16/15 16:14	1
1,2-Dichloroethane	ND		1.0	0.21 ug/L			11/16/15 16:14	1
1,2-Dichloroethene, Total	ND		1.0	0.51 ug/L			11/16/15 16:14	1
1,2-Dichloropropane	ND		1.0	0.095 ug/L			11/16/15 16:14	1
1,3-Dichlorobenzene	ND		1.0	0.11 ug/L			11/16/15 16:14	1
1,4-Dichlorobenzene	ND		1.0	0.21 ug/L			11/16/15 16:14	1
2-Butanone (MEK)	ND		5.0	0.55 ug/L			11/16/15 16:14	1
2-Hexanone	ND		5.0	0.16 ug/L			11/16/15 16:14	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.53 ug/L			11/16/15 16:14	1
Acetone	ND		5.0	2.5 ug/L			11/16/15 16:14	1
Benzene	ND		1.0	0.11 ug/L			11/16/15 16:14	1
Bromoform	ND		1.0	0.19 ug/L			11/16/15 16:14	1
Bromomethane	ND		1.0	0.31 ug/L			11/16/15 16:14	1
Carbon disulfide	ND		1.0	0.21 ug/L			11/16/15 16:14	1
Carbon tetrachloride	ND		1.0	0.14 ug/L			11/16/15 16:14	1
Chlorobenzene	ND		1.0	0.14 ug/L			11/16/15 16:14	1
Chlorodibromomethane	ND		1.0	0.14 ug/L			11/16/15 16:14	1
Chloroform	ND		1.0	0.17 ug/L			11/16/15 16:14	1
Chloromethane	ND		1.0	0.28 ug/L			11/16/15 16:14	1
Chloroethane	ND		1.0	0.21 ug/L			11/16/15 16:14	1
cis-1,2-Dichloroethene	ND		1.0	0.24 ug/L			11/16/15 16:14	1
cis-1,3-Dichloropropene	ND		1.0	0.19 ug/L			11/16/15 16:14	1
Cyclohexane	ND		1.0	0.25 ug/L			11/16/15 16:14	1
Dichlorobromomethane	ND		1.0	0.13 ug/L			11/16/15 16:14	1
Dichlorodifluoromethane	ND		1.0	0.19 ug/L			11/16/15 16:14	1
Ethylbenzene	ND		1.0	0.23 ug/L			11/16/15 16:14	1
1,2-Dibromoethane	ND		1.0	0.18 ug/L			11/16/15 16:14	1
Isopropylbenzene	ND		1.0	0.16 ug/L			11/16/15 16:14	1
Methyl acetate	ND		1.0	0.14 ug/L			11/16/15 16:14	1
Methyl tert-butyl ether	ND		1.0	0.18 ug/L			11/16/15 16:14	1
Methylcyclohexane	ND		1.0	0.26 ug/L			11/16/15 16:14	1
Methylene Chloride	ND		1.0	0.15 ug/L			11/16/15 16:14	1
m-Xylene & p-Xylene	ND		2.0	0.41 ug/L			11/16/15 16:14	1
o-Xylene	ND		1.0	0.11 ug/L			11/16/15 16:14	1
Styrene	ND		1.0	0.097 ug/L			11/16/15 16:14	1
Tetrachloroethene	ND		1.0	0.15 ug/L			11/16/15 16:14	1
Toluene	ND		1.0	0.15 ug/L			11/16/15 16:14	1
trans-1,2-Dichloroethene	ND		1.0	0.17 ug/L			11/16/15 16:14	1
trans-1,3-Dichloropropene	ND		1.0	0.15 ug/L			11/16/15 16:14	1
Trichloroethene	ND		1.0	0.14 ug/L			11/16/15 16:14	1

TestAmerica Pittsburgh

QC Sample Results

Client: GHD Services Inc.
Project/Site: 2077-20, Solvent Savers

TestAmerica Job ID: 180-49786-1

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 180-160650/4

Matrix: Water

Analysis Batch: 160650

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	ND		1.0	0.20 ug/L			11/16/15 16:14	1
Xylenes, Total	ND		3.0	0.49 ug/L			11/16/15 16:14	1
Vinyl chloride	ND		1.0	0.23 ug/L			11/16/15 16:14	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		58 - 135		11/16/15 16:14	1
4-Bromofluorobenzene (Surr)	102		62 - 123		11/16/15 16:14	1
Dibromofluoromethane (Surr)	97		64 - 128		11/16/15 16:14	1
Toluene-d8 (Surr)	100		71 - 118		11/16/15 16:14	1

Lab Sample ID: LCS 180-160650/1002

Matrix: Water

Analysis Batch: 160650

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	10.0	9.15		ug/L		92	75 - 125
1,1,2,2-Tetrachloroethane	10.0	9.81		ug/L		98	60 - 140
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	9.40		ug/L		94	46 - 148
1,1,2-Trichloroethane	10.0	9.88		ug/L		99	71 - 129
1,1-Dichloroethane	10.0	9.07		ug/L		91	72 - 128
1,1-Dichloroethene	10.0	8.94		ug/L		89	60 - 130
1,2,4-Trichlorobenzene	10.0	10.4		ug/L		104	55 - 140
1,2-Dibromo-3-Chloropropane	10.0	8.40		ug/L		84	37 - 133
1,2-Dichlorobenzene	10.0	10.0		ug/L		100	68 - 127
1,2-Dichloroethane	10.0	9.12		ug/L		91	68 - 132
1,2-Dichloroethene, Total	20.0	18.2		ug/L		91	69 - 125
1,2-Dichloropropane	10.0	9.29		ug/L		93	50 - 150
1,3-Dichlorobenzene	10.0	10.2		ug/L		102	73 - 127
1,4-Dichlorobenzene	10.0	9.93		ug/L		99	65 - 127
2-Butanone (MEK)	20.0	18.7		ug/L		94	39 - 138
2-Hexanone	20.0	18.5		ug/L		93	25 - 132
4-Methyl-2-pentanone (MIBK)	20.0	19.4		ug/L		97	60 - 135
Acetone	20.0	18.9		ug/L		95	22 - 150
Benzene	10.0	9.38		ug/L		94	71 - 129
Bromoform	10.0	9.14		ug/L		91	56 - 139
Bromomethane	10.0	10.5		ug/L		105	40 - 146
Carbon disulfide	10.0	8.51		ug/L		85	52 - 138
Carbon tetrachloride	10.0	8.92		ug/L		89	70 - 140
Chlorobenzene	10.0	10.4		ug/L		104	73 - 125
Chlorodibromomethane	10.0	9.53		ug/L		95	67 - 133
Chloroform	10.0	9.46		ug/L		95	67 - 133
Chloromethane	10.0	9.91		ug/L		99	51 - 137
Chloroethane	10.0	9.99		ug/L		100	47 - 143
cis-1,2-Dichloroethene	10.0	9.15		ug/L		91	69 - 127
cis-1,3-Dichloropropene	10.0	8.77		ug/L		88	50 - 140
Cyclohexane	10.0	9.09		ug/L		91	45 - 142
Dichlorobromomethane	10.0	9.26		ug/L		93	65 - 135

TestAmerica Pittsburgh

QC Sample Results

Client: GHD Services Inc.
Project/Site: 2077-20, Solvent Savers

TestAmerica Job ID: 180-49786-1

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 180-160650/1002

Matrix: Water

Analysis Batch: 160650

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dichlorodifluoromethane	10.0	10.6		ug/L		106	38 - 145
Ethylbenzene	10.0	10.5		ug/L		105	65 - 133
1,2-Dibromoethane	10.0	9.60		ug/L		96	74 - 123
Isopropylbenzene	10.0	10.7		ug/L		107	58 - 130
Methyl acetate	50.0	42.7		ug/L		85	47 - 142
Methyl tert-butyl ether	10.0	8.18		ug/L		82	50 - 150
Methylcyclohexane	10.0	9.26		ug/L		93	45 - 145
Methylene Chloride	10.0	8.42		ug/L		84	60 - 140
m-Xylene & p-Xylene	10.0	10.4		ug/L		104	73 - 130
o-Xylene	10.0	10.6		ug/L		106	72 - 124
Styrene	10.0	10.5		ug/L		105	70 - 130
Tetrachloroethene	10.0	10.3		ug/L		103	73 - 127
Toluene	10.0	10.2		ug/L		102	74 - 126
trans-1,2-Dichloroethene	10.0	9.03		ug/L		90	69 - 131
trans-1,3-Dichloropropene	10.0	9.33		ug/L		93	64 - 134
Trichloroethene	10.0	9.35		ug/L		93	73 - 125
Trichlorofluoromethane	10.0	9.96		ug/L		100	56 - 141
Xylenes, Total	20.0	21.0		ug/L		105	53 - 140
Vinyl chloride	10.0	10.2		ug/L		102	30 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		58 - 135
4-Bromofluorobenzene (Surr)	103		62 - 123
Dibromofluoromethane (Surr)	99		64 - 128
Toluene-d8 (Surr)	100		71 - 118

Method: 608 - Polychlorinated Biphenyls (PCBs) (GC)

Lab Sample ID: MB 180-160750/1-A

Matrix: Water

Analysis Batch: 160715

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 160750

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.090	0.0037 ug/L		11/14/15 07:45	11/17/15 16:47	1
PCB-1221	ND		0.090	0.0059 ug/L		11/14/15 07:45	11/17/15 16:47	1
PCB-1232	ND		0.090	0.0060 ug/L		11/14/15 07:45	11/17/15 16:47	1
PCB-1242	ND		0.090	0.0034 ug/L		11/14/15 07:45	11/17/15 16:47	1
PCB-1248	ND		0.090	0.0032 ug/L		11/14/15 07:45	11/17/15 16:47	1
PCB-1254	ND		0.090	0.0044 ug/L		11/14/15 07:45	11/17/15 16:47	1
PCB-1260	ND		0.090	0.0029 ug/L		11/14/15 07:45	11/17/15 16:47	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	102		20 - 150	11/14/15 07:45	11/17/15 16:47	1
Tetrachloro-m-xylene (Surr)	96		20 - 150	11/14/15 07:45	11/17/15 16:47	1
DCB Decachlorobiphenyl (Surr)	97		44 - 150	11/14/15 07:45	11/17/15 16:47	1
DCB Decachlorobiphenyl (Surr)	100		44 - 150	11/14/15 07:45	11/17/15 16:47	1

TestAmerica Pittsburgh

QC Sample Results

Client: GHD Services Inc.
Project/Site: 2077-20, Solvent Savers

TestAmerica Job ID: 180-49786-1

Method: 608 - Polychlorinated Biphenyls (PCBs) (GC) (Continued)

Lab Sample ID: LCS 180-160750/2-A

Matrix: Water

Analysis Batch: 160715

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 160750

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	1.00	1.05		ug/L		105	50 - 114
PCB-1260	1.00	1.19		ug/L		119	10 - 127

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene (Surr)	110		20 - 150
Tetrachloro-m-xylene (Surr)	101		20 - 150
DCB Decachlorobiphenyl (Surr)	113		44 - 150
DCB Decachlorobiphenyl (Surr)	107		44 - 150

Lab Sample ID: LCSD 180-160750/3-A

Matrix: Water

Analysis Batch: 160715

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 160750

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
PCB-1016	1.00	0.930		ug/L		93	50 - 114	12	20
PCB-1260	1.00	1.05		ug/L		105	10 - 127	13	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Tetrachloro-m-xylene (Surr)	101		20 - 150
Tetrachloro-m-xylene (Surr)	93		20 - 150
DCB Decachlorobiphenyl (Surr)	105		44 - 150
DCB Decachlorobiphenyl (Surr)	99		44 - 150

QC Association Summary

Client: GHD Services Inc.
Project/Site: 2077-20, Solvent Savers

TestAmerica Job ID: 180-49786-1

GC/MS VOA

Analysis Batch: 160650

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-49786-1	PW-111215-BM-0002	Total/NA	Water	624	
180-49786-2	TRIP BLANK	Total/NA	Water	624	
LCS 180-160650/1002	Lab Control Sample	Total/NA	Water	624	
MB 180-160650/4	Method Blank	Total/NA	Water	624	

GC Semi VOA

Analysis Batch: 160715

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-49786-1	PW-111215-BM-0002	Total/NA	Water	608	160750
LCS 180-160750/2-A	Lab Control Sample	Total/NA	Water	608	160750
LCSD 180-160750/3-A	Lab Control Sample Dup	Total/NA	Water	608	160750
MB 180-160750/1-A	Method Blank	Total/NA	Water	608	160750

Prep Batch: 160750

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-49786-1	PW-111215-BM-0002	Total/NA	Water	608	
LCS 180-160750/2-A	Lab Control Sample	Total/NA	Water	608	
LCSD 180-160750/3-A	Lab Control Sample Dup	Total/NA	Water	608	
MB 180-160750/1-A	Method Blank	Total/NA	Water	608	



**CONESTOGA-ROVERS
& ASSOCIATES**

CHAIN OF CUSTODY RECORD

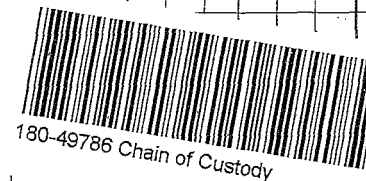
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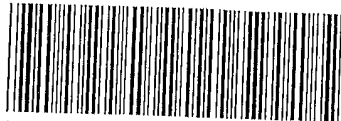
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Chemistry Contact: PAUL MCMAHON				Matrix Code (see back of COC)	Grab (G) or Comp (C)	Unpreserved	Hydrochloric Acid (HCl)	Nitric Acid (HNO ₃)	Sulfuric Acid (H ₂ SO ₄)	Sodium Hydroxide (NaOH)	Methanol/Water (Soil VOC)	EnCores 3x5-g, 1x25-g	Other:	Total Containers/Sample	PCB	VOC	MS/MSD Request	Airbill No: 9683 8769 5915																																																																																																																																																																																																																																																																																																			
Sampler(s): BRYAN MALONE																		Date Shipped: 11/12/15																																																																																																																																																																																																																																																																																																			
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Item</th> <th>SAMPLE IDENTIFICATION (Containers for each sample may be combined on one line)</th> <th>DATE (mm/dd/yyyy)</th> <th>TIME (hh:mm)</th> <th>Matrix Code (see back of COC)</th> <th>Grab (G) or Comp (C)</th> <th>Unpreserved</th> <th>Hydrochloric Acid (HCl)</th> <th>Nitric Acid (HNO₃)</th> <th>Sulfuric Acid (H₂SO₄)</th> <th>Sodium Hydroxide (NaOH)</th> <th>Methanol/Water (Soil VOC)</th> <th>EnCores 3x5-g, 1x25-g</th> <th>Other:</th> <th>Total Containers/Sample</th> <th>PCB</th> <th>VOC</th> <th>MS/MSD Request</th> <th>COMMENTS/ SPECIAL INSTRUCTIONS:</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>PW-111215-BM-0002</td> <td>11/12/15</td> <td>11:55</td> <td>WM</td> <td></td> <td></td> <td>2</td> <td>3</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>5</td> <td>2</td> <td>3</td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>TRIP BLANK</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>1</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>4</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>6</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>7</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>8</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>9</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>10</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>11</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>12</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>13</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>14</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>15</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>				Item	SAMPLE IDENTIFICATION (Containers for each sample may be combined on one line)	DATE (mm/dd/yyyy)	TIME (hh:mm)	Matrix Code (see back of COC)	Grab (G) or Comp (C)	Unpreserved	Hydrochloric Acid (HCl)	Nitric Acid (HNO ₃)	Sulfuric Acid (H ₂ SO ₄)	Sodium Hydroxide (NaOH)	Methanol/Water (Soil VOC)	EnCores 3x5-g, 1x25-g	Other:	Total Containers/Sample	PCB	VOC	MS/MSD Request	COMMENTS/ SPECIAL INSTRUCTIONS:	1	PW-111215-BM-0002	11/12/15	11:55	WM			2	3						5	2	3			2	TRIP BLANK													1					3																			4																			5																			6																			7																			8																			9																			10																			11																			12																			13																			14																			15																				
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All Samples in Cooler must be on COC																																																																																																																																																																																																																																																																																																																					
RELINQUISHED BY				COMPANY		DATE		TIME		RECEIVED BY				COMPANY		DATE		TIME																																																																																																																																																																																																																																																																																																			
1. Bryan Malone				GHD		11/12/15		16:45		1. Blue Water				JAP		11-13-15		8:15																																																																																																																																																																																																																																																																																																			



THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT - ALL FIELDS MUST BE COMPLETED ACCURATELY

Distribution: WHITE - Fully Executed Copy (CRA) YELLOW - Receiving Laboratory Copy PINK - Shipper GOLDENROD - Sampling Crew CRA Form: COC-10B (20110604)





180-49786 Waybill

ORIGIN ID:SYRA (716) 609-0384
GHD SERVICES INC.
2055 NIAGARA FALLS BLVD STE 3
NIAGARA FALLS, NY 143045702
UNITED STATES US

SHIP DATE: 12NOV15
ACTWGT: 34.30 LB
CAD: /PDS1621
DIMS: 21x17x14.19
BILL SENDER

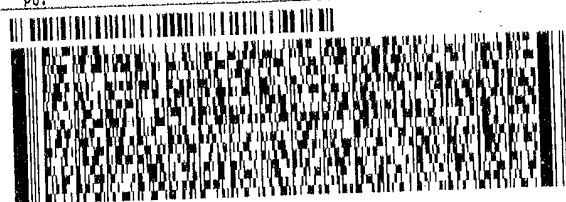
TO **SAMPLING RECIEVING**
TEST AMERICA
301 ALPHA DR

PITTSBURGH PA 15238

(412) 963-7068
TRU1
P01

REF:

DEPT:



FedEx
Express



JT5801508100104

FRI - 13 NOV 8:30A
FIRST OVERNIGHT
NSR
15238
PA-US PIT

TRK# 8083 8769 5915
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Business Day

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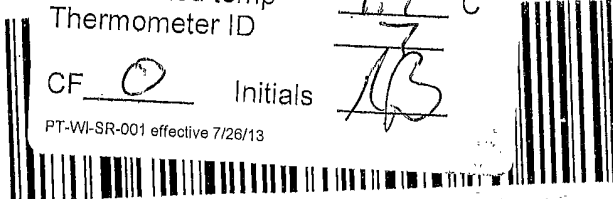
Envelope*

Uncorrected temp
Thermometer ID

1.9 °C

CF 0 Initials 73

PT-WI-SR-001 effective 7/26/13



FEDEX 1 001 001 001

Special Handling and

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 180-49786-1

Login Number: 49786

List Source: TestAmerica Pittsburgh

List Number: 1

Creator: Watson, Debbie

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	False	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pittsburgh

301 Alpha Drive

RIDC Park

Pittsburgh, PA 15238

Tel: (412)963-7058

TestAmerica Job ID: 180-50854-1

TestAmerica Sample Delivery Group: LINCKLAEN, NY

Client Project/Site: 002077-60, Solvent Savers

For:

GHD Services Inc.

2055 Niagara Falls Blvd., Suite 3

Niagara Falls, New York 14304

Attn: Mr. Paul McMahon



Authorized for release by:

12/21/2015 11:26:16 AM

David Dunlap, Senior Project Manager

(412)963-2432

dave.dunlap@testamericainc.com

Designee for

Jill Colussy, Project Manager I

(412)963-2444

jill.colussy@testamericainc.com

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www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: GHD Services Inc.
Project/Site: 002077-60, Solvent Savers

TestAmerica Job ID: 180-50854-1
SDG: LINCKLAEN, NY

Job ID: 180-50854-1

Laboratory: TestAmerica Pittsburgh

Narrative

Job Narrative 180-50854-1

Receipt

The sample was received on 12/17/2015 9:15 AM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.4° C.

GC/MS VOA

Method(s) 624: The following sample was diluted due to foaming of the sample during the purge process at a lesser dilution: W-121615-BM-0002 (180-50854-1). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: GHD Services Inc.
Project/Site: 002077-60, Solvent Savers

TestAmerica Job ID: 180-50854-1
SDG: LINCKLAEN, NY

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Certification Summary

Client: GHD Services Inc.
Project/Site: 002077-60, Solvent Savers

TestAmerica Job ID: 180-50854-1
SDG: LINCKLAEN, NY

Laboratory: TestAmerica Pittsburgh

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
New York	NELAP	2	11182	03-31-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
624		Water	1,1,2-Trichloro-1,2,2-trifluoroethane
624		Water	1,2,4-Trichlorobenzene
624		Water	1,2-Dibromo-3-Chloropropane
624		Water	1,2-Dibromoethane
624		Water	2-Butanone (MEK)
624		Water	2-Hexanone
624		Water	4-Methyl-2-pentanone (MIBK)
624		Water	Acetone
624		Water	Carbon disulfide
624		Water	Cyclohexane
624		Water	Isopropylbenzene
624		Water	Methyl acetate
624		Water	Methyl tert-butyl ether
624		Water	Methylcyclohexane

Sample Summary

Client: GHD Services Inc.
Project/Site: 002077-60, Solvent Savers

TestAmerica Job ID: 180-50854-1
SDG: LINCKLAEN, NY

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-50854-1	W-121615-BM-0002	Water	12/16/15 13:10	12/17/15 14:42

Method Summary

Client: GHD Services Inc.
Project/Site: 002077-60, Solvent Savers

TestAmerica Job ID: 180-50854-1
SDG: LINCKLAEN, NY

Method	Method Description	Protocol	Laboratory
624	Volatile Organic Compounds (GC/MS)	40CFR136A	TAL PIT
608	Polychlorinated Biphenyls (PCBs) (GC)	40CFR136A	TAL PIT

Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

Laboratory References:

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 002077-60, Solvent Savers

TestAmerica Job ID: 180-50854-1
SDG: LINCKLAEN, NY

Client Sample ID: W-121615-BM-0002

Date Collected: 12/16/15 13:10

Date Received: 12/17/15 14:42

Lab Sample ID: 180-50854-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		25	5 mL	5 mL	164070	12/18/15 16:41	DLF	TAL PIT
		Instrument ID: CHHP6								
Total/NA	Prep	608	RA		1060 mL	1.0 mL	163954	12/17/15 15:10	CBY	TAL PIT
Total/NA	Analysis	608	RA	1	1060 mL	1.0 mL	164039	12/19/15 04:00	JMO	TAL PIT
		Instrument ID: CHGC16								
Total/NA	Prep	608			1060 mL	1.0 mL	163954	12/17/15 15:10	CBY	TAL PIT
Total/NA	Analysis	608		1	1060 mL	1.0 mL	164036	12/18/15 12:57	AKG	TAL PIT
		Instrument ID: CHGC8								

Laboratory References:

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PIT

Batch Type: Prep

CBY = Charles Yushinski

Batch Type: Analysis

AKG = Ashok Gupta

DLF = Donald Ferguson

JMO = John Oravec

Client Sample Results

Client: GHD Services Inc.
Project/Site: 002077-60, Solvent Savers

TestAmerica Job ID: 180-50854-1
SDG: LINCKLAEN, NY

Client Sample ID: W-121615-BM-0002

Lab Sample ID: 180-50854-1

Date Collected: 12/16/15 13:10

Matrix: Water

Date Received: 12/17/15 14:42

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	23	J	25	7.2	ug/L			12/18/15 16:41	25
1,1,2,2-Tetrachloroethane	ND		25	5.0	ug/L			12/18/15 16:41	25
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		25	8.0	ug/L			12/18/15 16:41	25
1,1,2-Trichloroethane	ND		25	5.0	ug/L			12/18/15 16:41	25
1,1-Dichloroethane	ND		25	2.9	ug/L			12/18/15 16:41	25
1,1-Dichloroethene	ND		25	7.4	ug/L			12/18/15 16:41	25
1,2,4-Trichlorobenzene	ND		25	6.8	ug/L			12/18/15 16:41	25
1,2-Dibromo-3-Chloropropane	ND		25	3.5	ug/L			12/18/15 16:41	25
1,2-Dibromoethane	ND		25	4.5	ug/L			12/18/15 16:41	25
1,2-Dichlorobenzene	ND		25	3.8	ug/L			12/18/15 16:41	25
1,2-Dichloroethane	ND		25	5.3	ug/L			12/18/15 16:41	25
1,2-Dichloropropane	ND		25	2.4	ug/L			12/18/15 16:41	25
1,3-Dichlorobenzene	ND		25	2.6	ug/L			12/18/15 16:41	25
1,4-Dichlorobenzene	ND		25	5.2	ug/L			12/18/15 16:41	25
2-Butanone (MEK)	ND		130	14	ug/L			12/18/15 16:41	25
2-Hexanone	ND		130	4.0	ug/L			12/18/15 16:41	25
4-Methyl-2-pentanone (MIBK)	ND		130	13	ug/L			12/18/15 16:41	25
Acetone	470		130	63	ug/L			12/18/15 16:41	25
Benzene	ND		25	2.6	ug/L			12/18/15 16:41	25
Bromoform	ND		25	4.8	ug/L			12/18/15 16:41	25
Bromomethane	ND		25	7.8	ug/L			12/18/15 16:41	25
Carbon disulfide	ND		25	5.3	ug/L			12/18/15 16:41	25
Carbon tetrachloride	ND		25	3.4	ug/L			12/18/15 16:41	25
Chlorobenzene	ND		25	3.4	ug/L			12/18/15 16:41	25
Chlorodibromomethane	ND		25	3.4	ug/L			12/18/15 16:41	25
Chloroethane	ND		25	5.4	ug/L			12/18/15 16:41	25
Chloroform	ND		25	4.3	ug/L			12/18/15 16:41	25
Chloromethane	ND		25	7.1	ug/L			12/18/15 16:41	25
cis-1,2-Dichloroethene	ND		25	5.9	ug/L			12/18/15 16:41	25
cis-1,3-Dichloropropene	ND		25	4.7	ug/L			12/18/15 16:41	25
Cyclohexane	ND		25	6.4	ug/L			12/18/15 16:41	25
Dichlorobromomethane	ND		25	3.3	ug/L			12/18/15 16:41	25
Dichlorodifluoromethane	ND		25	4.8	ug/L			12/18/15 16:41	25
Ethylbenzene	ND		25	5.7	ug/L			12/18/15 16:41	25
Isopropylbenzene	ND		25	4.1	ug/L			12/18/15 16:41	25
Methyl acetate	ND		25	3.4	ug/L			12/18/15 16:41	25
Methyl tert-butyl ether	ND		25	4.6	ug/L			12/18/15 16:41	25
Methylcyclohexane	ND		25	6.5	ug/L			12/18/15 16:41	25
Methylene Chloride	36	B	25	3.7	ug/L			12/18/15 16:41	25
m-Xylene & p-Xylene	ND		50	10	ug/L			12/18/15 16:41	25
o-Xylene	ND		25	2.7	ug/L			12/18/15 16:41	25
Styrene	ND		25	2.4	ug/L			12/18/15 16:41	25
Tetrachloroethene	ND		25	3.7	ug/L			12/18/15 16:41	25
Toluene	6.5	J	25	3.8	ug/L			12/18/15 16:41	25
trans-1,2-Dichloroethene	ND		25	4.2	ug/L			12/18/15 16:41	25
trans-1,3-Dichloropropene	ND		25	3.7	ug/L			12/18/15 16:41	25
Trichloroethene	13	J	25	3.6	ug/L			12/18/15 16:41	25
Trichlorofluoromethane	ND		25	5.0	ug/L			12/18/15 16:41	25
Vinyl chloride	ND		25	5.7	ug/L			12/18/15 16:41	25

TestAmerica Pittsburgh

Client Sample Results

Client: GHD Services Inc.
Project/Site: 002077-60, Solvent Savers

TestAmerica Job ID: 180-50854-1
SDG: LINCKLAEN, NY

Client Sample ID: W-121615-BM-0002

Lab Sample ID: 180-50854-1

Date Collected: 12/16/15 13:10

Matrix: Water

Date Received: 12/17/15 14:42

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	ND		75	12	ug/L			12/18/15 16:41	25
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		58 - 135					12/18/15 16:41	25
4-Bromofluorobenzene (Surr)	93		62 - 123					12/18/15 16:41	25
Dibromofluoromethane (Surr)	104		64 - 128					12/18/15 16:41	25
Toluene-d8 (Surr)	90		71 - 118					12/18/15 16:41	25

Method: 608 - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.085	0.0035	ug/L		12/17/15 15:10	12/18/15 12:57	1
PCB-1221	ND		0.085	0.0055	ug/L		12/17/15 15:10	12/18/15 12:57	1
PCB-1232	ND		0.085	0.0057	ug/L		12/17/15 15:10	12/18/15 12:57	1
PCB-1248	ND		0.085	0.0030	ug/L		12/17/15 15:10	12/18/15 12:57	1
PCB-1254	ND		0.085	0.0042	ug/L		12/17/15 15:10	12/18/15 12:57	1
PCB-1260	ND		0.085	0.0027	ug/L		12/17/15 15:10	12/18/15 12:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	94		20 - 150				12/17/15 15:10	12/18/15 12:57	1
Tetrachloro-m-xylene (Surr)	92		20 - 150				12/17/15 15:10	12/18/15 12:57	1
DCB Decachlorobiphenyl (Surr)	118		44 - 150				12/17/15 15:10	12/18/15 12:57	1
DCB Decachlorobiphenyl (Surr)	126		44 - 150				12/17/15 15:10	12/18/15 12:57	1

Method: 608 - Polychlorinated Biphenyls (PCBs) (GC) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1242	0.93		0.085	0.0032	ug/L		12/17/15 15:10	12/19/15 04:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	109		20 - 150				12/17/15 15:10	12/19/15 04:00	1
Tetrachloro-m-xylene (Surr)	105		20 - 150				12/17/15 15:10	12/19/15 04:00	1
DCB Decachlorobiphenyl (Surr)	113		44 - 150				12/17/15 15:10	12/19/15 04:00	1
DCB Decachlorobiphenyl (Surr)	108		44 - 150				12/17/15 15:10	12/19/15 04:00	1

QC Sample Results

Client: GHD Services Inc.
Project/Site: 002077-60, Solvent Savers

TestAmerica Job ID: 180-50854-1
SDG: LINCKLAEN, NY

Method: 624 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 180-164070/5

Matrix: Water

Analysis Batch: 164070

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			12/18/15 13:40	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.20	ug/L			12/18/15 13:40	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.32	ug/L			12/18/15 13:40	1
1,1,2-Trichloroethane	ND		1.0	0.20	ug/L			12/18/15 13:40	1
1,1-Dichloroethane	ND		1.0	0.12	ug/L			12/18/15 13:40	1
1,1-Dichloroethene	ND		1.0	0.30	ug/L			12/18/15 13:40	1
1,2,4-Trichlorobenzene	ND		1.0	0.27	ug/L			12/18/15 13:40	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.14	ug/L			12/18/15 13:40	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			12/18/15 13:40	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			12/18/15 13:40	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			12/18/15 13:40	1
1,2-Dichloropropane	ND		1.0	0.095	ug/L			12/18/15 13:40	1
1,3-Dichlorobenzene	ND		1.0	0.11	ug/L			12/18/15 13:40	1
1,4-Dichlorobenzene	ND		1.0	0.21	ug/L			12/18/15 13:40	1
2-Butanone (MEK)	ND		5.0	0.55	ug/L			12/18/15 13:40	1
2-Hexanone	ND		5.0	0.16	ug/L			12/18/15 13:40	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.53	ug/L			12/18/15 13:40	1
Acetone	ND		5.0	2.5	ug/L			12/18/15 13:40	1
Benzene	ND		1.0	0.11	ug/L			12/18/15 13:40	1
Bromoform	ND		1.0	0.19	ug/L			12/18/15 13:40	1
Bromomethane	ND		1.0	0.31	ug/L			12/18/15 13:40	1
Carbon disulfide	ND		1.0	0.21	ug/L			12/18/15 13:40	1
Carbon tetrachloride	ND		1.0	0.14	ug/L			12/18/15 13:40	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/18/15 13:40	1
Chlorodibromomethane	ND		1.0	0.14	ug/L			12/18/15 13:40	1
Chloroethane	ND		1.0	0.21	ug/L			12/18/15 13:40	1
Chloroform	ND		1.0	0.17	ug/L			12/18/15 13:40	1
Chloromethane	ND		1.0	0.28	ug/L			12/18/15 13:40	1
cis-1,2-Dichloroethene	ND		1.0	0.24	ug/L			12/18/15 13:40	1
cis-1,3-Dichloropropene	ND		1.0	0.19	ug/L			12/18/15 13:40	1
Cyclohexane	ND		1.0	0.25	ug/L			12/18/15 13:40	1
Dichlorobromomethane	ND		1.0	0.13	ug/L			12/18/15 13:40	1
Dichlorodifluoromethane	ND		1.0	0.19	ug/L			12/18/15 13:40	1
Ethylbenzene	ND		1.0	0.23	ug/L			12/18/15 13:40	1
Isopropylbenzene	ND		1.0	0.16	ug/L			12/18/15 13:40	1
Methyl acetate	ND		1.0	0.14	ug/L			12/18/15 13:40	1
Methyl tert-butyl ether	ND		1.0	0.18	ug/L			12/18/15 13:40	1
Methylcyclohexane	ND		1.0	0.26	ug/L			12/18/15 13:40	1
Methylene Chloride	0.196	J	1.0	0.15	ug/L			12/18/15 13:40	1
m-Xylene & p-Xylene	ND		2.0	0.41	ug/L			12/18/15 13:40	1
o-Xylene	ND		1.0	0.11	ug/L			12/18/15 13:40	1
Styrene	ND		1.0	0.097	ug/L			12/18/15 13:40	1
Tetrachloroethene	ND		1.0	0.15	ug/L			12/18/15 13:40	1
Toluene	ND		1.0	0.15	ug/L			12/18/15 13:40	1
trans-1,2-Dichloroethene	ND		1.0	0.17	ug/L			12/18/15 13:40	1
trans-1,3-Dichloropropene	ND		1.0	0.15	ug/L			12/18/15 13:40	1
Trichloroethene	ND		1.0	0.14	ug/L			12/18/15 13:40	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			12/18/15 13:40	1

TestAmerica Pittsburgh

QC Sample Results

Client: GHD Services Inc.
Project/Site: 002077-60, Solvent Savers

TestAmerica Job ID: 180-50854-1
SDG: LINCKLAEN, NY

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 180-164070/5

Matrix: Water

Analysis Batch: 164070

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		1.0	0.23	ug/L			12/18/15 13:40	1
Xylenes, Total	ND		3.0	0.49	ug/L			12/18/15 13:40	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		58 - 135					12/18/15 13:40	1
4-Bromofluorobenzene (Surr)	96		62 - 123					12/18/15 13:40	1
Dibromofluoromethane (Surr)	101		64 - 128					12/18/15 13:40	1
Toluene-d8 (Surr)	95		71 - 118					12/18/15 13:40	1

Lab Sample ID: LCS 180-164070/1002

Matrix: Water

Analysis Batch: 164070

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	10.0	12.0		ug/L		120	75 - 125
1,1,2,2-Tetrachloroethane	10.0	10.1		ug/L		101	60 - 140
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	12.8		ug/L		128	46 - 148
1,1,2-Trichloroethane	10.0	9.94		ug/L		99	71 - 129
1,1-Dichloroethane	10.0	10.8		ug/L		108	72 - 128
1,1-Dichloroethene	10.0	11.1		ug/L		111	60 - 130
1,2,4-Trichlorobenzene	10.0	10.1		ug/L		101	55 - 140
1,2-Dibromo-3-Chloropropane	10.0	9.63		ug/L		96	37 - 133
1,2-Dibromoethane	10.0	10.0		ug/L		100	74 - 123
1,2-Dichlorobenzene	10.0	10.2		ug/L		102	68 - 127
1,2-Dichloroethane	10.0	10.6		ug/L		106	68 - 132
1,2-Dichloropropane	10.0	10.1		ug/L		101	50 - 150
1,3-Dichlorobenzene	10.0	10.2		ug/L		102	73 - 127
1,4-Dichlorobenzene	10.0	10.1		ug/L		101	65 - 127
2-Butanone (MEK)	20.0	22.2		ug/L		111	39 - 138
2-Hexanone	20.0	21.7		ug/L		109	25 - 132
4-Methyl-2-pentanone (MIBK)	20.0	19.6		ug/L		98	60 - 135
Acetone	20.0	28.8		ug/L		144	22 - 150
Benzene	10.0	11.0		ug/L		110	71 - 129
Bromoform	10.0	10.7		ug/L		107	56 - 139
Bromomethane	10.0	7.93		ug/L		79	40 - 146
Carbon disulfide	10.0	11.2		ug/L		112	52 - 138
Carbon tetrachloride	10.0	12.4		ug/L		124	70 - 140
Chlorobenzene	10.0	10.2		ug/L		102	73 - 125
Chlorodibromomethane	10.0	9.76		ug/L		98	67 - 133
Chloroethane	10.0	8.89		ug/L		89	47 - 143
Chloroform	10.0	11.1		ug/L		111	67 - 133
Chloromethane	10.0	8.42		ug/L		84	51 - 137
cis-1,2-Dichloroethene	10.0	11.0		ug/L		110	69 - 127
cis-1,3-Dichloropropene	10.0	9.85		ug/L		99	50 - 140
Cyclohexane	10.0	10.6		ug/L		106	45 - 142
Dichlorobromomethane	10.0	10.2		ug/L		102	65 - 135
Dichlorodifluoromethane	10.0	9.80		ug/L		98	38 - 145

TestAmerica Pittsburgh

QC Sample Results

Client: GHD Services Inc.
Project/Site: 002077-60, Solvent Savers

TestAmerica Job ID: 180-50854-1
SDG: LINCKLAEN, NY

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 180-164070/1002

Matrix: Water

Analysis Batch: 164070

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	10.0	10.2		ug/L		102	65 - 133
Isopropylbenzene	10.0	10.6		ug/L		106	58 - 130
Methyl acetate	50.0	59.2		ug/L		118	47 - 142
Methyl tert-butyl ether	10.0	11.4		ug/L		114	50 - 150
Methylcyclohexane	10.0	11.1		ug/L		111	45 - 145
Methylene Chloride	10.0	10.3		ug/L		103	60 - 140
m-Xylene & p-Xylene	10.0	10.3		ug/L		103	73 - 130
o-Xylene	10.0	9.96		ug/L		100	72 - 124
Styrene	10.0	9.92		ug/L		99	70 - 130
Tetrachloroethene	10.0	10.9		ug/L		109	73 - 127
Toluene	10.0	10.5		ug/L		105	74 - 126
trans-1,2-Dichloroethene	10.0	11.3		ug/L		113	69 - 131
trans-1,3-Dichloropropene	10.0	9.34		ug/L		93	64 - 134
Trichloroethene	10.0	11.7		ug/L		117	73 - 125
Trichlorofluoromethane	10.0	11.7		ug/L		117	56 - 141
Vinyl chloride	10.0	9.34		ug/L		93	30 - 140
Xylenes, Total	20.0	20.3		ug/L		101	53 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	104		58 - 135
4-Bromofluorobenzene (Surr)	98		62 - 123
Dibromofluoromethane (Surr)	106		64 - 128
Toluene-d8 (Surr)	99		71 - 118

Method: 608 - Polychlorinated Biphenyls (PCBs) (GC)

Lab Sample ID: MB 180-163954/1-A

Matrix: Water

Analysis Batch: 164036

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 163954

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.090	0.0037	ug/L		12/17/15 13:00	12/18/15 11:19	1
PCB-1221	ND		0.090	0.0059	ug/L		12/17/15 13:00	12/18/15 11:19	1
PCB-1232	ND		0.090	0.0060	ug/L		12/17/15 13:00	12/18/15 11:19	1
PCB-1242	ND		0.090	0.0034	ug/L		12/17/15 13:00	12/18/15 11:19	1
PCB-1248	ND		0.090	0.0032	ug/L		12/17/15 13:00	12/18/15 11:19	1
PCB-1254	ND		0.090	0.0044	ug/L		12/17/15 13:00	12/18/15 11:19	1
PCB-1260	ND		0.090	0.0029	ug/L		12/17/15 13:00	12/18/15 11:19	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	95		20 - 150	12/17/15 13:00	12/18/15 11:19	1
Tetrachloro-m-xylene (Surr)	94		20 - 150	12/17/15 13:00	12/18/15 11:19	1
DCB Decachlorobiphenyl (Surr)	98		44 - 150	12/17/15 13:00	12/18/15 11:19	1
DCB Decachlorobiphenyl (Surr)	98		44 - 150	12/17/15 13:00	12/18/15 11:19	1

TestAmerica Pittsburgh

QC Sample Results

Client: GHD Services Inc.
Project/Site: 002077-60, Solvent Savers

TestAmerica Job ID: 180-50854-1
SDG: LINCKLAEN, NY

Method: 608 - Polychlorinated Biphenyls (PCBs) (GC) (Continued)

Lab Sample ID: MB 180-163954/1-A

Matrix: Water

Analysis Batch: 164039

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 163954

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.090	0.0037	ug/L		12/17/15 13:00	12/19/15 03:40	1
PCB-1221	ND		0.090	0.0059	ug/L		12/17/15 13:00	12/19/15 03:40	1
PCB-1232	ND		0.090	0.0060	ug/L		12/17/15 13:00	12/19/15 03:40	1
PCB-1242	ND		0.090	0.0034	ug/L		12/17/15 13:00	12/19/15 03:40	1
PCB-1248	ND		0.090	0.0032	ug/L		12/17/15 13:00	12/19/15 03:40	1
PCB-1254	ND		0.090	0.0044	ug/L		12/17/15 13:00	12/19/15 03:40	1
PCB-1260	ND		0.090	0.0029	ug/L		12/17/15 13:00	12/19/15 03:40	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	107		20 - 150	12/17/15 13:00	12/19/15 03:40	1
Tetrachloro-m-xylene (Surr)	105		20 - 150	12/17/15 13:00	12/19/15 03:40	1
DCB Decachlorobiphenyl (Surr)	92		44 - 150	12/17/15 13:00	12/19/15 03:40	1
DCB Decachlorobiphenyl (Surr)	87		44 - 150	12/17/15 13:00	12/19/15 03:40	1

Lab Sample ID: LCS 180-163954/2-A

Matrix: Water

Analysis Batch: 164036

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 163954

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	1.00	0.907		ug/L		91	50 - 114
PCB-1260	1.00	0.934		ug/L		93	10 - 127

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene (Surr)	111		20 - 150
Tetrachloro-m-xylene (Surr)	109		20 - 150
DCB Decachlorobiphenyl (Surr)	115		44 - 150
DCB Decachlorobiphenyl (Surr)	117		44 - 150

Lab Sample ID: LCSD 180-163954/3-A

Matrix: Water

Analysis Batch: 164036

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 163954

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016	1.00	0.872		ug/L		87	50 - 114	4	20
PCB-1260	1.00	0.900		ug/L		90	10 - 127	4	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Tetrachloro-m-xylene (Surr)	97		20 - 150
Tetrachloro-m-xylene (Surr)	95		20 - 150
DCB Decachlorobiphenyl (Surr)	100		44 - 150
DCB Decachlorobiphenyl (Surr)	101		44 - 150

TestAmerica Pittsburgh

QC Association Summary

Client: GHD Services Inc.
Project/Site: 002077-60, Solvent Savers

TestAmerica Job ID: 180-50854-1
SDG: LINCKLAEN, NY

GC/MS VOA

Analysis Batch: 164070

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-50854-1	W-121615-BM-0002	Total/NA	Water	624	
LCS 180-164070/1002	Lab Control Sample	Total/NA	Water	624	
MB 180-164070/5	Method Blank	Total/NA	Water	624	

GC Semi VOA

Prep Batch: 163954

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-50854-1 - RA	W-121615-BM-0002	Total/NA	Water	608	
180-50854-1	W-121615-BM-0002	Total/NA	Water	608	
LCS 180-163954/2-A	Lab Control Sample	Total/NA	Water	608	
LCSD 180-163954/3-A	Lab Control Sample Dup	Total/NA	Water	608	
MB 180-163954/1-A	Method Blank	Total/NA	Water	608	

Analysis Batch: 164036

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-50854-1	W-121615-BM-0002	Total/NA	Water	608	163954
LCS 180-163954/2-A	Lab Control Sample	Total/NA	Water	608	163954
LCSD 180-163954/3-A	Lab Control Sample Dup	Total/NA	Water	608	163954
MB 180-163954/1-A	Method Blank	Total/NA	Water	608	163954

Analysis Batch: 164039

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-50854-1 - RA	W-121615-BM-0002	Total/NA	Water	608	163954
MB 180-163954/1-A	Method Blank	Total/NA	Water	608	163954



**CONESTOGA-ROVERS
& ASSOCIATES**

CHAIN OF CUSTODY RECORD

COC NO.: 48877


PAGE 1 OF 1

Address: _____

Phone: _____ Fax: _____

(See Reverse Side for Instructions)

Project No/ Phase/Task Code: 002077-60				Laboratory Name: TEST AMERICA				Lab Location: PITTSBURGH, PA				SSOW ID:																																																																																																																													
Project Name: SOLVENT SAVERS				Lab Contact:				Lab Quote No:				Cooler No: 253850																																																																																																																													
Project Location: LINERLAEN, NY				CONTAINER QUANTITY & PRESERVATION				ANALYSIS REQUESTED (See Back of COC for Definitions)				Carrier: FEDEX																																																																																																																													
Chemistry Contact: PAUL MCMAHON				<table border="1"> <tr> <th>SAMPLE TYPE</th> <th>Matrix Code (see back of COC)</th> <th>Grab (G) or Comp (C)</th> <th>Unpreserved</th> <th>Hydrochloric Acid (HCl)</th> <th>Nitric Acid (HNO₃)</th> <th>Sulfuric Acid (H₂SO₄)</th> <th>Sodium Hydroxide (NaOH)</th> <th>Methanol/Water (Soil VOC)</th> <th>EnCores 3x5-g, 1x25-g</th> <th>Other:</th> <th>Total Containers/Sample</th> <th>PCB</th> <th>VOC</th> <th>P</th> <th>PH</th> <th>METALS</th> <th>MS/MSD Request</th> </tr> <tr> <td>PAINT</td> <td></td> <td></td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>1</td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>CC</td> <td></td> <td></td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>1</td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>CC</td> <td></td> <td></td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>1</td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>WG</td> <td></td> <td></td> <td>3</td> <td>3</td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>7</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>WG</td> <td></td> <td></td> <td>2</td> <td>3</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>5</td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>WG</td> <td></td> <td></td> <td>3</td> <td>3</td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>7</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td></td> </tr> </table>				SAMPLE TYPE	Matrix Code (see back of COC)	Grab (G) or Comp (C)	Unpreserved	Hydrochloric Acid (HCl)	Nitric Acid (HNO ₃)	Sulfuric Acid (H ₂ SO ₄)	Sodium Hydroxide (NaOH)	Methanol/Water (Soil VOC)	EnCores 3x5-g, 1x25-g	Other:	Total Containers/Sample	PCB	VOC	P	PH	METALS	MS/MSD Request	PAINT			1								1	X	X					CC			1								1	X	X					CC			1								1	X	X					WG			3	3	1						7	X	X	X	X			WG			2	3							5	X	X					WG			3	3	1						7	X	X	X	X			Airbill No: 8682 1848 5565			
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180-50854 Chain of Custody

TAT Required in business days (use separate COCs for different TATs):				Total Number of Containers: 22		Notes/ Special Requirements:	
<input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Days <input type="checkbox"/> 3 Days <input type="checkbox"/> 1 Week <input type="checkbox"/> 2 Week <input type="checkbox"/> Other:				All Samples in Cooler must be on COC			

RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME
1. BRYAN MALONE	CRA (GHD)	12-16-15	18:30	1.	JAG	12/17/15	9:15
2.				2.			
3.				3.			

THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT - ALL FIELDS MUST BE COMPLETED ACCURATELY

Distribution: WHITE - Fully Executed Copy (CRA) YELLOW - Receiving Laboratory Copy PINK - Shipper GOLDENROD - Sampling Crew

CRA Form: COC-10B (20110804)

12/21/2015 Page 16 of 17

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 180-50854-1

SDG Number: LINCKLAEN, NY

Login Number: 50854

List Number: 1

Creator: Kovitch, Christina M

List Source: TestAmerica Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pittsburgh

301 Alpha Drive

RIDC Park

Pittsburgh, PA 15238

Tel: (412)963-7058

TestAmerica Job ID: 180-50858-1

TestAmerica Sample Delivery Group: LINCKLAEN, NY

Client Project/Site: 002077-60 Solvent Savers

Revision: 1

For:

GHD Services Inc.

2055 Niagara Falls Blvd., Suite 3

Niagara Falls, New York 14304

Attn: Mr. Paul McMahon



Authorized for release by:

1/8/2016 4:40:15 PM

Jill Colussy, Project Manager I

(412)963-2444

jill.colussy@testamericainc.com

LINKS

Review your project
results through

TotalAccess

Have a Question?



Visit us at:

www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50858-1
SDG: LINCKLAEN, NY

Job ID: 180-50858-1

Laboratory: TestAmerica Pittsburgh

Narrative

Job Narrative 180-50858-1 RE

Note

This report has been revised. The identification of the PCB detected in sample W-121615-BM-0001 (180-50858-1) was incorrect.

Receipt

The samples were received on 12/17/2015 3:14 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.4° C.

The chain of custody that was received with the samples was incorrect. The wrong sample was marked "HOLD". The corrected chain of custody was e-mailed to the laboratory by the client.

Sample W-121615-BM-0001 was received and placed on hold as per the client. This sample was taken off of hold as per the client on 12/21/2015.

GC/MS VOA

The following sample was diluted due to foaming at the time of purging during the original sample analysis: W-121615-BM-0003 (180-50858-2). Elevated reporting limits (RLs) are provided.

The following sample was diluted to bring the concentration of target analytes within the calibration range: W-121615-BM-0001 (180-50858-1). Elevated reporting limits (RLs) are provided. This sample also foams at purging.

The laboratory control sample (LCS) for batch 164236 recovered outside control limits for the following analytes: 1,1,2-Trichloro-1,2,2-trifluoroethane and trans-1,2-Dichloroethene. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

The continuing calibration verification (CCV) analyzed in batch 164056 was outside the method criteria for the following analyte: Carbon disulfide and Methyl tert-butyl ether. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte is considered estimated.

The continuing calibration verification (CCV) analyzed in batch 164236 was outside the method criteria for the following analyte(s): 1,1,2-Trichloro-1,2,2-trifluoroethane, 1,2-Dibromo-3-Chloropropane, Bromomethane, Chloroethane, Chloromethane, 1,1-Dichloroethene, and cis-1,3-Dichloropropene. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

PCBS

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals

The following sample was diluted to bring the concentration of potassium within the linear range of the instrument: W-121615-BM-0001 (180-50858-1). Elevated reporting limits (RLs) are provided..

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50858-1
SDG: LINCKLAEN, NY

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD is outside acceptance limits.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Certification Summary

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50858-1
SDG: LINCKLAEN, NY

Laboratory: TestAmerica Pittsburgh

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
New York	NELAP	2	11182	03-31-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
9040C		Water	pH

Sample Summary

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50858-1
SDG: LINCKLAEN, NY

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-50858-1	W-121615-BM-0001	Water	12/16/15 13:00	12/17/15 15:14
180-50858-2	W-121615-BM-0003	Water	12/16/15 13:30	12/17/15 15:14
180-50858-3	TRIP BLANK	Water	12/16/15 13:00	12/17/15 15:14

Method Summary

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50858-1
SDG: LINCKLAEN, NY

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds (GC/MS)	SW846	TAL PIT
8082A	Polychlorinated Biphenyls (PCBs) (GC)	SW846	TAL PIT
6010C	Metals (ICP)	SW846	TAL PIT
7470A	Mercury (CVAA)	SW846	TAL PIT
9040C	pH	SW846	TAL PIT

Protocol References:

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

Laboratory References:

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50858-1
SDG: LINCKLAEN, NY

Client Sample ID: W-121615-BM-0001

Date Collected: 12/16/15 13:00

Date Received: 12/17/15 15:14

Lab Sample ID: 180-50858-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		25	5 mL	5 mL	164236	12/21/15 16:52	DLF	TAL PIT
		Instrument ID: CHHP6								
Total/NA	Prep	3510C			1060 mL	1.0 mL	164424	12/22/15 11:30	CBY	TAL PIT
Total/NA	Analysis	8082A		1	1060 mL	1.0 mL	164525	12/23/15 18:06	AKG	TAL PIT
		Instrument ID: CHGC10								
Total Recoverable	Prep	3005A			50 mL	50 mL	164204	12/21/15 06:22	RJR	TAL PIT
Total Recoverable	Analysis	6010C		1	50 mL	50 mL	164363	12/22/15 08:27	RJG	TAL PIT
		Instrument ID: C								
Total Recoverable	Prep	3005A			50 mL	50 mL	164204	12/21/15 06:22	RJR	TAL PIT
Total Recoverable	Analysis	6010C		5	50 mL	50 mL	164363	12/22/15 08:48	RJG	TAL PIT
		Instrument ID: C								
Total/NA	Prep	7470A			50 mL	50 mL	164401	12/22/15 13:21	EVR	TAL PIT
Total/NA	Analysis	7470A		1	50 mL	50 mL	164559	12/23/15 11:13	EVR	TAL PIT
		Instrument ID: K								
Total/NA	Analysis	9040C		1		20 mL	164376	12/22/15 14:37	RJ	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: W-121615-BM-0003

Date Collected: 12/16/15 13:30

Date Received: 12/17/15 15:14

Lab Sample ID: 180-50858-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		100	5 mL	5 mL	164236	12/21/15 16:03	DLF	TAL PIT
		Instrument ID: CHHP6								
Total/NA	Prep	3510C			1050 mL	1.0 mL	164424	12/22/15 11:30	CBY	TAL PIT
Total/NA	Analysis	8082A		1	1050 mL	1.0 mL	164525	12/23/15 18:25	AKG	TAL PIT
		Instrument ID: CHGC10								
Total Recoverable	Prep	3005A			50 mL	50 mL	164204	12/21/15 06:22	RJR	TAL PIT
Total Recoverable	Analysis	6010C		1	50 mL	50 mL	164363	12/22/15 08:32	RJG	TAL PIT
		Instrument ID: C								
Total/NA	Prep	7470A			50 mL	50 mL	164132	12/19/15 09:26	EVR	TAL PIT
Total/NA	Analysis	7470A		1	50 mL	50 mL	164263	12/21/15 10:46	EVR	TAL PIT
		Instrument ID: K								
Total/NA	Analysis	9040C		1		20 mL	164083	12/21/15 09:06	RJ	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: TRIP BLANK

Date Collected: 12/16/15 13:00

Date Received: 12/17/15 15:14

Lab Sample ID: 180-50858-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	164056	12/18/15 17:41	DLF	TAL PIT
		Instrument ID: CHHP5								

TestAmerica Pittsburgh

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50858-1
SDG: LINCKLAEN, NY

Laboratory References:

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PIT

Batch Type: Prep

CBY = Charles Yushinski

EVR = Emilie Reichenbach

RJR = Ron Rosenbaum

Batch Type: Analysis

AKG = Ashok Gupta

DLF = Donald Ferguson

EVR = Emilie Reichenbach

RJ = Rebekah Jaquay

RJG = Rob Good

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50858-1
SDG: LINCKLAEN, NY

Client Sample ID: W-121615-BM-0001

Lab Sample ID: 180-50858-1

Date Collected: 12/16/15 13:00

Matrix: Water

Date Received: 12/17/15 15:14

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	21	J	25	7.2	ug/L			12/21/15 16:52	25
1,1,2,2-Tetrachloroethane	ND		25	5.0	ug/L			12/21/15 16:52	25
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	*	25	8.0	ug/L			12/21/15 16:52	25
1,1,2-Trichloroethane	ND		25	5.0	ug/L			12/21/15 16:52	25
1,1-Dichloroethane	ND		25	2.9	ug/L			12/21/15 16:52	25
1,1-Dichloroethene	ND		25	7.4	ug/L			12/21/15 16:52	25
1,2,4-Trichlorobenzene	ND		25	6.8	ug/L			12/21/15 16:52	25
1,2-Dibromo-3-Chloropropane	ND		25	3.5	ug/L			12/21/15 16:52	25
1,2-Dichlorobenzene	ND		25	3.8	ug/L			12/21/15 16:52	25
1,2-Dichloroethane	ND		25	5.3	ug/L			12/21/15 16:52	25
1,2-Dichloropropane	ND		25	2.4	ug/L			12/21/15 16:52	25
1,3-Dichlorobenzene	ND		25	2.6	ug/L			12/21/15 16:52	25
1,4-Dichlorobenzene	ND		25	5.2	ug/L			12/21/15 16:52	25
2-Butanone (MEK)	ND		130	14	ug/L			12/21/15 16:52	25
2-Hexanone	ND		130	4.0	ug/L			12/21/15 16:52	25
4-Methyl-2-pentanone (MIBK)	ND		130	13	ug/L			12/21/15 16:52	25
Acetone	530		130	63	ug/L			12/21/15 16:52	25
Benzene	ND		25	2.6	ug/L			12/21/15 16:52	25
Bromoform	ND		25	4.8	ug/L			12/21/15 16:52	25
Bromomethane	ND		25	7.8	ug/L			12/21/15 16:52	25
Carbon disulfide	ND		25	5.3	ug/L			12/21/15 16:52	25
Carbon tetrachloride	ND		25	3.4	ug/L			12/21/15 16:52	25
Chlorobenzene	ND		25	3.4	ug/L			12/21/15 16:52	25
Dibromochloromethane	ND		25	3.4	ug/L			12/21/15 16:52	25
Chloroethane	ND		25	5.4	ug/L			12/21/15 16:52	25
Chloroform	ND		25	4.3	ug/L			12/21/15 16:52	25
Chloromethane	ND		25	7.1	ug/L			12/21/15 16:52	25
cis-1,2-Dichloroethene	ND		25	5.9	ug/L			12/21/15 16:52	25
cis-1,3-Dichloropropene	ND		25	4.7	ug/L			12/21/15 16:52	25
Cyclohexane	ND		25	6.4	ug/L			12/21/15 16:52	25
Bromodichloromethane	ND		25	3.3	ug/L			12/21/15 16:52	25
Dichlorodifluoromethane	ND		25	4.8	ug/L			12/21/15 16:52	25
Ethylbenzene	ND		25	5.7	ug/L			12/21/15 16:52	25
1,2-Dibromoethane	ND		25	4.5	ug/L			12/21/15 16:52	25
Isopropylbenzene	ND		25	4.1	ug/L			12/21/15 16:52	25
Methyl acetate	ND		25	3.4	ug/L			12/21/15 16:52	25
Methyl tert-butyl ether	ND		25	4.6	ug/L			12/21/15 16:52	25
Methylcyclohexane	ND		25	6.5	ug/L			12/21/15 16:52	25
Methylene Chloride	75		25	3.1	ug/L			12/21/15 16:52	25
Styrene	ND		25	2.4	ug/L			12/21/15 16:52	25
Tetrachloroethene	ND		25	3.7	ug/L			12/21/15 16:52	25
Toluene	5.4	J	25	3.8	ug/L			12/21/15 16:52	25
trans-1,2-Dichloroethene	ND	*	25	4.2	ug/L			12/21/15 16:52	25
trans-1,3-Dichloropropene	ND		25	3.7	ug/L			12/21/15 16:52	25
Trichloroethene	14	J	25	3.6	ug/L			12/21/15 16:52	25
Trichlorofluoromethane	ND		25	5.0	ug/L			12/21/15 16:52	25
Vinyl chloride	ND		25	5.7	ug/L			12/21/15 16:52	25
Xylenes, Total	ND		75	12	ug/L			12/21/15 16:52	25

TestAmerica Pittsburgh

Client Sample Results

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50858-1
SDG: LINCKLAEN, NY

Client Sample ID: W-121615-BM-0001

Lab Sample ID: 180-50858-1

Date Collected: 12/16/15 13:00

Matrix: Water

Date Received: 12/17/15 15:14

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		70 - 121		12/21/15 16:52	25
Toluene-d8 (Surr)	94		80 - 120		12/21/15 16:52	25
Dibromofluoromethane (Surr)	106		77 - 120		12/21/15 16:52	25
4-Bromofluorobenzene (Surr)	95		80 - 120		12/21/15 16:52	25

Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.085	0.0035	ug/L		12/22/15 11:30	12/23/15 18:06	1
PCB-1221	ND		0.085	0.0055	ug/L		12/22/15 11:30	12/23/15 18:06	1
PCB-1232	ND		0.085	0.0057	ug/L		12/22/15 11:30	12/23/15 18:06	1
PCB-1242	0.75		0.085	0.0032	ug/L		12/22/15 11:30	12/23/15 18:06	1
PCB-1248	ND		0.085	0.0030	ug/L		12/22/15 11:30	12/23/15 18:06	1
PCB-1254	ND		0.085	0.0042	ug/L		12/22/15 11:30	12/23/15 18:06	1
PCB-1260	ND		0.085	0.0027	ug/L		12/22/15 11:30	12/23/15 18:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	115		43 - 138	12/22/15 11:30	12/23/15 18:06	1
Tetrachloro-m-xylene (Surr)	95		34 - 137	12/22/15 11:30	12/23/15 18:06	1

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		5.0	0.69	ug/L		12/21/15 06:22	12/22/15 08:27	1
Aluminum	900		200	37	ug/L		12/21/15 06:22	12/22/15 08:27	1
Arsenic	18		10	3.7	ug/L		12/21/15 06:22	12/22/15 08:27	1
Antimony	9.6	J	10	3.5	ug/L		12/21/15 06:22	12/22/15 08:27	1
Barium	5.8	J	200	0.14	ug/L		12/21/15 06:22	12/22/15 08:27	1
Beryllium	ND		4.0	0.15	ug/L		12/21/15 06:22	12/22/15 08:27	1
Cadmium	ND		5.0	0.26	ug/L		12/21/15 06:22	12/22/15 08:27	1
Calcium	5100		5000	84	ug/L		12/21/15 06:22	12/22/15 08:27	1
Chromium	40		5.0	0.97	ug/L		12/21/15 06:22	12/22/15 08:27	1
Cobalt	4.6	J	50	0.55	ug/L		12/21/15 06:22	12/22/15 08:27	1
Copper	40		25	0.97	ug/L		12/21/15 06:22	12/22/15 08:27	1
Iron	1200		100	15	ug/L		12/21/15 06:22	12/22/15 08:27	1
Lead	ND		10	2.1	ug/L		12/21/15 06:22	12/22/15 08:27	1
Magnesium	280	J	5000	25	ug/L		12/21/15 06:22	12/22/15 08:27	1
Manganese	36		15	0.19	ug/L		12/21/15 06:22	12/22/15 08:27	1
Nickel	12	J	40	0.89	ug/L		12/21/15 06:22	12/22/15 08:27	1
Potassium	1200000		25000	400	ug/L		12/21/15 06:22	12/22/15 08:48	5
Selenium	5.1	J	10	2.5	ug/L		12/21/15 06:22	12/22/15 08:27	1
Sodium	350000		5000	43	ug/L		12/21/15 06:22	12/22/15 08:27	1
Thallium	ND		20	1.4	ug/L		12/21/15 06:22	12/22/15 08:27	1
Vanadium	250		50	4.7	ug/L		12/21/15 06:22	12/22/15 08:27	1
Zinc	130		20	2.9	ug/L		12/21/15 06:22	12/22/15 08:27	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.092	J	0.20	0.078	ug/L		12/22/15 13:21	12/23/15 11:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	10.6	HF	0.100	0.100	SU			12/22/15 14:37	1

TestAmerica Pittsburgh

Client Sample Results

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50858-1
SDG: LINCKLAEN, NY

Client Sample ID: W-121615-BM-0003

Lab Sample ID: 180-50858-2

Date Collected: 12/16/15 13:30

Matrix: Water

Date Received: 12/17/15 15:14

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		100	29	ug/L			12/21/15 16:03	100
1,1,2,2-Tetrachloroethane	ND		100	20	ug/L			12/21/15 16:03	100
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	*	100	32	ug/L			12/21/15 16:03	100
1,1,2-Trichloroethane	ND		100	20	ug/L			12/21/15 16:03	100
1,1-Dichloroethane	ND		100	12	ug/L			12/21/15 16:03	100
1,1-Dichloroethene	ND		100	30	ug/L			12/21/15 16:03	100
1,2,4-Trichlorobenzene	ND		100	27	ug/L			12/21/15 16:03	100
1,2-Dibromo-3-Chloropropane	ND		100	14	ug/L			12/21/15 16:03	100
1,2-Dichlorobenzene	ND		100	15	ug/L			12/21/15 16:03	100
1,2-Dichloroethane	ND		100	21	ug/L			12/21/15 16:03	100
1,2-Dichloropropane	ND		100	9.5	ug/L			12/21/15 16:03	100
1,3-Dichlorobenzene	ND		100	11	ug/L			12/21/15 16:03	100
1,4-Dichlorobenzene	ND		100	21	ug/L			12/21/15 16:03	100
2-Butanone (MEK)	ND		500	55	ug/L			12/21/15 16:03	100
2-Hexanone	ND		500	16	ug/L			12/21/15 16:03	100
4-Methyl-2-pentanone (MIBK)	ND		500	53	ug/L			12/21/15 16:03	100
Acetone	ND		500	250	ug/L			12/21/15 16:03	100
Benzene	ND		100	11	ug/L			12/21/15 16:03	100
Bromoform	ND		100	19	ug/L			12/21/15 16:03	100
Bromomethane	ND		100	31	ug/L			12/21/15 16:03	100
Carbon disulfide	ND		100	21	ug/L			12/21/15 16:03	100
Carbon tetrachloride	ND		100	14	ug/L			12/21/15 16:03	100
Chlorobenzene	ND		100	14	ug/L			12/21/15 16:03	100
Dibromochloromethane	ND		100	14	ug/L			12/21/15 16:03	100
Chloroethane	ND		100	21	ug/L			12/21/15 16:03	100
Chloroform	ND		100	17	ug/L			12/21/15 16:03	100
Chloromethane	ND		100	28	ug/L			12/21/15 16:03	100
cis-1,2-Dichloroethene	71	J	100	24	ug/L			12/21/15 16:03	100
cis-1,3-Dichloropropene	ND		100	19	ug/L			12/21/15 16:03	100
Cyclohexane	99	J	100	25	ug/L			12/21/15 16:03	100
Bromodichloromethane	ND		100	13	ug/L			12/21/15 16:03	100
Dichlorodifluoromethane	ND		100	19	ug/L			12/21/15 16:03	100
Ethylbenzene	ND		100	23	ug/L			12/21/15 16:03	100
1,2-Dibromoethane	ND		100	18	ug/L			12/21/15 16:03	100
Isopropylbenzene	ND		100	16	ug/L			12/21/15 16:03	100
Methyl acetate	ND		100	14	ug/L			12/21/15 16:03	100
Methyl tert-butyl ether	ND		100	18	ug/L			12/21/15 16:03	100
Methylcyclohexane	ND		100	26	ug/L			12/21/15 16:03	100
Methylene Chloride	190		100	13	ug/L			12/21/15 16:03	100
Styrene	ND		100	9.7	ug/L			12/21/15 16:03	100
Tetrachloroethene	ND		100	15	ug/L			12/21/15 16:03	100
Toluene	ND		100	15	ug/L			12/21/15 16:03	100
trans-1,2-Dichloroethene	ND	*	100	17	ug/L			12/21/15 16:03	100
trans-1,3-Dichloropropene	ND		100	15	ug/L			12/21/15 16:03	100
Trichloroethene	19	J	100	14	ug/L			12/21/15 16:03	100
Trichlorofluoromethane	ND		100	20	ug/L			12/21/15 16:03	100
Vinyl chloride	ND		100	23	ug/L			12/21/15 16:03	100
Xylenes, Total	ND		300	49	ug/L			12/21/15 16:03	100

TestAmerica Pittsburgh

Client Sample Results

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50858-1
SDG: LINCKLAEN, NY

Client Sample ID: W-121615-BM-0003

Lab Sample ID: 180-50858-2

Date Collected: 12/16/15 13:30

Matrix: Water

Date Received: 12/17/15 15:14

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		70 - 121		12/21/15 16:03	100
Toluene-d8 (Surr)	94		80 - 120		12/21/15 16:03	100
Dibromofluoromethane (Surr)	101		77 - 120		12/21/15 16:03	100
4-Bromofluorobenzene (Surr)	95		80 - 120		12/21/15 16:03	100

Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.086	0.0035	ug/L		12/22/15 11:30	12/23/15 18:25	1
PCB-1221	ND		0.086	0.0056	ug/L		12/22/15 11:30	12/23/15 18:25	1
PCB-1232	ND		0.086	0.0057	ug/L		12/22/15 11:30	12/23/15 18:25	1
PCB-1242	ND		0.086	0.0032	ug/L		12/22/15 11:30	12/23/15 18:25	1
PCB-1248	ND		0.086	0.0030	ug/L		12/22/15 11:30	12/23/15 18:25	1
PCB-1254	ND		0.086	0.0042	ug/L		12/22/15 11:30	12/23/15 18:25	1
PCB-1260	ND		0.086	0.0027	ug/L		12/22/15 11:30	12/23/15 18:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	81		43 - 138	12/22/15 11:30	12/23/15 18:25	1
DCB Decachlorobiphenyl (Surr)	116		43 - 138	12/22/15 11:30	12/23/15 18:25	1
Tetrachloro-m-xylene (Surr)	88		34 - 137	12/22/15 11:30	12/23/15 18:25	1
Tetrachloro-m-xylene (Surr)	78		34 - 137	12/22/15 11:30	12/23/15 18:25	1

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		5.0	0.69	ug/L		12/21/15 06:22	12/22/15 08:32	1
Aluminum	400		200	37	ug/L		12/21/15 06:22	12/22/15 08:32	1
Arsenic	ND		10	3.7	ug/L		12/21/15 06:22	12/22/15 08:32	1
Antimony	ND		10	3.5	ug/L		12/21/15 06:22	12/22/15 08:32	1
Barium	23 J		200	0.14	ug/L		12/21/15 06:22	12/22/15 08:32	1
Beryllium	ND		4.0	0.15	ug/L		12/21/15 06:22	12/22/15 08:32	1
Cadmium	ND		5.0	0.26	ug/L		12/21/15 06:22	12/22/15 08:32	1
Calcium	40000		5000	84	ug/L		12/21/15 06:22	12/22/15 08:32	1
Chromium	3.3 J		5.0	0.97	ug/L		12/21/15 06:22	12/22/15 08:32	1
Cobalt	4.7 J		50	0.55	ug/L		12/21/15 06:22	12/22/15 08:32	1
Copper	4.2 J		25	0.97	ug/L		12/21/15 06:22	12/22/15 08:32	1
Iron	4600		100	15	ug/L		12/21/15 06:22	12/22/15 08:32	1
Lead	5.7 J		10	2.1	ug/L		12/21/15 06:22	12/22/15 08:32	1
Magnesium	3600 J		5000	25	ug/L		12/21/15 06:22	12/22/15 08:32	1
Manganese	900		15	0.19	ug/L		12/21/15 06:22	12/22/15 08:32	1
Nickel	8.8 J		40	0.89	ug/L		12/21/15 06:22	12/22/15 08:32	1
Potassium	10000		5000	79	ug/L		12/21/15 06:22	12/22/15 08:32	1
Selenium	2.6 J		10	2.5	ug/L		12/21/15 06:22	12/22/15 08:32	1
Sodium	24000		5000	43	ug/L		12/21/15 06:22	12/22/15 08:32	1
Thallium	ND		20	1.4	ug/L		12/21/15 06:22	12/22/15 08:32	1
Vanadium	ND		50	4.7	ug/L		12/21/15 06:22	12/22/15 08:32	1
Zinc	630		20	2.9	ug/L		12/21/15 06:22	12/22/15 08:32	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND	F1	0.20	0.078	ug/L		12/19/15 09:26	12/21/15 10:46	1

TestAmerica Pittsburgh

Client Sample Results

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50858-1
SDG: LINCKLAEN, NY

Client Sample ID: W-121615-BM-0003

Lab Sample ID: 180-50858-2

Date Collected: 12/16/15 13:30

Matrix: Water

Date Received: 12/17/15 15:14

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.59	HF	0.100	0.100	SU			12/21/15 09:06	1

Client Sample ID: TRIP BLANK

Lab Sample ID: 180-50858-3

Date Collected: 12/16/15 13:00

Matrix: Water

Date Received: 12/17/15 15:14

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			12/18/15 17:41	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.20	ug/L			12/18/15 17:41	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.32	ug/L			12/18/15 17:41	1
1,1,2-Trichloroethane	ND		1.0	0.20	ug/L			12/18/15 17:41	1
1,1-Dichloroethane	ND		1.0	0.12	ug/L			12/18/15 17:41	1
1,1-Dichloroethene	ND		1.0	0.30	ug/L			12/18/15 17:41	1
1,2,4-Trichlorobenzene	ND		1.0	0.27	ug/L			12/18/15 17:41	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.14	ug/L			12/18/15 17:41	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			12/18/15 17:41	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			12/18/15 17:41	1
1,2-Dichloropropane	ND		1.0	0.095	ug/L			12/18/15 17:41	1
1,3-Dichlorobenzene	ND		1.0	0.11	ug/L			12/18/15 17:41	1
1,4-Dichlorobenzene	ND		1.0	0.21	ug/L			12/18/15 17:41	1
2-Butanone (MEK)	ND		5.0	0.55	ug/L			12/18/15 17:41	1
2-Hexanone	ND		5.0	0.16	ug/L			12/18/15 17:41	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.53	ug/L			12/18/15 17:41	1
Acetone	ND		5.0	2.5	ug/L			12/18/15 17:41	1
Benzene	ND		1.0	0.11	ug/L			12/18/15 17:41	1
Bromoform	ND		1.0	0.19	ug/L			12/18/15 17:41	1
Bromomethane	ND		1.0	0.31	ug/L			12/18/15 17:41	1
Carbon disulfide	ND		1.0	0.21	ug/L			12/18/15 17:41	1
Carbon tetrachloride	ND		1.0	0.14	ug/L			12/18/15 17:41	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/18/15 17:41	1
Dibromochloromethane	ND		1.0	0.14	ug/L			12/18/15 17:41	1
Chloroethane	ND		1.0	0.21	ug/L			12/18/15 17:41	1
Chloroform	ND		1.0	0.17	ug/L			12/18/15 17:41	1
Chloromethane	ND		1.0	0.28	ug/L			12/18/15 17:41	1
cis-1,2-Dichloroethene	ND		1.0	0.24	ug/L			12/18/15 17:41	1
cis-1,3-Dichloropropene	ND		1.0	0.19	ug/L			12/18/15 17:41	1
Cyclohexane	ND		1.0	0.25	ug/L			12/18/15 17:41	1
Bromodichloromethane	ND		1.0	0.13	ug/L			12/18/15 17:41	1
Dichlorodifluoromethane	ND		1.0	0.19	ug/L			12/18/15 17:41	1
Ethylbenzene	ND		1.0	0.23	ug/L			12/18/15 17:41	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			12/18/15 17:41	1
Isopropylbenzene	ND		1.0	0.16	ug/L			12/18/15 17:41	1
Methyl acetate	ND		1.0	0.14	ug/L			12/18/15 17:41	1
Methyl tert-butyl ether	ND		1.0	0.18	ug/L			12/18/15 17:41	1
Methylcyclohexane	ND		1.0	0.26	ug/L			12/18/15 17:41	1
Methylene Chloride	ND		1.0	0.13	ug/L			12/18/15 17:41	1
Styrene	ND		1.0	0.097	ug/L			12/18/15 17:41	1
Tetrachloroethene	ND		1.0	0.15	ug/L			12/18/15 17:41	1
Toluene	ND		1.0	0.15	ug/L			12/18/15 17:41	1

TestAmerica Pittsburgh

Client Sample Results

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50858-1
SDG: LINCKLAEN, NY

Client Sample ID: TRIP BLANK

Lab Sample ID: 180-50858-3

Date Collected: 12/16/15 13:00

Matrix: Water

Date Received: 12/17/15 15:14

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		1.0	0.17	ug/L			12/18/15 17:41	1
trans-1,3-Dichloropropene	ND		1.0	0.15	ug/L			12/18/15 17:41	1
Trichloroethene	ND		1.0	0.14	ug/L			12/18/15 17:41	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			12/18/15 17:41	1
Vinyl chloride	ND		1.0	0.23	ug/L			12/18/15 17:41	1
Xylenes, Total	ND		3.0	0.49	ug/L			12/18/15 17:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		70 - 121		12/18/15 17:41	1
Toluene-d8 (Surr)	104		80 - 120		12/18/15 17:41	1
Dibromofluoromethane (Surr)	96		77 - 120		12/18/15 17:41	1
4-Bromofluorobenzene (Surr)	100		80 - 120		12/18/15 17:41	1

QC Sample Results

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50858-1
SDG: LINCKLAEN, NY

Method: 8260C - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 180-164056/6

Matrix: Water

Analysis Batch: 164056

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			12/18/15 13:17	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.20	ug/L			12/18/15 13:17	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.32	ug/L			12/18/15 13:17	1
1,1,2-Trichloroethane	ND		1.0	0.20	ug/L			12/18/15 13:17	1
1,1-Dichloroethane	ND		1.0	0.12	ug/L			12/18/15 13:17	1
1,1-Dichloroethene	ND		1.0	0.30	ug/L			12/18/15 13:17	1
1,2,4-Trichlorobenzene	ND		1.0	0.27	ug/L			12/18/15 13:17	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.14	ug/L			12/18/15 13:17	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			12/18/15 13:17	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			12/18/15 13:17	1
1,2-Dichloropropane	ND		1.0	0.095	ug/L			12/18/15 13:17	1
1,3-Dichlorobenzene	ND		1.0	0.11	ug/L			12/18/15 13:17	1
1,4-Dichlorobenzene	ND		1.0	0.21	ug/L			12/18/15 13:17	1
2-Butanone (MEK)	ND		5.0	0.55	ug/L			12/18/15 13:17	1
2-Hexanone	ND		5.0	0.16	ug/L			12/18/15 13:17	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.53	ug/L			12/18/15 13:17	1
Acetone	ND		5.0	2.5	ug/L			12/18/15 13:17	1
Benzene	ND		1.0	0.11	ug/L			12/18/15 13:17	1
Bromoform	ND		1.0	0.19	ug/L			12/18/15 13:17	1
Bromomethane	ND		1.0	0.31	ug/L			12/18/15 13:17	1
Carbon disulfide	ND		1.0	0.21	ug/L			12/18/15 13:17	1
Carbon tetrachloride	ND		1.0	0.14	ug/L			12/18/15 13:17	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/18/15 13:17	1
Dibromochloromethane	ND		1.0	0.14	ug/L			12/18/15 13:17	1
Chloroethane	ND		1.0	0.21	ug/L			12/18/15 13:17	1
Chloroform	ND		1.0	0.17	ug/L			12/18/15 13:17	1
Chloromethane	ND		1.0	0.28	ug/L			12/18/15 13:17	1
cis-1,2-Dichloroethene	ND		1.0	0.24	ug/L			12/18/15 13:17	1
cis-1,3-Dichloropropene	ND		1.0	0.19	ug/L			12/18/15 13:17	1
Cyclohexane	ND		1.0	0.25	ug/L			12/18/15 13:17	1
Bromodichloromethane	ND		1.0	0.13	ug/L			12/18/15 13:17	1
Dichlorodifluoromethane	ND		1.0	0.19	ug/L			12/18/15 13:17	1
Ethylbenzene	ND		1.0	0.23	ug/L			12/18/15 13:17	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			12/18/15 13:17	1
Isopropylbenzene	ND		1.0	0.16	ug/L			12/18/15 13:17	1
Methyl acetate	ND		1.0	0.14	ug/L			12/18/15 13:17	1
Methyl tert-butyl ether	ND		1.0	0.18	ug/L			12/18/15 13:17	1
Methylcyclohexane	ND		1.0	0.26	ug/L			12/18/15 13:17	1
Methylene Chloride	ND		1.0	0.13	ug/L			12/18/15 13:17	1
Styrene	ND		1.0	0.097	ug/L			12/18/15 13:17	1
Tetrachloroethene	ND		1.0	0.15	ug/L			12/18/15 13:17	1
Toluene	ND		1.0	0.15	ug/L			12/18/15 13:17	1
trans-1,2-Dichloroethene	ND		1.0	0.17	ug/L			12/18/15 13:17	1
trans-1,3-Dichloropropene	ND		1.0	0.15	ug/L			12/18/15 13:17	1
Trichloroethene	ND		1.0	0.14	ug/L			12/18/15 13:17	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			12/18/15 13:17	1
Vinyl chloride	ND		1.0	0.23	ug/L			12/18/15 13:17	1
Xylenes, Total	ND		3.0	0.49	ug/L			12/18/15 13:17	1

TestAmerica Pittsburgh

QC Sample Results

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50858-1
SDG: LINCKLAEN, NY

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		70 - 121		12/18/15 13:17	1
Toluene-d8 (Surr)	104		80 - 120		12/18/15 13:17	1
Dibromofluoromethane (Surr)	98		77 - 120		12/18/15 13:17	1
4-Bromofluorobenzene (Surr)	99		80 - 120		12/18/15 13:17	1

Lab Sample ID: LCS 180-164056/9

Matrix: Water

Analysis Batch: 164056

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	10.0	9.75		ug/L		98	57 - 128
1,1,2,2-Tetrachloroethane	10.0	10.8		ug/L		108	78 - 135
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	9.53		ug/L		95	72 - 123
1,1,2-Trichloroethane	10.0	11.2		ug/L		112	77 - 127
1,1-Dichloroethane	10.0	9.53		ug/L		95	76 - 126
1,1-Dichloroethene	10.0	9.14		ug/L		91	71 - 122
1,2,4-Trichlorobenzene	10.0	9.76		ug/L		98	51 - 138
1,2-Dibromo-3-Chloropropane	10.0	9.09		ug/L		91	55 - 139
1,2-Dichlorobenzene	10.0	10.2		ug/L		102	80 - 120
1,2-Dichloroethane	10.0	10.3		ug/L		103	72 - 126
1,2-Dichloropropane	10.0	10.0		ug/L		100	78 - 123
1,3-Dichlorobenzene	10.0	10.0		ug/L		100	80 - 120
1,4-Dichlorobenzene	10.0	9.96		ug/L		100	80 - 120
2-Butanone (MEK)	20.0	21.2		ug/L		106	41 - 150
2-Hexanone	20.0	17.9		ug/L		90	40 - 150
4-Methyl-2-pentanone (MIBK)	20.0	20.0		ug/L		100	49 - 147
Acetone	20.0	20.7		ug/L		103	10 - 150
Benzene	10.0	9.96		ug/L		100	80 - 121
Bromoform	10.0	9.68		ug/L		97	62 - 138
Bromomethane	10.0	10.6		ug/L		106	39 - 150
Carbon disulfide	10.0	6.89		ug/L		69	57 - 137
Carbon tetrachloride	10.0	10.0		ug/L		100	59 - 145
Chlorobenzene	10.0	10.6		ug/L		106	80 - 120
Dibromochloromethane	10.0	9.65		ug/L		96	71 - 134
Chloroethane	10.0	9.68		ug/L		97	53 - 148
Chloroform	10.0	10.4		ug/L		104	78 - 122
Chloromethane	10.0	10.5		ug/L		105	51 - 150
cis-1,2-Dichloroethene	10.0	10.2		ug/L		102	80 - 120
cis-1,3-Dichloropropene	10.0	9.44		ug/L		94	67 - 127
Cyclohexane	10.0	9.11		ug/L		91	65 - 132
Bromodichloromethane	10.0	9.95		ug/L		100	72 - 124
Dichlorodifluoromethane	10.0	10.5		ug/L		105	43 - 142
Ethylbenzene	10.0	10.1		ug/L		101	80 - 123
1,2-Dibromoethane	10.0	10.8		ug/L		108	79 - 126
Isopropylbenzene	10.0	10.4		ug/L		104	80 - 124
Methyl acetate	50.0	47.3		ug/L		95	65 - 144
Methyl tert-butyl ether	10.0	9.17		ug/L		92	68 - 124
Methylcyclohexane	10.0	8.95		ug/L		90	74 - 120
Methylene Chloride	10.0	11.2		ug/L		112	71 - 129
Styrene	10.0	10.7		ug/L		107	80 - 125
Tetrachloroethene	10.0	11.0		ug/L		110	80 - 122
Toluene	10.0	10.8		ug/L		108	80 - 125
trans-1,2-Dichloroethene	10.0	10.2		ug/L		102	80 - 121

TestAmerica Pittsburgh

QC Sample Results

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50858-1
SDG: LINCKLAEN, NY

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 180-164056/9

Matrix: Water

Analysis Batch: 164056

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,3-Dichloropropene	10.0	8.41		ug/L		84	63 - 144
Trichloroethene	10.0	10.6		ug/L		106	79 - 120
Trichlorofluoromethane	10.0	10.6		ug/L		106	39 - 150
Vinyl chloride	10.0	10.8		ug/L		108	61 - 138
Xylenes, Total	20.0	20.7		ug/L		104	80 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		70 - 121
Toluene-d8 (Surr)	97		80 - 120
Dibromofluoromethane (Surr)	93		77 - 120
4-Bromofluorobenzene (Surr)	94		80 - 120

Lab Sample ID: MB 180-164236/5

Matrix: Water

Analysis Batch: 164236

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			12/21/15 12:54	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.20	ug/L			12/21/15 12:54	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.32	ug/L			12/21/15 12:54	1
1,1,2-Trichloroethane	ND		1.0	0.20	ug/L			12/21/15 12:54	1
1,1-Dichloroethane	ND		1.0	0.12	ug/L			12/21/15 12:54	1
1,1-Dichloroethene	ND		1.0	0.30	ug/L			12/21/15 12:54	1
1,2,4-Trichlorobenzene	ND		1.0	0.27	ug/L			12/21/15 12:54	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.14	ug/L			12/21/15 12:54	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			12/21/15 12:54	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			12/21/15 12:54	1
1,2-Dichloropropane	ND		1.0	0.095	ug/L			12/21/15 12:54	1
1,3-Dichlorobenzene	ND		1.0	0.11	ug/L			12/21/15 12:54	1
1,4-Dichlorobenzene	ND		1.0	0.21	ug/L			12/21/15 12:54	1
2-Butanone (MEK)	ND		5.0	0.55	ug/L			12/21/15 12:54	1
2-Hexanone	ND		5.0	0.16	ug/L			12/21/15 12:54	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.53	ug/L			12/21/15 12:54	1
Acetone	ND		5.0	2.5	ug/L			12/21/15 12:54	1
Benzene	ND		1.0	0.11	ug/L			12/21/15 12:54	1
Bromoform	ND		1.0	0.19	ug/L			12/21/15 12:54	1
Bromomethane	ND		1.0	0.31	ug/L			12/21/15 12:54	1
Carbon disulfide	ND		1.0	0.21	ug/L			12/21/15 12:54	1
Carbon tetrachloride	ND		1.0	0.14	ug/L			12/21/15 12:54	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/21/15 12:54	1
Dibromochloromethane	ND		1.0	0.14	ug/L			12/21/15 12:54	1
Chloroethane	ND		1.0	0.21	ug/L			12/21/15 12:54	1
Chloroform	ND		1.0	0.17	ug/L			12/21/15 12:54	1
Chloromethane	ND		1.0	0.28	ug/L			12/21/15 12:54	1
cis-1,2-Dichloroethene	ND		1.0	0.24	ug/L			12/21/15 12:54	1
cis-1,3-Dichloropropene	ND		1.0	0.19	ug/L			12/21/15 12:54	1
Cyclohexane	ND		1.0	0.25	ug/L			12/21/15 12:54	1
Bromodichloromethane	ND		1.0	0.13	ug/L			12/21/15 12:54	1

TestAmerica Pittsburgh

QC Sample Results

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50858-1
SDG: LINCKLAEN, NY

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 180-164236/5

Matrix: Water

Analysis Batch: 164236

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0	0.19	ug/L			12/21/15 12:54	1
Ethylbenzene	ND		1.0	0.23	ug/L			12/21/15 12:54	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			12/21/15 12:54	1
Isopropylbenzene	ND		1.0	0.16	ug/L			12/21/15 12:54	1
Methyl acetate	ND		1.0	0.14	ug/L			12/21/15 12:54	1
Methyl tert-butyl ether	ND		1.0	0.18	ug/L			12/21/15 12:54	1
Methylcyclohexane	ND		1.0	0.26	ug/L			12/21/15 12:54	1
Methylene Chloride	ND		1.0	0.13	ug/L			12/21/15 12:54	1
Styrene	ND		1.0	0.097	ug/L			12/21/15 12:54	1
Tetrachloroethene	ND		1.0	0.15	ug/L			12/21/15 12:54	1
Toluene	ND		1.0	0.15	ug/L			12/21/15 12:54	1
trans-1,2-Dichloroethene	ND		1.0	0.17	ug/L			12/21/15 12:54	1
trans-1,3-Dichloropropene	ND		1.0	0.15	ug/L			12/21/15 12:54	1
Trichloroethene	ND		1.0	0.14	ug/L			12/21/15 12:54	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			12/21/15 12:54	1
Vinyl chloride	ND		1.0	0.23	ug/L			12/21/15 12:54	1
Xylenes, Total	ND		3.0	0.49	ug/L			12/21/15 12:54	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		70 - 121		12/21/15 12:54	1
Toluene-d8 (Surr)	94		80 - 120		12/21/15 12:54	1
Dibromofluoromethane (Surr)	106		77 - 120		12/21/15 12:54	1
4-Bromofluorobenzene (Surr)	98		80 - 120		12/21/15 12:54	1

Lab Sample ID: LCS 180-164236/8

Matrix: Water

Analysis Batch: 164236

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	10.0	10.9		ug/L		109	57 - 128
1,1,2,2-Tetrachloroethane	10.0	9.43		ug/L		94	78 - 135
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	12.4	*	ug/L		124	72 - 123
1,1,2-Trichloroethane	10.0	9.24		ug/L		92	77 - 127
1,1-Dichloroethane	10.0	10.3		ug/L		103	76 - 126
1,1-Dichloroethene	10.0	12.0		ug/L		120	71 - 122
1,2,4-Trichlorobenzene	10.0	9.11		ug/L		91	51 - 138
1,2-Dibromo-3-Chloropropane	10.0	8.46		ug/L		85	55 - 139
1,2-Dichlorobenzene	10.0	9.44		ug/L		94	80 - 120
1,2-Dichloroethane	10.0	10.3		ug/L		103	72 - 126
1,2-Dichloropropane	10.0	9.39		ug/L		94	78 - 123
1,3-Dichlorobenzene	10.0	8.79		ug/L		88	80 - 120
1,4-Dichlorobenzene	10.0	9.10		ug/L		91	80 - 120
2-Butanone (MEK)	20.0	18.5		ug/L		92	41 - 150
2-Hexanone	20.0	15.4		ug/L		77	40 - 150
4-Methyl-2-pentanone (MIBK)	20.0	15.6		ug/L		78	49 - 147
Acetone	20.0	20.3		ug/L		101	10 - 150
Benzene	10.0	10.6		ug/L		106	80 - 121

TestAmerica Pittsburgh

QC Sample Results

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50858-1
SDG: LINCKLAEN, NY

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 180-164236/8

Matrix: Water

Analysis Batch: 164236

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromoform	10.0	8.22		ug/L		82	62 - 138
Bromomethane	10.0	7.52		ug/L		75	39 - 150
Carbon disulfide	10.0	12.1		ug/L		121	57 - 137
Carbon tetrachloride	10.0	11.9		ug/L		119	59 - 145
Chlorobenzene	10.0	9.33		ug/L		93	80 - 120
Dibromochloromethane	10.0	8.59		ug/L		86	71 - 134
Chloroethane	10.0	7.78		ug/L		78	53 - 148
Chloroform	10.0	10.3		ug/L		103	78 - 122
Chloromethane	10.0	7.83		ug/L		78	51 - 150
cis-1,2-Dichloroethene	10.0	10.5		ug/L		105	80 - 120
cis-1,3-Dichloropropene	10.0	8.28		ug/L		83	67 - 127
Cyclohexane	10.0	10.7		ug/L		107	65 - 132
Bromodichloromethane	10.0	8.60		ug/L		86	72 - 124
Dichlorodifluoromethane	10.0	9.36		ug/L		94	43 - 142
Ethylbenzene	10.0	8.95		ug/L		89	80 - 123
1,2-Dibromoethane	10.0	9.94		ug/L		99	79 - 126
Isopropylbenzene	10.0	9.74		ug/L		97	80 - 124
Methyl acetate	50.0	58.5		ug/L		117	65 - 144
Methyl tert-butyl ether	10.0	11.8		ug/L		118	68 - 124
Methylcyclohexane	10.0	10.6		ug/L		106	74 - 120
Methylene Chloride	10.0	11.1		ug/L		111	71 - 129
Styrene	10.0	9.16		ug/L		92	80 - 125
Tetrachloroethene	10.0	10.5		ug/L		105	80 - 122
Toluene	10.0	9.92		ug/L		99	80 - 125
trans-1,2-Dichloroethene	10.0	12.2	*	ug/L		122	80 - 121
trans-1,3-Dichloropropene	10.0	8.36		ug/L		84	63 - 144
Trichloroethene	10.0	11.2		ug/L		112	79 - 120
Trichlorofluoromethane	10.0	9.80		ug/L		98	39 - 150
Vinyl chloride	10.0	8.53		ug/L		85	61 - 138
Xylenes, Total	20.0	18.4		ug/L		92	80 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	93		70 - 121
Toluene-d8 (Surr)	93		80 - 120
Dibromofluoromethane (Surr)	94		77 - 120
4-Bromofluorobenzene (Surr)	92		80 - 120

Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC)

Lab Sample ID: MB 180-164424/1-A

Matrix: Water

Analysis Batch: 164525

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 164424

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.090	0.0037	ug/L		12/22/15 11:30	12/23/15 17:47	1
PCB-1221	ND		0.090	0.0059	ug/L		12/22/15 11:30	12/23/15 17:47	1
PCB-1232	ND		0.090	0.0060	ug/L		12/22/15 11:30	12/23/15 17:47	1
PCB-1242	ND		0.090	0.0034	ug/L		12/22/15 11:30	12/23/15 17:47	1

TestAmerica Pittsburgh

QC Sample Results

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50858-1
SDG: LINCKLAEN, NY

Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC) (Continued)

Lab Sample ID: MB 180-164424/1-A

Matrix: Water

Analysis Batch: 164525

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 164424

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1248	ND		0.090	0.0032	ug/L		12/22/15 11:30	12/23/15 17:47	1
PCB-1254	ND		0.090	0.0044	ug/L		12/22/15 11:30	12/23/15 17:47	1
PCB-1260	ND		0.090	0.0029	ug/L		12/22/15 11:30	12/23/15 17:47	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	84		43 - 138	12/22/15 11:30	12/23/15 17:47	1
DCB Decachlorobiphenyl (Surr)	91		43 - 138	12/22/15 11:30	12/23/15 17:47	1
Tetrachloro-m-xylene (Surr)	99		34 - 137	12/22/15 11:30	12/23/15 17:47	1
Tetrachloro-m-xylene (Surr)	85		34 - 137	12/22/15 11:30	12/23/15 17:47	1

Lab Sample ID: LCS 180-164424/2-A

Matrix: Water

Analysis Batch: 164525

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 164424

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	1.00	0.898		ug/L		90	55 - 120
PCB-1260	1.00	1.03		ug/L		103	55 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	93		43 - 138
DCB Decachlorobiphenyl (Surr)	91		43 - 138
Tetrachloro-m-xylene (Surr)	104		34 - 137
Tetrachloro-m-xylene (Surr)	91		34 - 137

Lab Sample ID: LCSD 180-164424/3-A

Matrix: Water

Analysis Batch: 164525

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 164424

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016	1.00	0.876		ug/L		88	55 - 120	2	25
PCB-1260	1.00	1.01		ug/L		101	55 - 120	2	25

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	89		43 - 138
DCB Decachlorobiphenyl (Surr)	87		43 - 138
Tetrachloro-m-xylene (Surr)	99		34 - 137
Tetrachloro-m-xylene (Surr)	87		34 - 137

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 180-164204/1-A

Matrix: Water

Analysis Batch: 164363

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 164204

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		5.0	0.69	ug/L		12/21/15 06:22	12/22/15 08:12	1
Aluminum	ND		200	37	ug/L		12/21/15 06:22	12/22/15 08:12	1

TestAmerica Pittsburgh

QC Sample Results

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50858-1
SDG: LINCKLAEN, NY

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: MB 180-164204/1-A

Matrix: Water

Analysis Batch: 164363

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 164204

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		10	3.7	ug/L		12/21/15 06:22	12/22/15 08:12	1
Antimony	ND		10	3.5	ug/L		12/21/15 06:22	12/22/15 08:12	1
Barium	ND		200	0.14	ug/L		12/21/15 06:22	12/22/15 08:12	1
Beryllium	ND		4.0	0.15	ug/L		12/21/15 06:22	12/22/15 08:12	1
Cadmium	ND		5.0	0.26	ug/L		12/21/15 06:22	12/22/15 08:12	1
Calcium	ND		5000	84	ug/L		12/21/15 06:22	12/22/15 08:12	1
Chromium	ND		5.0	0.97	ug/L		12/21/15 06:22	12/22/15 08:12	1
Cobalt	ND		50	0.55	ug/L		12/21/15 06:22	12/22/15 08:12	1
Copper	ND		25	0.97	ug/L		12/21/15 06:22	12/22/15 08:12	1
Iron	ND		100	15	ug/L		12/21/15 06:22	12/22/15 08:12	1
Lead	ND		10	2.1	ug/L		12/21/15 06:22	12/22/15 08:12	1
Magnesium	ND		5000	25	ug/L		12/21/15 06:22	12/22/15 08:12	1
Manganese	ND		15	0.19	ug/L		12/21/15 06:22	12/22/15 08:12	1
Nickel	ND		40	0.89	ug/L		12/21/15 06:22	12/22/15 08:12	1
Potassium	ND		5000	79	ug/L		12/21/15 06:22	12/22/15 08:12	1
Selenium	ND		10	2.5	ug/L		12/21/15 06:22	12/22/15 08:12	1
Sodium	ND		5000	43	ug/L		12/21/15 06:22	12/22/15 08:12	1
Thallium	ND		20	1.4	ug/L		12/21/15 06:22	12/22/15 08:12	1
Vanadium	ND		50	4.7	ug/L		12/21/15 06:22	12/22/15 08:12	1
Zinc	ND		20	2.9	ug/L		12/21/15 06:22	12/22/15 08:12	1

Lab Sample ID: LCS 180-164204/2-A

Matrix: Water

Analysis Batch: 164363

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 164204

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	50.0	52.4		ug/L		105	80 - 120
Aluminum	2000	2000		ug/L		100	80 - 120
Arsenic	500	532		ug/L		106	80 - 120
Antimony	500	524		ug/L		105	80 - 120
Barium	2000	2020		ug/L		101	80 - 120
Beryllium	50.0	51.7		ug/L		103	80 - 120
Cadmium	50.0	51.3		ug/L		103	80 - 120
Calcium	50000	50700		ug/L		101	80 - 120
Chromium	200	199		ug/L		99	80 - 120
Cobalt	500	513		ug/L		103	80 - 120
Copper	250	245		ug/L		98	80 - 120
Iron	1000	1050		ug/L		105	80 - 120
Lead	500	507		ug/L		101	80 - 120
Magnesium	50000	49800		ug/L		100	80 - 120
Manganese	500	478		ug/L		96	80 - 120
Nickel	500	513		ug/L		103	80 - 120
Potassium	50000	49600		ug/L		99	80 - 120
Selenium	500	533		ug/L		107	80 - 120
Sodium	50000	51100		ug/L		102	80 - 120
Thallium	500	504		ug/L		101	80 - 120
Vanadium	500	531		ug/L		106	80 - 120
Zinc	500	500		ug/L		100	80 - 120

TestAmerica Pittsburgh

QC Sample Results

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50858-1
SDG: LINCKLAEN, NY

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LCSD 180-164204/3-A

Matrix: Water

Analysis Batch: 164363

Client Sample ID: Lab Control Sample Dup

Prep Type: Total Recoverable

Prep Batch: 164204

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Silver	50.0	51.4		ug/L		103	80 - 120	2	20
Aluminum	2000	2000		ug/L		100	80 - 120	0	20
Arsenic	500	526		ug/L		105	80 - 120	1	20
Antimony	500	522		ug/L		104	80 - 120	1	20
Barium	2000	2010		ug/L		101	80 - 120	0	20
Beryllium	50.0	51.9		ug/L		104	80 - 120	0	20
Cadmium	50.0	50.7		ug/L		101	80 - 120	1	20
Calcium	50000	50600		ug/L		101	80 - 120	0	20
Chromium	200	198		ug/L		99	80 - 120	1	20
Cobalt	500	508		ug/L		102	80 - 120	1	20
Copper	250	247		ug/L		99	80 - 120	1	20
Iron	1000	1020		ug/L		102	80 - 120	2	20
Lead	500	499		ug/L		100	80 - 120	2	20
Magnesium	50000	49900		ug/L		100	80 - 120	0	20
Manganese	500	483		ug/L		97	80 - 120	1	20
Nickel	500	505		ug/L		101	80 - 120	1	20
Potassium	50000	49800		ug/L		100	80 - 120	0	20
Selenium	500	518		ug/L		104	80 - 120	3	20
Sodium	50000	50900		ug/L		102	80 - 120	0	20
Thallium	500	495		ug/L		99	80 - 120	2	20
Vanadium	500	521		ug/L		104	80 - 120	2	20
Zinc	500	494		ug/L		99	80 - 120	1	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 180-164132/1-A

Matrix: Water

Analysis Batch: 164263

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 164132

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.078	ug/L		12/19/15 09:26	12/21/15 10:39	1

Lab Sample ID: LCS 180-164132/2-A

Matrix: Water

Analysis Batch: 164263

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 164132

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	2.50	2.39		ug/L		96	80 - 120

Lab Sample ID: 180-50858-2 MS

Matrix: Water

Analysis Batch: 164263

Client Sample ID: W-121615-BM-0003

Prep Type: Total/NA

Prep Batch: 164132

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND	F1	1.00	0.638	F1	ug/L		64	75 - 125

TestAmerica Pittsburgh

QC Sample Results

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50858-1
SDG: LINCKLAEN, NY

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 180-50858-2 MSD
Matrix: Water
Analysis Batch: 164263

Client Sample ID: W-121615-BM-0003
Prep Type: Total/NA
Prep Batch: 164132

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND	F1	1.00	0.598	F1	ug/L	-	60	75 - 125	6	20

Lab Sample ID: MB 180-164401/1-A
Matrix: Water
Analysis Batch: 164559

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 164401

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.078	ug/L	-	12/22/15 13:21	12/23/15 10:54	1

Lab Sample ID: LCS 180-164401/2-A
Matrix: Water
Analysis Batch: 164559

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 164401

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	2.50	2.50		ug/L	-	100	80 - 120

Method: 9040C - pH

Lab Sample ID: LCS 180-164083/1
Matrix: Water
Analysis Batch: 164083

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	7.00	6.980		SU	-	100	99 - 101

Lab Sample ID: LCS 180-164376/1
Matrix: Water
Analysis Batch: 164376

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	7.00	6.980		SU	-	100	99 - 101

QC Association Summary

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50858-1
SDG: LINCKLAEN, NY

GC/MS VOA

Analysis Batch: 164056

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-50858-3	TRIP BLANK	Total/NA	Water	8260C	
LCS 180-164056/9	Lab Control Sample	Total/NA	Water	8260C	
MB 180-164056/6	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 164236

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-50858-1	W-121615-BM-0001	Total/NA	Water	8260C	
180-50858-2	W-121615-BM-0003	Total/NA	Water	8260C	
LCS 180-164236/8	Lab Control Sample	Total/NA	Water	8260C	
MB 180-164236/5	Method Blank	Total/NA	Water	8260C	

GC Semi VOA

Prep Batch: 164424

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-50858-1	W-121615-BM-0001	Total/NA	Water	3510C	
180-50858-2	W-121615-BM-0003	Total/NA	Water	3510C	
LCS 180-164424/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 180-164424/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 180-164424/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 164525

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-50858-1	W-121615-BM-0001	Total/NA	Water	8082A	164424
180-50858-2	W-121615-BM-0003	Total/NA	Water	8082A	164424
LCS 180-164424/2-A	Lab Control Sample	Total/NA	Water	8082A	164424
LCSD 180-164424/3-A	Lab Control Sample Dup	Total/NA	Water	8082A	164424
MB 180-164424/1-A	Method Blank	Total/NA	Water	8082A	164424

Metals

Prep Batch: 164132

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-50858-2	W-121615-BM-0003	Total/NA	Water	7470A	
180-50858-2 MS	W-121615-BM-0003	Total/NA	Water	7470A	
180-50858-2 MSD	W-121615-BM-0003	Total/NA	Water	7470A	
LCS 180-164132/2-A	Lab Control Sample	Total/NA	Water	7470A	
MB 180-164132/1-A	Method Blank	Total/NA	Water	7470A	

Prep Batch: 164204

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-50858-1	W-121615-BM-0001	Total Recoverable	Water	3005A	
180-50858-2	W-121615-BM-0003	Total Recoverable	Water	3005A	
LCS 180-164204/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCSD 180-164204/3-A	Lab Control Sample Dup	Total Recoverable	Water	3005A	
MB 180-164204/1-A	Method Blank	Total Recoverable	Water	3005A	

Analysis Batch: 164263

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-50858-2	W-121615-BM-0003	Total/NA	Water	7470A	164132

TestAmerica Pittsburgh

QC Association Summary

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50858-1
SDG: LINCKLAEN, NY

Metals (Continued)

Analysis Batch: 164263 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-50858-2 MS	W-121615-BM-0003	Total/NA	Water	7470A	164132
180-50858-2 MSD	W-121615-BM-0003	Total/NA	Water	7470A	164132
LCS 180-164132/2-A	Lab Control Sample	Total/NA	Water	7470A	164132
MB 180-164132/1-A	Method Blank	Total/NA	Water	7470A	164132

Analysis Batch: 164363

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-50858-1	W-121615-BM-0001	Total Recoverable	Water	6010C	164204
180-50858-1	W-121615-BM-0001	Total Recoverable	Water	6010C	164204
180-50858-2	W-121615-BM-0003	Total Recoverable	Water	6010C	164204
LCS 180-164204/2-A	Lab Control Sample	Total Recoverable	Water	6010C	164204
LCSD 180-164204/3-A	Lab Control Sample Dup	Total Recoverable	Water	6010C	164204
MB 180-164204/1-A	Method Blank	Total Recoverable	Water	6010C	164204

Prep Batch: 164401

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-50858-1	W-121615-BM-0001	Total/NA	Water	7470A	
LCS 180-164401/2-A	Lab Control Sample	Total/NA	Water	7470A	
MB 180-164401/1-A	Method Blank	Total/NA	Water	7470A	

Analysis Batch: 164559

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-50858-1	W-121615-BM-0001	Total/NA	Water	7470A	164401
LCS 180-164401/2-A	Lab Control Sample	Total/NA	Water	7470A	164401
MB 180-164401/1-A	Method Blank	Total/NA	Water	7470A	164401

General Chemistry

Analysis Batch: 164083

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-50858-2	W-121615-BM-0003	Total/NA	Water	9040C	
LCS 180-164083/1	Lab Control Sample	Total/NA	Water	9040C	

Analysis Batch: 164376

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-50858-1	W-121615-BM-0001	Total/NA	Water	9040C	
LCS 180-164376/1	Lab Control Sample	Total/NA	Water	9040C	



**CONESTOGA-ROVERS
& ASSOCIATES**

CHAIN OF CUSTODY RECORD

COC NO.: 48877

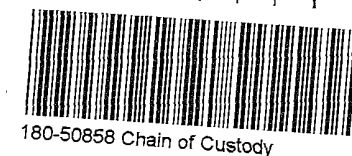
PAGE 1 OF 1

Address: _____

Phone: _____ Fax: _____

(See Reverse Side for Instructions)

Project No/ Phase/Task Code: 002077-60				Laboratory Name: TEST AMERICA				Lab Location: PITTSBURGH, PA				SSOW ID:			
Project Name: SOLVENT SAVERS				Lab Contact:				Lab Quote No:				Cooler No: 253850			
Project Location: LINERLAEN, NY				SAMPLE TYPE				CONTAINER QUANTITY & PRESERVATION				ANALYSIS REQUESTED (See Back of COC for Definitions)			
Chemistry Contact: PAUL MCMAHON				Matrix Code (see back of COC)				Grab (G) or Comp (C)				Unpreserved			
Sampler(s): BRYAN MALONE/JASON DAUENPORT															
DATE (mm/dd/yyyy)				TIME (hh:mm)				PCB				VOC			
DATE (mm/dd/yyyy)				TIME (hh:mm)				pH				METALS			
DATE (mm/dd/yyyy)				TIME (hh:mm)				MS/MSD Request				COMMENTS/ SPECIAL INSTRUCTIONS:			
1	PA-121615-BM-0006	12/16/15	11:15	PAINT	1										
2	CC-121615-BM-006A		11:30	CC	1										
3	CC-121615-BM-006B		11:30	CC	1										
4	W-121615-BM-0001		13:00	WG	3	3	1								
5	W-121615-BM-0002		13:10	WG	2	3									
6	W-121615-BM-0003		13:30	WG	3	3	1								
7															
8															
9															
10															
11															
12															
13															
14															
15															
TAT Required in business days (use separate COCs for different TATs): <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Days <input type="checkbox"/> 3 Days <input type="checkbox"/> 1 Week <input type="checkbox"/> 2 Week <input type="checkbox"/> Other:				Total Number of Containers: 22				Notes/ Special Requirements:							
All Samples in Cooler must be on COC															
RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME								
1. BRYAN MALONE	CRA (GHD)	12-16-15	18:30	1. [Signature]	MA [Signature]	12/17/15	9:15								
2.				2.											
3.				3.											



180-50858 Chain of Custody

THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT - ALL FIELDS MUST BE COMPLETED ACCURATELY

Distribution: WHITE - Fully Executed Copy (CRA) YELLOW - Receiving Laboratory Copy PINK - Shipper GOLDENROD - Sampling Crew CRA Form: COC-10B (20110804)



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1/8/2016



COC NO.: 48877

PAGE 1 OF 1

Address:

Phone:

Fax:

(See Reverse Side for Instructions)

Project No./Phase/Task Code: 002077-60						Laboratory Name: TEST AMERICA								Lab Location: PITTSBURGH, PA				SSOW ID:									
Project Name: SOLVENT SAVERS						Lab Contact:								Lab Quote No:				Cooler No: 253850									
Project Location: LINCOLN, NY						SAMPLE TYPE		CONTAINER QUANTITY & PRESERVATION						ANALYSIS REQUESTED (See Back of COC for Definitions)						Carrier: FedEx							
Chemistry Contact: PAUL MCMAHON						Matrix Code (see back of COC)	Grab (G) or Comp (C)	Unpreserved	Hydrochloric Acid (HCl)	Nitric Acid (HNO ₃)	Sulfuric Acid (H ₂ SO ₄)	Sodium Hydroxide (NaOH)	Methanol/Water (Soil VOC)	EnCore 3X5-B, 1x25-g	Other	Total Containers/Sample	PCB	VOC	P	METALS							Airbill No: 8682 1848 5565
Sampler(s): BRYAN MALONE/JASON DAVENPORT																											Date Shipped: 12-16-15
ID#	SAMPLE IDENTIFICATION (Containers for each sample may be combined on one line)		DATE (mm/dd/yyyy)	TIME (hh:mm)	MATRIX CODE	G/RAB (G) OR COMP (C)	UNPRESERVED	HCL	NITRIC ACID	SULFURIC ACID	NAOHI	MECH/WATER SOIL VOC	ECCORE	OTHER	TOTAL CONTAINERS/SAMPLE	PCB	VOC	P	METALS							COMMENTS/ SPECIAL INSTRUCTIONS:	
1	PA-121615-BM-0006		12/16/15	11:15	RNT										1 X	X											
2	CR-121615-BM-006A			11:30	LL										1 X	X											
3	CC-121615-BM-006B			11:30	CG										1 X	X											
4	W-121615-BM-0001			13:00	WG		3	3	1						7 X	X	X	X								HOLD PM	
5	W-121615-RM-0002			13:40	WG		2	3							5 X	X										HOLD 608/GY	
6	W-121615-RM-0003			13:30	NG		3	3	1						7 X	X	X	X									
7																											
8																											
9																											
10																											
11																											
12																											
13																											
14																											
TAT Required in business days (use separate COCs for different TATs):						Total Number of Containers: 22						Notes/ Special Requirements:															
<input type="checkbox"/> 1 Day <input checked="" type="checkbox"/> 2 Days <input type="checkbox"/> 3 Days <input type="checkbox"/> 1 Week <input checked="" type="checkbox"/> 2 Weeks <input type="checkbox"/> Other _____						All Samples In Cooler must be on COC																					
RELINQUISHED BY		COMPANY		DATE		TIME		RECEIVED BY		COMPANY		DATE		TIME													
1. BRYAN MALONE		ERA (GHD)		12-16-15		18:30		1.																			
2.								2.																			
3.								3.																			

THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT - ALL FIELDS MUST BE COMPLETED ACCURATELY

Distribution:

WHITE -- Fully Executed Copy (GRA)

YELLOW - Receiving Laboratory Copy

PINK—Shipper

GOLDENROD — Sampling Crew

CRA Form: CQC-10B (20110804)

ORIGIN ID:SYRA (716) 609-0384
GHD SERVICES INC.

2055 NIAGARA FALLS BLVD STE 3

NIAGARA FALLS, NY 143045702
UNITED STATES US

SHIP DATE: 16DEC15
ACTWGT: 55.90 LB
CAD: /POS1621
DIMS: 21x17x14 IN
BILL SENDER

TO **SAMOLING RECEIVING
TEST AMERICA
301 ALPHA DR**

PITTSBURGH PA 15238

(412) 963-7068

REF:

INVT
P01

DEPT:



Uncorrected temp
Thermometer ID

72.4°C

CF 0 Initials AB

PT-WI-SR-001 effective 7/26/13

**FedEx
Express**



5565

150

Floor/Suite/Room

702

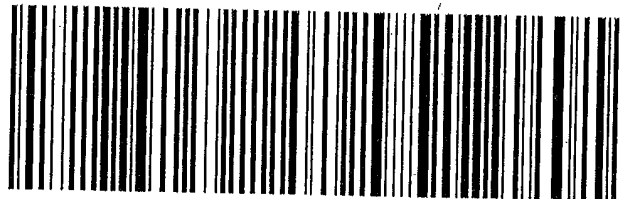
TRK# 8682 1848 5565
0215

**THU - 17 DEC 10:30A
PRIORITY OVERNIGHT**

NA AGCA

15238

PA-US PIT



Does this shipment contain dangerous goods?
One box must be checked.

☒ No

☐ Yes

As per attached
Shipper's Declaration.

☐ Yes

Shipper's Declaration
not required.

☐ Dry Ice

Dry Ice, S, UN 1845

x kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging.

☐ Cargo Aircraft Only

7 **Payment**

Bill to:

Enter FedEx Acct. No. or Credit Card No. below.

Obtain Recip
Acct. No.

☒ Sender

☐ Recipient

☐ Third Party

☐ Credit Card

☐ Cash/Check

Acct. No. in Section
I will be billed.



Total Packages

Total Weight

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8 Residential Delivery Signature Options

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☒ No Signature
Required

☐ Direct Signature

Someone at recipient's
address may sign for
delivery. Fee applies.

☐ Indirect Signature

If no one is available at
recipient's address, someone
at a neighboring address may
sign for delivery. Fee applies.

519

Rev. Date 10/09/Part #158279-©1994-2006 FedEx® PRINTED IN U.S.A. SRF



180-50858 Waybill

Align Open End of FedEx Pouch Here

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 180-50858-1

SDG Number: LINCKLAEN, NY

Login Number: 50858

List Number: 1

Creator: Kovitch, Christina M

List Source: TestAmerica Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pittsburgh

301 Alpha Drive

RIDC Park

Pittsburgh, PA 15238

Tel: (412)963-7058

TestAmerica Job ID: 180-50813-1

TestAmerica Sample Delivery Group: LINCKLAEN NY

Client Project/Site: 2077-60 Solvent Savers

Revision: 1

For:

GHD Services Inc.

2055 Niagara Falls Blvd., Suite 3

Niagara Falls, New York 14304

Attn: Mr. Paul McMahon



Authorized for release by:

1/5/2016 2:53:48 PM

Jill Colussy, Project Manager I

(412)963-2444

jill.colussy@testamericainc.com

LINKS

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results through

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www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50813-1
SDG: LINCKLAEN NY

Job ID: 180-50813-1

Laboratory: TestAmerica Pittsburgh

Narrative

Job Narrative 180-50813-1 RE

Note

This report has been revised. The detected PCBs are reported as PCB-1242 instead of PCB-1016.

Receipt

The samples were received on 12/16/2015 3:35 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.6° C.

GC/MS VOA

The laboratory control standard (LCS) /laboratory control duplicate (LCSD) for batch 180-164017 recovered outside control limits for the following analytes: Chlorodibromomethane and/or Dichlorobromomethane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

The %RPD of the laboratory control standard (LCS) and laboratory control standard duplicate (LCSD) for batch 180-164017 recovered outside control limits for the following analytes: Trichlorofluoromethane.

The laboratory control standard (LCS) for batch 180-164513 recovered outside control limits for the following analytes: Acetone. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

The continuing calibration verification (CCV) analyzed in batch 180-164017 was outside the method criteria for the following analytes: 1,2-Dibromo-3-Chloropropane, Acetone, Carbon disulfide, Methylene Chloride, Dichlorobromomethane, 4-Methyl-2-pentanone, 2-Hexanone, Chlorodibromomethane and Bromoform. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analytes is considered estimated.

The continuing calibration verification (CCV) analyzed in batch 180-164339 was outside the method criteria for the following analyte: 2-Hexanone and Acetone. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analytes is considered estimated.

The continuing calibration verification (CCV) analyzed in batch 180-164466 was outside the method criteria for the following analytes: 1,1-Dichloroethene, 1,2-Dibromo-3-Chloropropane, 2-Hexanone, Acetone and Toluene. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analytes is considered estimated.

PCBS

Due to the concentration of PCBs detected, the paint samples were analyzed at a dilution. Elevated reporting limits (RLs) are provided. These samples had the surrogates diluted out.

Definitions/Glossary

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50813-1
SDG: LINCKLAEN NY

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*	RPD of the LCS and LCSD exceeds the control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Certification Summary

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50813-1
SDG: LINCKLAEN NY

Laboratory: TestAmerica Pittsburgh

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
New York	NELAP	2	11182	03-31-16

The following analytes are included in this report, but are not certified under this certification:

Analysis Method	Prep Method	Matrix	Analyte
8260C	5030C	Solid	Cyclohexane

Sample Summary

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50813-1
SDG: LINCKLAEN NY

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-50813-1	RB-121515-BM-0001	Water	12/15/15 10:40	12/16/15 15:35
180-50813-2	PA-121515-BM-0001	Solid	12/15/15 12:00	12/16/15 15:35
180-50813-3	PA-121515-BM-0002	Solid	12/15/15 13:15	12/16/15 15:35
180-50813-4	PA-121515-BM-0003	Solid	12/15/15 14:25	12/16/15 15:35
180-50813-5	PA-121515-BM-0004	Solid	12/15/15 15:15	12/16/15 15:35
180-50813-6	PA-121515-BM-0005	Solid	12/15/15 16:10	12/16/15 15:35
180-50813-7	TRIP BLANK	Water	12/15/15 10:40	12/16/15 15:35

Method Summary

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50813-1
SDG: LINCKLAEN NY

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL PIT
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL PIT

Protocol References:

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

Laboratory References:

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50813-1
SDG: LINCKLAEN NY

Client Sample ID: RB-121515-BM-0001

Date Collected: 12/15/15 10:40

Date Received: 12/16/15 15:35

Lab Sample ID: 180-50813-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	164017	12/18/15 11:20	PJJ	TAL PIT
		Instrument ID: CHHP4								
Total/NA	Prep	3510C			1060 mL	40.0 mL	163978	12/17/15 15:00	CBY	TAL PIT
Total/NA	Analysis	8082A		1	1060 mL	40.0 mL	163995	12/18/15 14:05	JMO	TAL PIT
		Instrument ID: CHGC16								

Client Sample ID: PA-121515-BM-0001

Date Collected: 12/15/15 12:00

Date Received: 12/16/15 15:35

Lab Sample ID: 180-50813-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030C			5.0051 g	5 mL	164343	12/22/15 07:44	PJJ	TAL PIT
Total/NA	Analysis	8260C		1	5.0051 g	5 mL	164339	12/22/15 18:25	PJJ	TAL PIT
		Instrument ID: CHHP4								
Total/NA	Prep	3541			4.9 g	20.0 mL	164650	12/24/15 13:19	CBY	TAL PIT
Total/NA	Analysis	8082A		200	4.9 g	20.0 mL	164785	12/30/15 00:54	AKG	TAL PIT
		Instrument ID: CHGC10								

Client Sample ID: PA-121515-BM-0002

Date Collected: 12/15/15 13:15

Date Received: 12/16/15 15:35

Lab Sample ID: 180-50813-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030C			5.0000 g	5 mL	164343	12/22/15 07:44	PJJ	TAL PIT
Total/NA	Analysis	8260C		1	5.0000 g	5 mL	164339	12/22/15 18:51	PJJ	TAL PIT
		Instrument ID: CHHP4								
Total/NA	Prep	3541			12.3 g	20.0 mL	164650	12/24/15 13:19	CBY	TAL PIT
Total/NA	Analysis	8082A		200	12.3 g	20.0 mL	164785	12/30/15 01:12	AKG	TAL PIT
		Instrument ID: CHGC10								

Client Sample ID: PA-121515-BM-0003

Date Collected: 12/15/15 14:25

Date Received: 12/16/15 15:35

Lab Sample ID: 180-50813-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030C			5.0100 g	5 mL	164343	12/22/15 07:44	PJJ	TAL PIT
Total/NA	Analysis	8260C		1	5.0100 g	5 mL	164339	12/22/15 19:17	PJJ	TAL PIT
		Instrument ID: CHHP4								
Total/NA	Prep	3541			10 g	20.0 mL	164650	12/24/15 13:19	CBY	TAL PIT
Total/NA	Analysis	8082A		200	10 g	20.0 mL	164785	12/30/15 01:31	AKG	TAL PIT
		Instrument ID: CHGC10								

TestAmerica Pittsburgh

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50813-1
SDG: LINCKLAEN NY

Client Sample ID: PA-121515-BM-0004

Lab Sample ID: 180-50813-5

Date Collected: 12/15/15 15:15

Matrix: Solid

Date Received: 12/16/15 15:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030C			5.0001 g	5 mL	164343	12/22/15 07:44	PJJ	TAL PIT
Total/NA	Analysis	8260C		1	5.0001 g	5 mL	164339	12/22/15 19:42	PJJ	TAL PIT
		Instrument ID: CHHP4								
Total/NA	Prep	3541			10.5 g	20.0 mL	164650	12/24/15 13:19	CBY	TAL PIT
Total/NA	Analysis	8082A		200	10.5 g	20.0 mL	164785	12/30/15 01:50	AKG	TAL PIT
		Instrument ID: CHGC10								

Client Sample ID: PA-121515-BM-0005

Lab Sample ID: 180-50813-6

Date Collected: 12/15/15 16:10

Matrix: Solid

Date Received: 12/16/15 15:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030C			5.0200 g	5 mL	164513	12/23/15 07:25	PJJ	TAL PIT
Total/NA	Analysis	8260C		1	5.0200 g	5 mL	164466	12/23/15 14:56	PJJ	TAL PIT
		Instrument ID: CHHP4								
Total/NA	Prep	3541			7.3 g	20.0 mL	164650	12/24/15 13:20	CBY	TAL PIT
Total/NA	Analysis	8082A		50	7.3 g	20.0 mL	164785	12/30/15 02:09	AKG	TAL PIT
		Instrument ID: CHGC10								

Client Sample ID: TRIP BLANK

Lab Sample ID: 180-50813-7

Date Collected: 12/15/15 10:40

Matrix: Water

Date Received: 12/16/15 15:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	164017	12/18/15 10:54	PJJ	TAL PIT
		Instrument ID: CHHP4								

Laboratory References:

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PIT

Batch Type: Prep

CBY = Charles Yushinski

PJJ = Patrick Journet

Batch Type: Analysis

AKG = Ashok Gupta

JMO = John Oravec

PJJ = Patrick Journet

TestAmerica Pittsburgh

Client Sample Results

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50813-1
SDG: LINCKLAEN NY

Client Sample ID: RB-121515-BM-0001

Lab Sample ID: 180-50813-1

Date Collected: 12/15/15 10:40

Matrix: Water

Date Received: 12/16/15 15:35

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	1.0	ug/L			12/18/15 11:20	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.93	ug/L			12/18/15 11:20	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.33	ug/L			12/18/15 11:20	1
1,1,2-Trichloroethane	ND		5.0	1.2	ug/L			12/18/15 11:20	1
1,1-Dichloroethane	ND		5.0	1.0	ug/L			12/18/15 11:20	1
1,1-Dichloroethene	ND		5.0	1.1	ug/L			12/18/15 11:20	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.35	ug/L			12/18/15 11:20	1
1,2-Dichlorobenzene	ND		5.0	0.68	ug/L			12/18/15 11:20	1
1,2-Dichloroethane	ND		5.0	0.96	ug/L			12/18/15 11:20	1
1,2-Dichloropropane	ND		5.0	1.3	ug/L			12/18/15 11:20	1
1,2,4-Trichlorobenzene	ND		5.0	0.38	ug/L			12/18/15 11:20	1
1,3-Dichlorobenzene	ND		5.0	0.51	ug/L			12/18/15 11:20	1
1,4-Dichlorobenzene	ND		5.0	0.53	ug/L			12/18/15 11:20	1
2-Butanone (MEK)	ND		5.0	1.1	ug/L			12/18/15 11:20	1
2-Hexanone	ND		5.0	0.57	ug/L			12/18/15 11:20	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.59	ug/L			12/18/15 11:20	1
Acetone	ND		20	5.0	ug/L			12/18/15 11:20	1
Benzene	ND		5.0	0.99	ug/L			12/18/15 11:20	1
Bromoform	ND		5.0	1.1	ug/L			12/18/15 11:20	1
Bromomethane	ND		5.0	1.6	ug/L			12/18/15 11:20	1
Carbon disulfide	ND		5.0	1.1	ug/L			12/18/15 11:20	1
Carbon tetrachloride	ND		5.0	1.1	ug/L			12/18/15 11:20	1
Chlorobenzene	ND		5.0	0.53	ug/L			12/18/15 11:20	1
Chlorodibromomethane	ND	*	5.0	0.65	ug/L			12/18/15 11:20	1
Chloroform	ND		5.0	1.0	ug/L			12/18/15 11:20	1
Chloromethane	ND		5.0	1.4	ug/L			12/18/15 11:20	1
Chloroethane	ND		5.0	0.75	ug/L			12/18/15 11:20	1
cis-1,2-Dichloroethene	ND		5.0	0.67	ug/L			12/18/15 11:20	1
cis-1,3-Dichloropropene	ND		5.0	0.73	ug/L			12/18/15 11:20	1
Dichlorobromomethane	ND	*	5.0	0.93	ug/L			12/18/15 11:20	1
Dichlorodifluoromethane	ND		5.0	0.64	ug/L			12/18/15 11:20	1
Ethylbenzene	ND		5.0	0.62	ug/L			12/18/15 11:20	1
1,2-Dibromoethane	ND		5.0	0.61	ug/L			12/18/15 11:20	1
Cyclohexane	ND		5.0	0.60	ug/L			12/18/15 11:20	1
Isopropylbenzene	ND		5.0	0.53	ug/L			12/18/15 11:20	1
Methyl acetate	ND		25	3.0	ug/L			12/18/15 11:20	1
Methyl tert-butyl ether	ND		5.0	1.0	ug/L			12/18/15 11:20	1
Methylcyclohexane	ND		5.0	0.56	ug/L			12/18/15 11:20	1
Methylene Chloride	ND		5.0	1.1	ug/L			12/18/15 11:20	1
Styrene	ND		5.0	0.64	ug/L			12/18/15 11:20	1
Tetrachloroethene	ND		5.0	0.82	ug/L			12/18/15 11:20	1
Toluene	ND		5.0	0.85	ug/L			12/18/15 11:20	1
trans-1,2-Dichloroethene	ND		5.0	0.75	ug/L			12/18/15 11:20	1
trans-1,3-Dichloropropene	ND		5.0	0.58	ug/L			12/18/15 11:20	1
Trichloroethene	ND		5.0	0.80	ug/L			12/18/15 11:20	1
Trichlorofluoromethane	ND	*	5.0	1.1	ug/L			12/18/15 11:20	1
Vinyl chloride	ND		5.0	1.3	ug/L			12/18/15 11:20	1
Xylenes, Total	ND		10	1.7	ug/L			12/18/15 11:20	1

TestAmerica Pittsburgh

Client Sample Results

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50813-1
SDG: LINCKLAEN NY

Client Sample ID: RB-121515-BM-0001

Lab Sample ID: 180-50813-1

Date Collected: 12/15/15 10:40

Matrix: Water

Date Received: 12/16/15 15:35

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		62 - 123		12/18/15 11:20	1
4-Bromofluorobenzene (Surr)	86		75 - 120		12/18/15 11:20	1
Dibromofluoromethane (Surr)	97		80 - 120		12/18/15 11:20	1
Toluene-d8 (Surr)	114		80 - 120		12/18/15 11:20	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.38	0.14	ug/L		12/17/15 15:00	12/18/15 14:05	1
PCB-1221	ND		0.38	0.22	ug/L		12/17/15 15:00	12/18/15 14:05	1
PCB-1232	ND		0.38	0.23	ug/L		12/17/15 15:00	12/18/15 14:05	1
PCB-1242	ND		0.38	0.13	ug/L		12/17/15 15:00	12/18/15 14:05	1
PCB-1248	ND		0.38	0.12	ug/L		12/17/15 15:00	12/18/15 14:05	1
PCB-1254	ND		0.38	0.17	ug/L		12/17/15 15:00	12/18/15 14:05	1
PCB-1260	ND		0.38	0.11	ug/L		12/17/15 15:00	12/18/15 14:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	76		35 - 140	12/17/15 15:00	12/18/15 14:05	1
Tetrachloro-m-xylene (Surr)	71		35 - 140	12/17/15 15:00	12/18/15 14:05	1
DCB Decachlorobiphenyl (Surr)	83		35 - 140	12/17/15 15:00	12/18/15 14:05	1
DCB Decachlorobiphenyl (Surr)	99		35 - 140	12/17/15 15:00	12/18/15 14:05	1

Client Sample ID: PA-121515-BM-0001

Lab Sample ID: 180-50813-2

Date Collected: 12/15/15 12:00

Matrix: Solid

Date Received: 12/16/15 15:35

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		250	51	ug/Kg		12/22/15 07:44	12/22/15 18:25	1
1,1,2,2-Tetrachloroethane	ND		250	47	ug/Kg		12/22/15 07:44	12/22/15 18:25	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		250	17	ug/Kg		12/22/15 07:44	12/22/15 18:25	1
1,1,2-Trichloroethane	ND		250	58	ug/Kg		12/22/15 07:44	12/22/15 18:25	1
1,1-Dichloroethane	ND		250	51	ug/Kg		12/22/15 07:44	12/22/15 18:25	1
1,1-Dichloroethene	ND		250	53	ug/Kg		12/22/15 07:44	12/22/15 18:25	1
1,2-Dibromo-3-Chloropropane	ND		250	18	ug/Kg		12/22/15 07:44	12/22/15 18:25	1
1,2-Dichlorobenzene	ND		250	34	ug/Kg		12/22/15 07:44	12/22/15 18:25	1
1,2-Dichloroethane	ND		250	48	ug/Kg		12/22/15 07:44	12/22/15 18:25	1
1,2-Dichloropropane	ND		250	64	ug/Kg		12/22/15 07:44	12/22/15 18:25	1
1,2,4-Trichlorobenzene	ND		250	19	ug/Kg		12/22/15 07:44	12/22/15 18:25	1
1,3-Dichlorobenzene	ND		250	25	ug/Kg		12/22/15 07:44	12/22/15 18:25	1
1,4-Dichlorobenzene	ND		250	26	ug/Kg		12/22/15 07:44	12/22/15 18:25	1
2-Butanone (MEK)	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 18:25	1
2-Hexanone	ND		250	28	ug/Kg		12/22/15 07:44	12/22/15 18:25	1
4-Methyl-2-pentanone (MIBK)	ND		250	30	ug/Kg		12/22/15 07:44	12/22/15 18:25	1
Acetone	ND		1000	250	ug/Kg		12/22/15 07:44	12/22/15 18:25	1
Benzene	ND		250	49	ug/Kg		12/22/15 07:44	12/22/15 18:25	1
Bromoform	ND		250	53	ug/Kg		12/22/15 07:44	12/22/15 18:25	1
Bromomethane	ND		250	79	ug/Kg		12/22/15 07:44	12/22/15 18:25	1
Carbon disulfide	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 18:25	1
Carbon tetrachloride	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 18:25	1
Chlorobenzene	ND		250	26	ug/Kg		12/22/15 07:44	12/22/15 18:25	1
Chlorodibromomethane	ND		250	32	ug/Kg		12/22/15 07:44	12/22/15 18:25	1

TestAmerica Pittsburgh

Client Sample Results

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50813-1
SDG: LINCKLAEN NY

Client Sample ID: PA-121515-BM-0001

Lab Sample ID: 180-50813-2

Date Collected: 12/15/15 12:00

Matrix: Solid

Date Received: 12/16/15 15:35

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	ND		250	50	ug/Kg		12/22/15 07:44	12/22/15 18:25	1
Chloromethane	ND		250	69	ug/Kg		12/22/15 07:44	12/22/15 18:25	1
Chloroethane	ND		250	37	ug/Kg		12/22/15 07:44	12/22/15 18:25	1
cis-1,2-Dichloroethene	ND		250	33	ug/Kg		12/22/15 07:44	12/22/15 18:25	1
cis-1,3-Dichloropropene	ND		250	36	ug/Kg		12/22/15 07:44	12/22/15 18:25	1
Dichlorobromomethane	ND		250	47	ug/Kg		12/22/15 07:44	12/22/15 18:25	1
Dichlorodifluoromethane	ND		250	32	ug/Kg		12/22/15 07:44	12/22/15 18:25	1
Ethylbenzene	ND		250	31	ug/Kg		12/22/15 07:44	12/22/15 18:25	1
1,2-Dibromoethane	ND		250	31	ug/Kg		12/22/15 07:44	12/22/15 18:25	1
Cyclohexane	ND		250	30	ug/Kg		12/22/15 07:44	12/22/15 18:25	1
Isopropylbenzene	ND		250	27	ug/Kg		12/22/15 07:44	12/22/15 18:25	1
Methyl acetate	ND		1200	61	ug/Kg		12/22/15 07:44	12/22/15 18:25	1
Methyl tert-butyl ether	ND		250	51	ug/Kg		12/22/15 07:44	12/22/15 18:25	1
Methylcyclohexane	ND		250	28	ug/Kg		12/22/15 07:44	12/22/15 18:25	1
Methylene Chloride	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 18:25	1
Styrene	ND		250	32	ug/Kg		12/22/15 07:44	12/22/15 18:25	1
Tetrachloroethene	ND		250	41	ug/Kg		12/22/15 07:44	12/22/15 18:25	1
Toluene	ND		250	42	ug/Kg		12/22/15 07:44	12/22/15 18:25	1
trans-1,2-Dichloroethene	ND		250	38	ug/Kg		12/22/15 07:44	12/22/15 18:25	1
trans-1,3-Dichloropropene	ND		250	29	ug/Kg		12/22/15 07:44	12/22/15 18:25	1
Trichloroethene	ND		250	40	ug/Kg		12/22/15 07:44	12/22/15 18:25	1
Trichlorofluoromethane	ND		250	56	ug/Kg		12/22/15 07:44	12/22/15 18:25	1
Vinyl chloride	ND		250	64	ug/Kg		12/22/15 07:44	12/22/15 18:25	1
Xylenes, Total	ND		500	98	ug/Kg		12/22/15 07:44	12/22/15 18:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	86		52 - 124	12/22/15 07:44	12/22/15 18:25	1
4-Bromofluorobenzene (Surr)	87		63 - 120	12/22/15 07:44	12/22/15 18:25	1
Dibromofluoromethane (Surr)	89		68 - 121	12/22/15 07:44	12/22/15 18:25	1
Toluene-d8 (Surr)	111		72 - 127	12/22/15 07:44	12/22/15 18:25	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		10000	4700	ug/Kg		12/24/15 13:19	12/30/15 00:54	200
PCB-1221	ND		10000	7400	ug/Kg		12/24/15 13:19	12/30/15 00:54	200
PCB-1232	ND		10000	2600	ug/Kg		12/24/15 13:19	12/30/15 00:54	200
PCB-1242	660000		10000	3800	ug/Kg		12/24/15 13:19	12/30/15 00:54	200
PCB-1248	ND		10000	2400	ug/Kg		12/24/15 13:19	12/30/15 00:54	200
PCB-1254	ND		10000	3800	ug/Kg		12/24/15 13:19	12/30/15 00:54	200
PCB-1260	ND		10000	3500	ug/Kg		12/24/15 13:19	12/30/15 00:54	200

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	0	D X	45 - 135	12/24/15 13:19	12/30/15 00:54	200
Tetrachloro-m-xylene (Surr)	0	D X	45 - 135	12/24/15 13:19	12/30/15 00:54	200
DCB Decachlorobiphenyl (Surr)	0	D X	45 - 125	12/24/15 13:19	12/30/15 00:54	200
DCB Decachlorobiphenyl (Surr)	0	D X	45 - 125	12/24/15 13:19	12/30/15 00:54	200

TestAmerica Pittsburgh

Client Sample Results

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50813-1
SDG: LINCKLAEN NY

Client Sample ID: PA-121515-BM-0002

Lab Sample ID: 180-50813-3

Date Collected: 12/15/15 13:15

Matrix: Solid

Date Received: 12/16/15 15:35

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	430		250	51	ug/Kg		12/22/15 07:44	12/22/15 18:51	1
1,1,2,2-Tetrachloroethane	ND		250	47	ug/Kg		12/22/15 07:44	12/22/15 18:51	1
1,1,2-Trichloro-1,2,2-trifluoroethane	55	J	250	17	ug/Kg		12/22/15 07:44	12/22/15 18:51	1
1,1,2-Trichloroethane	ND		250	58	ug/Kg		12/22/15 07:44	12/22/15 18:51	1
1,1-Dichloroethane	ND		250	51	ug/Kg		12/22/15 07:44	12/22/15 18:51	1
1,1-Dichloroethene	ND		250	53	ug/Kg		12/22/15 07:44	12/22/15 18:51	1
1,2-Dibromo-3-Chloropropane	ND		250	18	ug/Kg		12/22/15 07:44	12/22/15 18:51	1
1,2-Dichlorobenzene	280		250	34	ug/Kg		12/22/15 07:44	12/22/15 18:51	1
1,2-Dichloroethane	ND		250	48	ug/Kg		12/22/15 07:44	12/22/15 18:51	1
1,2-Dichloropropane	ND		250	64	ug/Kg		12/22/15 07:44	12/22/15 18:51	1
1,2,4-Trichlorobenzene	ND		250	19	ug/Kg		12/22/15 07:44	12/22/15 18:51	1
1,3-Dichlorobenzene	ND		250	25	ug/Kg		12/22/15 07:44	12/22/15 18:51	1
1,4-Dichlorobenzene	ND		250	26	ug/Kg		12/22/15 07:44	12/22/15 18:51	1
2-Butanone (MEK)	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 18:51	1
2-Hexanone	ND		250	28	ug/Kg		12/22/15 07:44	12/22/15 18:51	1
4-Methyl-2-pentanone (MIBK)	ND		250	30	ug/Kg		12/22/15 07:44	12/22/15 18:51	1
Acetone	ND		1000	250	ug/Kg		12/22/15 07:44	12/22/15 18:51	1
Benzene	ND		250	49	ug/Kg		12/22/15 07:44	12/22/15 18:51	1
Bromoform	ND		250	53	ug/Kg		12/22/15 07:44	12/22/15 18:51	1
Bromomethane	ND		250	79	ug/Kg		12/22/15 07:44	12/22/15 18:51	1
Carbon disulfide	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 18:51	1
Carbon tetrachloride	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 18:51	1
Chlorobenzene	ND		250	26	ug/Kg		12/22/15 07:44	12/22/15 18:51	1
Chlorodibromomethane	ND		250	32	ug/Kg		12/22/15 07:44	12/22/15 18:51	1
Chloroform	ND		250	50	ug/Kg		12/22/15 07:44	12/22/15 18:51	1
Chloromethane	ND		250	70	ug/Kg		12/22/15 07:44	12/22/15 18:51	1
Chloroethane	ND		250	37	ug/Kg		12/22/15 07:44	12/22/15 18:51	1
cis-1,2-Dichloroethene	ND		250	33	ug/Kg		12/22/15 07:44	12/22/15 18:51	1
cis-1,3-Dichloropropene	ND		250	36	ug/Kg		12/22/15 07:44	12/22/15 18:51	1
Dichlorobromomethane	ND		250	47	ug/Kg		12/22/15 07:44	12/22/15 18:51	1
Dichlorodifluoromethane	ND		250	32	ug/Kg		12/22/15 07:44	12/22/15 18:51	1
Ethylbenzene	91	J	250	31	ug/Kg		12/22/15 07:44	12/22/15 18:51	1
1,2-Dibromoethane	ND		250	31	ug/Kg		12/22/15 07:44	12/22/15 18:51	1
Cyclohexane	ND		250	30	ug/Kg		12/22/15 07:44	12/22/15 18:51	1
Isopropylbenzene	ND		250	27	ug/Kg		12/22/15 07:44	12/22/15 18:51	1
Methyl acetate	170	J	1300	61	ug/Kg		12/22/15 07:44	12/22/15 18:51	1
Methyl tert-butyl ether	ND		250	51	ug/Kg		12/22/15 07:44	12/22/15 18:51	1
Methylcyclohexane	ND		250	28	ug/Kg		12/22/15 07:44	12/22/15 18:51	1
Methylene Chloride	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 18:51	1
Styrene	ND		250	32	ug/Kg		12/22/15 07:44	12/22/15 18:51	1
Tetrachloroethene	200	J	250	41	ug/Kg		12/22/15 07:44	12/22/15 18:51	1
Toluene	370		250	42	ug/Kg		12/22/15 07:44	12/22/15 18:51	1
trans-1,2-Dichloroethene	ND		250	38	ug/Kg		12/22/15 07:44	12/22/15 18:51	1
trans-1,3-Dichloropropene	ND		250	29	ug/Kg		12/22/15 07:44	12/22/15 18:51	1
Trichloroethene	560		250	40	ug/Kg		12/22/15 07:44	12/22/15 18:51	1
Trichlorofluoromethane	ND		250	56	ug/Kg		12/22/15 07:44	12/22/15 18:51	1
Vinyl chloride	ND		250	65	ug/Kg		12/22/15 07:44	12/22/15 18:51	1
Xylenes, Total	520		500	98	ug/Kg		12/22/15 07:44	12/22/15 18:51	1

TestAmerica Pittsburgh

Client Sample Results

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50813-1
SDG: LINCKLAEN NY

Client Sample ID: PA-121515-BM-0002

Lab Sample ID: 180-50813-3

Date Collected: 12/15/15 13:15

Matrix: Solid

Date Received: 12/16/15 15:35

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	84		52 - 124	12/22/15 07:44	12/22/15 18:51	1
4-Bromofluorobenzene (Surr)	95		63 - 120	12/22/15 07:44	12/22/15 18:51	1
Dibromofluoromethane (Surr)	95		68 - 121	12/22/15 07:44	12/22/15 18:51	1
Toluene-d8 (Surr)	113		72 - 127	12/22/15 07:44	12/22/15 18:51	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		4100	1900	ug/Kg		12/24/15 13:19	12/30/15 01:12	200
PCB-1221	ND		4100	2900	ug/Kg		12/24/15 13:19	12/30/15 01:12	200
PCB-1232	ND		4100	1000	ug/Kg		12/24/15 13:19	12/30/15 01:12	200
PCB-1242	320000		4100	1500	ug/Kg		12/24/15 13:19	12/30/15 01:12	200
PCB-1248	ND		4100	950	ug/Kg		12/24/15 13:19	12/30/15 01:12	200
PCB-1254	ND		4100	1500	ug/Kg		12/24/15 13:19	12/30/15 01:12	200
PCB-1260	ND		4100	1400	ug/Kg		12/24/15 13:19	12/30/15 01:12	200

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	0	D X	45 - 135	12/24/15 13:19	12/30/15 01:12	200
Tetrachloro-m-xylene (Surr)	0	D X	45 - 135	12/24/15 13:19	12/30/15 01:12	200
DCB Decachlorobiphenyl (Surr)	0	D X	45 - 125	12/24/15 13:19	12/30/15 01:12	200
DCB Decachlorobiphenyl (Surr)	0	D X	45 - 125	12/24/15 13:19	12/30/15 01:12	200

Client Sample ID: PA-121515-BM-0003

Lab Sample ID: 180-50813-4

Date Collected: 12/15/15 14:25

Matrix: Solid

Date Received: 12/16/15 15:35

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		250	51	ug/Kg		12/22/15 07:44	12/22/15 19:17	1
1,1,2,2-Tetrachloroethane	ND		250	47	ug/Kg		12/22/15 07:44	12/22/15 19:17	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		250	16	ug/Kg		12/22/15 07:44	12/22/15 19:17	1
1,1,2-Trichloroethane	ND		250	58	ug/Kg		12/22/15 07:44	12/22/15 19:17	1
1,1-Dichloroethane	ND		250	51	ug/Kg		12/22/15 07:44	12/22/15 19:17	1
1,1-Dichloroethene	ND		250	53	ug/Kg		12/22/15 07:44	12/22/15 19:17	1
1,2-Dibromo-3-Chloropropane	ND		250	18	ug/Kg		12/22/15 07:44	12/22/15 19:17	1
1,2-Dichlorobenzene	47	J	250	34	ug/Kg		12/22/15 07:44	12/22/15 19:17	1
1,2-Dichloroethane	ND		250	48	ug/Kg		12/22/15 07:44	12/22/15 19:17	1
1,2-Dichloropropane	ND		250	64	ug/Kg		12/22/15 07:44	12/22/15 19:17	1
1,2,4-Trichlorobenzene	ND		250	19	ug/Kg		12/22/15 07:44	12/22/15 19:17	1
1,3-Dichlorobenzene	ND		250	25	ug/Kg		12/22/15 07:44	12/22/15 19:17	1
1,4-Dichlorobenzene	ND		250	26	ug/Kg		12/22/15 07:44	12/22/15 19:17	1
2-Butanone (MEK)	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 19:17	1
2-Hexanone	ND		250	28	ug/Kg		12/22/15 07:44	12/22/15 19:17	1
4-Methyl-2-pentanone (MIBK)	ND		250	29	ug/Kg		12/22/15 07:44	12/22/15 19:17	1
Acetone	ND		1000	250	ug/Kg		12/22/15 07:44	12/22/15 19:17	1
Benzene	ND		250	49	ug/Kg		12/22/15 07:44	12/22/15 19:17	1
Bromoform	ND		250	53	ug/Kg		12/22/15 07:44	12/22/15 19:17	1
Bromomethane	ND		250	79	ug/Kg		12/22/15 07:44	12/22/15 19:17	1
Carbon disulfide	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 19:17	1
Carbon tetrachloride	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 19:17	1
Chlorobenzene	ND		250	26	ug/Kg		12/22/15 07:44	12/22/15 19:17	1
Chlorodibromomethane	ND		250	32	ug/Kg		12/22/15 07:44	12/22/15 19:17	1

TestAmerica Pittsburgh

Client Sample Results

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50813-1
SDG: LINCKLAEN NY

Client Sample ID: PA-121515-BM-0003

Lab Sample ID: 180-50813-4

Date Collected: 12/15/15 14:25

Matrix: Solid

Date Received: 12/16/15 15:35

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	ND		250	50	ug/Kg		12/22/15 07:44	12/22/15 19:17	1
Chloromethane	ND		250	69	ug/Kg		12/22/15 07:44	12/22/15 19:17	1
Chloroethane	ND		250	37	ug/Kg		12/22/15 07:44	12/22/15 19:17	1
cis-1,2-Dichloroethene	ND		250	33	ug/Kg		12/22/15 07:44	12/22/15 19:17	1
cis-1,3-Dichloropropene	ND		250	36	ug/Kg		12/22/15 07:44	12/22/15 19:17	1
Dichlorobromomethane	ND		250	46	ug/Kg		12/22/15 07:44	12/22/15 19:17	1
Dichlorodifluoromethane	ND		250	32	ug/Kg		12/22/15 07:44	12/22/15 19:17	1
Ethylbenzene	ND		250	31	ug/Kg		12/22/15 07:44	12/22/15 19:17	1
1,2-Dibromoethane	ND		250	31	ug/Kg		12/22/15 07:44	12/22/15 19:17	1
Cyclohexane	ND		250	30	ug/Kg		12/22/15 07:44	12/22/15 19:17	1
Isopropylbenzene	ND		250	26	ug/Kg		12/22/15 07:44	12/22/15 19:17	1
Methyl acetate	ND		1200	61	ug/Kg		12/22/15 07:44	12/22/15 19:17	1
Methyl tert-butyl ether	ND		250	51	ug/Kg		12/22/15 07:44	12/22/15 19:17	1
Methylcyclohexane	ND		250	28	ug/Kg		12/22/15 07:44	12/22/15 19:17	1
Methylene Chloride	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 19:17	1
Styrene	ND		250	32	ug/Kg		12/22/15 07:44	12/22/15 19:17	1
Tetrachloroethene	ND		250	41	ug/Kg		12/22/15 07:44	12/22/15 19:17	1
Toluene	45 J		250	42	ug/Kg		12/22/15 07:44	12/22/15 19:17	1
trans-1,2-Dichloroethene	ND		250	38	ug/Kg		12/22/15 07:44	12/22/15 19:17	1
trans-1,3-Dichloropropene	ND		250	29	ug/Kg		12/22/15 07:44	12/22/15 19:17	1
Trichloroethene	41 J		250	40	ug/Kg		12/22/15 07:44	12/22/15 19:17	1
Trichlorofluoromethane	ND		250	56	ug/Kg		12/22/15 07:44	12/22/15 19:17	1
Vinyl chloride	ND		250	64	ug/Kg		12/22/15 07:44	12/22/15 19:17	1
Xylenes, Total	ND		500	98	ug/Kg		12/22/15 07:44	12/22/15 19:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	75		52 - 124	12/22/15 07:44	12/22/15 19:17	1
4-Bromofluorobenzene (Surr)	84		63 - 120	12/22/15 07:44	12/22/15 19:17	1
Dibromofluoromethane (Surr)	84		68 - 121	12/22/15 07:44	12/22/15 19:17	1
Toluene-d8 (Surr)	105		72 - 127	12/22/15 07:44	12/22/15 19:17	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		5000	2300	ug/Kg		12/24/15 13:19	12/30/15 01:31	200
PCB-1221	ND		5000	3600	ug/Kg		12/24/15 13:19	12/30/15 01:31	200
PCB-1232	ND		5000	1300	ug/Kg		12/24/15 13:19	12/30/15 01:31	200
PCB-1242	360000		5000	1800	ug/Kg		12/24/15 13:19	12/30/15 01:31	200
PCB-1248	ND		5000	1200	ug/Kg		12/24/15 13:19	12/30/15 01:31	200
PCB-1254	ND		5000	1800	ug/Kg		12/24/15 13:19	12/30/15 01:31	200
PCB-1260	ND		5000	1700	ug/Kg		12/24/15 13:19	12/30/15 01:31	200

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	0	D X	45 - 135	12/24/15 13:19	12/30/15 01:31	200
Tetrachloro-m-xylene (Surr)	0	D X	45 - 135	12/24/15 13:19	12/30/15 01:31	200
DCB Decachlorobiphenyl (Surr)	0	D X	45 - 125	12/24/15 13:19	12/30/15 01:31	200
DCB Decachlorobiphenyl (Surr)	0	D X	45 - 125	12/24/15 13:19	12/30/15 01:31	200

TestAmerica Pittsburgh

Client Sample Results

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50813-1
SDG: LINCKLAEN NY

Client Sample ID: PA-121515-BM-0004

Lab Sample ID: 180-50813-5

Date Collected: 12/15/15 15:15

Matrix: Solid

Date Received: 12/16/15 15:35

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	510		250	51	ug/Kg		12/22/15 07:44	12/22/15 19:42	1
1,1,2,2-Tetrachloroethane	ND		250	47	ug/Kg		12/22/15 07:44	12/22/15 19:42	1
1,1,2-Trichloro-1,2,2-trifluoroethane	55	J	250	17	ug/Kg		12/22/15 07:44	12/22/15 19:42	1
1,1,2-Trichloroethane	ND		250	58	ug/Kg		12/22/15 07:44	12/22/15 19:42	1
1,1-Dichloroethane	ND		250	51	ug/Kg		12/22/15 07:44	12/22/15 19:42	1
1,1-Dichloroethene	ND		250	53	ug/Kg		12/22/15 07:44	12/22/15 19:42	1
1,2-Dibromo-3-Chloropropane	ND		250	18	ug/Kg		12/22/15 07:44	12/22/15 19:42	1
1,2-Dichlorobenzene	310		250	34	ug/Kg		12/22/15 07:44	12/22/15 19:42	1
1,2-Dichloroethane	ND		250	48	ug/Kg		12/22/15 07:44	12/22/15 19:42	1
1,2-Dichloropropane	ND		250	64	ug/Kg		12/22/15 07:44	12/22/15 19:42	1
1,2,4-Trichlorobenzene	ND		250	19	ug/Kg		12/22/15 07:44	12/22/15 19:42	1
1,3-Dichlorobenzene	ND		250	25	ug/Kg		12/22/15 07:44	12/22/15 19:42	1
1,4-Dichlorobenzene	ND		250	26	ug/Kg		12/22/15 07:44	12/22/15 19:42	1
2-Butanone (MEK)	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 19:42	1
2-Hexanone	ND		250	28	ug/Kg		12/22/15 07:44	12/22/15 19:42	1
4-Methyl-2-pentanone (MIBK)	ND		250	30	ug/Kg		12/22/15 07:44	12/22/15 19:42	1
Acetone	ND		1000	250	ug/Kg		12/22/15 07:44	12/22/15 19:42	1
Benzene	ND		250	49	ug/Kg		12/22/15 07:44	12/22/15 19:42	1
Bromoform	ND		250	53	ug/Kg		12/22/15 07:44	12/22/15 19:42	1
Bromomethane	ND		250	79	ug/Kg		12/22/15 07:44	12/22/15 19:42	1
Carbon disulfide	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 19:42	1
Carbon tetrachloride	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 19:42	1
Chlorobenzene	ND		250	26	ug/Kg		12/22/15 07:44	12/22/15 19:42	1
Chlorodibromomethane	ND		250	32	ug/Kg		12/22/15 07:44	12/22/15 19:42	1
Chloroform	ND		250	50	ug/Kg		12/22/15 07:44	12/22/15 19:42	1
Chloromethane	ND		250	70	ug/Kg		12/22/15 07:44	12/22/15 19:42	1
Chloroethane	ND		250	37	ug/Kg		12/22/15 07:44	12/22/15 19:42	1
cis-1,2-Dichloroethene	ND		250	33	ug/Kg		12/22/15 07:44	12/22/15 19:42	1
cis-1,3-Dichloropropene	ND		250	36	ug/Kg		12/22/15 07:44	12/22/15 19:42	1
Dichlorobromomethane	ND		250	47	ug/Kg		12/22/15 07:44	12/22/15 19:42	1
Dichlorodifluoromethane	ND		250	32	ug/Kg		12/22/15 07:44	12/22/15 19:42	1
Ethylbenzene	74	J	250	31	ug/Kg		12/22/15 07:44	12/22/15 19:42	1
1,2-Dibromoethane	ND		250	31	ug/Kg		12/22/15 07:44	12/22/15 19:42	1
Cyclohexane	ND		250	30	ug/Kg		12/22/15 07:44	12/22/15 19:42	1
Isopropylbenzene	ND		250	27	ug/Kg		12/22/15 07:44	12/22/15 19:42	1
Methyl acetate	ND		1200	61	ug/Kg		12/22/15 07:44	12/22/15 19:42	1
Methyl tert-butyl ether	ND		250	51	ug/Kg		12/22/15 07:44	12/22/15 19:42	1
Methylcyclohexane	ND		250	28	ug/Kg		12/22/15 07:44	12/22/15 19:42	1
Methylene Chloride	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 19:42	1
Styrene	ND		250	32	ug/Kg		12/22/15 07:44	12/22/15 19:42	1
Tetrachloroethene	130	J	250	41	ug/Kg		12/22/15 07:44	12/22/15 19:42	1
Toluene	320		250	42	ug/Kg		12/22/15 07:44	12/22/15 19:42	1
trans-1,2-Dichloroethene	ND		250	38	ug/Kg		12/22/15 07:44	12/22/15 19:42	1
trans-1,3-Dichloropropene	ND		250	29	ug/Kg		12/22/15 07:44	12/22/15 19:42	1
Trichloroethene	550		250	40	ug/Kg		12/22/15 07:44	12/22/15 19:42	1
Trichlorofluoromethane	ND		250	56	ug/Kg		12/22/15 07:44	12/22/15 19:42	1
Vinyl chloride	ND		250	65	ug/Kg		12/22/15 07:44	12/22/15 19:42	1
Xylenes, Total	460	J	500	98	ug/Kg		12/22/15 07:44	12/22/15 19:42	1

TestAmerica Pittsburgh

Client Sample Results

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50813-1
SDG: LINCKLAEN NY

Client Sample ID: PA-121515-BM-0004

Lab Sample ID: 180-50813-5

Date Collected: 12/15/15 15:15

Matrix: Solid

Date Received: 12/16/15 15:35

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	89		52 - 124	12/22/15 07:44	12/22/15 19:42	1
4-Bromofluorobenzene (Surr)	97		63 - 120	12/22/15 07:44	12/22/15 19:42	1
Dibromofluoromethane (Surr)	96		68 - 121	12/22/15 07:44	12/22/15 19:42	1
Toluene-d8 (Surr)	102		72 - 127	12/22/15 07:44	12/22/15 19:42	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		4800	2200	ug/Kg		12/24/15 13:19	12/30/15 01:50	200
PCB-1221	ND		4800	3400	ug/Kg		12/24/15 13:19	12/30/15 01:50	200
PCB-1232	ND		4800	1200	ug/Kg		12/24/15 13:19	12/30/15 01:50	200
PCB-1242	400000		4800	1800	ug/Kg		12/24/15 13:19	12/30/15 01:50	200
PCB-1248	ND		4800	1100	ug/Kg		12/24/15 13:19	12/30/15 01:50	200
PCB-1254	ND		4800	1800	ug/Kg		12/24/15 13:19	12/30/15 01:50	200
PCB-1260	ND		4800	1600	ug/Kg		12/24/15 13:19	12/30/15 01:50	200

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	0	D X	45 - 135	12/24/15 13:19	12/30/15 01:50	200
Tetrachloro-m-xylene (Surr)	0	D X	45 - 135	12/24/15 13:19	12/30/15 01:50	200
DCB Decachlorobiphenyl (Surr)	0	D X	45 - 125	12/24/15 13:19	12/30/15 01:50	200
DCB Decachlorobiphenyl (Surr)	0	D X	45 - 125	12/24/15 13:19	12/30/15 01:50	200

Client Sample ID: PA-121515-BM-0005

Lab Sample ID: 180-50813-6

Date Collected: 12/15/15 16:10

Matrix: Solid

Date Received: 12/16/15 15:35

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		250	51	ug/Kg		12/23/15 07:25	12/23/15 14:56	1
1,1,2,2-Tetrachloroethane	ND		250	46	ug/Kg		12/23/15 07:25	12/23/15 14:56	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		250	16	ug/Kg		12/23/15 07:25	12/23/15 14:56	1
1,1,2-Trichloroethane	ND		250	58	ug/Kg		12/23/15 07:25	12/23/15 14:56	1
1,1-Dichloroethane	ND		250	50	ug/Kg		12/23/15 07:25	12/23/15 14:56	1
1,1-Dichloroethene	ND		250	53	ug/Kg		12/23/15 07:25	12/23/15 14:56	1
1,2-Dibromo-3-Chloropropane	ND		250	18	ug/Kg		12/23/15 07:25	12/23/15 14:56	1
1,2-Dichlorobenzene	ND		250	34	ug/Kg		12/23/15 07:25	12/23/15 14:56	1
1,2-Dichloroethane	ND		250	48	ug/Kg		12/23/15 07:25	12/23/15 14:56	1
1,2-Dichloropropane	ND		250	64	ug/Kg		12/23/15 07:25	12/23/15 14:56	1
1,2,4-Trichlorobenzene	ND		250	19	ug/Kg		12/23/15 07:25	12/23/15 14:56	1
1,3-Dichlorobenzene	ND		250	25	ug/Kg		12/23/15 07:25	12/23/15 14:56	1
1,4-Dichlorobenzene	ND		250	26	ug/Kg		12/23/15 07:25	12/23/15 14:56	1
2-Butanone (MEK)	ND		250	54	ug/Kg		12/23/15 07:25	12/23/15 14:56	1
2-Hexanone	ND		250	28	ug/Kg		12/23/15 07:25	12/23/15 14:56	1
4-Methyl-2-pentanone (MIBK)	ND		250	29	ug/Kg		12/23/15 07:25	12/23/15 14:56	1
Acetone	ND	*	1000	250	ug/Kg		12/23/15 07:25	12/23/15 14:56	1
Benzene	ND		250	49	ug/Kg		12/23/15 07:25	12/23/15 14:56	1
Bromoform	ND		250	53	ug/Kg		12/23/15 07:25	12/23/15 14:56	1
Bromomethane	ND		250	78	ug/Kg		12/23/15 07:25	12/23/15 14:56	1
Carbon disulfide	ND		250	53	ug/Kg		12/23/15 07:25	12/23/15 14:56	1
Carbon tetrachloride	ND		250	54	ug/Kg		12/23/15 07:25	12/23/15 14:56	1
Chlorobenzene	ND		250	26	ug/Kg		12/23/15 07:25	12/23/15 14:56	1
Chlorodibromomethane	ND		250	32	ug/Kg		12/23/15 07:25	12/23/15 14:56	1

TestAmerica Pittsburgh

Client Sample Results

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50813-1
SDG: LINCKLAEN NY

Client Sample ID: PA-121515-BM-0005

Lab Sample ID: 180-50813-6

Date Collected: 12/15/15 16:10

Matrix: Solid

Date Received: 12/16/15 15:35

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	ND		250	50	ug/Kg		12/23/15 07:25	12/23/15 14:56	1
Chloromethane	ND		250	69	ug/Kg		12/23/15 07:25	12/23/15 14:56	1
Chloroethane	ND		250	37	ug/Kg		12/23/15 07:25	12/23/15 14:56	1
cis-1,2-Dichloroethene	ND		250	33	ug/Kg		12/23/15 07:25	12/23/15 14:56	1
cis-1,3-Dichloropropene	ND		250	36	ug/Kg		12/23/15 07:25	12/23/15 14:56	1
Dichlorobromomethane	ND		250	46	ug/Kg		12/23/15 07:25	12/23/15 14:56	1
Dichlorodifluoromethane	ND		250	32	ug/Kg		12/23/15 07:25	12/23/15 14:56	1
Ethylbenzene	ND		250	31	ug/Kg		12/23/15 07:25	12/23/15 14:56	1
1,2-Dibromoethane	ND		250	30	ug/Kg		12/23/15 07:25	12/23/15 14:56	1
Cyclohexane	ND		250	30	ug/Kg		12/23/15 07:25	12/23/15 14:56	1
Isopropylbenzene	ND		250	26	ug/Kg		12/23/15 07:25	12/23/15 14:56	1
Methyl acetate	ND		1200	61	ug/Kg		12/23/15 07:25	12/23/15 14:56	1
Methyl tert-butyl ether	ND		250	51	ug/Kg		12/23/15 07:25	12/23/15 14:56	1
Methylcyclohexane	ND		250	28	ug/Kg		12/23/15 07:25	12/23/15 14:56	1
Methylene Chloride	ND		250	54	ug/Kg		12/23/15 07:25	12/23/15 14:56	1
Styrene	ND		250	32	ug/Kg		12/23/15 07:25	12/23/15 14:56	1
Tetrachloroethene	ND		250	41	ug/Kg		12/23/15 07:25	12/23/15 14:56	1
Toluene	ND		250	42	ug/Kg		12/23/15 07:25	12/23/15 14:56	1
trans-1,2-Dichloroethene	ND		250	37	ug/Kg		12/23/15 07:25	12/23/15 14:56	1
trans-1,3-Dichloropropene	ND		250	29	ug/Kg		12/23/15 07:25	12/23/15 14:56	1
Trichloroethene	ND		250	40	ug/Kg		12/23/15 07:25	12/23/15 14:56	1
Trichlorofluoromethane	ND		250	56	ug/Kg		12/23/15 07:25	12/23/15 14:56	1
Vinyl chloride	ND		250	64	ug/Kg		12/23/15 07:25	12/23/15 14:56	1
Xylenes, Total	ND		500	98	ug/Kg		12/23/15 07:25	12/23/15 14:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	84		52 - 124	12/23/15 07:25	12/23/15 14:56	1
4-Bromofluorobenzene (Surr)	83		63 - 120	12/23/15 07:25	12/23/15 14:56	1
Dibromofluoromethane (Surr)	86		68 - 121	12/23/15 07:25	12/23/15 14:56	1
Toluene-d8 (Surr)	95		72 - 127	12/23/15 07:25	12/23/15 14:56	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		1700	790	ug/Kg		12/24/15 13:20	12/30/15 02:09	50
PCB-1221	ND		1700	1200	ug/Kg		12/24/15 13:20	12/30/15 02:09	50
PCB-1232	ND		1700	430	ug/Kg		12/24/15 13:20	12/30/15 02:09	50
PCB-1242	90000		1700	630	ug/Kg		12/24/15 13:20	12/30/15 02:09	50
PCB-1248	ND		1700	400	ug/Kg		12/24/15 13:20	12/30/15 02:09	50
PCB-1254	ND		1700	630	ug/Kg		12/24/15 13:20	12/30/15 02:09	50
PCB-1260	ND		1700	590	ug/Kg		12/24/15 13:20	12/30/15 02:09	50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	0	X D	45 - 135	12/24/15 13:20	12/30/15 02:09	50
Tetrachloro-m-xylene (Surr)	0	X D	45 - 135	12/24/15 13:20	12/30/15 02:09	50
DCB Decachlorobiphenyl (Surr)	0	X D	45 - 125	12/24/15 13:20	12/30/15 02:09	50
DCB Decachlorobiphenyl (Surr)	0	X D	45 - 125	12/24/15 13:20	12/30/15 02:09	50

TestAmerica Pittsburgh

Client Sample Results

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50813-1
SDG: LINCKLAEN NY

Client Sample ID: TRIP BLANK

Lab Sample ID: 180-50813-7

Date Collected: 12/15/15 10:40

Matrix: Water

Date Received: 12/16/15 15:35

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	1.0	ug/L			12/18/15 10:54	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.93	ug/L			12/18/15 10:54	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.33	ug/L			12/18/15 10:54	1
1,1,2-Trichloroethane	ND		5.0	1.2	ug/L			12/18/15 10:54	1
1,1-Dichloroethane	ND		5.0	1.0	ug/L			12/18/15 10:54	1
1,1-Dichloroethene	ND		5.0	1.1	ug/L			12/18/15 10:54	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.35	ug/L			12/18/15 10:54	1
1,2-Dichlorobenzene	ND		5.0	0.68	ug/L			12/18/15 10:54	1
1,2-Dichloroethane	ND		5.0	0.96	ug/L			12/18/15 10:54	1
1,2-Dichloropropane	ND		5.0	1.3	ug/L			12/18/15 10:54	1
1,2,4-Trichlorobenzene	ND		5.0	0.38	ug/L			12/18/15 10:54	1
1,3-Dichlorobenzene	ND		5.0	0.51	ug/L			12/18/15 10:54	1
1,4-Dichlorobenzene	ND		5.0	0.53	ug/L			12/18/15 10:54	1
2-Butanone (MEK)	ND		5.0	1.1	ug/L			12/18/15 10:54	1
2-Hexanone	ND		5.0	0.57	ug/L			12/18/15 10:54	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.59	ug/L			12/18/15 10:54	1
Acetone	ND		20	5.0	ug/L			12/18/15 10:54	1
Benzene	ND		5.0	0.99	ug/L			12/18/15 10:54	1
Bromoform	ND		5.0	1.1	ug/L			12/18/15 10:54	1
Bromomethane	ND		5.0	1.6	ug/L			12/18/15 10:54	1
Carbon disulfide	ND		5.0	1.1	ug/L			12/18/15 10:54	1
Carbon tetrachloride	ND		5.0	1.1	ug/L			12/18/15 10:54	1
Chlorobenzene	ND		5.0	0.53	ug/L			12/18/15 10:54	1
Chlorodibromomethane	ND *		5.0	0.65	ug/L			12/18/15 10:54	1
Chloroform	ND		5.0	1.0	ug/L			12/18/15 10:54	1
Chloromethane	ND		5.0	1.4	ug/L			12/18/15 10:54	1
Chloroethane	ND		5.0	0.75	ug/L			12/18/15 10:54	1
cis-1,2-Dichloroethene	ND		5.0	0.67	ug/L			12/18/15 10:54	1
cis-1,3-Dichloropropene	ND		5.0	0.73	ug/L			12/18/15 10:54	1
Dichlorobromomethane	ND *		5.0	0.93	ug/L			12/18/15 10:54	1
Dichlorodifluoromethane	ND		5.0	0.64	ug/L			12/18/15 10:54	1
Ethylbenzene	ND		5.0	0.62	ug/L			12/18/15 10:54	1
1,2-Dibromoethane	ND		5.0	0.61	ug/L			12/18/15 10:54	1
Cyclohexane	ND		5.0	0.60	ug/L			12/18/15 10:54	1
Isopropylbenzene	ND		5.0	0.53	ug/L			12/18/15 10:54	1
Methyl acetate	ND		25	3.0	ug/L			12/18/15 10:54	1
Methyl tert-butyl ether	ND		5.0	1.0	ug/L			12/18/15 10:54	1
Methylcyclohexane	ND		5.0	0.56	ug/L			12/18/15 10:54	1
Methylene Chloride	ND		5.0	1.1	ug/L			12/18/15 10:54	1
Styrene	ND		5.0	0.64	ug/L			12/18/15 10:54	1
Tetrachloroethene	ND		5.0	0.82	ug/L			12/18/15 10:54	1
Toluene	ND		5.0	0.85	ug/L			12/18/15 10:54	1
trans-1,2-Dichloroethene	ND		5.0	0.75	ug/L			12/18/15 10:54	1
trans-1,3-Dichloropropene	ND		5.0	0.58	ug/L			12/18/15 10:54	1
Trichloroethene	ND		5.0	0.80	ug/L			12/18/15 10:54	1
Trichlorofluoromethane	ND *		5.0	1.1	ug/L			12/18/15 10:54	1
Vinyl chloride	ND		5.0	1.3	ug/L			12/18/15 10:54	1
Xylenes, Total	ND		10	1.7	ug/L			12/18/15 10:54	1

TestAmerica Pittsburgh

Client Sample Results

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50813-1
SDG: LINCKLAEN NY

Client Sample ID: TRIP BLANK

Date Collected: 12/15/15 10:40

Date Received: 12/16/15 15:35

Lab Sample ID: 180-50813-7

Matrix: Water

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	93		62 - 123		12/18/15 10:54	1
4-Bromofluorobenzene (Surr)	86		75 - 120		12/18/15 10:54	1
Dibromofluoromethane (Surr)	98		80 - 120		12/18/15 10:54	1
Toluene-d8 (Surr)	109		80 - 120		12/18/15 10:54	1

QC Sample Results

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50813-1
SDG: LINCKLAEN NY

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 180-164017/7

Matrix: Water

Analysis Batch: 164017

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	1.0	ug/L			12/18/15 10:29	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.93	ug/L			12/18/15 10:29	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.33	ug/L			12/18/15 10:29	1
1,1,2-Trichloroethane	ND		5.0	1.2	ug/L			12/18/15 10:29	1
1,1-Dichloroethane	ND		5.0	1.0	ug/L			12/18/15 10:29	1
1,1-Dichloroethene	ND		5.0	1.1	ug/L			12/18/15 10:29	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.35	ug/L			12/18/15 10:29	1
1,2-Dichlorobenzene	ND		5.0	0.68	ug/L			12/18/15 10:29	1
1,2-Dichloroethane	ND		5.0	0.96	ug/L			12/18/15 10:29	1
1,2-Dichloropropane	ND		5.0	1.3	ug/L			12/18/15 10:29	1
1,2,4-Trichlorobenzene	ND		5.0	0.38	ug/L			12/18/15 10:29	1
1,3-Dichlorobenzene	ND		5.0	0.51	ug/L			12/18/15 10:29	1
1,4-Dichlorobenzene	ND		5.0	0.53	ug/L			12/18/15 10:29	1
2-Butanone (MEK)	ND		5.0	1.1	ug/L			12/18/15 10:29	1
2-Hexanone	ND		5.0	0.57	ug/L			12/18/15 10:29	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.59	ug/L			12/18/15 10:29	1
Acetone	ND		20	5.0	ug/L			12/18/15 10:29	1
Benzene	ND		5.0	0.99	ug/L			12/18/15 10:29	1
Bromoform	ND		5.0	1.1	ug/L			12/18/15 10:29	1
Bromomethane	ND		5.0	1.6	ug/L			12/18/15 10:29	1
Carbon disulfide	ND		5.0	1.1	ug/L			12/18/15 10:29	1
Carbon tetrachloride	ND		5.0	1.1	ug/L			12/18/15 10:29	1
Chlorobenzene	ND		5.0	0.53	ug/L			12/18/15 10:29	1
Chlorodibromomethane	ND		5.0	0.65	ug/L			12/18/15 10:29	1
Chloroform	ND		5.0	1.0	ug/L			12/18/15 10:29	1
Chloromethane	ND		5.0	1.4	ug/L			12/18/15 10:29	1
Chloroethane	ND		5.0	0.75	ug/L			12/18/15 10:29	1
cis-1,2-Dichloroethene	ND		5.0	0.67	ug/L			12/18/15 10:29	1
cis-1,3-Dichloropropene	ND		5.0	0.73	ug/L			12/18/15 10:29	1
Dichlorobromomethane	ND		5.0	0.93	ug/L			12/18/15 10:29	1
Dichlorodifluoromethane	ND		5.0	0.64	ug/L			12/18/15 10:29	1
Ethylbenzene	ND		5.0	0.62	ug/L			12/18/15 10:29	1
1,2-Dibromoethane	ND		5.0	0.61	ug/L			12/18/15 10:29	1
Cyclohexane	ND		5.0	0.60	ug/L			12/18/15 10:29	1
Isopropylbenzene	ND		5.0	0.53	ug/L			12/18/15 10:29	1
Methyl acetate	ND		25	3.0	ug/L			12/18/15 10:29	1
Methyl tert-butyl ether	ND		5.0	1.0	ug/L			12/18/15 10:29	1
Methylcyclohexane	ND		5.0	0.56	ug/L			12/18/15 10:29	1
Methylene Chloride	ND		5.0	1.1	ug/L			12/18/15 10:29	1
Styrene	ND		5.0	0.64	ug/L			12/18/15 10:29	1
Tetrachloroethene	ND		5.0	0.82	ug/L			12/18/15 10:29	1
Toluene	ND		5.0	0.85	ug/L			12/18/15 10:29	1
trans-1,2-Dichloroethene	ND		5.0	0.75	ug/L			12/18/15 10:29	1
trans-1,3-Dichloropropene	ND		5.0	0.58	ug/L			12/18/15 10:29	1
Trichloroethene	ND		5.0	0.80	ug/L			12/18/15 10:29	1
Trichlorofluoromethane	ND		5.0	1.1	ug/L			12/18/15 10:29	1
Vinyl chloride	ND		5.0	1.3	ug/L			12/18/15 10:29	1
Xylenes, Total	ND		10	1.7	ug/L			12/18/15 10:29	1

TestAmerica Pittsburgh

QC Sample Results

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50813-1
SDG: LINCKLAEN NY

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	86		62 - 123		12/18/15 10:29	1
4-Bromofluorobenzene (Surr)	97		75 - 120		12/18/15 10:29	1
Dibromofluoromethane (Surr)	94		80 - 120		12/18/15 10:29	1
Toluene-d8 (Surr)	110		80 - 120		12/18/15 10:29	1

Lab Sample ID: LCS 180-164017/4
Matrix: Water
Analysis Batch: 164017

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	40.0	39.8		ug/L		99	69 - 134
1,1,2,2-Tetrachloroethane	40.0	42.1		ug/L		105	59 - 136
1,1,2-Trichloro-1,2,2-trifluoroethane	40.0	32.1		ug/L		80	70 - 131
1,1,2-Trichloroethane	40.0	44.5		ug/L		111	75 - 126
1,1-Dichloroethane	40.0	37.1		ug/L		93	77 - 122
1,1-Dichloroethene	40.0	34.3		ug/L		86	69 - 127
1,2-Dibromo-3-Chloropropane	40.0	57.1		ug/L		143	28 - 150
1,2-Dichlorobenzene	40.0	45.5		ug/L		114	75 - 125
1,2-Dichloroethane	40.0	42.7		ug/L		107	63 - 140
1,2-Dichloropropane	40.0	40.4		ug/L		101	75 - 114
1,2,4-Trichlorobenzene	40.0	49.7		ug/L		124	35 - 150
1,3-Dichlorobenzene	40.0	41.7		ug/L		104	76 - 125
1,4-Dichlorobenzene	40.0	43.4		ug/L		109	76 - 123
2-Butanone (MEK)	40.0	39.5		ug/L		99	31 - 139
2-Hexanone	40.0	46.3		ug/L		116	35 - 129
4-Methyl-2-pentanone (MIBK)	40.0	46.2		ug/L		115	33 - 135
Acetone	40.0	43.3		ug/L		108	10 - 141
Benzene	40.0	36.7		ug/L		92	80 - 120
Bromoform	40.0	50.2		ug/L		125	49 - 137
Bromomethane	40.0	42.0		ug/L		105	45 - 150
Carbon disulfide	40.0	37.3		ug/L		93	62 - 126
Carbon tetrachloride	40.0	39.4		ug/L		99	63 - 139
Chlorobenzene	40.0	40.7		ug/L		102	83 - 120
Chlorodibromomethane	40.0	52.0	*	ug/L		130	64 - 124
Chloroform	40.0	41.2		ug/L		103	77 - 119
Chloromethane	40.0	43.0		ug/L		107	49 - 133
Chloroethane	40.0	44.0		ug/L		110	33 - 150
cis-1,2-Dichloroethene	40.0	37.6		ug/L		94	82 - 116
cis-1,3-Dichloropropene	40.0	46.2		ug/L		116	74 - 123
Dichlorobromomethane	40.0	48.2	*	ug/L		120	71 - 119
Dichlorodifluoromethane	40.0	43.1		ug/L		108	28 - 140
Ethylbenzene	40.0	40.0		ug/L		100	79 - 124
1,2-Dibromoethane	40.0	44.9		ug/L		112	57 - 124
Cyclohexane	40.0	35.6		ug/L		89	69 - 124
Isopropylbenzene	40.0	39.5		ug/L		99	73 - 130
Methyl acetate	200	193		ug/L		96	34 - 127
Methyl tert-butyl ether	40.0	39.5		ug/L		99	53 - 122
Methylcyclohexane	40.0	36.9		ug/L		92	67 - 120
Methylene Chloride	40.0	38.2		ug/L		96	75 - 120
m-Xylene & p-Xylene	40.0	42.0		ug/L		105	78 - 124
o-Xylene	40.0	40.6		ug/L		101	78 - 124
Styrene	40.0	41.4		ug/L		103	78 - 124
Tetrachloroethene	40.0	39.4		ug/L		98	78 - 126

TestAmerica Pittsburgh

QC Sample Results

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50813-1
SDG: LINCKLAEN NY

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 180-164017/4

Matrix: Water

Analysis Batch: 164017

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Toluene	40.0	36.4		ug/L		91	80 - 124
trans-1,2-Dichloroethene	40.0	36.3		ug/L		91	78 - 120
trans-1,3-Dichloropropene	40.0	47.8		ug/L		120	63 - 122
Trichloroethene	40.0	39.7		ug/L		99	80 - 120
Trichlorofluoromethane	40.0	33.9		ug/L		85	14 - 150
Vinyl chloride	40.0	41.0		ug/L		103	57 - 128
Xylenes, Total	80.0	82.6		ug/L		103	81 - 121

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	106		62 - 123
4-Bromofluorobenzene (Surr)	101		75 - 120
Dibromofluoromethane (Surr)	100		80 - 120
Toluene-d8 (Surr)	102		80 - 120

Lab Sample ID: LCSD 180-164017/5

Matrix: Water

Analysis Batch: 164017

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	40.0	40.8		ug/L		102	69 - 134	3	24
1,1,2,2-Tetrachloroethane	40.0	45.1		ug/L		113	59 - 136	7	20
1,1,2-Trichloro-1,2,2-trifluoroethane	40.0	36.4		ug/L		91	70 - 131	12	30
1,1,2-Trichloroethane	40.0	44.9		ug/L		112	75 - 126	1	23
1,1-Dichloroethane	40.0	37.8		ug/L		95	77 - 122	2	22
1,1-Dichloroethene	40.0	39.3		ug/L		98	69 - 127	14	20
1,2-Dibromo-3-Chloropropane	40.0	58.2		ug/L		145	28 - 150	2	20
1,2-Dichlorobenzene	40.0	42.8		ug/L		107	75 - 125	6	20
1,2-Dichloroethane	40.0	42.9		ug/L		107	63 - 140	1	25
1,2-Dichloropropane	40.0	40.6		ug/L		101	75 - 114	0	20
1,2,4-Trichlorobenzene	40.0	42.6		ug/L		106	35 - 150	15	30
1,3-Dichlorobenzene	40.0	43.9		ug/L		110	76 - 125	5	21
1,4-Dichlorobenzene	40.0	44.6		ug/L		111	76 - 123	3	20
2-Butanone (MEK)	40.0	40.5		ug/L		101	31 - 139	3	35
2-Hexanone	40.0	47.6		ug/L		119	35 - 129	3	24
4-Methyl-2-pentanone (MIBK)	40.0	47.4		ug/L		118	33 - 135	3	29
Acetone	40.0	47.1		ug/L		118	10 - 141	8	32
Benzene	40.0	36.9		ug/L		92	80 - 120	1	20
Bromoform	40.0	51.2		ug/L		128	49 - 137	2	20
Bromomethane	40.0	42.4		ug/L		106	45 - 150	1	23
Carbon disulfide	40.0	38.9		ug/L		97	62 - 126	4	20
Carbon tetrachloride	40.0	41.0		ug/L		103	63 - 139	4	25
Chlorobenzene	40.0	41.9		ug/L		105	83 - 120	3	20
Chlorodibromomethane	40.0	52.3	*	ug/L		131	64 - 124	1	20
Chloroform	40.0	41.9		ug/L		105	77 - 119	2	20
Chloromethane	40.0	42.5		ug/L		106	49 - 133	1	20
Chloroethane	40.0	46.1		ug/L		115	33 - 150	5	24
cis-1,2-Dichloroethene	40.0	37.3		ug/L		93	82 - 116	1	20

TestAmerica Pittsburgh

QC Sample Results

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50813-1
SDG: LINCKLAEN NY

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 180-164017/5

Matrix: Water

Analysis Batch: 164017

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
cis-1,3-Dichloropropene	40.0	45.9		ug/L		115	74 - 123	1	20
Dichlorobromomethane	40.0	47.3		ug/L		118	71 - 119	2	20
Dichlorodifluoromethane	40.0	44.2		ug/L		111	28 - 140	3	20
Ethylbenzene	40.0	41.0		ug/L		103	79 - 124	3	25
1,2-Dibromoethane	40.0	44.5		ug/L		111	57 - 124	1	20
Cyclohexane	40.0	37.0		ug/L		93	69 - 124	4	20
Isopropylbenzene	40.0	41.1		ug/L		103	73 - 130	4	20
Methyl acetate	200	191		ug/L		95	34 - 127	1	29
Methyl tert-butyl ether	40.0	39.4		ug/L		98	53 - 122	0	20
Methylcyclohexane	40.0	38.4		ug/L		96	67 - 120	4	20
Methylene Chloride	40.0	38.6		ug/L		97	75 - 120	1	20
m-Xylene & p-Xylene	40.0	43.2		ug/L		108	78 - 124	3	24
o-Xylene	40.0	41.2		ug/L		103	78 - 124	1	22
Styrene	40.0	42.0		ug/L		105	78 - 124	1	22
Tetrachloroethene	40.0	41.3		ug/L		103	78 - 126	5	25
Toluene	40.0	38.2		ug/L		96	80 - 124	5	20
trans-1,2-Dichloroethene	40.0	36.1		ug/L		90	78 - 120	1	20
trans-1,3-Dichloropropene	40.0	47.6		ug/L		119	63 - 122	1	20
Trichloroethene	40.0	40.4		ug/L		101	80 - 120	2	20
Trichlorofluoromethane	40.0	46.6	*	ug/L		116	14 - 150	31	20
Vinyl chloride	40.0	42.9		ug/L		107	57 - 128	4	26
Xylenes, Total	80.0	84.4		ug/L		106	81 - 121	2	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	101		62 - 123
4-Bromofluorobenzene (Surr)	95		75 - 120
Dibromofluoromethane (Surr)	96		80 - 120
Toluene-d8 (Surr)	104		80 - 120

Lab Sample ID: MB 180-164343/1-A

Matrix: Solid

Analysis Batch: 164339

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 164343

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		250	51	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
1,1,2,2-Tetrachloroethane	ND		250	47	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		250	17	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
1,1,2-Trichloroethane	ND		250	58	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
1,1-Dichloroethane	ND		250	51	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
1,1-Dichloroethene	ND		250	53	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
1,2-Dibromo-3-Chloropropane	ND		250	18	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
1,2-Dichlorobenzene	ND		250	34	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
1,2-Dichloroethane	ND		250	48	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
1,2-Dichloropropane	ND		250	64	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
1,2,4-Trichlorobenzene	ND		250	19	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
1,3-Dichlorobenzene	ND		250	25	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
1,4-Dichlorobenzene	ND		250	26	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
2-Butanone (MEK)	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 10:45	1

TestAmerica Pittsburgh

QC Sample Results

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50813-1
SDG: LINCKLAEN NY

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 180-164343/1-A

Matrix: Solid

Analysis Batch: 164339

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 164343

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Hexanone	ND		250	28	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
4-Methyl-2-pentanone (MIBK)	ND		250	30	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Acetone	ND		1000	250	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Benzene	ND		250	49	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Bromoform	ND		250	53	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Bromomethane	ND		250	79	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Carbon disulfide	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Carbon tetrachloride	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Chlorobenzene	ND		250	26	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Chlorodibromomethane	ND		250	32	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Chloroform	ND		250	50	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Chloromethane	ND		250	70	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Chloroethane	ND		250	37	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
cis-1,2-Dichloroethene	ND		250	33	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
cis-1,3-Dichloropropene	ND		250	36	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Dichlorobromomethane	ND		250	47	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Dichlorodifluoromethane	ND		250	32	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Ethylbenzene	ND		250	31	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
1,2-Dibromoethane	ND		250	31	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Cyclohexane	ND		250	30	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Isopropylbenzene	ND		250	27	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Methyl acetate	ND		1300	61	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Methyl tert-butyl ether	ND		250	51	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Methylcyclohexane	ND		250	28	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Methylene Chloride	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Styrene	ND		250	32	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Tetrachloroethene	ND		250	41	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Toluene	ND		250	42	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
trans-1,2-Dichloroethene	ND		250	38	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
trans-1,3-Dichloropropene	ND		250	29	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Trichloroethene	ND		250	40	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Trichlorofluoromethane	ND		250	56	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Vinyl chloride	ND		250	65	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Xylenes, Total	ND		500	98	ug/Kg		12/22/15 07:44	12/22/15 10:45	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	76		52 - 124	12/22/15 07:44	12/22/15 10:45	1
4-Bromofluorobenzene (Surr)	80		63 - 120	12/22/15 07:44	12/22/15 10:45	1
Dibromofluoromethane (Surr)	79		68 - 121	12/22/15 07:44	12/22/15 10:45	1
Toluene-d8 (Surr)	119		72 - 127	12/22/15 07:44	12/22/15 10:45	1

Lab Sample ID: LCS 180-164343/2-A

Matrix: Solid

Analysis Batch: 164339

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 164343

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	2000	1980		ug/Kg		99	67 - 126
1,1,2,2-Tetrachloroethane	2000	2130		ug/Kg		107	60 - 139

TestAmerica Pittsburgh

QC Sample Results

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50813-1
SDG: LINCKLAEN NY

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 180-164343/2-A

Matrix: Solid

Analysis Batch: 164339

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 164343

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,2-Trichloro-1,2,2-trifluoroethane	2000	2070		ug/Kg		104	55 - 130
1,1,2-Trichloroethane	2000	2140		ug/Kg		107	70 - 128
1,1-Dichloroethane	2000	1900		ug/Kg		95	66 - 124
1,1-Dichloroethene	2000	2240		ug/Kg		112	59 - 129
1,2-Dibromo-3-Chloropropane	2000	2200		ug/Kg		110	35 - 136
1,2-Dichlorobenzene	2000	1990		ug/Kg		99	71 - 124
1,2-Dichloroethane	2000	2090		ug/Kg		105	61 - 127
1,2-Dichloropropane	2000	2230		ug/Kg		112	72 - 122
1,2,4-Trichlorobenzene	2000	1960		ug/Kg		98	51 - 136
1,3-Dichlorobenzene	2000	2030		ug/Kg		101	75 - 118
1,4-Dichlorobenzene	2000	2070		ug/Kg		104	77 - 116
2-Butanone (MEK)	2000	1840		ug/Kg		92	35 - 149
2-Hexanone	2000	2120		ug/Kg		106	32 - 150
4-Methyl-2-pentanone (MIBK)	2000	2110		ug/Kg		105	44 - 148
Acetone	2000	2490		ug/Kg		124	20 - 150
Benzene	2000	1950		ug/Kg		97	77 - 120
Bromoform	2000	2230		ug/Kg		111	53 - 140
Bromomethane	2000	2060		ug/Kg		103	25 - 150
Carbon disulfide	2000	2160		ug/Kg		108	50 - 127
Carbon tetrachloride	2000	2000		ug/Kg		100	69 - 122
Chlorobenzene	2000	1930		ug/Kg		96	79 - 120
Chlorodibromomethane	2000	2310		ug/Kg		116	70 - 132
Chloroform	2000	1990		ug/Kg		99	72 - 120
Chloromethane	2000	1850		ug/Kg		93	44 - 131
Chloroethane	2000	2170		ug/Kg		108	22 - 150
cis-1,2-Dichloroethene	2000	1960		ug/Kg		98	80 - 118
cis-1,3-Dichloropropene	2000	2350		ug/Kg		118	73 - 120
Dichlorobromomethane	2000	2320		ug/Kg		116	70 - 125
Dichlorodifluoromethane	2000	1930		ug/Kg		96	25 - 150
Ethylbenzene	2000	2000		ug/Kg		100	78 - 125
1,2-Dibromoethane	2000	2090		ug/Kg		105	70 - 131
Cyclohexane	2000	1940		ug/Kg		97	64 - 130
Isopropylbenzene	2000	1950		ug/Kg		97	70 - 133
Methyl acetate	10000	9620		ug/Kg		96	27 - 142
Methyl tert-butyl ether	2000	2030		ug/Kg		102	48 - 132
Methylcyclohexane	2000	2110		ug/Kg		106	66 - 135
Methylene Chloride	2000	2060		ug/Kg		103	58 - 127
m-Xylene & p-Xylene	2000	2040		ug/Kg		102	75 - 126
o-Xylene	2000	2080		ug/Kg		104	83 - 127
Styrene	2000	2070		ug/Kg		103	83 - 129
Tetrachloroethene	2000	1910		ug/Kg		96	78 - 129
Toluene	2000	1910		ug/Kg		95	78 - 124
trans-1,2-Dichloroethene	2000	1930		ug/Kg		96	77 - 121
trans-1,3-Dichloropropene	2000	2330		ug/Kg		117	74 - 129
Trichloroethene	2000	2120		ug/Kg		106	76 - 119
Trichlorofluoromethane	2000	1750		ug/Kg		87	20 - 150
Vinyl chloride	2000	1940		ug/Kg		97	63 - 124

TestAmerica Pittsburgh

QC Sample Results

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50813-1
SDG: LINCKLAEN NY

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 180-164343/2-A
Matrix: Solid
Analysis Batch: 164339

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 164343

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Xylenes, Total	4000	4120		ug/Kg		103	83 - 126
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1,2-Dichloroethane-d4 (Surr)	100		52 - 124				
4-Bromofluorobenzene (Surr)	104		63 - 120				
Dibromofluoromethane (Surr)	96		68 - 121				
Toluene-d8 (Surr)	107		72 - 127				

Lab Sample ID: MB 180-164513/1-A
Matrix: Solid
Analysis Batch: 164466

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 164513

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		250	51	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
1,1,2,2-Tetrachloroethane	ND		250	47	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		250	17	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
1,1,2-Trichloroethane	ND		250	58	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
1,1-Dichloroethane	ND		250	51	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
1,1-Dichloroethene	ND		250	53	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
1,2-Dibromo-3-Chloropropane	ND		250	18	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
1,2-Dichlorobenzene	ND		250	34	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
1,2-Dichloroethane	ND		250	48	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
1,2-Dichloropropane	ND		250	64	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
1,2,4-Trichlorobenzene	ND		250	19	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
1,3-Dichlorobenzene	ND		250	25	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
1,4-Dichlorobenzene	ND		250	26	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
2-Butanone (MEK)	ND		250	54	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
2-Hexanone	ND		250	28	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
4-Methyl-2-pentanone (MIBK)	ND		250	30	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Acetone	ND		1000	250	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Benzene	ND		250	49	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Bromoform	ND		250	53	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Bromomethane	ND		250	79	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Carbon disulfide	ND		250	54	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Carbon tetrachloride	ND		250	54	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Chlorobenzene	ND		250	26	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Chlorodibromomethane	ND		250	32	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Chloroform	ND		250	50	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Chloromethane	ND		250	70	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Chloroethane	ND		250	37	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
cis-1,2-Dichloroethene	ND		250	33	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
cis-1,3-Dichloropropene	ND		250	36	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Dichlorobromomethane	ND		250	47	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Dichlorodifluoromethane	ND		250	32	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Ethylbenzene	ND		250	31	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
1,2-Dibromoethane	ND		250	31	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Cyclohexane	ND		250	30	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Isopropylbenzene	ND		250	27	ug/Kg		12/23/15 07:22	12/23/15 11:37	1

TestAmerica Pittsburgh

QC Sample Results

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50813-1
SDG: LINCKLAEN NY

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 180-164513/1-A

Matrix: Solid

Analysis Batch: 164466

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 164513

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl acetate	ND		1300	61	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Methyl tert-butyl ether	ND		250	51	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Methylcyclohexane	ND		250	28	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Methylene Chloride	ND		250	54	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Styrene	ND		250	32	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Tetrachloroethene	ND		250	41	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Toluene	ND		250	42	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
trans-1,2-Dichloroethene	ND		250	38	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
trans-1,3-Dichloropropene	ND		250	29	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Trichloroethene	ND		250	40	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Trichlorofluoromethane	ND		250	56	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Vinyl chloride	ND		250	65	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Xylenes, Total	ND		500	98	ug/Kg		12/23/15 07:22	12/23/15 11:37	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	83		52 - 124	12/23/15 07:22	12/23/15 11:37	1
4-Bromofluorobenzene (Surr)	82		63 - 120	12/23/15 07:22	12/23/15 11:37	1
Dibromofluoromethane (Surr)	90		68 - 121	12/23/15 07:22	12/23/15 11:37	1
Toluene-d8 (Surr)	108		72 - 127	12/23/15 07:22	12/23/15 11:37	1

Lab Sample ID: LCS 180-164513/2-A

Matrix: Solid

Analysis Batch: 164466

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 164513

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	2000	1860		ug/Kg		93	67 - 126
1,1,2,2-Tetrachloroethane	2000	2490		ug/Kg		125	60 - 139
1,1,2-Trichloro-1,2,2-trifluoroethane	2000	2200		ug/Kg		110	55 - 130
1,1,2-Trichloroethane	2000	2050		ug/Kg		102	70 - 128
1,1-Dichloroethane	2000	1810		ug/Kg		90	66 - 124
1,1-Dichloroethene	2000	2390		ug/Kg		119	59 - 129
1,2-Dibromo-3-Chloropropane	2000	2310		ug/Kg		115	35 - 136
1,2-Dichlorobenzene	2000	2000		ug/Kg		100	71 - 124
1,2-Dichloroethane	2000	2140		ug/Kg		107	61 - 127
1,2-Dichloropropane	2000	2180		ug/Kg		109	72 - 122
1,2,4-Trichlorobenzene	2000	1900		ug/Kg		95	51 - 136
1,3-Dichlorobenzene	2000	1960		ug/Kg		98	75 - 118
1,4-Dichlorobenzene	2000	1980		ug/Kg		99	77 - 116
2-Butanone (MEK)	2000	2240		ug/Kg		112	35 - 149
2-Hexanone	2000	2830		ug/Kg		141	32 - 150
4-Methyl-2-pentanone (MIBK)	2000	2550		ug/Kg		128	44 - 148
Acetone	2000	3180	*	ug/Kg		159	20 - 150
Benzene	2000	1840		ug/Kg		92	77 - 120
Bromoform	2000	2350		ug/Kg		117	53 - 140
Bromomethane	2000	1870		ug/Kg		93	25 - 150
Carbon disulfide	2000	2380		ug/Kg		119	50 - 127
Carbon tetrachloride	2000	1870		ug/Kg		94	69 - 122

TestAmerica Pittsburgh

QC Sample Results

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50813-1
SDG: LINCKLAEN NY

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 180-164513/2-A

Matrix: Solid

Analysis Batch: 164466

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 164513

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chlorobenzene	2000	1940		ug/Kg		97	79 - 120
Chlorodibromomethane	2000	2330		ug/Kg		117	70 - 132
Chloroform	2000	1840		ug/Kg		92	72 - 120
Chloromethane	2000	1660		ug/Kg		83	44 - 131
Chloroethane	2000	1930		ug/Kg		97	22 - 150
cis-1,2-Dichloroethene	2000	1780		ug/Kg		89	80 - 118
cis-1,3-Dichloropropene	2000	1990		ug/Kg		99	73 - 120
Dichlorobromomethane	2000	2210		ug/Kg		110	70 - 125
Dichlorodifluoromethane	2000	1780		ug/Kg		89	25 - 150
Ethylbenzene	2000	1910		ug/Kg		95	78 - 125
1,2-Dibromoethane	2000	2120		ug/Kg		106	70 - 131
Cyclohexane	2000	1760		ug/Kg		88	64 - 130
Isopropylbenzene	2000	2100		ug/Kg		105	70 - 133
Methyl acetate	10000	11800		ug/Kg		118	27 - 142
Methyl tert-butyl ether	2000	2300		ug/Kg		115	48 - 132
Methylcyclohexane	2000	2130		ug/Kg		107	66 - 135
Methylene Chloride	2000	2270		ug/Kg		113	58 - 127
m-Xylene & p-Xylene	2000	1930		ug/Kg		97	75 - 126
o-Xylene	2000	1900		ug/Kg		95	83 - 127
Styrene	2000	1970		ug/Kg		99	83 - 129
Tetrachloroethene	2000	1850		ug/Kg		92	78 - 129
Toluene	2000	1780		ug/Kg		89	78 - 124
trans-1,2-Dichloroethene	2000	2090		ug/Kg		104	77 - 121
trans-1,3-Dichloropropene	2000	2240		ug/Kg		112	74 - 129
Trichloroethene	2000	1990		ug/Kg		99	76 - 119
Trichlorofluoromethane	2000	1720		ug/Kg		86	20 - 150
Vinyl chloride	2000	1820		ug/Kg		91	63 - 124
Xylenes, Total	4000	3830		ug/Kg		96	83 - 126

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	96		52 - 124
4-Bromofluorobenzene (Surr)	112		63 - 120
Dibromofluoromethane (Surr)	85		68 - 121
Toluene-d8 (Surr)	94		72 - 127

Lab Sample ID: LCSD 180-164513/3-A

Matrix: Solid

Analysis Batch: 164466

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 164513

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
1,1,1-Trichloroethane	2000	1860		ug/Kg		93	67 - 126	0	31
1,1,2,2-Tetrachloroethane	2000	2410		ug/Kg		121	60 - 139	3	24
1,1,2-Trichloro-1,2,2-trifluoroethane	2000	2230		ug/Kg		112	55 - 130	1	37
1,1,2-Trichloroethane	2000	2200		ug/Kg		110	70 - 128	7	22
1,1-Dichloroethane	2000	1750		ug/Kg		88	66 - 124	3	23
1,1-Dichloroethene	2000	2360		ug/Kg		118	59 - 129	1	25
1,2-Dibromo-3-Chloropropane	2000	2270		ug/Kg		114	35 - 136	2	40

TestAmerica Pittsburgh

QC Sample Results

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50813-1
SDG: LINCKLAEN NY

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 180-164513/3-A

Matrix: Solid

Analysis Batch: 164466

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 164513

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dichlorobenzene	2000	2040		ug/Kg		102	71 - 124	2	22
1,2-Dichloroethane	2000	2000		ug/Kg		100	61 - 127	7	23
1,2-Dichloropropane	2000	2120		ug/Kg		106	72 - 122	3	20
1,2,4-Trichlorobenzene	2000	1940		ug/Kg		97	51 - 136	2	40
1,3-Dichlorobenzene	2000	2040		ug/Kg		102	75 - 118	4	20
1,4-Dichlorobenzene	2000	2060		ug/Kg		103	77 - 116	4	20
2-Butanone (MEK)	2000	1910		ug/Kg		96	35 - 149	16	36
2-Hexanone	2000	2510		ug/Kg		125	32 - 150	12	32
4-Methyl-2-pentanone (MIBK)	2000	2460		ug/Kg		123	44 - 148	4	30
Acetone	2000	2620		ug/Kg		131	20 - 150	19	40
Benzene	2000	1890		ug/Kg		95	77 - 120	3	20
Bromoform	2000	2390		ug/Kg		119	53 - 140	2	23
Bromomethane	2000	1830		ug/Kg		92	25 - 150	2	40
Carbon disulfide	2000	2240		ug/Kg		112	50 - 127	6	23
Carbon tetrachloride	2000	1880		ug/Kg		94	69 - 122	0	22
Chlorobenzene	2000	1930		ug/Kg		97	79 - 120	0	20
Chlorodibromomethane	2000	2430		ug/Kg		121	70 - 132	4	20
Chloroform	2000	1790		ug/Kg		90	72 - 120	3	25
Chloromethane	2000	1630		ug/Kg		82	44 - 131	2	27
Chloroethane	2000	1760		ug/Kg		88	22 - 150	9	40
cis-1,2-Dichloroethene	2000	1810		ug/Kg		90	80 - 118	1	20
cis-1,3-Dichloropropene	2000	2090		ug/Kg		104	73 - 120	5	20
Dichlorobromomethane	2000	2130		ug/Kg		106	70 - 125	4	21
Dichlorodifluoromethane	2000	1750		ug/Kg		88	25 - 150	2	34
Ethylbenzene	2000	2120		ug/Kg		106	78 - 125	11	21
1,2-Dibromoethane	2000	2310		ug/Kg		115	70 - 131	8	20
Cyclohexane	2000	1890		ug/Kg		95	64 - 130	7	21
Isopropylbenzene	2000	2040		ug/Kg		102	70 - 133	3	22
Methyl acetate	10000	10500		ug/Kg		105	27 - 142	12	40
Methyl tert-butyl ether	2000	1880		ug/Kg		94	48 - 132	20	36
Methylcyclohexane	2000	2040		ug/Kg		102	66 - 135	4	23
Methylene Chloride	2000	1840		ug/Kg		92	58 - 127	21	28
m-Xylene & p-Xylene	2000	2110		ug/Kg		105	75 - 126	9	21
o-Xylene	2000	2150		ug/Kg		107	83 - 127	12	20
Styrene	2000	2180		ug/Kg		109	83 - 129	10	20
Tetrachloroethene	2000	1920		ug/Kg		96	78 - 129	4	20
Toluene	2000	1840		ug/Kg		92	78 - 124	4	21
trans-1,2-Dichloroethene	2000	1710		ug/Kg		85	77 - 121	20	20
trans-1,3-Dichloropropene	2000	2400		ug/Kg		120	74 - 129	6	20
Trichloroethene	2000	1980		ug/Kg		99	76 - 119	0	21
Trichlorofluoromethane	2000	2320		ug/Kg		116	20 - 150	30	40
Vinyl chloride	2000	1790		ug/Kg		90	63 - 124	2	27
Xylenes, Total	4000	4260		ug/Kg		107	83 - 126	11	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		52 - 124
4-Bromofluorobenzene (Surr)	107		63 - 120
Dibromofluoromethane (Surr)	89		68 - 121

TestAmerica Pittsburgh

QC Sample Results

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50813-1
SDG: LINCKLAEN NY

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 180-164513/3-A
Matrix: Solid
Analysis Batch: 164466

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 164513

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Toluene-d8 (Surr)	96		72 - 127

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 180-163978/1-A
Matrix: Water
Analysis Batch: 163995

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 163978

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.40	0.15	ug/L		12/17/15 15:00	12/18/15 13:28	1
PCB-1221	ND		0.40	0.23	ug/L		12/17/15 15:00	12/18/15 13:28	1
PCB-1232	ND		0.40	0.24	ug/L		12/17/15 15:00	12/18/15 13:28	1
PCB-1242	ND		0.40	0.13	ug/L		12/17/15 15:00	12/18/15 13:28	1
PCB-1248	ND		0.40	0.13	ug/L		12/17/15 15:00	12/18/15 13:28	1
PCB-1254	ND		0.40	0.18	ug/L		12/17/15 15:00	12/18/15 13:28	1
PCB-1260	ND		0.40	0.11	ug/L		12/17/15 15:00	12/18/15 13:28	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	89		35 - 140	12/17/15 15:00	12/18/15 13:28	1
Tetrachloro-m-xylene (Surr)	91		35 - 140	12/17/15 15:00	12/18/15 13:28	1
DCB Decachlorobiphenyl (Surr)	81		35 - 140	12/17/15 15:00	12/18/15 13:28	1
DCB Decachlorobiphenyl (Surr)	86		35 - 140	12/17/15 15:00	12/18/15 13:28	1

Lab Sample ID: LCS 180-163978/2-A
Matrix: Water
Analysis Batch: 163995

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 163978

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
PCB-1016	40.0	26.2		ug/L		66	60 - 130
PCB-1260	40.0	24.8		ug/L		62	60 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene (Surr)	77		35 - 140
Tetrachloro-m-xylene (Surr)	72		35 - 140
DCB Decachlorobiphenyl (Surr)	73		35 - 140
DCB Decachlorobiphenyl (Surr)	78		35 - 140

Lab Sample ID: LCSD 180-163978/3-A
Matrix: Water
Analysis Batch: 163995

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 163978

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
PCB-1016	40.0	30.4		ug/L		76	60 - 130	15	27
PCB-1260	40.0	29.5		ug/L		74	60 - 130	17	24

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Tetrachloro-m-xylene (Surr)	85		35 - 140

TestAmerica Pittsburgh

QC Sample Results

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50813-1
SDG: LINCKLAEN NY

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: LCSD 180-163978/3-A

Matrix: Water

Analysis Batch: 163995

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 163978

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
Tetrachloro-m-xylene (Surr)	77		35 - 140
DCB Decachlorobiphenyl (Surr)	72		35 - 140
DCB Decachlorobiphenyl (Surr)	75		35 - 140

Lab Sample ID: MB 180-164650/1-A

Matrix: Solid

Analysis Batch: 164785

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 164650

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
PCB-1016	ND		17	7.6	ug/Kg		12/24/15 13:19	12/29/15 18:20	1
PCB-1221	ND		17	12	ug/Kg		12/24/15 13:19	12/29/15 18:20	1
PCB-1232	ND		17	4.2	ug/Kg		12/24/15 13:19	12/29/15 18:20	1
PCB-1242	ND		17	6.2	ug/Kg		12/24/15 13:19	12/29/15 18:20	1
PCB-1248	ND		17	3.9	ug/Kg		12/24/15 13:19	12/29/15 18:20	1
PCB-1254	ND		17	6.2	ug/Kg		12/24/15 13:19	12/29/15 18:20	1
PCB-1260	ND		17	5.7	ug/Kg		12/24/15 13:19	12/29/15 18:20	1

	MB	MB					Prepared	Analyzed	Dil Fac
Surrogate	%Recovery	Qualifier	Limits						
Tetrachloro-m-xylene (Surr)	100		45 - 135				12/24/15 13:19	12/29/15 18:20	1
Tetrachloro-m-xylene (Surr)	97		45 - 135				12/24/15 13:19	12/29/15 18:20	1
DCB Decachlorobiphenyl (Surr)	95		45 - 125				12/24/15 13:19	12/29/15 18:20	1
DCB Decachlorobiphenyl (Surr)	93		45 - 125				12/24/15 13:19	12/29/15 18:20	1

Lab Sample ID: LCS 180-164650/2-A

Matrix: Solid

Analysis Batch: 164785

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 164650

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.	Limits
	Added	Result	Qualifier					
PCB-1016	1330	1180		ug/Kg		88		55 - 135
PCB-1260	1330	1120		ug/Kg		84		50 - 140

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
Tetrachloro-m-xylene (Surr)	109		45 - 135
Tetrachloro-m-xylene (Surr)	104		45 - 135
DCB Decachlorobiphenyl (Surr)	99		45 - 125
DCB Decachlorobiphenyl (Surr)	105		45 - 125

TestAmerica Pittsburgh

QC Association Summary

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50813-1
SDG: LINCKLAEN NY

GC/MS VOA

Analysis Batch: 164017

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-50813-1	RB-121515-BM-0001	Total/NA	Water	8260C	
180-50813-7	TRIP BLANK	Total/NA	Water	8260C	
LCS 180-164017/4	Lab Control Sample	Total/NA	Water	8260C	
LCSD 180-164017/5	Lab Control Sample Dup	Total/NA	Water	8260C	
MB 180-164017/7	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 164339

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-50813-2	PA-121515-BM-0001	Total/NA	Solid	8260C	164343
180-50813-3	PA-121515-BM-0002	Total/NA	Solid	8260C	164343
180-50813-4	PA-121515-BM-0003	Total/NA	Solid	8260C	164343
180-50813-5	PA-121515-BM-0004	Total/NA	Solid	8260C	164343
LCS 180-164343/2-A	Lab Control Sample	Total/NA	Solid	8260C	164343
MB 180-164343/1-A	Method Blank	Total/NA	Solid	8260C	164343

Prep Batch: 164343

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-50813-2	PA-121515-BM-0001	Total/NA	Solid	5030C	
180-50813-3	PA-121515-BM-0002	Total/NA	Solid	5030C	
180-50813-4	PA-121515-BM-0003	Total/NA	Solid	5030C	
180-50813-5	PA-121515-BM-0004	Total/NA	Solid	5030C	
LCS 180-164343/2-A	Lab Control Sample	Total/NA	Solid	5030C	
MB 180-164343/1-A	Method Blank	Total/NA	Solid	5030C	

Analysis Batch: 164466

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-50813-6	PA-121515-BM-0005	Total/NA	Solid	8260C	164513
LCS 180-164513/2-A	Lab Control Sample	Total/NA	Solid	8260C	164513
LCSD 180-164513/3-A	Lab Control Sample Dup	Total/NA	Solid	8260C	164513
MB 180-164513/1-A	Method Blank	Total/NA	Solid	8260C	164513

Prep Batch: 164513

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-50813-6	PA-121515-BM-0005	Total/NA	Solid	5030C	
LCS 180-164513/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCSD 180-164513/3-A	Lab Control Sample Dup	Total/NA	Solid	5030C	
MB 180-164513/1-A	Method Blank	Total/NA	Solid	5030C	

GC Semi VOA

Prep Batch: 163978

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-50813-1	RB-121515-BM-0001	Total/NA	Water	3510C	
LCS 180-163978/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 180-163978/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 180-163978/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 163995

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-50813-1	RB-121515-BM-0001	Total/NA	Water	8082A	163978

TestAmerica Pittsburgh

QC Association Summary

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50813-1
SDG: LINCKLAEN NY

GC Semi VOA (Continued)

Analysis Batch: 163995 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 180-163978/2-A	Lab Control Sample	Total/NA	Water	8082A	163978
LCSD 180-163978/3-A	Lab Control Sample Dup	Total/NA	Water	8082A	163978
MB 180-163978/1-A	Method Blank	Total/NA	Water	8082A	163978

Prep Batch: 164650

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-50813-2	PA-121515-BM-0001	Total/NA	Solid	3541	
180-50813-3	PA-121515-BM-0002	Total/NA	Solid	3541	
180-50813-4	PA-121515-BM-0003	Total/NA	Solid	3541	
180-50813-5	PA-121515-BM-0004	Total/NA	Solid	3541	
180-50813-6	PA-121515-BM-0005	Total/NA	Solid	3541	
LCS 180-164650/2-A	Lab Control Sample	Total/NA	Solid	3541	
MB 180-164650/1-A	Method Blank	Total/NA	Solid	3541	

Analysis Batch: 164785

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-50813-2	PA-121515-BM-0001	Total/NA	Solid	8082A	164650
180-50813-3	PA-121515-BM-0002	Total/NA	Solid	8082A	164650
180-50813-4	PA-121515-BM-0003	Total/NA	Solid	8082A	164650
180-50813-5	PA-121515-BM-0004	Total/NA	Solid	8082A	164650
180-50813-6	PA-121515-BM-0005	Total/NA	Solid	8082A	164650
LCS 180-164650/2-A	Lab Control Sample	Total/NA	Solid	8082A	164650
MB 180-164650/1-A	Method Blank	Total/NA	Solid	8082A	164650



**CONESTOGA-ROVERS
& ASSOCIATES**

CHAIN OF CUSTODY RECORD

Address: _____
Phone: _____ Fax: _____

COC NO.: 40872

PAGE 1 OF 2

(See Reverse Side for Instructions)

Project No/ Phase/Task Code: 002077-600			Laboratory Name: TEST AMERICA			Lab Location: PITTSBURGH, PA			SSOW ID:			
Project Name: SOLVENT SAVERS			Lab Contact:			Lab Quote No:			Cooler No: 735545			
Project Location: LINCKLAEN, NY			SAMPLE TYPE			CONTAINER QUANTITY & PRESERVATION			ANALYSIS REQUESTED (See Back of COC for Definitions)			
Chemistry Contact: PAUL MCMAHON			Matrix Code (see back of COC)			Grab (G) or Comp (C)			MS/MSD Request			
Sampler(s): BRYAN MALONE/JAS ON DAVENPORT			Unpreserved			Hydrochloric Acid (HCl)			Nitric Acid (HNO ₃)			
			Sulfuric Acid (H ₂ SO ₄)			Sodium Hydroxide (NaOH)			Methanol/Water (Soil VOC)			
			EnCores 3x5-g, 1x25-g			Other:			Total Containers/Sample			
									PCB			
									VOC			
SAMPLE IDENTIFICATION (Containers for each sample may be combined on one line)			DATE (mm/dd/yyyy)			TIME (hh:mm)			COMMENTS/ SPECIAL INSTRUCTIONS			
1	RB-121515-BM-0001		12/15/15	10:40	WATER	2	3			5	X	X
2	PA-121515-BM-0001		12/15/15	12:00	PAINT	1				1	X	X
3	CC-121515-BM-001A			12:40	CC	1				1	X	X
4	CC-121515-BM-001B			12:40	CC	1				1	X	X
5	PA-121515-BM-0002			13:15	PAINT	1				1	X	X
6	CC-121515-BM-002A			13:50	CC	1				1	X	X
7	CC-121515-BM-002B			13:50	CC	1				1	X	X
8	PA-121515-BM-0003			14:25	PAINT	1				1	X	X
9	CC-121515-BM-003A			14:45	CC	1				1	X	X
10	CC-121515-BM-003B			14:45	CC	1				1	X	X
11	PA-121515-BM-0004			15:15	PAINT	1				1	X	X
12	CC-121515-BM-004A			15:30	CC	1				1	X	X
13	CC-121515-BM-004B			15:30	CC	1				1	X	X
14	PA-121515-BM-0005			16:10	PAINT	1				1	X	X
15	CC-121515-BM-005A			16:25	CC	1				1	X	X
TAT Required in business days (use separate COCs for different TATs): <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Days <input type="checkbox"/> 3 Days <input type="checkbox"/> 1 Week <input type="checkbox"/> 2 Week <input type="checkbox"/> Other:						Total Number of Containers: 19			Notes/ Special Requirements:			
All Samples in Cooler must be on COC												
RELINQUISHED BY:			COMPANY:			DATE:			TIME:			
1. Bryan Malone			CRA (GHD)			12/15/15			19:50			
2.												
3.												
RECEIVED BY:			COMPANY:			DATE:			TIME:			
1. [Signature]			[Signature]			12/16/15			9:00			
2.												
3.												



180-50813 Chain of Custody

THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT - ALL FIELDS MUST BE COMPLETED ACCURATELY

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**CONESTOGA-ROVERS
& ASSOCIATES**

CHAIN OF CUSTODY RECORD

Address: _____
Phone: _____ Fax: _____

COC NO: **40873**
PAGE 2 OF 2
(See Reverse Side for Instructions)

Project No/ Phase/Task Code: 002077-60				Laboratory Name: TEST AMERICA				Lab Location: PITTSBURGH, PA				SSOW ID:							
Project Name: SOLVENT SAVERS				Lab Contact:				Lab Quote No:				Cooler No: 735545							
Project Location: LINCKLAEN, NY				SAMPLE TYPE				CONTAINER QUANTITY & PRESERVATION				ANALYSIS REQUESTED (See Back of COC for Definitions)							
Chemistry Contact: PAUL MCMAHON				Matrix Code (see back of COC)	Grab (G) or Comp (C)	Unpreserved	Hydrochloric Acid (HCl)	Nitric Acid (HNO ₃)	Sulfuric Acid (H ₂ SO ₄)	Sodium Hydroxide (NaOH)	Methanol/Water (Soil VOC)	EnCores 3x5-g, 1x25-g	Other:	Total Containers/Sample	MS/MSD Request	Carrier: FED EX			
Sampler(s): BRYAN MALONE/JASON DAVENPORT																Airbill No: 8696 4139 3371			
																Date Shipped: 12-15-15			
SAMPLE IDENTIFICATION				DATE		TIME										COMMENTS/ SPECIAL INSTRUCTIONS:			
1 CC-121515-BM-005B				12/15/15		16:25		CC		1									
2 TRIP BLANK								TB		1									
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			
TAT Required in business days (use separate COCs for different TATs): <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Days <input type="checkbox"/> 3 Days <input type="checkbox"/> 1 Week <input type="checkbox"/> 2 Week <input type="checkbox"/> Other:								Total Number of Containers: 2				Notes/ Special Requirements:							
All Samples in Cooler must be on COC																			
RELINQUISHED BY		COMPANY		DATE		TIME		RECEIVED BY		COMPANY		DATE		TIME					
1. 12/15/2016 Bryan Malone		CRA (GHD)		12/15/15		19:50		1. [Signature]		TARA		12/15/15		900					
2.								2.											
3.								3.											

THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT - ALL FIELDS MUST BE COMPLETED ACCURATELY

Distribution:

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PINK -> Shipper

12

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2

1

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 180-50813-1

SDG Number: LINCKLAEN NY

Login Number: 50813

List Number: 1

Creator: Kovitch, Christina M

List Source: TestAmerica Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pittsburgh

301 Alpha Drive

RIDC Park

Pittsburgh, PA 15238

Tel: (412)963-7058

TestAmerica Job ID: 180-50861-1

TestAmerica Sample Delivery Group: LINCKLAEN, NY

Client Project/Site: 002077-60 Solvent Savers

For:

GHD Services Inc.

2055 Niagara Falls Blvd., Suite 3

Niagara Falls, New York 14304

Attn: Mr. Paul McMahon



Authorized for release by:

1/5/2016 3:27:58 PM

Jill Colussy, Project Manager I

(412)963-2444

jill.colussy@testamericainc.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50861-1
SDG: LINCKLAEN,NY

Job ID: 180-50861-1

Laboratory: TestAmerica Pittsburgh

Narrative

Job Narrative 180-50861-1

Receipt

The sample was received on 12/17/2015 9:15 AM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.4° C.

GC/MS VOA

The continuing calibration verification (CCV) analyzed in batch 180-164466 was outside the method criteria for the following analytes: 1,1-Dichloroethene, 1,2-Dibromo-3-Chloropropane, 2-Hexanone, Acetone and Toluene. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analytes is considered estimated.

PCBs

Due to the concentration of PCBs detected, the paint sample was analyzed at a dilution. Elevated reporting limits (RLs) are provided. The sample had the surrogates diluted out.

Definitions/Glossary

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50861-1
SDG: LINCKLAEN,NY

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD is outside acceptance limits.

GC Semi VOA

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Certification Summary

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50861-1
SDG: LINCKLAEN,NY

Laboratory: TestAmerica Pittsburgh

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
New York	NELAP	2	11182	03-31-16

The following analytes are included in this report, but are not certified under this certification:

Analysis Method	Prep Method	Matrix	Analyte
8260C	5030C	Solid	Cyclohexane

Sample Summary

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50861-1
SDG: LINCKLAEN,NY

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-50861-1	PA-121615-BM-0006	Solid	12/16/15 11:15	12/17/15 09:15

Method Summary

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50861-1
SDG: LINCKLAEN,NY

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL PIT
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL PIT

Protocol References:

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

Laboratory References:

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50861-1
SDG: LINCKLAEN,NY

Client Sample ID: PA-121615-BM-0006

Date Collected: 12/16/15 11:15

Date Received: 12/17/15 09:15

Lab Sample ID: 180-50861-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030C			5.0011 g	5 mL	164513	12/23/15 07:23	PJJ	TAL PIT
Total/NA	Analysis	8260C		1	5.0011 g	5 mL	164466	12/23/15 15:21	PJJ	TAL PIT
		Instrument ID: CHHP4								
Total/NA	Prep	3541			8.3 g	20.0 mL	164650	12/24/15 13:20	CBY	TAL PIT
Total/NA	Analysis	8082A		50	8.3 g	20.0 mL	164785	12/30/15 02:27	AKG	TAL PIT
		Instrument ID: CHGC10								

Laboratory References:

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PIT

Batch Type: Prep

CBY = Charles Yushinski

PJJ = Patrick Journet

Batch Type: Analysis

AKG = Ashok Gupta

PJJ = Patrick Journet

Client Sample Results

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50861-1
SDG: LINCKLAEN,NY

Client Sample ID: PA-121615-BM-0006

Lab Sample ID: 180-50861-1

Date Collected: 12/16/15 11:15

Matrix: Solid

Date Received: 12/17/15 09:15

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	450		250	51	ug/Kg		12/23/15 07:23	12/23/15 15:21	1
1,1,2,2-Tetrachloroethane	ND		250	47	ug/Kg		12/23/15 07:23	12/23/15 15:21	1
1,1,2-Trichloro-1,2,2-trifluoroethane	270		250	17	ug/Kg		12/23/15 07:23	12/23/15 15:21	1
1,1,2-Trichloroethane	ND		250	58	ug/Kg		12/23/15 07:23	12/23/15 15:21	1
1,1-Dichloroethane	ND		250	51	ug/Kg		12/23/15 07:23	12/23/15 15:21	1
1,1-Dichloroethene	ND		250	53	ug/Kg		12/23/15 07:23	12/23/15 15:21	1
1,2-Dibromo-3-Chloropropane	ND		250	18	ug/Kg		12/23/15 07:23	12/23/15 15:21	1
1,2-Dichlorobenzene	720		250	34	ug/Kg		12/23/15 07:23	12/23/15 15:21	1
1,2-Dichloroethane	ND		250	48	ug/Kg		12/23/15 07:23	12/23/15 15:21	1
1,2-Dichloropropane	ND		250	64	ug/Kg		12/23/15 07:23	12/23/15 15:21	1
1,2,4-Trichlorobenzene	ND		250	19	ug/Kg		12/23/15 07:23	12/23/15 15:21	1
1,3-Dichlorobenzene	ND		250	25	ug/Kg		12/23/15 07:23	12/23/15 15:21	1
1,4-Dichlorobenzene	33 J		250	26	ug/Kg		12/23/15 07:23	12/23/15 15:21	1
2-Butanone (MEK)	ND		250	54	ug/Kg		12/23/15 07:23	12/23/15 15:21	1
2-Hexanone	ND		250	28	ug/Kg		12/23/15 07:23	12/23/15 15:21	1
4-Methyl-2-pentanone (MIBK)	ND		250	30	ug/Kg		12/23/15 07:23	12/23/15 15:21	1
Acetone	ND		1000	250	ug/Kg		12/23/15 07:23	12/23/15 15:21	1
Benzene	ND		250	49	ug/Kg		12/23/15 07:23	12/23/15 15:21	1
Bromoform	ND		250	53	ug/Kg		12/23/15 07:23	12/23/15 15:21	1
Bromomethane	ND		250	79	ug/Kg		12/23/15 07:23	12/23/15 15:21	1
Carbon disulfide	ND		250	54	ug/Kg		12/23/15 07:23	12/23/15 15:21	1
Carbon tetrachloride	ND		250	54	ug/Kg		12/23/15 07:23	12/23/15 15:21	1
Chlorobenzene	ND		250	26	ug/Kg		12/23/15 07:23	12/23/15 15:21	1
Chlorodibromomethane	ND		250	32	ug/Kg		12/23/15 07:23	12/23/15 15:21	1
Chloroform	ND		250	50	ug/Kg		12/23/15 07:23	12/23/15 15:21	1
Chloromethane	ND		250	70	ug/Kg		12/23/15 07:23	12/23/15 15:21	1
Chloroethane	ND		250	37	ug/Kg		12/23/15 07:23	12/23/15 15:21	1
cis-1,2-Dichloroethene	ND		250	33	ug/Kg		12/23/15 07:23	12/23/15 15:21	1
cis-1,3-Dichloropropene	ND		250	36	ug/Kg		12/23/15 07:23	12/23/15 15:21	1
Dichlorobromomethane	ND		250	47	ug/Kg		12/23/15 07:23	12/23/15 15:21	1
Dichlorodifluoromethane	ND		250	32	ug/Kg		12/23/15 07:23	12/23/15 15:21	1
Ethylbenzene	150 J		250	31	ug/Kg		12/23/15 07:23	12/23/15 15:21	1
1,2-Dibromoethane	ND		250	31	ug/Kg		12/23/15 07:23	12/23/15 15:21	1
Cyclohexane	ND		250	30	ug/Kg		12/23/15 07:23	12/23/15 15:21	1
Isopropylbenzene	ND		250	27	ug/Kg		12/23/15 07:23	12/23/15 15:21	1
Methyl acetate	64 J		1200	61	ug/Kg		12/23/15 07:23	12/23/15 15:21	1
Methyl tert-butyl ether	ND		250	51	ug/Kg		12/23/15 07:23	12/23/15 15:21	1
Methylcyclohexane	ND		250	28	ug/Kg		12/23/15 07:23	12/23/15 15:21	1
Methylene Chloride	ND		250	54	ug/Kg		12/23/15 07:23	12/23/15 15:21	1
Styrene	ND		250	32	ug/Kg		12/23/15 07:23	12/23/15 15:21	1
Tetrachloroethene	470		250	41	ug/Kg		12/23/15 07:23	12/23/15 15:21	1
Toluene	160 J		250	42	ug/Kg		12/23/15 07:23	12/23/15 15:21	1
trans-1,2-Dichloroethene	ND		250	38	ug/Kg		12/23/15 07:23	12/23/15 15:21	1
trans-1,3-Dichloropropene	ND		250	29	ug/Kg		12/23/15 07:23	12/23/15 15:21	1
Trichloroethene	ND		250	40	ug/Kg		12/23/15 07:23	12/23/15 15:21	1
Trichlorofluoromethane	ND		250	56	ug/Kg		12/23/15 07:23	12/23/15 15:21	1
Vinyl chloride	ND		250	64	ug/Kg		12/23/15 07:23	12/23/15 15:21	1
Xylenes, Total	1000		500	98	ug/Kg		12/23/15 07:23	12/23/15 15:21	1

TestAmerica Pittsburgh

Client Sample Results

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50861-1
SDG: LINCKLAEN,NY

Client Sample ID: PA-121615-BM-0006

Lab Sample ID: 180-50861-1

Date Collected: 12/16/15 11:15

Matrix: Solid

Date Received: 12/17/15 09:15

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	77		52 - 124	12/23/15 07:23	12/23/15 15:21	1
4-Bromofluorobenzene (Surr)	85		63 - 120	12/23/15 07:23	12/23/15 15:21	1
Dibromofluoromethane (Surr)	87		68 - 121	12/23/15 07:23	12/23/15 15:21	1
Toluene-d8 (Surr)	107		72 - 127	12/23/15 07:23	12/23/15 15:21	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		1500	690	ug/Kg		12/24/15 13:20	12/30/15 02:27	50
PCB-1221	ND		1500	1100	ug/Kg		12/24/15 13:20	12/30/15 02:27	50
PCB-1232	ND		1500	380	ug/Kg		12/24/15 13:20	12/30/15 02:27	50
PCB-1242	140000		1500	560	ug/Kg		12/24/15 13:20	12/30/15 02:27	50
PCB-1248	ND		1500	350	ug/Kg		12/24/15 13:20	12/30/15 02:27	50
PCB-1254	ND		1500	560	ug/Kg		12/24/15 13:20	12/30/15 02:27	50
PCB-1260	ND		1500	520	ug/Kg		12/24/15 13:20	12/30/15 02:27	50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	0	D X	45 - 135	12/24/15 13:20	12/30/15 02:27	50
Tetrachloro-m-xylene (Surr)	0	D X	45 - 135	12/24/15 13:20	12/30/15 02:27	50
DCB Decachlorobiphenyl (Surr)	0	D X	45 - 125	12/24/15 13:20	12/30/15 02:27	50
DCB Decachlorobiphenyl (Surr)	0	D X	45 - 125	12/24/15 13:20	12/30/15 02:27	50

QC Sample Results

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50861-1
SDG: LINCKLAEN,NY

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 180-164513/1-A

Matrix: Solid

Analysis Batch: 164466

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 164513

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		250	51	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
1,1,2,2-Tetrachloroethane	ND		250	47	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		250	17	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
1,1,2-Trichloroethane	ND		250	58	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
1,1-Dichloroethane	ND		250	51	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
1,1-Dichloroethene	ND		250	53	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
1,2-Dibromo-3-Chloropropane	ND		250	18	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
1,2-Dichlorobenzene	ND		250	34	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
1,2-Dichloroethane	ND		250	48	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
1,2-Dichloropropane	ND		250	64	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
1,2,4-Trichlorobenzene	ND		250	19	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
1,3-Dichlorobenzene	ND		250	25	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
1,4-Dichlorobenzene	ND		250	26	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
2-Butanone (MEK)	ND		250	54	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
2-Hexanone	ND		250	28	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
4-Methyl-2-pentanone (MIBK)	ND		250	30	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Acetone	ND		1000	250	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Benzene	ND		250	49	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Bromoform	ND		250	53	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Bromomethane	ND		250	79	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Carbon disulfide	ND		250	54	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Carbon tetrachloride	ND		250	54	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Chlorobenzene	ND		250	26	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Chlorodibromomethane	ND		250	32	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Chloroform	ND		250	50	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Chloromethane	ND		250	70	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Chloroethane	ND		250	37	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
cis-1,2-Dichloroethene	ND		250	33	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
cis-1,3-Dichloropropene	ND		250	36	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Dichlorobromomethane	ND		250	47	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Dichlorodifluoromethane	ND		250	32	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Ethylbenzene	ND		250	31	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
1,2-Dibromoethane	ND		250	31	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Cyclohexane	ND		250	30	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Isopropylbenzene	ND		250	27	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Methyl acetate	ND		1300	61	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Methyl tert-butyl ether	ND		250	51	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Methylcyclohexane	ND		250	28	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Methylene Chloride	ND		250	54	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Styrene	ND		250	32	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Tetrachloroethene	ND		250	41	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Toluene	ND		250	42	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
trans-1,2-Dichloroethene	ND		250	38	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
trans-1,3-Dichloropropene	ND		250	29	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Trichloroethene	ND		250	40	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Trichlorofluoromethane	ND		250	56	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Vinyl chloride	ND		250	65	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Xylenes, Total	ND		500	98	ug/Kg		12/23/15 07:22	12/23/15 11:37	1

TestAmerica Pittsburgh

QC Sample Results

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50861-1
SDG: LINCKLAEN,NY

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	83		52 - 124	12/23/15 07:22	12/23/15 11:37	1
4-Bromofluorobenzene (Surr)	82		63 - 120	12/23/15 07:22	12/23/15 11:37	1
Dibromofluoromethane (Surr)	90		68 - 121	12/23/15 07:22	12/23/15 11:37	1
Toluene-d8 (Surr)	108		72 - 127	12/23/15 07:22	12/23/15 11:37	1

Lab Sample ID: LCS 180-164513/2-A
Matrix: Solid
Analysis Batch: 164466

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 164513

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	2000	1860		ug/Kg		93	67 - 126
1,1,2,2-Tetrachloroethane	2000	2490		ug/Kg		125	60 - 139
1,1,2-Trichloro-1,2,2-trifluoroethane	2000	2200		ug/Kg		110	55 - 130
1,1,2-Trichloroethane	2000	2050		ug/Kg		102	70 - 128
1,1-Dichloroethane	2000	1810		ug/Kg		90	66 - 124
1,1-Dichloroethene	2000	2390		ug/Kg		119	59 - 129
1,2-Dibromo-3-Chloropropane	2000	2310		ug/Kg		115	35 - 136
1,2-Dichlorobenzene	2000	2000		ug/Kg		100	71 - 124
1,2-Dichloroethane	2000	2140		ug/Kg		107	61 - 127
1,2-Dichloropropane	2000	2180		ug/Kg		109	72 - 122
1,2,4-Trichlorobenzene	2000	1900		ug/Kg		95	51 - 136
1,3-Dichlorobenzene	2000	1960		ug/Kg		98	75 - 118
1,4-Dichlorobenzene	2000	1980		ug/Kg		99	77 - 116
2-Butanone (MEK)	2000	2240		ug/Kg		112	35 - 149
2-Hexanone	2000	2830		ug/Kg		141	32 - 150
4-Methyl-2-pentanone (MIBK)	2000	2550		ug/Kg		128	44 - 148
Acetone	2000	3180 *		ug/Kg		159	20 - 150
Benzene	2000	1840		ug/Kg		92	77 - 120
Bromoform	2000	2350		ug/Kg		117	53 - 140
Bromomethane	2000	1870		ug/Kg		93	25 - 150
Carbon disulfide	2000	2380		ug/Kg		119	50 - 127
Carbon tetrachloride	2000	1870		ug/Kg		94	69 - 122
Chlorobenzene	2000	1940		ug/Kg		97	79 - 120
Chlorodibromomethane	2000	2330		ug/Kg		117	70 - 132
Chloroform	2000	1840		ug/Kg		92	72 - 120
Chloromethane	2000	1660		ug/Kg		83	44 - 131
Chloroethane	2000	1930		ug/Kg		97	22 - 150
cis-1,2-Dichloroethene	2000	1780		ug/Kg		89	80 - 118
cis-1,3-Dichloropropene	2000	1990		ug/Kg		99	73 - 120
Dichlorobromomethane	2000	2210		ug/Kg		110	70 - 125
Dichlorodifluoromethane	2000	1780		ug/Kg		89	25 - 150
Ethylbenzene	2000	1910		ug/Kg		95	78 - 125
1,2-Dibromoethane	2000	2120		ug/Kg		106	70 - 131
Cyclohexane	2000	1760		ug/Kg		88	64 - 130
Isopropylbenzene	2000	2100		ug/Kg		105	70 - 133
Methyl acetate	10000	11800		ug/Kg		118	27 - 142
Methyl tert-butyl ether	2000	2300		ug/Kg		115	48 - 132
Methylcyclohexane	2000	2130		ug/Kg		107	66 - 135
Methylene Chloride	2000	2270		ug/Kg		113	58 - 127
m-Xylene & p-Xylene	2000	1930		ug/Kg		97	75 - 126
o-Xylene	2000	1900		ug/Kg		95	83 - 127
Styrene	2000	1970		ug/Kg		99	83 - 129
Tetrachloroethene	2000	1850		ug/Kg		92	78 - 129

TestAmerica Pittsburgh

QC Sample Results

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50861-1
SDG: LINCKLAEN,NY

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 180-164513/2-A

Matrix: Solid

Analysis Batch: 164466

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 164513

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Toluene	2000	1780		ug/Kg		89	78 - 124
trans-1,2-Dichloroethene	2000	2090		ug/Kg		104	77 - 121
trans-1,3-Dichloropropene	2000	2240		ug/Kg		112	74 - 129
Trichloroethene	2000	1990		ug/Kg		99	76 - 119
Trichlorofluoromethane	2000	1720		ug/Kg		86	20 - 150
Vinyl chloride	2000	1820		ug/Kg		91	63 - 124
Xylenes, Total	4000	3830		ug/Kg		96	83 - 126

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	96		52 - 124
4-Bromofluorobenzene (Surr)	112		63 - 120
Dibromofluoromethane (Surr)	85		68 - 121
Toluene-d8 (Surr)	94		72 - 127

Lab Sample ID: LCSD 180-164513/3-A

Matrix: Solid

Analysis Batch: 164466

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 164513

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	2000	1860		ug/Kg		93	67 - 126	0	31
1,1,2,2-Tetrachloroethane	2000	2410		ug/Kg		121	60 - 139	3	24
1,1,2-Trichloro-1,2,2-trifluoroethane	2000	2230		ug/Kg		112	55 - 130	1	37
1,1,2-Trichloroethane	2000	2200		ug/Kg		110	70 - 128	7	22
1,1-Dichloroethane	2000	1750		ug/Kg		88	66 - 124	3	23
1,1-Dichloroethene	2000	2360		ug/Kg		118	59 - 129	1	25
1,2-Dibromo-3-Chloropropane	2000	2270		ug/Kg		114	35 - 136	2	40
1,2-Dichlorobenzene	2000	2040		ug/Kg		102	71 - 124	2	22
1,2-Dichloroethane	2000	2000		ug/Kg		100	61 - 127	7	23
1,2-Dichloropropane	2000	2120		ug/Kg		106	72 - 122	3	20
1,2,4-Trichlorobenzene	2000	1940		ug/Kg		97	51 - 136	2	40
1,3-Dichlorobenzene	2000	2040		ug/Kg		102	75 - 118	4	20
1,4-Dichlorobenzene	2000	2060		ug/Kg		103	77 - 116	4	20
2-Butanone (MEK)	2000	1910		ug/Kg		96	35 - 149	16	36
2-Hexanone	2000	2510		ug/Kg		125	32 - 150	12	32
4-Methyl-2-pentanone (MIBK)	2000	2460		ug/Kg		123	44 - 148	4	30
Acetone	2000	2620		ug/Kg		131	20 - 150	19	40
Benzene	2000	1890		ug/Kg		95	77 - 120	3	20
Bromoform	2000	2390		ug/Kg		119	53 - 140	2	23
Bromomethane	2000	1830		ug/Kg		92	25 - 150	2	40
Carbon disulfide	2000	2240		ug/Kg		112	50 - 127	6	23
Carbon tetrachloride	2000	1880		ug/Kg		94	69 - 122	0	22
Chlorobenzene	2000	1930		ug/Kg		97	79 - 120	0	20
Chlorodibromomethane	2000	2430		ug/Kg		121	70 - 132	4	20
Chloroform	2000	1790		ug/Kg		90	72 - 120	3	25
Chloromethane	2000	1630		ug/Kg		82	44 - 131	2	27
Chloroethane	2000	1760		ug/Kg		88	22 - 150	9	40
cis-1,2-Dichloroethene	2000	1810		ug/Kg		90	80 - 118	1	20

TestAmerica Pittsburgh

QC Sample Results

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50861-1
SDG: LINCKLAEN,NY

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 180-164513/3-A

Matrix: Solid

Analysis Batch: 164466

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 164513

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
cis-1,3-Dichloropropene	2000	2090		ug/Kg		104	73 - 120	5	20
Dichlorobromomethane	2000	2130		ug/Kg		106	70 - 125	4	21
Dichlorodifluoromethane	2000	1750		ug/Kg		88	25 - 150	2	34
Ethylbenzene	2000	2120		ug/Kg		106	78 - 125	11	21
1,2-Dibromoethane	2000	2310		ug/Kg		115	70 - 131	8	20
Cyclohexane	2000	1890		ug/Kg		95	64 - 130	7	21
Isopropylbenzene	2000	2040		ug/Kg		102	70 - 133	3	22
Methyl acetate	10000	10500		ug/Kg		105	27 - 142	12	40
Methyl tert-butyl ether	2000	1880		ug/Kg		94	48 - 132	20	36
Methylcyclohexane	2000	2040		ug/Kg		102	66 - 135	4	23
Methylene Chloride	2000	1840		ug/Kg		92	58 - 127	21	28
m-Xylene & p-Xylene	2000	2110		ug/Kg		105	75 - 126	9	21
o-Xylene	2000	2150		ug/Kg		107	83 - 127	12	20
Styrene	2000	2180		ug/Kg		109	83 - 129	10	20
Tetrachloroethene	2000	1920		ug/Kg		96	78 - 129	4	20
Toluene	2000	1840		ug/Kg		92	78 - 124	4	21
trans-1,2-Dichloroethene	2000	1710		ug/Kg		85	77 - 121	20	20
trans-1,3-Dichloropropene	2000	2400		ug/Kg		120	74 - 129	6	20
Trichloroethene	2000	1980		ug/Kg		99	76 - 119	0	21
Trichlorofluoromethane	2000	2320		ug/Kg		116	20 - 150	30	40
Vinyl chloride	2000	1790		ug/Kg		90	63 - 124	2	27
Xylenes, Total	4000	4260		ug/Kg		107	83 - 126	11	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		52 - 124
4-Bromofluorobenzene (Surr)	107		63 - 120
Dibromofluoromethane (Surr)	89		68 - 121
Toluene-d8 (Surr)	96		72 - 127

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 180-164650/1-A

Matrix: Solid

Analysis Batch: 164785

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 164650

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		17	7.6	ug/Kg		12/24/15 13:19	12/29/15 18:20	1
PCB-1221	ND		17	12	ug/Kg		12/24/15 13:19	12/29/15 18:20	1
PCB-1232	ND		17	4.2	ug/Kg		12/24/15 13:19	12/29/15 18:20	1
PCB-1242	ND		17	6.2	ug/Kg		12/24/15 13:19	12/29/15 18:20	1
PCB-1248	ND		17	3.9	ug/Kg		12/24/15 13:19	12/29/15 18:20	1
PCB-1254	ND		17	6.2	ug/Kg		12/24/15 13:19	12/29/15 18:20	1
PCB-1260	ND		17	5.7	ug/Kg		12/24/15 13:19	12/29/15 18:20	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	100		45 - 135	12/24/15 13:19	12/29/15 18:20	1
Tetrachloro-m-xylene (Surr)	97		45 - 135	12/24/15 13:19	12/29/15 18:20	1

TestAmerica Pittsburgh

QC Sample Results

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50861-1
SDG: LINCKLAEN,NY

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: MB 180-164650/1-A

Matrix: Solid

Analysis Batch: 164785

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 164650

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
%Recovery	Qualifier					
DCB Decachlorobiphenyl (Surr)	95		45 - 125	12/24/15 13:19	12/29/15 18:20	1
DCB Decachlorobiphenyl (Surr)	93		45 - 125	12/24/15 13:19	12/29/15 18:20	1

Lab Sample ID: LCS 180-164650/2-A

Matrix: Solid

Analysis Batch: 164785

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 164650

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
PCB-1016	1330	1180		ug/Kg		88	55 - 135
PCB-1260	1330	1120		ug/Kg		84	50 - 140

Surrogate	LCS	LCS	Limits
%Recovery	Qualifier		
Tetrachloro-m-xylene (Surr)	109		45 - 135
Tetrachloro-m-xylene (Surr)	104		45 - 135
DCB Decachlorobiphenyl (Surr)	99		45 - 125
DCB Decachlorobiphenyl (Surr)	105		45 - 125

QC Association Summary

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50861-1
SDG: LINCKLAEN,NY

GC/MS VOA

Analysis Batch: 164466

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-50861-1	PA-121615-BM-0006	Total/NA	Solid	8260C	164513
LCS 180-164513/2-A	Lab Control Sample	Total/NA	Solid	8260C	164513
LCSD 180-164513/3-A	Lab Control Sample Dup	Total/NA	Solid	8260C	164513
MB 180-164513/1-A	Method Blank	Total/NA	Solid	8260C	164513

Prep Batch: 164513

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-50861-1	PA-121615-BM-0006	Total/NA	Solid	5030C	
LCS 180-164513/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCSD 180-164513/3-A	Lab Control Sample Dup	Total/NA	Solid	5030C	
MB 180-164513/1-A	Method Blank	Total/NA	Solid	5030C	

GC Semi VOA

Prep Batch: 164650

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-50861-1	PA-121615-BM-0006	Total/NA	Solid	3541	
LCS 180-164650/2-A	Lab Control Sample	Total/NA	Solid	3541	
MB 180-164650/1-A	Method Blank	Total/NA	Solid	3541	

Analysis Batch: 164785

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-50861-1	PA-121615-BM-0006	Total/NA	Solid	8082A	164650
LCS 180-164650/2-A	Lab Control Sample	Total/NA	Solid	8082A	164650
MB 180-164650/1-A	Method Blank	Total/NA	Solid	8082A	164650



**CONESTOGA-ROVERS
& ASSOCIATES**

CHAIN OF CUSTODY RECORD

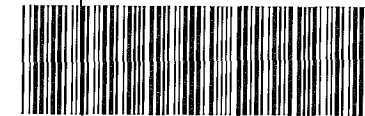
Address: _____
Phone: _____ Fax: _____

COC NO.: 48877

PAGE 1 OF 1

(See Reverse Side for Instructions)

Project No/ Phase/Task Code: 002077-60				Laboratory Name: TEST AMERICA				Lab Location: PITTSBURGH, PA				SSOW ID:									
Project Name: SOLVENT SAVERS				Lab Contact:				Lab Quote No:				Cooler No: 253850									
Project Location: LINCOLN, NY				<div style="display: flex; justify-content: space-between;"> <div style="width: 15%;">SAMPLE TYPE</div> <div style="width: 45%;">CONTAINER QUANTITY & PRESERVATION</div> <div style="width: 40%;">ANALYSIS REQUESTED <small>(See Back of COC for Definitions)</small></div> </div>				Carrier: FEDEX													
Chemistry Contact: PAUL MCMAHON								Airbill No: 8682 1848 5565													
Sampler(s): BRYAN MALONE/JASON DAVENPORT				Date Shipped: 12-16-15				<div style="border: 1px solid black; padding: 5px;"> COMMENTS/ SPECIAL INSTRUCTIONS: </div>													
Page 7 of 19	SAMPLE IDENTIFICATION <small>(Containers for each sample may be combined on one line)</small>		DATE <small>(mm/dd/yyyy)</small>	TIME <small>(hh:mm)</small>	Matrix Code <small>(see back of COC)</small>	Grab (G) or Comp (C)	Unpreserved	Hydrochloric Acid (HCl)	Nitric Acid (HNO ₃)	Sulfuric Acid (H ₂ SO ₄)	Sodium Hydroxide (NaOH)	Methanol/Water (Soil VOC)	EnCores 3x5-g, 1x25-g	Other:	Total Containers/Sample	PCB	VOC	pH	METALS	MSMSD Request	
	1 PA-121615-BM-0006		12/16/15	11:15	PAINT	1										1	X	X			
	2 CC-121615-BM-006A			11:30	CC	1										1	X	X			
	3 CC-121615-BM-006B			11:30	CC	1										1	X	X			
	W-121615-BM-0001			13:00	WG	3	3	1								7	X	X	X		
	W-121615-BM-0002			13:10	WG	2	3									5	X	X			
	W-121615-BM-0003			13:30	WG	3	3	1								7	X	X	X		
	TAT Required in business days (use separate COCs for different TATs): <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Days <input type="checkbox"/> 3 Days <input type="checkbox"/> 1 Week <input type="checkbox"/> 2 Week <input type="checkbox"/> Other:										Total Number of Containers: 22		Notes/ Special Requirements:								
All Samples in Cooler must be on COC																					
RELINQUISHED BY		COMPANY		DATE		TIME		RECEIVED BY		COMPANY		DATE		TIME							
1. BRYAN MALONE		CRA (GHD)		12-16-15		18:30		1.		TAG		12/17/15		9:15							
								2.													
								3.													



180-50861 Chain of Custody

THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT - ALL FIELDS MUST BE COMPLETED ACCURATELY

Distribution: WHITE - Fully Executed Copy (CRA) YELLOW - Receiving Laboratory Copy PINK - Shipper GOLDENROD - Sampling Crew CRA Form: COC-10B (20110804)



ORIGIN ID:SYRA (716) 609-0384
GHD SERVICES INC.

2055 NIAGARA FALLS BLVD, STE 3

NIAGARA FALLS, NY 143045702
UNITED STATES US

SHIP DATE: 16DEC15
ACTWGT: 55.90 LB
CAD: /POS1621
DIMS: 21x17x14 IN
BILL SENDER

TO **SAMOLING RECEIVING
TEST AMERICA
301 ALPHA DR**

PITTSBURGH PA 15238

(412) 963-7068

REF:

DEPT:



Uncorrected temp
Thermometer ID

72.4°C

CF 0 Initials AB

PT-WI-SR-001 effective 7/26/13

**FedEx
Express**



J1530150910014V

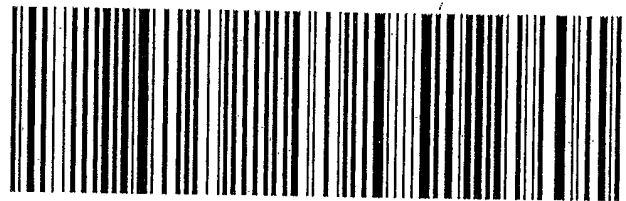
5565

TRK# 8682 1848 5565
0215

**THU - 17 DEC 10:30A
PRIORITY OVERNIGHT**

NA AGCA

15238
PA-US PIT



Align Open End of FedEx Pouch Here

Does this shipment contain dangerous goods?
One box must be checked.

☒ No ☐ Yes As per attached Shipper's Declaration ☐ Yes Shipper's Declaration not required ☐ Dry Ice Dry Ice, 3, UN 1845 x kg ☐ Cargo Aircraft Only

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging.

Payment Bill to: Enter FedEx Acct. No. or Credit Card No. below. Obtain Recip. Acct. No. ☐
☒ Sender Acct. No. in Spotted ☐ Recipient ☐ Third Party ☐ Credit Card ☐ Cash/Check



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519

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180-50861 Waybill

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 180-50861-1

SDG Number: LINCKLAEN,NY

Login Number: 50861

List Number: 1

Creator: Kovitch, Christina M

List Source: TestAmerica Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pittsburgh

301 Alpha Drive

RIDC Park

Pittsburgh, PA 15238

Tel: (412)963-7058

TestAmerica Job ID: 180-50806-1

TestAmerica Sample Delivery Group: LINCKLAEN NY

Client Project/Site: 2077-60 Solvent Savers

For:

GHD Services Inc.

2055 Niagara Falls Blvd., Suite 3

Niagara Falls, New York 14304

Attn: Mr. Paul McMahon



Authorized for release by:

1/8/2016 10:31:08 AM

Jill Colussy, Project Manager I

(412)963-2444

jill.colussy@testamericainc.com

LINKS

Review your project
results through

TotalAccess

Have a Question?



Visit us at:

www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



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Case Narrative

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50806-1
SDG: LINCKLAEN NY

Job ID: 180-50806-1

Laboratory: TestAmerica Pittsburgh

Narrative

Job Narrative 180-50806-1

Receipt

The samples were received on 12/16/2015 9:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.6° C.

The samples reported in this Job are cores samples. The cores ending in "B" were placed "on hold" upon receipt as per the client. The core samples ending in "A" were processed as per the client. These samples were logged in as -INTERVAL 1 and - INTERVAL 2 as per the client.

GC/MS VOA

The continuing calibration verification (CCV) analyzed in batch 180-164339 was outside the method criteria for the following analyte: 2-Hexanone and Acetone. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte is considered estimated.

PCBS

Due to the concentration of PCBs detected, several samples were analyzed at a dilution. The reporting limits have been adjusted accordingly,

Sample CC-121515-BM-001A-INTERVAL2 (180-50806-2) and CC-121515-BM-003A-INTERVAL2 (180-50806-6) had surrogate decachlorobiphenyl recover outside of the control limits on both columns. The recoveries of tetrachloro-m-xylene surrogate were within the control limits. All results were reported.

Sample CC-121515-BM-003A-INTERVAL1 (180-50806-5) was analyzed undiluted and had all surrogates recover high and outside of the control limits. All results were reported as per the client. The client did not want the sample re-extracted.

Definitions/Glossary

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50806-1
SDG: LINCKLAEN NY

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits

GC Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Certification Summary

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50806-1
SDG: LINCKLAEN NY

Laboratory: TestAmerica Pittsburgh

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
New York	NELAP	2	11182	03-31-16
The following analytes are included in this report, but are not certified under this certification:				
Analysis Method	Prep Method	Matrix	Analyte	
8260C	5030C	Solid	Cyclohexane	

Laboratory: TestAmerica Canton

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	NELAP	9	01144CA	06-30-14 *
California	State Program	9	2927	04-30-17
Connecticut	State Program	1	PH-0590	12-31-17
Illinois	NELAP	5	200004	07-31-16
Kansas	NELAP	7	E-10336	01-31-16 *
Kentucky (UST)	State Program	4	58	02-26-16 *
Kentucky (WW)	State Program	4	98016	12-31-15 *
L-A-B	DoD ELAP		L2315	07-18-16
Minnesota	NELAP	5	039-999-348	12-31-16
Nevada	State Program	9	OH-000482008A	07-31-16
New Jersey	NELAP	2	OH001	06-30-16
New York	NELAP	2	10975	03-31-16 *
Ohio VAP	State Program	5	CL0024	09-14-17
Oregon	NELAP	10	4062	02-23-16 *
Pennsylvania	NELAP	3	68-00340	08-31-16
Texas	NELAP	6	T104704517-15-5	08-31-16
USDA	Federal		P330-13-00319	11-26-16
Virginia	NELAP	3	460175	09-14-16
Washington	State Program	10	C971	01-12-16 *
West Virginia DEP	State Program	3	210	12-31-15 *
Wisconsin	State Program	5	999518190	08-31-16

* Certification renewal pending - certification considered valid.

TestAmerica Pittsburgh

Sample Summary

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50806-1
SDG: LINCKLAEN NY

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-50806-1	CC-121515-BM-001A-INTERVAL1	Solid	12/15/15 12:40	12/16/15 09:00
180-50806-2	CC-121515-BM-001A-INTERVAL2	Solid	12/15/15 12:40	12/16/15 09:00
180-50806-3	CC-121515-BM-002A-INTERVAL1	Solid	12/15/15 13:50	12/16/15 09:00
180-50806-4	CC-121515-BM-002A-INTERVAL2	Solid	12/15/15 13:50	12/16/15 09:00
180-50806-5	CC-121515-BM-003A-INTERVAL1	Solid	12/15/15 14:45	12/16/15 09:00
180-50806-6	CC-121515-BM-003A-INTERVAL2	Solid	12/15/15 14:45	12/16/15 09:00
180-50806-7	CC-121515-BM-004A-INTERVAL1	Solid	12/15/15 15:30	12/16/15 09:00
180-50806-8	CC-121515-BM-004A-INTERVAL2	Solid	12/15/15 15:30	12/16/15 09:00
180-50806-9	CC-121515-BM-005A-INTERVAL1	Solid	12/15/15 16:25	12/16/15 09:00
180-50806-10	CC-121515-BM-005A-INTERVAL2	Solid	12/15/15 16:25	12/16/15 09:00

Method Summary

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50806-1
SDG: LINCKLAEN NY

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL PIT
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL PIT
Part Size Red	Particle Size Reduction Preparation	NONE	TAL CAN

Protocol References:

NONE = NONE

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

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50806-1
SDG: LINCKLAEN NY

Client Sample ID: CC-121515-BM-001A-INTERVAL1

Date Collected: 12/15/15 12:40

Date Received: 12/16/15 09:00

Lab Sample ID: 180-50806-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030C			5.1225 g	5 mL	164343	12/22/15 07:44	PJJ	TAL PIT
Total/NA	Analysis	8260C		1	5.1225 g	5 mL	164339	12/22/15 15:51	PJJ	TAL PIT
		Instrument ID: CHHP4								
Total/NA	Prep	3541			15.1 g	20.0 mL	164650	12/24/15 13:19	CBY	TAL PIT
Total/NA	Analysis	8082A		20	15.1 g	20.0 mL	164785	12/29/15 21:46	AKG	TAL PIT
		Instrument ID: CHGC10								
Total/NA	Analysis	Part Size Red		1			211548	12/18/15 12:00	DRJ	TAL CAN
		Instrument ID: NOEQUIP								

Client Sample ID: CC-121515-BM-001A-INTERVAL2

Date Collected: 12/15/15 12:40

Date Received: 12/16/15 09:00

Lab Sample ID: 180-50806-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030C			5.0500 g	5 mL	164343	12/22/15 07:44	PJJ	TAL PIT
Total/NA	Analysis	8260C		1	5.0500 g	5 mL	164339	12/22/15 11:53	PJJ	TAL PIT
		Instrument ID: CHHP4								
Total/NA	Prep	3541			15.7 g	20.0 mL	164650	12/24/15 13:19	CBY	TAL PIT
Total/NA	Analysis	8082A		1	15.7 g	20.0 mL	164785	12/29/15 22:05	AKG	TAL PIT
		Instrument ID: CHGC10								
Total/NA	Analysis	Part Size Red		1			211548	12/18/15 12:00	DRJ	TAL CAN
		Instrument ID: NOEQUIP								

Client Sample ID: CC-121515-BM-002A-INTERVAL1

Date Collected: 12/15/15 13:50

Date Received: 12/16/15 09:00

Lab Sample ID: 180-50806-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030C			5.0005 g	5 mL	164343	12/22/15 07:44	PJJ	TAL PIT
Total/NA	Analysis	8260C		1	5.0005 g	5 mL	164339	12/22/15 12:18	PJJ	TAL PIT
		Instrument ID: CHHP4								
Total/NA	Prep	3541			15.4 g	20.0 mL	164650	12/24/15 13:19	CBY	TAL PIT
Total/NA	Analysis	8082A		5	15.4 g	20.0 mL	164785	12/29/15 22:24	AKG	TAL PIT
		Instrument ID: CHGC10								
Total/NA	Analysis	Part Size Red		1			211548	12/18/15 12:00	DRJ	TAL CAN
		Instrument ID: NOEQUIP								

Client Sample ID: CC-121515-BM-002A-INTERVAL2

Date Collected: 12/15/15 13:50

Date Received: 12/16/15 09:00

Lab Sample ID: 180-50806-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030C			5.0300 g	5 mL	164343	12/22/15 07:44	PJJ	TAL PIT

TestAmerica Pittsburgh

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50806-1
SDG: LINCKLAEN NY

Client Sample ID: CC-121515-BM-002A-INTERVAL2

Lab Sample ID: 180-50806-4

Date Collected: 12/15/15 13:50

Matrix: Solid

Date Received: 12/16/15 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5.0300 g	5 mL	164339	12/22/15 12:44	PJJ	TAL PIT
		Instrument ID: CHHP4								
Total/NA	Prep	3541			15.1 g	20.0 mL	164650	12/24/15 13:19	CBY	TAL PIT
Total/NA	Analysis	8082A		5	15.1 g	20.0 mL	164785	12/29/15 22:42	AKG	TAL PIT
		Instrument ID: CHGC10								
Total/NA	Analysis	Part Size Red		1			211548	12/18/15 12:00	DRJ	TAL CAN
		Instrument ID: NOEQUIP								

Client Sample ID: CC-121515-BM-003A-INTERVAL1

Lab Sample ID: 180-50806-5

Date Collected: 12/15/15 14:45

Matrix: Solid

Date Received: 12/16/15 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030C			5.0000 g	5 mL	164343	12/22/15 07:44	PJJ	TAL PIT
Total/NA	Analysis	8260C		1	5.0000 g	5 mL	164339	12/22/15 13:10	PJJ	TAL PIT
		Instrument ID: CHHP4								
Total/NA	Prep	3541			14.9 g	20.0 mL	164650	12/24/15 13:19	CBY	TAL PIT
Total/NA	Analysis	8082A		1	14.9 g	20.0 mL	164785	12/29/15 23:01	AKG	TAL PIT
		Instrument ID: CHGC10								
Total/NA	Analysis	Part Size Red		1			211548	12/18/15 12:00	DRJ	TAL CAN
		Instrument ID: NOEQUIP								

Client Sample ID: CC-121515-BM-003A-INTERVAL2

Lab Sample ID: 180-50806-6

Date Collected: 12/15/15 14:45

Matrix: Solid

Date Received: 12/16/15 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030C			5.0047 g	5 mL	164343	12/22/15 07:44	PJJ	TAL PIT
Total/NA	Analysis	8260C		1	5.0047 g	5 mL	164339	12/22/15 17:34	PJJ	TAL PIT
		Instrument ID: CHHP4								
Total/NA	Prep	3541			15.1 g	20.0 mL	164650	12/24/15 13:19	CBY	TAL PIT
Total/NA	Analysis	8082A		1	15.1 g	20.0 mL	164785	12/29/15 23:20	AKG	TAL PIT
		Instrument ID: CHGC10								
Total/NA	Analysis	Part Size Red		1			211548	12/18/15 12:00	DRJ	TAL CAN
		Instrument ID: NOEQUIP								

Client Sample ID: CC-121515-BM-004A-INTERVAL1

Lab Sample ID: 180-50806-7

Date Collected: 12/15/15 15:30

Matrix: Solid

Date Received: 12/16/15 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030C			5.0000 g	5 mL	164343	12/22/15 07:44	PJJ	TAL PIT

TestAmerica Pittsburgh

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50806-1
SDG: LINCKLAEN NY

Client Sample ID: CC-121515-BM-004A-INTERVAL1

Lab Sample ID: 180-50806-7

Date Collected: 12/15/15 15:30

Matrix: Solid

Date Received: 12/16/15 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5.0000 g	5 mL	164339	12/22/15 18:00	PJJ	TAL PIT
		Instrument ID: CHHP4								
Total/NA	Prep	3541			15.4 g	20.0 mL	164650	12/24/15 13:19	CBY	TAL PIT
Total/NA	Analysis	8082A		5	15.4 g	20.0 mL	164785	12/29/15 23:39	AKG	TAL PIT
		Instrument ID: CHGC10								
Total/NA	Analysis	Part Size Red		1			211548	12/18/15 13:07	DRJ	TAL CAN
		Instrument ID: NOEQUIP								

Client Sample ID: CC-121515-BM-004A-INTERVAL2

Lab Sample ID: 180-50806-8

Date Collected: 12/15/15 15:30

Matrix: Solid

Date Received: 12/16/15 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030C			5.0033 g	5 mL	164343	12/22/15 07:44	PJJ	TAL PIT
Total/NA	Analysis	8260C		1	5.0033 g	5 mL	164339	12/22/15 14:34	PJJ	TAL PIT
		Instrument ID: CHHP4								
Total/NA	Prep	3541			15.1 g	20.0 mL	164650	12/24/15 13:19	CBY	TAL PIT
Total/NA	Analysis	8082A		1	15.1 g	20.0 mL	164785	12/29/15 23:58	AKG	TAL PIT
		Instrument ID: CHGC10								
Total/NA	Analysis	Part Size Red		1			211548	12/18/15 13:07	DRJ	TAL CAN
		Instrument ID: NOEQUIP								

Client Sample ID: CC-121515-BM-005A-INTERVAL1

Lab Sample ID: 180-50806-9

Date Collected: 12/15/15 16:25

Matrix: Solid

Date Received: 12/16/15 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030C			5.0000 g	5 mL	164343	12/22/15 07:44	PJJ	TAL PIT
Total/NA	Analysis	8260C		1	5.0000 g	5 mL	164339	12/22/15 14:59	PJJ	TAL PIT
		Instrument ID: CHHP4								
Total/NA	Prep	3541			13 g	20.0 mL	164650	12/24/15 13:19	CBY	TAL PIT
Total/NA	Analysis	8082A		10	13 g	20.0 mL	164785	12/30/15 00:16	AKG	TAL PIT
		Instrument ID: CHGC10								
Total/NA	Analysis	Part Size Red		1			211548	12/18/15 13:07	DRJ	TAL CAN
		Instrument ID: NOEQUIP								

Client Sample ID: CC-121515-BM-005A-INTERVAL2

Lab Sample ID: 180-50806-10

Date Collected: 12/15/15 16:25

Matrix: Solid

Date Received: 12/16/15 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030C			5.0000 g	5 mL	164343	12/22/15 07:44	PJJ	TAL PIT

TestAmerica Pittsburgh

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50806-1
SDG: LINCKLAEN NY

Client Sample ID: CC-121515-BM-005A-INTERVAL2

Lab Sample ID: 180-50806-10

Date Collected: 12/15/15 16:25

Matrix: Solid

Date Received: 12/16/15 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5.0000 g	5 mL	164339	12/22/15 15:25	PJJ	TAL PIT
		Instrument ID: CHHP4								
Total/NA	Prep	3541			15 g	20.0 mL	164650	12/24/15 13:19	CBY	TAL PIT
Total/NA	Analysis	8082A		5	15 g	20.0 mL	164785	12/30/15 00:35	AKG	TAL PIT
		Instrument ID: CHGC10								
Total/NA	Analysis	Part Size Red		1			211548	12/18/15 13:07	DRJ	TAL CAN
		Instrument ID: NOEQUIP								

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL CAN

Batch Type: Analysis

DRJ = Diane Jones

Lab: TAL PIT

Batch Type: Prep

CBY = Charles Yushinski

PJJ = Patrick Journet

Batch Type: Analysis

AKG = Ashok Gupta

PJJ = Patrick Journet

Client Sample Results

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50806-1
SDG: LINCKLAEN NY

Client Sample ID: CC-121515-BM-001A-INTERVAL1

Lab Sample ID: 180-50806-1

Date Collected: 12/15/15 12:40

Matrix: Solid

Date Received: 12/16/15 09:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		240	50	ug/Kg		12/22/15 07:44	12/22/15 15:51	1
1,1,2,2-Tetrachloroethane	ND		240	46	ug/Kg		12/22/15 07:44	12/22/15 15:51	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		240	16	ug/Kg		12/22/15 07:44	12/22/15 15:51	1
1,1,2-Trichloroethane	ND		240	57	ug/Kg		12/22/15 07:44	12/22/15 15:51	1
1,1-Dichloroethane	ND		240	49	ug/Kg		12/22/15 07:44	12/22/15 15:51	1
1,1-Dichloroethene	ND		240	52	ug/Kg		12/22/15 07:44	12/22/15 15:51	1
1,2-Dibromo-3-Chloropropane	ND		240	17	ug/Kg		12/22/15 07:44	12/22/15 15:51	1
1,2-Dichlorobenzene	ND		240	33	ug/Kg		12/22/15 07:44	12/22/15 15:51	1
1,2-Dichloroethane	ND		240	47	ug/Kg		12/22/15 07:44	12/22/15 15:51	1
1,2-Dichloropropane	ND		240	62	ug/Kg		12/22/15 07:44	12/22/15 15:51	1
1,2,4-Trichlorobenzene	ND		240	18	ug/Kg		12/22/15 07:44	12/22/15 15:51	1
1,3-Dichlorobenzene	ND		240	25	ug/Kg		12/22/15 07:44	12/22/15 15:51	1
1,4-Dichlorobenzene	ND		240	26	ug/Kg		12/22/15 07:44	12/22/15 15:51	1
2-Butanone (MEK)	ND		240	53	ug/Kg		12/22/15 07:44	12/22/15 15:51	1
2-Hexanone	ND		240	28	ug/Kg		12/22/15 07:44	12/22/15 15:51	1
4-Methyl-2-pentanone (MIBK)	ND		240	29	ug/Kg		12/22/15 07:44	12/22/15 15:51	1
Acetone	ND		980	240	ug/Kg		12/22/15 07:44	12/22/15 15:51	1
Benzene	ND		240	48	ug/Kg		12/22/15 07:44	12/22/15 15:51	1
Bromoform	ND		240	52	ug/Kg		12/22/15 07:44	12/22/15 15:51	1
Bromomethane	ND		240	77	ug/Kg		12/22/15 07:44	12/22/15 15:51	1
Carbon disulfide	ND		240	52	ug/Kg		12/22/15 07:44	12/22/15 15:51	1
Carbon tetrachloride	ND		240	53	ug/Kg		12/22/15 07:44	12/22/15 15:51	1
Chlorobenzene	ND		240	26	ug/Kg		12/22/15 07:44	12/22/15 15:51	1
Chlorodibromomethane	ND		240	32	ug/Kg		12/22/15 07:44	12/22/15 15:51	1
Chloroform	ND		240	49	ug/Kg		12/22/15 07:44	12/22/15 15:51	1
Chloromethane	ND		240	68	ug/Kg		12/22/15 07:44	12/22/15 15:51	1
Chloroethane	ND		240	36	ug/Kg		12/22/15 07:44	12/22/15 15:51	1
cis-1,2-Dichloroethene	ND		240	32	ug/Kg		12/22/15 07:44	12/22/15 15:51	1
cis-1,3-Dichloropropene	ND		240	35	ug/Kg		12/22/15 07:44	12/22/15 15:51	1
Dichlorobromomethane	ND		240	45	ug/Kg		12/22/15 07:44	12/22/15 15:51	1
Dichlorodifluoromethane	ND		240	31	ug/Kg		12/22/15 07:44	12/22/15 15:51	1
Ethylbenzene	ND		240	30	ug/Kg		12/22/15 07:44	12/22/15 15:51	1
1,2-Dibromoethane	ND		240	30	ug/Kg		12/22/15 07:44	12/22/15 15:51	1
Cyclohexane	ND		240	29	ug/Kg		12/22/15 07:44	12/22/15 15:51	1
Isopropylbenzene	ND		240	26	ug/Kg		12/22/15 07:44	12/22/15 15:51	1
Methyl acetate	ND		1200	60	ug/Kg		12/22/15 07:44	12/22/15 15:51	1
Methyl tert-butyl ether	ND		240	50	ug/Kg		12/22/15 07:44	12/22/15 15:51	1
Methylcyclohexane	ND		240	27	ug/Kg		12/22/15 07:44	12/22/15 15:51	1
Methylene Chloride	ND		240	53	ug/Kg		12/22/15 07:44	12/22/15 15:51	1
Styrene	ND		240	31	ug/Kg		12/22/15 07:44	12/22/15 15:51	1
Tetrachloroethene	ND		240	40	ug/Kg		12/22/15 07:44	12/22/15 15:51	1
Toluene	ND		240	41	ug/Kg		12/22/15 07:44	12/22/15 15:51	1
trans-1,2-Dichloroethene	ND		240	37	ug/Kg		12/22/15 07:44	12/22/15 15:51	1
trans-1,3-Dichloropropene	ND		240	28	ug/Kg		12/22/15 07:44	12/22/15 15:51	1
Trichloroethene	100	J	240	39	ug/Kg		12/22/15 07:44	12/22/15 15:51	1
Trichlorofluoromethane	ND		240	55	ug/Kg		12/22/15 07:44	12/22/15 15:51	1
Vinyl chloride	ND		240	63	ug/Kg		12/22/15 07:44	12/22/15 15:51	1
Xylenes, Total	ND		490	96	ug/Kg		12/22/15 07:44	12/22/15 15:51	1

TestAmerica Pittsburgh

Client Sample Results

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50806-1
SDG: LINCKLAEN NY

Client Sample ID: CC-121515-BM-001A-INTERVAL1

Lab Sample ID: 180-50806-1

Date Collected: 12/15/15 12:40

Matrix: Solid

Date Received: 12/16/15 09:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	79		52 - 124	12/22/15 07:44	12/22/15 15:51	1
4-Bromofluorobenzene (Surr)	84		63 - 120	12/22/15 07:44	12/22/15 15:51	1
Dibromofluoromethane (Surr)	85		68 - 121	12/22/15 07:44	12/22/15 15:51	1
Toluene-d8 (Surr)	107		72 - 127	12/22/15 07:44	12/22/15 15:51	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		330	150	ug/Kg		12/24/15 13:19	12/29/15 21:46	20
PCB-1221	ND		330	240	ug/Kg		12/24/15 13:19	12/29/15 21:46	20
PCB-1232	ND		330	83	ug/Kg		12/24/15 13:19	12/29/15 21:46	20
PCB-1242	13000		330	120	ug/Kg		12/24/15 13:19	12/29/15 21:46	20
PCB-1248	ND		330	78	ug/Kg		12/24/15 13:19	12/29/15 21:46	20
PCB-1254	ND		330	120	ug/Kg		12/24/15 13:19	12/29/15 21:46	20
PCB-1260	ND		330	110	ug/Kg		12/24/15 13:19	12/29/15 21:46	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	102		45 - 135	12/24/15 13:19	12/29/15 21:46	20
Tetrachloro-m-xylene (Surr)	110		45 - 135	12/24/15 13:19	12/29/15 21:46	20
DCB Decachlorobiphenyl (Surr)	119		45 - 125	12/24/15 13:19	12/29/15 21:46	20
DCB Decachlorobiphenyl (Surr)	119		45 - 125	12/24/15 13:19	12/29/15 21:46	20

Method: Part Size Red - Particle Size Reduction Preparation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PSR sample generated	1.0				NONE			12/18/15 12:00	1

Client Sample ID: CC-121515-BM-001A-INTERVAL2

Lab Sample ID: 180-50806-2

Date Collected: 12/15/15 12:40

Matrix: Solid

Date Received: 12/16/15 09:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		250	51	ug/Kg		12/22/15 07:44	12/22/15 11:53	1
1,1,1,2-Tetrachloroethane	ND		250	46	ug/Kg		12/22/15 07:44	12/22/15 11:53	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		250	16	ug/Kg		12/22/15 07:44	12/22/15 11:53	1
1,1,2-Trichloroethane	ND		250	57	ug/Kg		12/22/15 07:44	12/22/15 11:53	1
1,1-Dichloroethane	ND		250	50	ug/Kg		12/22/15 07:44	12/22/15 11:53	1
1,1-Dichloroethene	ND		250	53	ug/Kg		12/22/15 07:44	12/22/15 11:53	1
1,2-Dibromo-3-Chloropropane	ND		250	17	ug/Kg		12/22/15 07:44	12/22/15 11:53	1
1,2-Dichlorobenzene	ND		250	34	ug/Kg		12/22/15 07:44	12/22/15 11:53	1
1,2-Dichloroethane	ND		250	47	ug/Kg		12/22/15 07:44	12/22/15 11:53	1
1,2-Dichloropropane	ND		250	63	ug/Kg		12/22/15 07:44	12/22/15 11:53	1
1,2,4-Trichlorobenzene	ND		250	19	ug/Kg		12/22/15 07:44	12/22/15 11:53	1
1,3-Dichlorobenzene	ND		250	25	ug/Kg		12/22/15 07:44	12/22/15 11:53	1
1,4-Dichlorobenzene	ND		250	26	ug/Kg		12/22/15 07:44	12/22/15 11:53	1
2-Butanone (MEK)	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 11:53	1
2-Hexanone	ND		250	28	ug/Kg		12/22/15 07:44	12/22/15 11:53	1
4-Methyl-2-pentanone (MIBK)	ND		250	29	ug/Kg		12/22/15 07:44	12/22/15 11:53	1
Acetone	ND		990	250	ug/Kg		12/22/15 07:44	12/22/15 11:53	1
Benzene	ND		250	49	ug/Kg		12/22/15 07:44	12/22/15 11:53	1
Bromoform	ND		250	53	ug/Kg		12/22/15 07:44	12/22/15 11:53	1
Bromomethane	ND		250	78	ug/Kg		12/22/15 07:44	12/22/15 11:53	1

TestAmerica Pittsburgh

Client Sample Results

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50806-1
SDG: LINCKLAEN NY

Client Sample ID: CC-121515-BM-001A-INTERVAL2

Lab Sample ID: 180-50806-2

Date Collected: 12/15/15 12:40

Matrix: Solid

Date Received: 12/16/15 09:00

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		250	53	ug/Kg		12/22/15 07:44	12/22/15 11:53	1
Carbon tetrachloride	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 11:53	1
Chlorobenzene	ND		250	26	ug/Kg		12/22/15 07:44	12/22/15 11:53	1
Chlorodibromomethane	ND		250	32	ug/Kg		12/22/15 07:44	12/22/15 11:53	1
Chloroform	ND		250	50	ug/Kg		12/22/15 07:44	12/22/15 11:53	1
Chloromethane	ND		250	69	ug/Kg		12/22/15 07:44	12/22/15 11:53	1
Chloroethane	ND		250	37	ug/Kg		12/22/15 07:44	12/22/15 11:53	1
cis-1,2-Dichloroethene	ND		250	33	ug/Kg		12/22/15 07:44	12/22/15 11:53	1
cis-1,3-Dichloropropene	ND		250	36	ug/Kg		12/22/15 07:44	12/22/15 11:53	1
Dichlorobromomethane	ND		250	46	ug/Kg		12/22/15 07:44	12/22/15 11:53	1
Dichlorodifluoromethane	ND		250	31	ug/Kg		12/22/15 07:44	12/22/15 11:53	1
Ethylbenzene	ND		250	31	ug/Kg		12/22/15 07:44	12/22/15 11:53	1
1,2-Dibromoethane	ND		250	30	ug/Kg		12/22/15 07:44	12/22/15 11:53	1
Cyclohexane	ND		250	30	ug/Kg		12/22/15 07:44	12/22/15 11:53	1
Isopropylbenzene	ND		250	26	ug/Kg		12/22/15 07:44	12/22/15 11:53	1
Methyl acetate	ND		1200	61	ug/Kg		12/22/15 07:44	12/22/15 11:53	1
Methyl tert-butyl ether	ND		250	51	ug/Kg		12/22/15 07:44	12/22/15 11:53	1
Methylcyclohexane	ND		250	28	ug/Kg		12/22/15 07:44	12/22/15 11:53	1
Methylene Chloride	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 11:53	1
Styrene	ND		250	32	ug/Kg		12/22/15 07:44	12/22/15 11:53	1
Tetrachloroethene	ND		250	41	ug/Kg		12/22/15 07:44	12/22/15 11:53	1
Toluene	ND		250	42	ug/Kg		12/22/15 07:44	12/22/15 11:53	1
trans-1,2-Dichloroethene	ND		250	37	ug/Kg		12/22/15 07:44	12/22/15 11:53	1
trans-1,3-Dichloropropene	ND		250	29	ug/Kg		12/22/15 07:44	12/22/15 11:53	1
Trichloroethene	44	J	250	40	ug/Kg		12/22/15 07:44	12/22/15 11:53	1
Trichlorofluoromethane	ND		250	55	ug/Kg		12/22/15 07:44	12/22/15 11:53	1
Vinyl chloride	ND		250	64	ug/Kg		12/22/15 07:44	12/22/15 11:53	1
Xylenes, Total	ND		500	97	ug/Kg		12/22/15 07:44	12/22/15 11:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		52 - 124	12/22/15 07:44	12/22/15 11:53	1
4-Bromofluorobenzene (Surr)	87		63 - 120	12/22/15 07:44	12/22/15 11:53	1
Dibromofluoromethane (Surr)	95		68 - 121	12/22/15 07:44	12/22/15 11:53	1
Toluene-d8 (Surr)	112		72 - 127	12/22/15 07:44	12/22/15 11:53	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		16	7.3	ug/Kg		12/24/15 13:19	12/29/15 22:05	1
PCB-1221	ND		16	12	ug/Kg		12/24/15 13:19	12/29/15 22:05	1
PCB-1232	ND		16	4.0	ug/Kg		12/24/15 13:19	12/29/15 22:05	1
PCB-1242	44		16	5.9	ug/Kg		12/24/15 13:19	12/29/15 22:05	1
PCB-1248	ND		16	3.7	ug/Kg		12/24/15 13:19	12/29/15 22:05	1
PCB-1254	ND		16	5.9	ug/Kg		12/24/15 13:19	12/29/15 22:05	1
PCB-1260	ND		16	5.5	ug/Kg		12/24/15 13:19	12/29/15 22:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	108		45 - 135	12/24/15 13:19	12/29/15 22:05	1
Tetrachloro-m-xylene (Surr)	116		45 - 135	12/24/15 13:19	12/29/15 22:05	1
DCB Decachlorobiphenyl (Surr)	139	X	45 - 125	12/24/15 13:19	12/29/15 22:05	1
DCB Decachlorobiphenyl (Surr)	130	X	45 - 125	12/24/15 13:19	12/29/15 22:05	1

TestAmerica Pittsburgh

Client Sample Results

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50806-1
SDG: LINCKLAEN NY

Client Sample ID: CC-121515-BM-001A-INTERVAL2

Lab Sample ID: 180-50806-2

Date Collected: 12/15/15 12:40

Matrix: Solid

Date Received: 12/16/15 09:00

Method: Part Size Red - Particle Size Reduction Preparation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PSR sample generated	1.0				NONE			12/18/15 12:00	1

Client Sample ID: CC-121515-BM-002A-INTERVAL1

Lab Sample ID: 180-50806-3

Date Collected: 12/15/15 13:50

Matrix: Solid

Date Received: 12/16/15 09:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		250	51	ug/Kg		12/22/15 07:44	12/22/15 12:18	1
1,1,2,2-Tetrachloroethane	ND		250	47	ug/Kg		12/22/15 07:44	12/22/15 12:18	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		250	17	ug/Kg		12/22/15 07:44	12/22/15 12:18	1
1,1,2-Trichloroethane	ND		250	58	ug/Kg		12/22/15 07:44	12/22/15 12:18	1
1,1-Dichloroethane	ND		250	51	ug/Kg		12/22/15 07:44	12/22/15 12:18	1
1,1-Dichloroethene	ND		250	53	ug/Kg		12/22/15 07:44	12/22/15 12:18	1
1,2-Dibromo-3-Chloropropane	ND		250	18	ug/Kg		12/22/15 07:44	12/22/15 12:18	1
1,2-Dichlorobenzene	ND		250	34	ug/Kg		12/22/15 07:44	12/22/15 12:18	1
1,2-Dichloroethane	ND		250	48	ug/Kg		12/22/15 07:44	12/22/15 12:18	1
1,2-Dichloropropane	ND		250	64	ug/Kg		12/22/15 07:44	12/22/15 12:18	1
1,2,4-Trichlorobenzene	ND		250	19	ug/Kg		12/22/15 07:44	12/22/15 12:18	1
1,3-Dichlorobenzene	ND		250	25	ug/Kg		12/22/15 07:44	12/22/15 12:18	1
1,4-Dichlorobenzene	ND		250	26	ug/Kg		12/22/15 07:44	12/22/15 12:18	1
2-Butanone (MEK)	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 12:18	1
2-Hexanone	ND		250	28	ug/Kg		12/22/15 07:44	12/22/15 12:18	1
4-Methyl-2-pentanone (MIBK)	ND		250	30	ug/Kg		12/22/15 07:44	12/22/15 12:18	1
Acetone	ND		1000	250	ug/Kg		12/22/15 07:44	12/22/15 12:18	1
Benzene	ND		250	49	ug/Kg		12/22/15 07:44	12/22/15 12:18	1
Bromoform	ND		250	53	ug/Kg		12/22/15 07:44	12/22/15 12:18	1
Bromomethane	ND		250	79	ug/Kg		12/22/15 07:44	12/22/15 12:18	1
Carbon disulfide	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 12:18	1
Carbon tetrachloride	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 12:18	1
Chlorobenzene	ND		250	26	ug/Kg		12/22/15 07:44	12/22/15 12:18	1
Chlorodibromomethane	ND		250	32	ug/Kg		12/22/15 07:44	12/22/15 12:18	1
Chloroform	ND		250	50	ug/Kg		12/22/15 07:44	12/22/15 12:18	1
Chloromethane	ND		250	70	ug/Kg		12/22/15 07:44	12/22/15 12:18	1
Chloroethane	ND		250	37	ug/Kg		12/22/15 07:44	12/22/15 12:18	1
cis-1,2-Dichloroethene	ND		250	33	ug/Kg		12/22/15 07:44	12/22/15 12:18	1
cis-1,3-Dichloropropene	ND		250	36	ug/Kg		12/22/15 07:44	12/22/15 12:18	1
Dichlorobromomethane	ND		250	47	ug/Kg		12/22/15 07:44	12/22/15 12:18	1
Dichlorodifluoromethane	ND		250	32	ug/Kg		12/22/15 07:44	12/22/15 12:18	1
Ethylbenzene	ND		250	31	ug/Kg		12/22/15 07:44	12/22/15 12:18	1
1,2-Dibromoethane	ND		250	31	ug/Kg		12/22/15 07:44	12/22/15 12:18	1
Cyclohexane	ND		250	30	ug/Kg		12/22/15 07:44	12/22/15 12:18	1
Isopropylbenzene	ND		250	27	ug/Kg		12/22/15 07:44	12/22/15 12:18	1
Methyl acetate	ND		1200	61	ug/Kg		12/22/15 07:44	12/22/15 12:18	1
Methyl tert-butyl ether	ND		250	51	ug/Kg		12/22/15 07:44	12/22/15 12:18	1
Methylcyclohexane	ND		250	28	ug/Kg		12/22/15 07:44	12/22/15 12:18	1
Methylene Chloride	74	J	250	54	ug/Kg		12/22/15 07:44	12/22/15 12:18	1
Styrene	ND		250	32	ug/Kg		12/22/15 07:44	12/22/15 12:18	1
Tetrachloroethene	54	J	250	41	ug/Kg		12/22/15 07:44	12/22/15 12:18	1
Toluene	180	J	250	42	ug/Kg		12/22/15 07:44	12/22/15 12:18	1

TestAmerica Pittsburgh

Client Sample Results

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50806-1
SDG: LINCKLAEN NY

Client Sample ID: CC-121515-BM-002A-INTERVAL1

Lab Sample ID: 180-50806-3

Date Collected: 12/15/15 13:50

Matrix: Solid

Date Received: 12/16/15 09:00

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		250	38	ug/Kg		12/22/15 07:44	12/22/15 12:18	1
trans-1,3-Dichloropropene	ND		250	29	ug/Kg		12/22/15 07:44	12/22/15 12:18	1
Trichloroethene	440		250	40	ug/Kg		12/22/15 07:44	12/22/15 12:18	1
Trichlorofluoromethane	ND		250	56	ug/Kg		12/22/15 07:44	12/22/15 12:18	1
Vinyl chloride	ND		250	65	ug/Kg		12/22/15 07:44	12/22/15 12:18	1
Xylenes, Total	ND		500	98	ug/Kg		12/22/15 07:44	12/22/15 12:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	86		52 - 124	12/22/15 07:44	12/22/15 12:18	1
4-Bromofluorobenzene (Surr)	84		63 - 120	12/22/15 07:44	12/22/15 12:18	1
Dibromofluoromethane (Surr)	92		68 - 121	12/22/15 07:44	12/22/15 12:18	1
Toluene-d8 (Surr)	106		72 - 127	12/22/15 07:44	12/22/15 12:18	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		81	37	ug/Kg		12/24/15 13:19	12/29/15 22:24	5
PCB-1221	ND		81	59	ug/Kg		12/24/15 13:19	12/29/15 22:24	5
PCB-1232	ND		81	20	ug/Kg		12/24/15 13:19	12/29/15 22:24	5
PCB-1242	2400		81	30	ug/Kg		12/24/15 13:19	12/29/15 22:24	5
PCB-1248	ND		81	19	ug/Kg		12/24/15 13:19	12/29/15 22:24	5
PCB-1254	ND		81	30	ug/Kg		12/24/15 13:19	12/29/15 22:24	5
PCB-1260	ND		81	28	ug/Kg		12/24/15 13:19	12/29/15 22:24	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	96		45 - 135	12/24/15 13:19	12/29/15 22:24	5
Tetrachloro-m-xylene (Surr)	98		45 - 135	12/24/15 13:19	12/29/15 22:24	5
DCB Decachlorobiphenyl (Surr)	111		45 - 125	12/24/15 13:19	12/29/15 22:24	5
DCB Decachlorobiphenyl (Surr)	107		45 - 125	12/24/15 13:19	12/29/15 22:24	5

Method: Part Size Red - Particle Size Reduction Preparation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PSR sample generated	1.0				NONE			12/18/15 12:00	1

Client Sample ID: CC-121515-BM-002A-INTERVAL2

Lab Sample ID: 180-50806-4

Date Collected: 12/15/15 13:50

Matrix: Solid

Date Received: 12/16/15 09:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		250	51	ug/Kg		12/22/15 07:44	12/22/15 12:44	1
1,1,2,2-Tetrachloroethane	ND		250	46	ug/Kg		12/22/15 07:44	12/22/15 12:44	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		250	16	ug/Kg		12/22/15 07:44	12/22/15 12:44	1
1,1,2-Trichloroethane	ND		250	58	ug/Kg		12/22/15 07:44	12/22/15 12:44	1
1,1-Dichloroethane	ND		250	50	ug/Kg		12/22/15 07:44	12/22/15 12:44	1
1,1-Dichloroethene	ND	F1	250	53	ug/Kg		12/22/15 07:44	12/22/15 12:44	1
1,2-Dibromo-3-Chloropropane	ND		250	18	ug/Kg		12/22/15 07:44	12/22/15 12:44	1
1,2-Dichlorobenzene	ND		250	34	ug/Kg		12/22/15 07:44	12/22/15 12:44	1
1,2-Dichloroethane	ND		250	48	ug/Kg		12/22/15 07:44	12/22/15 12:44	1
1,2-Dichloropropane	ND		250	63	ug/Kg		12/22/15 07:44	12/22/15 12:44	1
1,2,4-Trichlorobenzene	ND		250	19	ug/Kg		12/22/15 07:44	12/22/15 12:44	1
1,3-Dichlorobenzene	ND		250	25	ug/Kg		12/22/15 07:44	12/22/15 12:44	1

TestAmerica Pittsburgh

Client Sample Results

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50806-1
SDG: LINCKLAEN NY

Client Sample ID: CC-121515-BM-002A-INTERVAL2

Lab Sample ID: 180-50806-4

Date Collected: 12/15/15 13:50

Matrix: Solid

Date Received: 12/16/15 09:00

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		250	26	ug/Kg		12/22/15 07:44	12/22/15 12:44	1
2-Butanone (MEK)	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 12:44	1
2-Hexanone	ND		250	28	ug/Kg		12/22/15 07:44	12/22/15 12:44	1
4-Methyl-2-pentanone (MIBK)	ND		250	29	ug/Kg		12/22/15 07:44	12/22/15 12:44	1
Acetone	ND		990	250	ug/Kg		12/22/15 07:44	12/22/15 12:44	1
Benzene	ND		250	49	ug/Kg		12/22/15 07:44	12/22/15 12:44	1
Bromoform	ND		250	53	ug/Kg		12/22/15 07:44	12/22/15 12:44	1
Bromomethane	ND		250	78	ug/Kg		12/22/15 07:44	12/22/15 12:44	1
Carbon disulfide	ND		250	53	ug/Kg		12/22/15 07:44	12/22/15 12:44	1
Carbon tetrachloride	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 12:44	1
Chlorobenzene	ND		250	26	ug/Kg		12/22/15 07:44	12/22/15 12:44	1
Chlorodibromomethane	ND		250	32	ug/Kg		12/22/15 07:44	12/22/15 12:44	1
Chloroform	ND		250	50	ug/Kg		12/22/15 07:44	12/22/15 12:44	1
Chloromethane	ND		250	69	ug/Kg		12/22/15 07:44	12/22/15 12:44	1
Chloroethane	ND		250	37	ug/Kg		12/22/15 07:44	12/22/15 12:44	1
cis-1,2-Dichloroethene	ND		250	33	ug/Kg		12/22/15 07:44	12/22/15 12:44	1
cis-1,3-Dichloropropene	ND		250	36	ug/Kg		12/22/15 07:44	12/22/15 12:44	1
Dichlorobromomethane	ND		250	46	ug/Kg		12/22/15 07:44	12/22/15 12:44	1
Dichlorodifluoromethane	ND		250	32	ug/Kg		12/22/15 07:44	12/22/15 12:44	1
Ethylbenzene	ND		250	31	ug/Kg		12/22/15 07:44	12/22/15 12:44	1
1,2-Dibromoethane	ND		250	30	ug/Kg		12/22/15 07:44	12/22/15 12:44	1
Cyclohexane	ND		250	30	ug/Kg		12/22/15 07:44	12/22/15 12:44	1
Isopropylbenzene	ND		250	26	ug/Kg		12/22/15 07:44	12/22/15 12:44	1
Methyl acetate	ND		1200	61	ug/Kg		12/22/15 07:44	12/22/15 12:44	1
Methyl tert-butyl ether	ND		250	51	ug/Kg		12/22/15 07:44	12/22/15 12:44	1
Methylcyclohexane	ND		250	28	ug/Kg		12/22/15 07:44	12/22/15 12:44	1
Methylene Chloride	170	J	250	54	ug/Kg		12/22/15 07:44	12/22/15 12:44	1
Styrene	ND		250	32	ug/Kg		12/22/15 07:44	12/22/15 12:44	1
Tetrachloroethene	ND		250	41	ug/Kg		12/22/15 07:44	12/22/15 12:44	1
Toluene	100	J F2	250	42	ug/Kg		12/22/15 07:44	12/22/15 12:44	1
trans-1,2-Dichloroethene	ND		250	37	ug/Kg		12/22/15 07:44	12/22/15 12:44	1
trans-1,3-Dichloropropene	ND		250	29	ug/Kg		12/22/15 07:44	12/22/15 12:44	1
Trichloroethene	180	J	250	40	ug/Kg		12/22/15 07:44	12/22/15 12:44	1
Trichlorofluoromethane	ND		250	56	ug/Kg		12/22/15 07:44	12/22/15 12:44	1
Vinyl chloride	ND		250	64	ug/Kg		12/22/15 07:44	12/22/15 12:44	1
Xylenes, Total	ND		500	98	ug/Kg		12/22/15 07:44	12/22/15 12:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		52 - 124	12/22/15 07:44	12/22/15 12:44	1
4-Bromofluorobenzene (Surr)	102		63 - 120	12/22/15 07:44	12/22/15 12:44	1
Dibromofluoromethane (Surr)	99		68 - 121	12/22/15 07:44	12/22/15 12:44	1
Toluene-d8 (Surr)	104		72 - 127	12/22/15 07:44	12/22/15 12:44	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		83	38	ug/Kg		12/24/15 13:19	12/29/15 22:42	5
PCB-1221	ND		83	60	ug/Kg		12/24/15 13:19	12/29/15 22:42	5
PCB-1232	ND		83	21	ug/Kg		12/24/15 13:19	12/29/15 22:42	5
PCB-1242	3300		83	31	ug/Kg		12/24/15 13:19	12/29/15 22:42	5
PCB-1248	ND		83	19	ug/Kg		12/24/15 13:19	12/29/15 22:42	5

TestAmerica Pittsburgh

Client Sample Results

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50806-1
SDG: LINCKLAEN NY

Client Sample ID: CC-121515-BM-002A-INTERVAL2

Lab Sample ID: 180-50806-4

Date Collected: 12/15/15 13:50

Matrix: Solid

Date Received: 12/16/15 09:00

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1254	ND		83	31	ug/Kg		12/24/15 13:19	12/29/15 22:42	5
PCB-1260	ND		83	28	ug/Kg		12/24/15 13:19	12/29/15 22:42	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	106		45 - 135				12/24/15 13:19	12/29/15 22:42	5
Tetrachloro-m-xylene (Surr)	110		45 - 135				12/24/15 13:19	12/29/15 22:42	5
DCB Decachlorobiphenyl (Surr)	122		45 - 125				12/24/15 13:19	12/29/15 22:42	5
DCB Decachlorobiphenyl (Surr)	121		45 - 125				12/24/15 13:19	12/29/15 22:42	5

Method: Part Size Red - Particle Size Reduction Preparation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PSR sample generated	1.0				NONE			12/18/15 12:00	1

Client Sample ID: CC-121515-BM-003A-INTERVAL1

Lab Sample ID: 180-50806-5

Date Collected: 12/15/15 14:45

Matrix: Solid

Date Received: 12/16/15 09:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	82	J	250	51	ug/Kg		12/22/15 07:44	12/22/15 13:10	1
1,1,2,2-Tetrachloroethane	ND		250	47	ug/Kg		12/22/15 07:44	12/22/15 13:10	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		250	17	ug/Kg		12/22/15 07:44	12/22/15 13:10	1
1,1,2-Trichloroethane	ND		250	58	ug/Kg		12/22/15 07:44	12/22/15 13:10	1
1,1-Dichloroethane	ND		250	51	ug/Kg		12/22/15 07:44	12/22/15 13:10	1
1,1-Dichloroethene	ND		250	53	ug/Kg		12/22/15 07:44	12/22/15 13:10	1
1,2-Dibromo-3-Chloropropane	ND		250	18	ug/Kg		12/22/15 07:44	12/22/15 13:10	1
1,2-Dichlorobenzene	37	J	250	34	ug/Kg		12/22/15 07:44	12/22/15 13:10	1
1,2-Dichloroethane	ND		250	48	ug/Kg		12/22/15 07:44	12/22/15 13:10	1
1,2-Dichloropropane	ND		250	64	ug/Kg		12/22/15 07:44	12/22/15 13:10	1
1,2,4-Trichlorobenzene	ND		250	19	ug/Kg		12/22/15 07:44	12/22/15 13:10	1
1,3-Dichlorobenzene	ND		250	25	ug/Kg		12/22/15 07:44	12/22/15 13:10	1
1,4-Dichlorobenzene	ND		250	26	ug/Kg		12/22/15 07:44	12/22/15 13:10	1
2-Butanone (MEK)	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 13:10	1
2-Hexanone	ND		250	28	ug/Kg		12/22/15 07:44	12/22/15 13:10	1
4-Methyl-2-pentanone (MIBK)	ND		250	30	ug/Kg		12/22/15 07:44	12/22/15 13:10	1
Acetone	ND		1000	250	ug/Kg		12/22/15 07:44	12/22/15 13:10	1
Benzene	ND		250	49	ug/Kg		12/22/15 07:44	12/22/15 13:10	1
Bromoform	ND		250	53	ug/Kg		12/22/15 07:44	12/22/15 13:10	1
Bromomethane	ND		250	79	ug/Kg		12/22/15 07:44	12/22/15 13:10	1
Carbon disulfide	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 13:10	1
Carbon tetrachloride	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 13:10	1
Chlorobenzene	ND		250	26	ug/Kg		12/22/15 07:44	12/22/15 13:10	1
Chlorodibromomethane	ND		250	32	ug/Kg		12/22/15 07:44	12/22/15 13:10	1
Chloroform	ND		250	50	ug/Kg		12/22/15 07:44	12/22/15 13:10	1
Chloromethane	ND		250	70	ug/Kg		12/22/15 07:44	12/22/15 13:10	1
Chloroethane	ND		250	37	ug/Kg		12/22/15 07:44	12/22/15 13:10	1
cis-1,2-Dichloroethene	ND		250	33	ug/Kg		12/22/15 07:44	12/22/15 13:10	1
cis-1,3-Dichloropropene	ND		250	36	ug/Kg		12/22/15 07:44	12/22/15 13:10	1
Dichlorobromomethane	ND		250	47	ug/Kg		12/22/15 07:44	12/22/15 13:10	1
Dichlorodifluoromethane	ND		250	32	ug/Kg		12/22/15 07:44	12/22/15 13:10	1

TestAmerica Pittsburgh

Client Sample Results

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50806-1
SDG: LINCKLAEN NY

Client Sample ID: CC-121515-BM-003A-INTERVAL1

Lab Sample ID: 180-50806-5

Date Collected: 12/15/15 14:45

Matrix: Solid

Date Received: 12/16/15 09:00

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		250	31	ug/Kg		12/22/15 07:44	12/22/15 13:10	1
1,2-Dibromoethane	ND		250	31	ug/Kg		12/22/15 07:44	12/22/15 13:10	1
Cyclohexane	ND		250	30	ug/Kg		12/22/15 07:44	12/22/15 13:10	1
Isopropylbenzene	ND		250	27	ug/Kg		12/22/15 07:44	12/22/15 13:10	1
Methyl acetate	2500		1300	61	ug/Kg		12/22/15 07:44	12/22/15 13:10	1
Methyl tert-butyl ether	ND		250	51	ug/Kg		12/22/15 07:44	12/22/15 13:10	1
Methylcyclohexane	ND		250	28	ug/Kg		12/22/15 07:44	12/22/15 13:10	1
Methylene Chloride	210 J		250	54	ug/Kg		12/22/15 07:44	12/22/15 13:10	1
Styrene	ND		250	32	ug/Kg		12/22/15 07:44	12/22/15 13:10	1
Tetrachloroethene	100 J		250	41	ug/Kg		12/22/15 07:44	12/22/15 13:10	1
Toluene	290		250	42	ug/Kg		12/22/15 07:44	12/22/15 13:10	1
trans-1,2-Dichloroethene	ND		250	38	ug/Kg		12/22/15 07:44	12/22/15 13:10	1
trans-1,3-Dichloropropene	ND		250	29	ug/Kg		12/22/15 07:44	12/22/15 13:10	1
Trichloroethene	1000		250	40	ug/Kg		12/22/15 07:44	12/22/15 13:10	1
Trichlorofluoromethane	ND		250	56	ug/Kg		12/22/15 07:44	12/22/15 13:10	1
Vinyl chloride	ND		250	65	ug/Kg		12/22/15 07:44	12/22/15 13:10	1
Xylenes, Total	100 J		500	98	ug/Kg		12/22/15 07:44	12/22/15 13:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	83		52 - 124	12/22/15 07:44	12/22/15 13:10	1
4-Bromofluorobenzene (Surr)	76		63 - 120	12/22/15 07:44	12/22/15 13:10	1
Dibromofluoromethane (Surr)	91		68 - 121	12/22/15 07:44	12/22/15 13:10	1
Toluene-d8 (Surr)	110		72 - 127	12/22/15 07:44	12/22/15 13:10	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		17	7.7	ug/Kg		12/24/15 13:19	12/29/15 23:01	1
PCB-1221	ND		17	12	ug/Kg		12/24/15 13:19	12/29/15 23:01	1
PCB-1232	ND		17	4.2	ug/Kg		12/24/15 13:19	12/29/15 23:01	1
PCB-1242	23		17	6.2	ug/Kg		12/24/15 13:19	12/29/15 23:01	1
PCB-1248	ND		17	3.9	ug/Kg		12/24/15 13:19	12/29/15 23:01	1
PCB-1254	ND		17	6.2	ug/Kg		12/24/15 13:19	12/29/15 23:01	1
PCB-1260	ND		17	5.8	ug/Kg		12/24/15 13:19	12/29/15 23:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	142	X	45 - 135	12/24/15 13:19	12/29/15 23:01	1
Tetrachloro-m-xylene (Surr)	141	X	45 - 135	12/24/15 13:19	12/29/15 23:01	1
DCB Decachlorobiphenyl (Surr)	180	X	45 - 125	12/24/15 13:19	12/29/15 23:01	1
DCB Decachlorobiphenyl (Surr)	170	X	45 - 125	12/24/15 13:19	12/29/15 23:01	1

Method: Part Size Red - Particle Size Reduction Preparation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PSR sample generated	1.0				NONE			12/18/15 12:00	1

Client Sample ID: CC-121515-BM-003A-INTERVAL2

Lab Sample ID: 180-50806-6

Date Collected: 12/15/15 14:45

Matrix: Solid

Date Received: 12/16/15 09:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		250	51	ug/Kg		12/22/15 07:44	12/22/15 17:34	1

TestAmerica Pittsburgh

Client Sample Results

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50806-1
SDG: LINCKLAEN NY

Client Sample ID: CC-121515-BM-003A-INTERVAL2

Lab Sample ID: 180-50806-6

Date Collected: 12/15/15 14:45

Matrix: Solid

Date Received: 12/16/15 09:00

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		250	47	ug/Kg		12/22/15 07:44	12/22/15 17:34	1
1,1,2-Trichloro-1,2,2-trifluoroethane	18	J	250	17	ug/Kg		12/22/15 07:44	12/22/15 17:34	1
1,1,2-Trichloroethane	ND		250	58	ug/Kg		12/22/15 07:44	12/22/15 17:34	1
1,1-Dichloroethane	ND		250	51	ug/Kg		12/22/15 07:44	12/22/15 17:34	1
1,1-Dichloroethene	ND		250	53	ug/Kg		12/22/15 07:44	12/22/15 17:34	1
1,2-Dibromo-3-Chloropropane	ND		250	18	ug/Kg		12/22/15 07:44	12/22/15 17:34	1
1,2-Dichlorobenzene	ND		250	34	ug/Kg		12/22/15 07:44	12/22/15 17:34	1
1,2-Dichloroethane	ND		250	48	ug/Kg		12/22/15 07:44	12/22/15 17:34	1
1,2-Dichloropropane	ND		250	64	ug/Kg		12/22/15 07:44	12/22/15 17:34	1
1,2,4-Trichlorobenzene	ND		250	19	ug/Kg		12/22/15 07:44	12/22/15 17:34	1
1,3-Dichlorobenzene	ND		250	25	ug/Kg		12/22/15 07:44	12/22/15 17:34	1
1,4-Dichlorobenzene	ND		250	26	ug/Kg		12/22/15 07:44	12/22/15 17:34	1
2-Butanone (MEK)	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 17:34	1
2-Hexanone	ND		250	28	ug/Kg		12/22/15 07:44	12/22/15 17:34	1
4-Methyl-2-pentanone (MIBK)	ND		250	30	ug/Kg		12/22/15 07:44	12/22/15 17:34	1
Acetone	ND		1000	250	ug/Kg		12/22/15 07:44	12/22/15 17:34	1
Benzene	ND		250	49	ug/Kg		12/22/15 07:44	12/22/15 17:34	1
Bromoform	ND		250	53	ug/Kg		12/22/15 07:44	12/22/15 17:34	1
Bromomethane	ND		250	79	ug/Kg		12/22/15 07:44	12/22/15 17:34	1
Carbon disulfide	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 17:34	1
Carbon tetrachloride	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 17:34	1
Chlorobenzene	ND		250	26	ug/Kg		12/22/15 07:44	12/22/15 17:34	1
Chlorodibromomethane	ND		250	32	ug/Kg		12/22/15 07:44	12/22/15 17:34	1
Chloroform	ND		250	50	ug/Kg		12/22/15 07:44	12/22/15 17:34	1
Chloromethane	ND		250	69	ug/Kg		12/22/15 07:44	12/22/15 17:34	1
Chloroethane	ND		250	37	ug/Kg		12/22/15 07:44	12/22/15 17:34	1
cis-1,2-Dichloroethene	ND		250	33	ug/Kg		12/22/15 07:44	12/22/15 17:34	1
cis-1,3-Dichloropropene	ND		250	36	ug/Kg		12/22/15 07:44	12/22/15 17:34	1
Dichlorobromomethane	ND		250	47	ug/Kg		12/22/15 07:44	12/22/15 17:34	1
Dichlorodifluoromethane	ND		250	32	ug/Kg		12/22/15 07:44	12/22/15 17:34	1
Ethylbenzene	ND		250	31	ug/Kg		12/22/15 07:44	12/22/15 17:34	1
1,2-Dibromoethane	ND		250	31	ug/Kg		12/22/15 07:44	12/22/15 17:34	1
Cyclohexane	ND		250	30	ug/Kg		12/22/15 07:44	12/22/15 17:34	1
Isopropylbenzene	ND		250	27	ug/Kg		12/22/15 07:44	12/22/15 17:34	1
Methyl acetate	ND		1200	61	ug/Kg		12/22/15 07:44	12/22/15 17:34	1
Methyl tert-butyl ether	ND		250	51	ug/Kg		12/22/15 07:44	12/22/15 17:34	1
Methylcyclohexane	ND		250	28	ug/Kg		12/22/15 07:44	12/22/15 17:34	1
Methylene Chloride	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 17:34	1
Styrene	ND		250	32	ug/Kg		12/22/15 07:44	12/22/15 17:34	1
Tetrachloroethene	ND		250	41	ug/Kg		12/22/15 07:44	12/22/15 17:34	1
Toluene	55	J	250	42	ug/Kg		12/22/15 07:44	12/22/15 17:34	1
trans-1,2-Dichloroethene	ND		250	38	ug/Kg		12/22/15 07:44	12/22/15 17:34	1
trans-1,3-Dichloropropene	ND		250	29	ug/Kg		12/22/15 07:44	12/22/15 17:34	1
Trichloroethene	220	J	250	40	ug/Kg		12/22/15 07:44	12/22/15 17:34	1
Trichlorofluoromethane	ND		250	56	ug/Kg		12/22/15 07:44	12/22/15 17:34	1
Vinyl chloride	ND		250	64	ug/Kg		12/22/15 07:44	12/22/15 17:34	1
Xylenes, Total	ND		500	98	ug/Kg		12/22/15 07:44	12/22/15 17:34	1

TestAmerica Pittsburgh

Client Sample Results

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50806-1
SDG: LINCKLAEN NY

Client Sample ID: CC-121515-BM-003A-INTERVAL2

Lab Sample ID: 180-50806-6

Date Collected: 12/15/15 14:45

Matrix: Solid

Date Received: 12/16/15 09:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	80		52 - 124	12/22/15 07:44	12/22/15 17:34	1
4-Bromofluorobenzene (Surr)	87		63 - 120	12/22/15 07:44	12/22/15 17:34	1
Dibromofluoromethane (Surr)	88		68 - 121	12/22/15 07:44	12/22/15 17:34	1
Toluene-d8 (Surr)	93		72 - 127	12/22/15 07:44	12/22/15 17:34	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		17	7.6	ug/Kg		12/24/15 13:19	12/29/15 23:20	1
PCB-1221	ND		17	12	ug/Kg		12/24/15 13:19	12/29/15 23:20	1
PCB-1232	ND		17	4.2	ug/Kg		12/24/15 13:19	12/29/15 23:20	1
PCB-1242	40		17	6.1	ug/Kg		12/24/15 13:19	12/29/15 23:20	1
PCB-1248	ND		17	3.9	ug/Kg		12/24/15 13:19	12/29/15 23:20	1
PCB-1254	ND		17	6.1	ug/Kg		12/24/15 13:19	12/29/15 23:20	1
PCB-1260	ND		17	5.7	ug/Kg		12/24/15 13:19	12/29/15 23:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	127		45 - 135	12/24/15 13:19	12/29/15 23:20	1
Tetrachloro-m-xylene (Surr)	132		45 - 135	12/24/15 13:19	12/29/15 23:20	1
DCB Decachlorobiphenyl (Surr)	158	X	45 - 125	12/24/15 13:19	12/29/15 23:20	1
DCB Decachlorobiphenyl (Surr)	147	X	45 - 125	12/24/15 13:19	12/29/15 23:20	1

Method: Part Size Red - Particle Size Reduction Preparation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PSR sample generated	1.0				NONE			12/18/15 12:00	1

Client Sample ID: CC-121515-BM-004A-INTERVAL1

Lab Sample ID: 180-50806-7

Date Collected: 12/15/15 15:30

Matrix: Solid

Date Received: 12/16/15 09:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		250	51	ug/Kg		12/22/15 07:44	12/22/15 18:00	1
1,1,2,2-Tetrachloroethane	ND		250	47	ug/Kg		12/22/15 07:44	12/22/15 18:00	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		250	17	ug/Kg		12/22/15 07:44	12/22/15 18:00	1
1,1,2-Trichloroethane	ND		250	58	ug/Kg		12/22/15 07:44	12/22/15 18:00	1
1,1-Dichloroethane	ND		250	51	ug/Kg		12/22/15 07:44	12/22/15 18:00	1
1,1-Dichloroethene	ND		250	53	ug/Kg		12/22/15 07:44	12/22/15 18:00	1
1,2-Dibromo-3-Chloropropane	ND		250	18	ug/Kg		12/22/15 07:44	12/22/15 18:00	1
1,2-Dichlorobenzene	45	J	250	34	ug/Kg		12/22/15 07:44	12/22/15 18:00	1
1,2-Dichloroethane	ND		250	48	ug/Kg		12/22/15 07:44	12/22/15 18:00	1
1,2-Dichloropropane	ND		250	64	ug/Kg		12/22/15 07:44	12/22/15 18:00	1
1,2,4-Trichlorobenzene	ND		250	19	ug/Kg		12/22/15 07:44	12/22/15 18:00	1
1,3-Dichlorobenzene	ND		250	25	ug/Kg		12/22/15 07:44	12/22/15 18:00	1
1,4-Dichlorobenzene	ND		250	26	ug/Kg		12/22/15 07:44	12/22/15 18:00	1
2-Butanone (MEK)	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 18:00	1
2-Hexanone	ND		250	28	ug/Kg		12/22/15 07:44	12/22/15 18:00	1
4-Methyl-2-pentanone (MIBK)	ND		250	30	ug/Kg		12/22/15 07:44	12/22/15 18:00	1
Acetone	ND		1000	250	ug/Kg		12/22/15 07:44	12/22/15 18:00	1
Benzene	ND		250	49	ug/Kg		12/22/15 07:44	12/22/15 18:00	1
Bromoform	ND		250	53	ug/Kg		12/22/15 07:44	12/22/15 18:00	1
Bromomethane	ND		250	79	ug/Kg		12/22/15 07:44	12/22/15 18:00	1

TestAmerica Pittsburgh

Client Sample Results

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50806-1
SDG: LINCKLAEN NY

Client Sample ID: CC-121515-BM-004A-INTERVAL1

Lab Sample ID: 180-50806-7

Date Collected: 12/15/15 15:30

Matrix: Solid

Date Received: 12/16/15 09:00

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 18:00	1
Carbon tetrachloride	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 18:00	1
Chlorobenzene	ND		250	26	ug/Kg		12/22/15 07:44	12/22/15 18:00	1
Chlorodibromomethane	ND		250	32	ug/Kg		12/22/15 07:44	12/22/15 18:00	1
Chloroform	ND		250	50	ug/Kg		12/22/15 07:44	12/22/15 18:00	1
Chloromethane	ND		250	70	ug/Kg		12/22/15 07:44	12/22/15 18:00	1
Chloroethane	ND		250	37	ug/Kg		12/22/15 07:44	12/22/15 18:00	1
cis-1,2-Dichloroethene	ND		250	33	ug/Kg		12/22/15 07:44	12/22/15 18:00	1
cis-1,3-Dichloropropene	ND		250	36	ug/Kg		12/22/15 07:44	12/22/15 18:00	1
Dichlorobromomethane	ND		250	47	ug/Kg		12/22/15 07:44	12/22/15 18:00	1
Dichlorodifluoromethane	ND		250	32	ug/Kg		12/22/15 07:44	12/22/15 18:00	1
Ethylbenzene	ND		250	31	ug/Kg		12/22/15 07:44	12/22/15 18:00	1
1,2-Dibromoethane	ND		250	31	ug/Kg		12/22/15 07:44	12/22/15 18:00	1
Cyclohexane	ND		250	30	ug/Kg		12/22/15 07:44	12/22/15 18:00	1
Isopropylbenzene	ND		250	27	ug/Kg		12/22/15 07:44	12/22/15 18:00	1
Methyl acetate	ND		1300	61	ug/Kg		12/22/15 07:44	12/22/15 18:00	1
Methyl tert-butyl ether	ND		250	51	ug/Kg		12/22/15 07:44	12/22/15 18:00	1
Methylcyclohexane	ND		250	28	ug/Kg		12/22/15 07:44	12/22/15 18:00	1
Methylene Chloride	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 18:00	1
Styrene	ND		250	32	ug/Kg		12/22/15 07:44	12/22/15 18:00	1
Tetrachloroethene	59 J		250	41	ug/Kg		12/22/15 07:44	12/22/15 18:00	1
Toluene	170 J		250	42	ug/Kg		12/22/15 07:44	12/22/15 18:00	1
trans-1,2-Dichloroethene	ND		250	38	ug/Kg		12/22/15 07:44	12/22/15 18:00	1
trans-1,3-Dichloropropene	ND		250	29	ug/Kg		12/22/15 07:44	12/22/15 18:00	1
Trichloroethene	630		250	40	ug/Kg		12/22/15 07:44	12/22/15 18:00	1
Trichlorofluoromethane	ND		250	56	ug/Kg		12/22/15 07:44	12/22/15 18:00	1
Vinyl chloride	ND		250	65	ug/Kg		12/22/15 07:44	12/22/15 18:00	1
Xylenes, Total	ND		500	98	ug/Kg		12/22/15 07:44	12/22/15 18:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	79		52 - 124	12/22/15 07:44	12/22/15 18:00	1
4-Bromofluorobenzene (Surr)	82		63 - 120	12/22/15 07:44	12/22/15 18:00	1
Dibromofluoromethane (Surr)	83		68 - 121	12/22/15 07:44	12/22/15 18:00	1
Toluene-d8 (Surr)	106		72 - 127	12/22/15 07:44	12/22/15 18:00	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		81	37	ug/Kg		12/24/15 13:19	12/29/15 23:39	5
PCB-1221	ND		81	59	ug/Kg		12/24/15 13:19	12/29/15 23:39	5
PCB-1232	ND		81	20	ug/Kg		12/24/15 13:19	12/29/15 23:39	5
PCB-1242	2100		81	30	ug/Kg		12/24/15 13:19	12/29/15 23:39	5
PCB-1248	ND		81	19	ug/Kg		12/24/15 13:19	12/29/15 23:39	5
PCB-1254	ND		81	30	ug/Kg		12/24/15 13:19	12/29/15 23:39	5
PCB-1260	ND		81	28	ug/Kg		12/24/15 13:19	12/29/15 23:39	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	88		45 - 135	12/24/15 13:19	12/29/15 23:39	5
Tetrachloro-m-xylene (Surr)	91		45 - 135	12/24/15 13:19	12/29/15 23:39	5
DCB Decachlorobiphenyl (Surr)	100		45 - 125	12/24/15 13:19	12/29/15 23:39	5
DCB Decachlorobiphenyl (Surr)	98		45 - 125	12/24/15 13:19	12/29/15 23:39	5

TestAmerica Pittsburgh

Client Sample Results

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50806-1
SDG: LINCKLAEN NY

Client Sample ID: CC-121515-BM-004A-INTERVAL1

Lab Sample ID: 180-50806-7

Date Collected: 12/15/15 15:30

Matrix: Solid

Date Received: 12/16/15 09:00

Method: Part Size Red - Particle Size Reduction Preparation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PSR sample generated	1.0				NONE			12/18/15 13:07	1

Client Sample ID: CC-121515-BM-004A-INTERVAL2

Lab Sample ID: 180-50806-8

Date Collected: 12/15/15 15:30

Matrix: Solid

Date Received: 12/16/15 09:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		250	51	ug/Kg		12/22/15 07:44	12/22/15 14:34	1
1,1,2,2-Tetrachloroethane	ND		250	47	ug/Kg		12/22/15 07:44	12/22/15 14:34	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		250	17	ug/Kg		12/22/15 07:44	12/22/15 14:34	1
1,1,2-Trichloroethane	ND		250	58	ug/Kg		12/22/15 07:44	12/22/15 14:34	1
1,1-Dichloroethane	ND		250	51	ug/Kg		12/22/15 07:44	12/22/15 14:34	1
1,1-Dichloroethene	ND		250	53	ug/Kg		12/22/15 07:44	12/22/15 14:34	1
1,2-Dibromo-3-Chloropropane	ND		250	18	ug/Kg		12/22/15 07:44	12/22/15 14:34	1
1,2-Dichlorobenzene	ND		250	34	ug/Kg		12/22/15 07:44	12/22/15 14:34	1
1,2-Dichloroethane	ND		250	48	ug/Kg		12/22/15 07:44	12/22/15 14:34	1
1,2-Dichloropropane	ND		250	64	ug/Kg		12/22/15 07:44	12/22/15 14:34	1
1,2,4-Trichlorobenzene	ND		250	19	ug/Kg		12/22/15 07:44	12/22/15 14:34	1
1,3-Dichlorobenzene	ND		250	25	ug/Kg		12/22/15 07:44	12/22/15 14:34	1
1,4-Dichlorobenzene	ND		250	26	ug/Kg		12/22/15 07:44	12/22/15 14:34	1
2-Butanone (MEK)	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 14:34	1
2-Hexanone	ND		250	28	ug/Kg		12/22/15 07:44	12/22/15 14:34	1
4-Methyl-2-pentanone (MIBK)	ND		250	30	ug/Kg		12/22/15 07:44	12/22/15 14:34	1
Acetone	ND		1000	250	ug/Kg		12/22/15 07:44	12/22/15 14:34	1
Benzene	ND		250	49	ug/Kg		12/22/15 07:44	12/22/15 14:34	1
Bromoform	ND		250	53	ug/Kg		12/22/15 07:44	12/22/15 14:34	1
Bromomethane	ND		250	79	ug/Kg		12/22/15 07:44	12/22/15 14:34	1
Carbon disulfide	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 14:34	1
Carbon tetrachloride	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 14:34	1
Chlorobenzene	ND		250	26	ug/Kg		12/22/15 07:44	12/22/15 14:34	1
Chlorodibromomethane	ND		250	32	ug/Kg		12/22/15 07:44	12/22/15 14:34	1
Chloroform	ND		250	50	ug/Kg		12/22/15 07:44	12/22/15 14:34	1
Chloromethane	ND		250	69	ug/Kg		12/22/15 07:44	12/22/15 14:34	1
Chloroethane	ND		250	37	ug/Kg		12/22/15 07:44	12/22/15 14:34	1
cis-1,2-Dichloroethene	ND		250	33	ug/Kg		12/22/15 07:44	12/22/15 14:34	1
cis-1,3-Dichloropropene	ND		250	36	ug/Kg		12/22/15 07:44	12/22/15 14:34	1
Dichlorobromomethane	ND		250	47	ug/Kg		12/22/15 07:44	12/22/15 14:34	1
Dichlorodifluoromethane	ND		250	32	ug/Kg		12/22/15 07:44	12/22/15 14:34	1
Ethylbenzene	ND		250	31	ug/Kg		12/22/15 07:44	12/22/15 14:34	1
1,2-Dibromoethane	ND		250	31	ug/Kg		12/22/15 07:44	12/22/15 14:34	1
Cyclohexane	ND		250	30	ug/Kg		12/22/15 07:44	12/22/15 14:34	1
Isopropylbenzene	ND		250	27	ug/Kg		12/22/15 07:44	12/22/15 14:34	1
Methyl acetate	ND		1200	61	ug/Kg		12/22/15 07:44	12/22/15 14:34	1
Methyl tert-butyl ether	ND		250	51	ug/Kg		12/22/15 07:44	12/22/15 14:34	1
Methylcyclohexane	ND		250	28	ug/Kg		12/22/15 07:44	12/22/15 14:34	1
Methylene Chloride	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 14:34	1
Styrene	ND		250	32	ug/Kg		12/22/15 07:44	12/22/15 14:34	1
Tetrachloroethene	53	J	250	41	ug/Kg		12/22/15 07:44	12/22/15 14:34	1
Toluene	170	J	250	42	ug/Kg		12/22/15 07:44	12/22/15 14:34	1

TestAmerica Pittsburgh

Client Sample Results

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50806-1
SDG: LINCKLAEN NY

Client Sample ID: CC-121515-BM-004A-INTERVAL2

Lab Sample ID: 180-50806-8

Date Collected: 12/15/15 15:30

Matrix: Solid

Date Received: 12/16/15 09:00

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		250	38	ug/Kg		12/22/15 07:44	12/22/15 14:34	1
trans-1,3-Dichloropropene	ND		250	29	ug/Kg		12/22/15 07:44	12/22/15 14:34	1
Trichloroethene	400		250	40	ug/Kg		12/22/15 07:44	12/22/15 14:34	1
Trichlorofluoromethane	ND		250	56	ug/Kg		12/22/15 07:44	12/22/15 14:34	1
Vinyl chloride	ND		250	64	ug/Kg		12/22/15 07:44	12/22/15 14:34	1
Xylenes, Total	ND		500	98	ug/Kg		12/22/15 07:44	12/22/15 14:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	114		52 - 124	12/22/15 07:44	12/22/15 14:34	1
4-Bromofluorobenzene (Surr)	105		63 - 120	12/22/15 07:44	12/22/15 14:34	1
Dibromofluoromethane (Surr)	113		68 - 121	12/22/15 07:44	12/22/15 14:34	1
Toluene-d8 (Surr)	117		72 - 127	12/22/15 07:44	12/22/15 14:34	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		17	7.6	ug/Kg		12/24/15 13:19	12/29/15 23:58	1
PCB-1221	ND		17	12	ug/Kg		12/24/15 13:19	12/29/15 23:58	1
PCB-1232	ND		17	4.2	ug/Kg		12/24/15 13:19	12/29/15 23:58	1
PCB-1242	11	J p	17	6.1	ug/Kg		12/24/15 13:19	12/29/15 23:58	1
PCB-1248	ND		17	3.9	ug/Kg		12/24/15 13:19	12/29/15 23:58	1
PCB-1254	ND		17	6.1	ug/Kg		12/24/15 13:19	12/29/15 23:58	1
PCB-1260	ND		17	5.7	ug/Kg		12/24/15 13:19	12/29/15 23:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	109		45 - 135	12/24/15 13:19	12/29/15 23:58	1
Tetrachloro-m-xylene (Surr)	102		45 - 135	12/24/15 13:19	12/29/15 23:58	1
DCB Decachlorobiphenyl (Surr)	107		45 - 125	12/24/15 13:19	12/29/15 23:58	1
DCB Decachlorobiphenyl (Surr)	103		45 - 125	12/24/15 13:19	12/29/15 23:58	1

Method: Part Size Red - Particle Size Reduction Preparation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PSR sample generated	1.0				NONE			12/18/15 13:07	1

Client Sample ID: CC-121515-BM-005A-INTERVAL1

Lab Sample ID: 180-50806-9

Date Collected: 12/15/15 16:25

Matrix: Solid

Date Received: 12/16/15 09:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		250	51	ug/Kg		12/22/15 07:44	12/22/15 14:59	1
1,1,2,2-Tetrachloroethane	ND		250	47	ug/Kg		12/22/15 07:44	12/22/15 14:59	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		250	17	ug/Kg		12/22/15 07:44	12/22/15 14:59	1
1,1,2-Trichloroethane	ND		250	58	ug/Kg		12/22/15 07:44	12/22/15 14:59	1
1,1-Dichloroethane	ND		250	51	ug/Kg		12/22/15 07:44	12/22/15 14:59	1
1,1-Dichloroethene	ND		250	53	ug/Kg		12/22/15 07:44	12/22/15 14:59	1
1,2-Dibromo-3-Chloropropane	ND		250	18	ug/Kg		12/22/15 07:44	12/22/15 14:59	1
1,2-Dichlorobenzene	ND		250	34	ug/Kg		12/22/15 07:44	12/22/15 14:59	1
1,2-Dichloroethane	ND		250	48	ug/Kg		12/22/15 07:44	12/22/15 14:59	1
1,2-Dichloropropane	ND		250	64	ug/Kg		12/22/15 07:44	12/22/15 14:59	1
1,2,4-Trichlorobenzene	ND		250	19	ug/Kg		12/22/15 07:44	12/22/15 14:59	1
1,3-Dichlorobenzene	ND		250	25	ug/Kg		12/22/15 07:44	12/22/15 14:59	1

TestAmerica Pittsburgh

Client Sample Results

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50806-1
SDG: LINCKLAEN NY

Client Sample ID: CC-121515-BM-005A-INTERVAL1

Lab Sample ID: 180-50806-9

Date Collected: 12/15/15 16:25

Matrix: Solid

Date Received: 12/16/15 09:00

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		250	26	ug/Kg		12/22/15 07:44	12/22/15 14:59	1
2-Butanone (MEK)	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 14:59	1
2-Hexanone	ND		250	28	ug/Kg		12/22/15 07:44	12/22/15 14:59	1
4-Methyl-2-pentanone (MIBK)	ND		250	30	ug/Kg		12/22/15 07:44	12/22/15 14:59	1
Acetone	ND		1000	250	ug/Kg		12/22/15 07:44	12/22/15 14:59	1
Benzene	ND		250	49	ug/Kg		12/22/15 07:44	12/22/15 14:59	1
Bromoform	ND		250	53	ug/Kg		12/22/15 07:44	12/22/15 14:59	1
Bromomethane	ND		250	79	ug/Kg		12/22/15 07:44	12/22/15 14:59	1
Carbon disulfide	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 14:59	1
Carbon tetrachloride	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 14:59	1
Chlorobenzene	ND		250	26	ug/Kg		12/22/15 07:44	12/22/15 14:59	1
Chlorodibromomethane	ND		250	32	ug/Kg		12/22/15 07:44	12/22/15 14:59	1
Chloroform	ND		250	50	ug/Kg		12/22/15 07:44	12/22/15 14:59	1
Chloromethane	ND		250	70	ug/Kg		12/22/15 07:44	12/22/15 14:59	1
Chloroethane	ND		250	37	ug/Kg		12/22/15 07:44	12/22/15 14:59	1
cis-1,2-Dichloroethene	ND		250	33	ug/Kg		12/22/15 07:44	12/22/15 14:59	1
cis-1,3-Dichloropropene	ND		250	36	ug/Kg		12/22/15 07:44	12/22/15 14:59	1
Dichlorobromomethane	ND		250	47	ug/Kg		12/22/15 07:44	12/22/15 14:59	1
Dichlorodifluoromethane	ND		250	32	ug/Kg		12/22/15 07:44	12/22/15 14:59	1
Ethylbenzene	ND		250	31	ug/Kg		12/22/15 07:44	12/22/15 14:59	1
1,2-Dibromoethane	ND		250	31	ug/Kg		12/22/15 07:44	12/22/15 14:59	1
Cyclohexane	ND		250	30	ug/Kg		12/22/15 07:44	12/22/15 14:59	1
Isopropylbenzene	ND		250	27	ug/Kg		12/22/15 07:44	12/22/15 14:59	1
Methyl acetate	ND		1300	61	ug/Kg		12/22/15 07:44	12/22/15 14:59	1
Methyl tert-butyl ether	ND		250	51	ug/Kg		12/22/15 07:44	12/22/15 14:59	1
Methylcyclohexane	ND		250	28	ug/Kg		12/22/15 07:44	12/22/15 14:59	1
Methylene Chloride	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 14:59	1
Styrene	ND		250	32	ug/Kg		12/22/15 07:44	12/22/15 14:59	1
Tetrachloroethene	ND		250	41	ug/Kg		12/22/15 07:44	12/22/15 14:59	1
Toluene	ND		250	42	ug/Kg		12/22/15 07:44	12/22/15 14:59	1
trans-1,2-Dichloroethene	ND		250	38	ug/Kg		12/22/15 07:44	12/22/15 14:59	1
trans-1,3-Dichloropropene	ND		250	29	ug/Kg		12/22/15 07:44	12/22/15 14:59	1
Trichloroethene	ND		250	40	ug/Kg		12/22/15 07:44	12/22/15 14:59	1
Trichlorofluoromethane	ND		250	56	ug/Kg		12/22/15 07:44	12/22/15 14:59	1
Vinyl chloride	ND		250	65	ug/Kg		12/22/15 07:44	12/22/15 14:59	1
Xylenes, Total	ND		500	98	ug/Kg		12/22/15 07:44	12/22/15 14:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		52 - 124	12/22/15 07:44	12/22/15 14:59	1
4-Bromofluorobenzene (Surr)	82		63 - 120	12/22/15 07:44	12/22/15 14:59	1
Dibromofluoromethane (Surr)	101		68 - 121	12/22/15 07:44	12/22/15 14:59	1
Toluene-d8 (Surr)	106		72 - 127	12/22/15 07:44	12/22/15 14:59	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		190	88	ug/Kg		12/24/15 13:19	12/30/15 00:16	10
PCB-1221	ND		190	140	ug/Kg		12/24/15 13:19	12/30/15 00:16	10
PCB-1232	ND		190	48	ug/Kg		12/24/15 13:19	12/30/15 00:16	10
PCB-1242	4300		190	71	ug/Kg		12/24/15 13:19	12/30/15 00:16	10
PCB-1248	ND		190	45	ug/Kg		12/24/15 13:19	12/30/15 00:16	10

TestAmerica Pittsburgh

Client Sample Results

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50806-1
SDG: LINCKLAEN NY

Client Sample ID: CC-121515-BM-005A-INTERVAL1

Lab Sample ID: 180-50806-9

Date Collected: 12/15/15 16:25

Matrix: Solid

Date Received: 12/16/15 09:00

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1254	ND		190	71	ug/Kg		12/24/15 13:19	12/30/15 00:16	10
PCB-1260	ND		190	66	ug/Kg		12/24/15 13:19	12/30/15 00:16	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	77		45 - 135	12/24/15 13:19	12/30/15 00:16	10
Tetrachloro-m-xylene (Surr)	82		45 - 135	12/24/15 13:19	12/30/15 00:16	10
DCB Decachlorobiphenyl (Surr)	101		45 - 125	12/24/15 13:19	12/30/15 00:16	10
DCB Decachlorobiphenyl (Surr)	99		45 - 125	12/24/15 13:19	12/30/15 00:16	10

Method: Part Size Red - Particle Size Reduction Preparation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PSR sample generated	1.0				NONE			12/18/15 13:07	1

Client Sample ID: CC-121515-BM-005A-INTERVAL2

Lab Sample ID: 180-50806-10

Date Collected: 12/15/15 16:25

Matrix: Solid

Date Received: 12/16/15 09:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		250	51	ug/Kg		12/22/15 07:44	12/22/15 15:25	1
1,1,2,2-Tetrachloroethane	ND		250	47	ug/Kg		12/22/15 07:44	12/22/15 15:25	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		250	17	ug/Kg		12/22/15 07:44	12/22/15 15:25	1
1,1,2-Trichloroethane	ND		250	58	ug/Kg		12/22/15 07:44	12/22/15 15:25	1
1,1-Dichloroethane	ND		250	51	ug/Kg		12/22/15 07:44	12/22/15 15:25	1
1,1-Dichloroethene	ND		250	53	ug/Kg		12/22/15 07:44	12/22/15 15:25	1
1,2-Dibromo-3-Chloropropane	ND		250	18	ug/Kg		12/22/15 07:44	12/22/15 15:25	1
1,2-Dichlorobenzene	ND		250	34	ug/Kg		12/22/15 07:44	12/22/15 15:25	1
1,2-Dichloroethane	ND		250	48	ug/Kg		12/22/15 07:44	12/22/15 15:25	1
1,2-Dichloropropane	ND		250	64	ug/Kg		12/22/15 07:44	12/22/15 15:25	1
1,2,4-Trichlorobenzene	ND		250	19	ug/Kg		12/22/15 07:44	12/22/15 15:25	1
1,3-Dichlorobenzene	ND		250	25	ug/Kg		12/22/15 07:44	12/22/15 15:25	1
1,4-Dichlorobenzene	ND		250	26	ug/Kg		12/22/15 07:44	12/22/15 15:25	1
2-Butanone (MEK)	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 15:25	1
2-Hexanone	ND		250	28	ug/Kg		12/22/15 07:44	12/22/15 15:25	1
4-Methyl-2-pentanone (MIBK)	ND		250	30	ug/Kg		12/22/15 07:44	12/22/15 15:25	1
Acetone	ND		1000	250	ug/Kg		12/22/15 07:44	12/22/15 15:25	1
Benzene	ND		250	49	ug/Kg		12/22/15 07:44	12/22/15 15:25	1
Bromoform	ND		250	53	ug/Kg		12/22/15 07:44	12/22/15 15:25	1
Bromomethane	ND		250	79	ug/Kg		12/22/15 07:44	12/22/15 15:25	1
Carbon disulfide	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 15:25	1
Carbon tetrachloride	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 15:25	1
Chlorobenzene	ND		250	26	ug/Kg		12/22/15 07:44	12/22/15 15:25	1
Chlorodibromomethane	ND		250	32	ug/Kg		12/22/15 07:44	12/22/15 15:25	1
Chloroform	ND		250	50	ug/Kg		12/22/15 07:44	12/22/15 15:25	1
Chloromethane	ND		250	70	ug/Kg		12/22/15 07:44	12/22/15 15:25	1
Chloroethane	ND		250	37	ug/Kg		12/22/15 07:44	12/22/15 15:25	1
cis-1,2-Dichloroethene	ND		250	33	ug/Kg		12/22/15 07:44	12/22/15 15:25	1
cis-1,3-Dichloropropene	ND		250	36	ug/Kg		12/22/15 07:44	12/22/15 15:25	1
Dichlorobromomethane	ND		250	47	ug/Kg		12/22/15 07:44	12/22/15 15:25	1
Dichlorodifluoromethane	ND		250	32	ug/Kg		12/22/15 07:44	12/22/15 15:25	1

TestAmerica Pittsburgh

Client Sample Results

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50806-1
SDG: LINCKLAEN NY

Client Sample ID: CC-121515-BM-005A-INTERVAL2

Lab Sample ID: 180-50806-10

Date Collected: 12/15/15 16:25

Matrix: Solid

Date Received: 12/16/15 09:00

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		250	31	ug/Kg		12/22/15 07:44	12/22/15 15:25	1
1,2-Dibromoethane	ND		250	31	ug/Kg		12/22/15 07:44	12/22/15 15:25	1
Cyclohexane	ND		250	30	ug/Kg		12/22/15 07:44	12/22/15 15:25	1
Isopropylbenzene	ND		250	27	ug/Kg		12/22/15 07:44	12/22/15 15:25	1
Methyl acetate	ND		1300	61	ug/Kg		12/22/15 07:44	12/22/15 15:25	1
Methyl tert-butyl ether	ND		250	51	ug/Kg		12/22/15 07:44	12/22/15 15:25	1
Methylcyclohexane	ND		250	28	ug/Kg		12/22/15 07:44	12/22/15 15:25	1
Methylene Chloride	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 15:25	1
Styrene	ND		250	32	ug/Kg		12/22/15 07:44	12/22/15 15:25	1
Tetrachloroethene	ND		250	41	ug/Kg		12/22/15 07:44	12/22/15 15:25	1
Toluene	ND		250	42	ug/Kg		12/22/15 07:44	12/22/15 15:25	1
trans-1,2-Dichloroethene	ND		250	38	ug/Kg		12/22/15 07:44	12/22/15 15:25	1
trans-1,3-Dichloropropene	ND		250	29	ug/Kg		12/22/15 07:44	12/22/15 15:25	1
Trichloroethene	ND		250	40	ug/Kg		12/22/15 07:44	12/22/15 15:25	1
Trichlorofluoromethane	ND		250	56	ug/Kg		12/22/15 07:44	12/22/15 15:25	1
Vinyl chloride	ND		250	65	ug/Kg		12/22/15 07:44	12/22/15 15:25	1
Xylenes, Total	ND		500	98	ug/Kg		12/22/15 07:44	12/22/15 15:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		52 - 124	12/22/15 07:44	12/22/15 15:25	1
4-Bromofluorobenzene (Surr)	99		63 - 120	12/22/15 07:44	12/22/15 15:25	1
Dibromofluoromethane (Surr)	88		68 - 121	12/22/15 07:44	12/22/15 15:25	1
Toluene-d8 (Surr)	100		72 - 127	12/22/15 07:44	12/22/15 15:25	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		83	38	ug/Kg		12/24/15 13:19	12/30/15 00:35	5
PCB-1221	ND		83	60	ug/Kg		12/24/15 13:19	12/30/15 00:35	5
PCB-1232	ND		83	21	ug/Kg		12/24/15 13:19	12/30/15 00:35	5
PCB-1242	720		83	31	ug/Kg		12/24/15 13:19	12/30/15 00:35	5
PCB-1248	ND		83	20	ug/Kg		12/24/15 13:19	12/30/15 00:35	5
PCB-1254	ND		83	31	ug/Kg		12/24/15 13:19	12/30/15 00:35	5
PCB-1260	ND		83	29	ug/Kg		12/24/15 13:19	12/30/15 00:35	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	101		45 - 135	12/24/15 13:19	12/30/15 00:35	5
Tetrachloro-m-xylene (Surr)	103		45 - 135	12/24/15 13:19	12/30/15 00:35	5
DCB Decachlorobiphenyl (Surr)	117		45 - 125	12/24/15 13:19	12/30/15 00:35	5
DCB Decachlorobiphenyl (Surr)	117		45 - 125	12/24/15 13:19	12/30/15 00:35	5

Method: Part Size Red - Particle Size Reduction Preparation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PSR sample generated	1.0				NONE			12/18/15 13:07	1

TestAmerica Pittsburgh

QC Sample Results

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50806-1
SDG: LINCKLAEN NY

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 180-164343/1-A

Matrix: Solid

Analysis Batch: 164339

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 164343

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		250	51	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
1,1,2,2-Tetrachloroethane	ND		250	47	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		250	17	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
1,1,2-Trichloroethane	ND		250	58	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
1,1-Dichloroethane	ND		250	51	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
1,1-Dichloroethene	ND		250	53	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
1,2-Dibromo-3-Chloropropane	ND		250	18	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
1,2-Dichlorobenzene	ND		250	34	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
1,2-Dichloroethane	ND		250	48	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
1,2-Dichloropropane	ND		250	64	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
1,2,4-Trichlorobenzene	ND		250	19	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
1,3-Dichlorobenzene	ND		250	25	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
1,4-Dichlorobenzene	ND		250	26	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
2-Butanone (MEK)	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
2-Hexanone	ND		250	28	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
4-Methyl-2-pentanone (MIBK)	ND		250	30	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Acetone	ND		1000	250	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Benzene	ND		250	49	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Bromoform	ND		250	53	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Bromomethane	ND		250	79	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Carbon disulfide	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Carbon tetrachloride	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Chlorobenzene	ND		250	26	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Chlorodibromomethane	ND		250	32	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Chloroform	ND		250	50	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Chloromethane	ND		250	70	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Chloroethane	ND		250	37	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
cis-1,2-Dichloroethene	ND		250	33	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
cis-1,3-Dichloropropene	ND		250	36	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Dichlorobromomethane	ND		250	47	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Dichlorodifluoromethane	ND		250	32	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Ethylbenzene	ND		250	31	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
1,2-Dibromoethane	ND		250	31	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Cyclohexane	ND		250	30	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Isopropylbenzene	ND		250	27	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Methyl acetate	ND		1300	61	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Methyl tert-butyl ether	ND		250	51	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Methylcyclohexane	ND		250	28	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Methylene Chloride	ND		250	54	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Styrene	ND		250	32	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Tetrachloroethene	ND		250	41	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Toluene	ND		250	42	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
trans-1,2-Dichloroethene	ND		250	38	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
trans-1,3-Dichloropropene	ND		250	29	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Trichloroethene	ND		250	40	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Trichlorofluoromethane	ND		250	56	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Vinyl chloride	ND		250	65	ug/Kg		12/22/15 07:44	12/22/15 10:45	1
Xylenes, Total	ND		500	98	ug/Kg		12/22/15 07:44	12/22/15 10:45	1

TestAmerica Pittsburgh

QC Sample Results

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50806-1
SDG: LINCKLAEN NY

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	76		52 - 124	12/22/15 07:44	12/22/15 10:45	1
4-Bromofluorobenzene (Surr)	80		63 - 120	12/22/15 07:44	12/22/15 10:45	1
Dibromofluoromethane (Surr)	79		68 - 121	12/22/15 07:44	12/22/15 10:45	1
Toluene-d8 (Surr)	119		72 - 127	12/22/15 07:44	12/22/15 10:45	1

Lab Sample ID: LCS 180-164343/2-A
Matrix: Solid
Analysis Batch: 164339

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 164343

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	2000	1980		ug/Kg		99	67 - 126
1,1,2,2-Tetrachloroethane	2000	2130		ug/Kg		107	60 - 139
1,1,2-Trichloro-1,2,2-trifluoroethane	2000	2070		ug/Kg		104	55 - 130
1,1,2-Trichloroethane	2000	2140		ug/Kg		107	70 - 128
1,1-Dichloroethane	2000	1900		ug/Kg		95	66 - 124
1,1-Dichloroethene	2000	2240		ug/Kg		112	59 - 129
1,2-Dibromo-3-Chloropropane	2000	2200		ug/Kg		110	35 - 136
1,2-Dichlorobenzene	2000	1990		ug/Kg		99	71 - 124
1,2-Dichloroethane	2000	2090		ug/Kg		105	61 - 127
1,2-Dichloropropane	2000	2230		ug/Kg		112	72 - 122
1,2,4-Trichlorobenzene	2000	1960		ug/Kg		98	51 - 136
1,3-Dichlorobenzene	2000	2030		ug/Kg		101	75 - 118
1,4-Dichlorobenzene	2000	2070		ug/Kg		104	77 - 116
2-Butanone (MEK)	2000	1840		ug/Kg		92	35 - 149
2-Hexanone	2000	2120		ug/Kg		106	32 - 150
4-Methyl-2-pentanone (MIBK)	2000	2110		ug/Kg		105	44 - 148
Acetone	2000	2490		ug/Kg		124	20 - 150
Benzene	2000	1950		ug/Kg		97	77 - 120
Bromoform	2000	2230		ug/Kg		111	53 - 140
Bromomethane	2000	2060		ug/Kg		103	25 - 150
Carbon disulfide	2000	2160		ug/Kg		108	50 - 127
Carbon tetrachloride	2000	2000		ug/Kg		100	69 - 122
Chlorobenzene	2000	1930		ug/Kg		96	79 - 120
Chlorodibromomethane	2000	2310		ug/Kg		116	70 - 132
Chloroform	2000	1990		ug/Kg		99	72 - 120
Chloromethane	2000	1850		ug/Kg		93	44 - 131
Chloroethane	2000	2170		ug/Kg		108	22 - 150
cis-1,2-Dichloroethene	2000	1960		ug/Kg		98	80 - 118
cis-1,3-Dichloropropene	2000	2350		ug/Kg		118	73 - 120
Dichlorobromomethane	2000	2320		ug/Kg		116	70 - 125
Dichlorodifluoromethane	2000	1930		ug/Kg		96	25 - 150
Ethylbenzene	2000	2000		ug/Kg		100	78 - 125
1,2-Dibromoethane	2000	2090		ug/Kg		105	70 - 131
Cyclohexane	2000	1940		ug/Kg		97	64 - 130
Isopropylbenzene	2000	1950		ug/Kg		97	70 - 133
Methyl acetate	10000	9620		ug/Kg		96	27 - 142
Methyl tert-butyl ether	2000	2030		ug/Kg		102	48 - 132
Methylcyclohexane	2000	2110		ug/Kg		106	66 - 135
Methylene Chloride	2000	2060		ug/Kg		103	58 - 127
m-Xylene & p-Xylene	2000	2040		ug/Kg		102	75 - 126
o-Xylene	2000	2080		ug/Kg		104	83 - 127
Styrene	2000	2070		ug/Kg		103	83 - 129
Tetrachloroethene	2000	1910		ug/Kg		96	78 - 129

TestAmerica Pittsburgh

QC Sample Results

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50806-1
SDG: LINCKLAEN NY

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 180-164343/2-A

Matrix: Solid

Analysis Batch: 164339

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 164343

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Toluene	2000	1910		ug/Kg		95	78 - 124
trans-1,2-Dichloroethene	2000	1930		ug/Kg		96	77 - 121
trans-1,3-Dichloropropene	2000	2330		ug/Kg		117	74 - 129
Trichloroethene	2000	2120		ug/Kg		106	76 - 119
Trichlorofluoromethane	2000	1750		ug/Kg		87	20 - 150
Vinyl chloride	2000	1940		ug/Kg		97	63 - 124
Xylenes, Total	4000	4120		ug/Kg		103	83 - 126

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		52 - 124
4-Bromofluorobenzene (Surr)	104		63 - 120
Dibromofluoromethane (Surr)	96		68 - 121
Toluene-d8 (Surr)	107		72 - 127

Lab Sample ID: 180-50806-4 MS

Matrix: Solid

Analysis Batch: 164339

Client Sample ID: CC-121515-BM-002A-INTERVAL2

Prep Type: Total/NA

Prep Batch: 164343

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	ND		2000	2110		ug/Kg		106	67 - 126
1,1,2,2-Tetrachloroethane	ND		2000	1760		ug/Kg		88	60 - 139
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		2000	2130		ug/Kg		107	55 - 130
1,1,2-Trichloroethane	ND		2000	1930		ug/Kg		97	70 - 128
1,1-Dichloroethane	ND		2000	1910		ug/Kg		96	66 - 124
1,1-Dichloroethene	ND	F1	2000	2370		ug/Kg		119	59 - 129
1,2-Dibromo-3-Chloropropane	ND		2000	1650		ug/Kg		83	35 - 136
1,2-Dichlorobenzene	ND		2000	1990		ug/Kg		100	71 - 124
1,2-Dichloroethane	ND		2000	1970		ug/Kg		99	61 - 127
1,2-Dichloropropane	ND		2000	1940		ug/Kg		97	72 - 122
1,2,4-Trichlorobenzene	ND		2000	1670		ug/Kg		83	51 - 136
1,3-Dichlorobenzene	ND		2000	2150		ug/Kg		107	75 - 118
1,4-Dichlorobenzene	ND		2000	2130		ug/Kg		106	77 - 116
2-Butanone (MEK)	ND		2000	1700		ug/Kg		85	35 - 149
2-Hexanone	ND		2000	2090		ug/Kg		105	32 - 150
4-Methyl-2-pentanone (MIBK)	ND		2000	1710		ug/Kg		86	44 - 148
Acetone	ND		2000	2040		ug/Kg		102	20 - 150
Benzene	ND		2000	2090		ug/Kg		105	77 - 120
Bromoform	ND		2000	2060		ug/Kg		103	53 - 140
Bromomethane	ND		2000	2220		ug/Kg		111	25 - 150
Carbon disulfide	ND		2000	2130		ug/Kg		107	50 - 127
Carbon tetrachloride	ND		2000	2180		ug/Kg		109	69 - 122
Chlorobenzene	ND		2000	2120		ug/Kg		106	79 - 120
Chlorodibromomethane	ND		2000	2110		ug/Kg		106	70 - 132
Chloroform	ND		2000	2140		ug/Kg		107	72 - 120
Chloromethane	ND		2000	1970		ug/Kg		98	44 - 131
Chloroethane	ND		2000	2380		ug/Kg		119	22 - 150
cis-1,2-Dichloroethene	ND		2000	1920		ug/Kg		96	80 - 118

TestAmerica Pittsburgh

QC Sample Results

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50806-1
SDG: LINCKLAEN NY

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 180-50806-4 MS

Matrix: Solid

Analysis Batch: 164339

Client Sample ID: CC-121515-BM-002A-INTERVAL2

Prep Type: Total/NA

Prep Batch: 164343

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,3-Dichloropropene	ND		2000	1960		ug/Kg		98	73 - 120
Dichlorobromomethane	ND		2000	2020		ug/Kg		101	70 - 125
Dichlorodifluoromethane	ND		2000	2050		ug/Kg		103	25 - 150
Ethylbenzene	ND		2000	2160		ug/Kg		108	78 - 125
1,2-Dibromoethane	ND		2000	1920		ug/Kg		96	70 - 131
Cyclohexane	ND		2000	2110		ug/Kg		105	64 - 130
Isopropylbenzene	ND		2000	2160		ug/Kg		108	70 - 133
Methyl acetate	ND		10000	7860		ug/Kg		79	27 - 142
Methyl tert-butyl ether	ND		2000	1810		ug/Kg		91	48 - 132
Methylcyclohexane	ND		2000	1950		ug/Kg		97	66 - 135
Methylene Chloride	170	J	2000	1920		ug/Kg		88	58 - 127
m-Xylene & p-Xylene	ND		2000	2190		ug/Kg		110	75 - 126
o-Xylene	ND		2000	2190		ug/Kg		110	83 - 127
Styrene	ND		2000	2190		ug/Kg		110	83 - 129
Tetrachloroethene	ND		2000	2030		ug/Kg		102	78 - 129
Toluene	100	J F2	2000	1890		ug/Kg		90	78 - 124
trans-1,2-Dichloroethene	ND		2000	1990		ug/Kg		100	77 - 121
trans-1,3-Dichloropropene	ND		2000	2020		ug/Kg		101	74 - 129
Trichloroethene	180	J	2000	2090		ug/Kg		96	76 - 119
Trichlorofluoromethane	ND		2000	2800		ug/Kg		140	20 - 150
Vinyl chloride	ND		2000	2070		ug/Kg		103	63 - 124
Xylenes, Total	ND		4000	4380		ug/Kg		110	83 - 126

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	92		52 - 124
4-Bromofluorobenzene (Surr)	103		63 - 120
Dibromofluoromethane (Surr)	97		68 - 121
Toluene-d8 (Surr)	98		72 - 127

Lab Sample ID: 180-50806-4 MSD

Matrix: Solid

Analysis Batch: 164339

Client Sample ID: CC-121515-BM-002A-INTERVAL2

Prep Type: Total/NA

Prep Batch: 164343

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
1,1,1-Trichloroethane	ND		2000	2190		ug/Kg		109	67 - 126	3	31
1,1,2,2-Tetrachloroethane	ND		2000	2090		ug/Kg		104	60 - 139	17	24
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		2000	2230		ug/Kg		112	55 - 130	5	37
1,1,2-Trichloroethane	ND		2000	1980		ug/Kg		99	70 - 128	2	22
1,1-Dichloroethane	ND		2000	1880		ug/Kg		94	66 - 124	2	23
1,1-Dichloroethene	ND	F1	2000	2600	F1	ug/Kg		130	59 - 129	9	25
1,2-Dibromo-3-Chloropropane	ND		2000	1670		ug/Kg		83	35 - 136	1	40
1,2-Dichlorobenzene	ND		2000	2020		ug/Kg		101	71 - 124	1	22
1,2-Dichloroethane	ND		2000	1820		ug/Kg		91	61 - 127	8	23
1,2-Dichloropropane	ND		2000	2280		ug/Kg		114	72 - 122	16	20
1,2,4-Trichlorobenzene	ND		2000	1630		ug/Kg		81	51 - 136	2	40
1,3-Dichlorobenzene	ND		2000	2170		ug/Kg		108	75 - 118	1	20
1,4-Dichlorobenzene	ND		2000	2140		ug/Kg		107	77 - 116	1	20

TestAmerica Pittsburgh

QC Sample Results

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50806-1
SDG: LINCKLAEN NY

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 180-50806-4 MSD

Matrix: Solid

Analysis Batch: 164339

Client Sample ID: CC-121515-BM-002A-INTERVAL2

Prep Type: Total/NA

Prep Batch: 164343

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Butanone (MEK)	ND		2000	1570		ug/Kg		79	35 - 149	8	36
2-Hexanone	ND		2000	1950		ug/Kg		97	32 - 150	7	32
4-Methyl-2-pentanone (MIBK)	ND		2000	2000		ug/Kg		100	44 - 148	16	30
Acetone	ND		2000	2040		ug/Kg		102	20 - 150	0	40
Benzene	ND		2000	2050		ug/Kg		103	77 - 120	2	20
Bromoform	ND		2000	2110		ug/Kg		105	53 - 140	2	23
Bromomethane	ND		2000	2110		ug/Kg		106	25 - 150	5	40
Carbon disulfide	ND		2000	2320		ug/Kg		116	50 - 127	8	23
Carbon tetrachloride	ND		2000	2240		ug/Kg		112	69 - 122	3	22
Chlorobenzene	ND		2000	2100		ug/Kg		105	79 - 120	1	20
Chlorodibromomethane	ND		2000	2130		ug/Kg		107	70 - 132	1	20
Chloroform	ND		2000	2010		ug/Kg		100	72 - 120	6	25
Chloromethane	ND		2000	1900		ug/Kg		95	44 - 131	3	27
Chloroethane	ND		2000	2510		ug/Kg		125	22 - 150	5	40
cis-1,2-Dichloroethene	ND		2000	1960		ug/Kg		98	80 - 118	2	20
cis-1,3-Dichloropropene	ND		2000	2180		ug/Kg		109	73 - 120	10	20
Dichlorobromomethane	ND		2000	2100		ug/Kg		105	70 - 125	4	21
Dichlorodifluoromethane	ND		2000	2090		ug/Kg		105	25 - 150	2	34
Ethylbenzene	ND		2000	2170		ug/Kg		109	78 - 125	0	21
1,2-Dibromoethane	ND		2000	1840		ug/Kg		92	70 - 131	4	20
Cyclohexane	ND		2000	2160		ug/Kg		108	64 - 130	3	21
Isopropylbenzene	ND		2000	2540		ug/Kg		127	70 - 133	16	22
Methyl acetate	ND		10000	6770		ug/Kg		68	27 - 142	15	40
Methyl tert-butyl ether	ND		2000	1640		ug/Kg		82	48 - 132	10	36
Methylcyclohexane	ND		2000	2460		ug/Kg		123	66 - 135	23	23
Methylene Chloride	170	J	2000	1830		ug/Kg		83	58 - 127	5	28
m-Xylene & p-Xylene	ND		2000	2280		ug/Kg		114	75 - 126	4	21
o-Xylene	ND		2000	2330		ug/Kg		116	83 - 127	6	20
Styrene	ND		2000	2260		ug/Kg		113	83 - 129	3	20
Tetrachloroethene	ND		2000	2310		ug/Kg		115	78 - 129	13	20
Toluene	100	J F2	2000	2370	F2	ug/Kg		113	78 - 124	22	21
trans-1,2-Dichloroethene	ND		2000	1980		ug/Kg		99	77 - 121	1	20
trans-1,3-Dichloropropene	ND		2000	2100		ug/Kg		105	74 - 129	4	20
Trichloroethene	180	J	2000	2270		ug/Kg		104	76 - 119	8	21
Trichlorofluoromethane	ND		2000	2770		ug/Kg		139	20 - 150	1	40
Vinyl chloride	ND		2000	1970		ug/Kg		98	63 - 124	5	27
Xylenes, Total	ND		4000	4610		ug/Kg		115	83 - 126	5	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	83		52 - 124
4-Bromofluorobenzene (Surr)	111		63 - 120
Dibromofluoromethane (Surr)	87		68 - 121
Toluene-d8 (Surr)	119		72 - 127

TestAmerica Pittsburgh

QC Sample Results

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50806-1
SDG: LINCKLAEN NY

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 180-164650/1-A

Matrix: Solid

Analysis Batch: 164785

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 164650

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		17	7.6	ug/Kg		12/24/15 13:19	12/29/15 18:20	1
PCB-1221	ND		17	12	ug/Kg		12/24/15 13:19	12/29/15 18:20	1
PCB-1232	ND		17	4.2	ug/Kg		12/24/15 13:19	12/29/15 18:20	1
PCB-1242	ND		17	6.2	ug/Kg		12/24/15 13:19	12/29/15 18:20	1
PCB-1248	ND		17	3.9	ug/Kg		12/24/15 13:19	12/29/15 18:20	1
PCB-1254	ND		17	6.2	ug/Kg		12/24/15 13:19	12/29/15 18:20	1
PCB-1260	ND		17	5.7	ug/Kg		12/24/15 13:19	12/29/15 18:20	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	100		45 - 135	12/24/15 13:19	12/29/15 18:20	1
Tetrachloro-m-xylene (Surr)	97		45 - 135	12/24/15 13:19	12/29/15 18:20	1
DCB Decachlorobiphenyl (Surr)	95		45 - 125	12/24/15 13:19	12/29/15 18:20	1
DCB Decachlorobiphenyl (Surr)	93		45 - 125	12/24/15 13:19	12/29/15 18:20	1

Lab Sample ID: LCS 180-164650/2-A

Matrix: Solid

Analysis Batch: 164785

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 164650

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
PCB-1016	1330	1180		ug/Kg		88	55 - 135
PCB-1260	1330	1120		ug/Kg		84	50 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene (Surr)	109		45 - 135
Tetrachloro-m-xylene (Surr)	104		45 - 135
DCB Decachlorobiphenyl (Surr)	99		45 - 125
DCB Decachlorobiphenyl (Surr)	105		45 - 125

QC Association Summary

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50806-1
SDG: LINCKLAEN NY

GC/MS VOA

Analysis Batch: 164339

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-50806-1	CC-121515-BM-001A-INTERVAL1	Total/NA	Solid	8260C	164343
180-50806-2	CC-121515-BM-001A-INTERVAL2	Total/NA	Solid	8260C	164343
180-50806-3	CC-121515-BM-002A-INTERVAL1	Total/NA	Solid	8260C	164343
180-50806-4	CC-121515-BM-002A-INTERVAL2	Total/NA	Solid	8260C	164343
180-50806-4 MS	CC-121515-BM-002A-INTERVAL2	Total/NA	Solid	8260C	164343
180-50806-4 MSD	CC-121515-BM-002A-INTERVAL2	Total/NA	Solid	8260C	164343
180-50806-5	CC-121515-BM-003A-INTERVAL1	Total/NA	Solid	8260C	164343
180-50806-6	CC-121515-BM-003A-INTERVAL2	Total/NA	Solid	8260C	164343
180-50806-7	CC-121515-BM-004A-INTERVAL1	Total/NA	Solid	8260C	164343
180-50806-8	CC-121515-BM-004A-INTERVAL2	Total/NA	Solid	8260C	164343
180-50806-9	CC-121515-BM-005A-INTERVAL1	Total/NA	Solid	8260C	164343
180-50806-10	CC-121515-BM-005A-INTERVAL2	Total/NA	Solid	8260C	164343
LCS 180-164343/2-A	Lab Control Sample	Total/NA	Solid	8260C	164343
MB 180-164343/1-A	Method Blank	Total/NA	Solid	8260C	164343

Prep Batch: 164343

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-50806-1	CC-121515-BM-001A-INTERVAL1	Total/NA	Solid	5030C	
180-50806-2	CC-121515-BM-001A-INTERVAL2	Total/NA	Solid	5030C	
180-50806-3	CC-121515-BM-002A-INTERVAL1	Total/NA	Solid	5030C	
180-50806-4	CC-121515-BM-002A-INTERVAL2	Total/NA	Solid	5030C	
180-50806-4 MS	CC-121515-BM-002A-INTERVAL2	Total/NA	Solid	5030C	
180-50806-4 MSD	CC-121515-BM-002A-INTERVAL2	Total/NA	Solid	5030C	
180-50806-5	CC-121515-BM-003A-INTERVAL1	Total/NA	Solid	5030C	
180-50806-6	CC-121515-BM-003A-INTERVAL2	Total/NA	Solid	5030C	
180-50806-7	CC-121515-BM-004A-INTERVAL1	Total/NA	Solid	5030C	
180-50806-8	CC-121515-BM-004A-INTERVAL2	Total/NA	Solid	5030C	
180-50806-9	CC-121515-BM-005A-INTERVAL1	Total/NA	Solid	5030C	
180-50806-10	CC-121515-BM-005A-INTERVAL2	Total/NA	Solid	5030C	
LCS 180-164343/2-A	Lab Control Sample	Total/NA	Solid	5030C	
MB 180-164343/1-A	Method Blank	Total/NA	Solid	5030C	

GC Semi VOA

Prep Batch: 164650

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-50806-1	CC-121515-BM-001A-INTERVAL1	Total/NA	Solid	3541	
180-50806-2	CC-121515-BM-001A-INTERVAL2	Total/NA	Solid	3541	
180-50806-3	CC-121515-BM-002A-INTERVAL1	Total/NA	Solid	3541	
180-50806-4	CC-121515-BM-002A-INTERVAL2	Total/NA	Solid	3541	
180-50806-5	CC-121515-BM-003A-INTERVAL1	Total/NA	Solid	3541	
180-50806-6	CC-121515-BM-003A-INTERVAL2	Total/NA	Solid	3541	
180-50806-7	CC-121515-BM-004A-INTERVAL1	Total/NA	Solid	3541	
180-50806-8	CC-121515-BM-004A-INTERVAL2	Total/NA	Solid	3541	
180-50806-9	CC-121515-BM-005A-INTERVAL1	Total/NA	Solid	3541	
180-50806-10	CC-121515-BM-005A-INTERVAL2	Total/NA	Solid	3541	
LCS 180-164650/2-A	Lab Control Sample	Total/NA	Solid	3541	
MB 180-164650/1-A	Method Blank	Total/NA	Solid	3541	

TestAmerica Pittsburgh

QC Association Summary

Client: GHD Services Inc.
Project/Site: 2077-60 Solvent Savers

TestAmerica Job ID: 180-50806-1
SDG: LINCKLAEN NY

GC Semi VOA (Continued)

Analysis Batch: 164785

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-50806-1	CC-121515-BM-001A-INTERVAL1	Total/NA	Solid	8082A	164650
180-50806-2	CC-121515-BM-001A-INTERVAL2	Total/NA	Solid	8082A	164650
180-50806-3	CC-121515-BM-002A-INTERVAL1	Total/NA	Solid	8082A	164650
180-50806-4	CC-121515-BM-002A-INTERVAL2	Total/NA	Solid	8082A	164650
180-50806-5	CC-121515-BM-003A-INTERVAL1	Total/NA	Solid	8082A	164650
180-50806-6	CC-121515-BM-003A-INTERVAL2	Total/NA	Solid	8082A	164650
180-50806-7	CC-121515-BM-004A-INTERVAL1	Total/NA	Solid	8082A	164650
180-50806-8	CC-121515-BM-004A-INTERVAL2	Total/NA	Solid	8082A	164650
180-50806-9	CC-121515-BM-005A-INTERVAL1	Total/NA	Solid	8082A	164650
180-50806-10	CC-121515-BM-005A-INTERVAL2	Total/NA	Solid	8082A	164650
LCS 180-164650/2-A	Lab Control Sample	Total/NA	Solid	8082A	164650
MB 180-164650/1-A	Method Blank	Total/NA	Solid	8082A	164650

Organic Prep

Analysis Batch: 211548

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-50806-1	CC-121515-BM-001A-INTERVAL1	Total/NA	Solid	Part Size Red	
180-50806-2	CC-121515-BM-001A-INTERVAL2	Total/NA	Solid	Part Size Red	
180-50806-3	CC-121515-BM-002A-INTERVAL1	Total/NA	Solid	Part Size Red	
180-50806-4	CC-121515-BM-002A-INTERVAL2	Total/NA	Solid	Part Size Red	
180-50806-5	CC-121515-BM-003A-INTERVAL1	Total/NA	Solid	Part Size Red	
180-50806-6	CC-121515-BM-003A-INTERVAL2	Total/NA	Solid	Part Size Red	
180-50806-7	CC-121515-BM-004A-INTERVAL1	Total/NA	Solid	Part Size Red	
180-50806-8	CC-121515-BM-004A-INTERVAL2	Total/NA	Solid	Part Size Red	
180-50806-9	CC-121515-BM-005A-INTERVAL1	Total/NA	Solid	Part Size Red	
180-50806-10	CC-121515-BM-005A-INTERVAL2	Total/NA	Solid	Part Size Red	



COC NO.: 40872

Fax:

PAGE 1 OF 2

(See Reverse Side for Instructions)

100

180-50806 Chain of Custody

THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT -- ALL FIELDS MUST BE COMPLETED ACCURATELY

Distribution:

WHITE — Fully Executed Copy (CRA)

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PINK — Shipper

GOLDENROD – Sampling Crew

CRA Form: COC-10B (20110804)

13	12	11	10	9	8	7	6	5	4	3	2	1
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COC NO.: 40873

PAGE 2 OF 2

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THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT -- ALL FIELDS MUST BE COMPLETED ACCURATELY

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GOLDENROD – Sampling Crew

CRA Form: COC-10B (20110804)

ORIGIN ID:SYRA (716) 609-0384
GHD SERVICES INC.

2055 NIAGARA FALLS BLVD STE 3

NIAGARA FALLS, NY 143045702
UNITED STATES US

SHIP DATE: 15DEC15
ACTWGT: 33.40 LB
CAD: /POS1621
DIMS: 21x17x14 IN

BILL SENDER

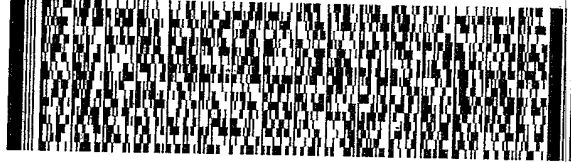
TO **SAMPLE RECEIVING
TEST AMERICA
301 ALPHA DR**

PITTSBURGH PA 15238

(412) 963-7058
REF: NO: PO:

REF:

DEPT:



**FedEx
Express**



AMON 80910631F

press
Ex Prio
business
days will
SATUR
Ex 20a
dt
TRK# 8696 4139 3371
0215

**WED - 16 DEC 10:30A
PRIORITY OVERNIGHT**

NA AGCA

**NSR
15238
PIT**

PA-US

Uncorrected temp
Thermometer ID

2.6 °C

CF 0

Initials TW

PT-WI-SR-001 effective 7/26/13

Overnight and FedEx way
select locations.



A



180-50806 Waybill

Part # 156297-455 R112 08/15

THE LEADER IN ENVIRONMENTAL TESTING

Age Group	Number of People
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13



10.1301/JHEP09(2015)101

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 180-50806-1

SDG Number: LINCKLAEN NY

Login Number: 50806

List Number: 1

Creator: Kovitch, Christina M

List Source: TestAmerica Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pittsburgh

301 Alpha Drive

RIDC Park

Pittsburgh, PA 15238

Tel: (412)963-7058

TestAmerica Job ID: 180-50868-1

TestAmerica Sample Delivery Group: LINCKLAEN, NY

Client Project/Site: 002077-60 Solvent Savers

For:

GHD Services Inc.

2055 Niagara Falls Blvd., Suite 3

Niagara Falls, New York 14304

Attn: Mr. Paul McMahon



Authorized for release by:

1/5/2016 3:43:00 PM

Jill Colussy, Project Manager I

(412)963-2444

jill.colussy@testamericainc.com

LINKS

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results through

TotalAccess

Have a Question?



Visit us at:

www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50868-1
SDG: LINCKLAEN, NY

Job ID: 180-50868-1

Laboratory: TestAmerica Pittsburgh

Narrative

Job Narrative 180-50868-1

Receipt

The samples were received on 12/17/2015 9:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.4° C.

The samples reported in this Job are cores samples. Sample CC-121615-BM-006B was placed "on hold" upon receipt as per the client. The core sample CC-121615-BM-006A was processed as per the client. The sample was logged in as CC-121615-BM-006A INTERVAL 1 and CC-121615-BM-006A INTERVAL 2 as per the client.

GC/MS VOA

The laboratory control sample (LCS) for batch 180-164513 recovered outside control limits for the following analytes: Acetone. This analyte was biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

The continuing calibration verification (CCV) analyzed in batch 164466 was outside the method criteria for the following analyte(s): 1,1-Dichloroethene, 1,2-Dibromo-3-Chloropropane, 2-Hexanone, Acetone and Toluene. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

PCBS

Due to the concentration of PCBs detected, sample CC-121615-BM-006A INTERVAL 1 was analyzed at a dilution. Elevated reporting limits (RLs) are provided.

Sample CC-121615-BM-006A INTERVAL 2 had surrogate decachlorobiphenyl recover high and outside of the control limits on both columns. The recoveries of tetrachloro-m-xylene surrogate were within the control limits. All results were reported.

Definitions/Glossary

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50868-1
SDG: LINCKLAEN, NY

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD is outside acceptance limits.

GC Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Certification Summary

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50868-1
SDG: LINCKLAEN, NY

Laboratory: TestAmerica Pittsburgh

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
New York	NELAP	2	11182	03-31-16
The following analytes are included in this report, but are not certified under this certification:				
Analysis Method	Prep Method	Matrix	Analyte	
8260C	5030C	Solid	Cyclohexane	

Laboratory: TestAmerica Canton

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	NELAP	9	01144CA	06-30-14 *
California	State Program	9	2927	04-30-17
Connecticut	State Program	1	PH-0590	12-31-15 *
Illinois	NELAP	5	200004	07-31-16
Kansas	NELAP	7	E-10336	01-31-16 *
Kentucky (UST)	State Program	4	58	02-26-16 *
Kentucky (WW)	State Program	4	98016	12-31-15 *
L-A-B	DoD ELAP		L2315	07-18-16
Minnesota	NELAP	5	039-999-348	12-31-16
Nevada	State Program	9	OH-000482008A	07-31-16
New Jersey	NELAP	2	OH001	06-30-16
New York	NELAP	2	10975	03-31-16 *
Ohio VAP	State Program	5	CL0024	09-14-17
Oregon	NELAP	10	4062	02-23-16 *
Pennsylvania	NELAP	3	68-00340	08-31-16
Texas	NELAP	6	T104704517-15-5	08-31-16
USDA	Federal		P330-13-00319	11-26-16
Virginia	NELAP	3	460175	09-14-16
Washington	State Program	10	C971	01-12-16 *
West Virginia DEP	State Program	3	210	12-31-15 *
Wisconsin	State Program	5	999518190	08-31-16

* Certification renewal pending - certification considered valid.

TestAmerica Pittsburgh

Sample Summary

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50868-1
SDG: LINCKLAEN, NY

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-50868-1	CC-121615-BM-006A INTERVAL 1	Solid	12/16/15 11:30	12/17/15 09:15
180-50868-2	CC-121615-BM-006A INTERVAL 2	Solid	12/16/15 11:30	12/17/15 09:15

Method Summary

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50868-1
SDG: LINCKLAEN, NY

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL PIT
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL PIT
Part Size Red	Particle Size Reduction Preparation	NONE	TAL CAN

Protocol References:

NONE = NONE

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

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50868-1
SDG: LINCKLAEN, NY

Client Sample ID: CC-121615-BM-006A INTERVAL 1

Date Collected: 12/16/15 11:30

Date Received: 12/17/15 09:15

Lab Sample ID: 180-50868-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030C			5.0000 g	5 mL	164513	12/23/15 07:20	PJJ	TAL PIT
Total/NA	Analysis	8260C		1	5.0000 g	5 mL	164466	12/23/15 12:28	PJJ	TAL PIT
		Instrument ID: CHHP4								
Total/NA	Prep	3541			9.1 g	20.0 mL	164650	12/24/15 13:20	CBY	TAL PIT
Total/NA	Analysis	8082A		10	9.1 g	20.0 mL	164785	12/30/15 02:46	AKG	TAL PIT
		Instrument ID: CHGC10								
Total/NA	Analysis	Part Size Red		1			211548	12/18/15 13:07	DRJ	TAL CAN
		Instrument ID: NOEQUIP								

Client Sample ID: CC-121615-BM-006A INTERVAL 2

Date Collected: 12/16/15 11:30

Date Received: 12/17/15 09:15

Lab Sample ID: 180-50868-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030C			5.0004 g	5 mL	164513	12/23/15 07:20	PJJ	TAL PIT
Total/NA	Analysis	8260C		1	5.0004 g	5 mL	164466	12/23/15 12:54	PJJ	TAL PIT
		Instrument ID: CHHP4								
Total/NA	Prep	3541			15.3 g	20.0 mL	164650	12/24/15 13:20	CBY	TAL PIT
Total/NA	Analysis	8082A		1	15.3 g	20.0 mL	164785	12/30/15 03:05	AKG	TAL PIT
		Instrument ID: CHGC10								
Total/NA	Analysis	Part Size Red		1			211548	12/18/15 13:07	DRJ	TAL CAN
		Instrument ID: NOEQUIP								

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL CAN

Batch Type: Analysis

DRJ = Diane Jones

Lab: TAL PIT

Batch Type: Prep

CBY = Charles Yushinski

PJJ = Patrick Journet

Batch Type: Analysis

AKG = Ashok Gupta

PJJ = Patrick Journet

TestAmerica Pittsburgh

Client Sample Results

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50868-1
SDG: LINCKLAEN, NY

Client Sample ID: CC-121615-BM-006A INTERVAL 1

Lab Sample ID: 180-50868-1

Date Collected: 12/16/15 11:30

Matrix: Solid

Date Received: 12/17/15 09:15

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	56	J	250	51	ug/Kg		12/23/15 07:20	12/23/15 12:28	1
1,1,2,2-Tetrachloroethane	ND		250	47	ug/Kg		12/23/15 07:20	12/23/15 12:28	1
1,1,2-Trichloro-1,2,2-trifluoroethane	26	J	250	17	ug/Kg		12/23/15 07:20	12/23/15 12:28	1
1,1,2-Trichloroethane	ND		250	58	ug/Kg		12/23/15 07:20	12/23/15 12:28	1
1,1-Dichloroethane	ND		250	51	ug/Kg		12/23/15 07:20	12/23/15 12:28	1
1,1-Dichloroethene	ND		250	53	ug/Kg		12/23/15 07:20	12/23/15 12:28	1
1,2-Dibromo-3-Chloropropane	ND		250	18	ug/Kg		12/23/15 07:20	12/23/15 12:28	1
1,2-Dichlorobenzene	150	J	250	34	ug/Kg		12/23/15 07:20	12/23/15 12:28	1
1,2-Dichloroethane	ND		250	48	ug/Kg		12/23/15 07:20	12/23/15 12:28	1
1,2-Dichloropropane	ND		250	64	ug/Kg		12/23/15 07:20	12/23/15 12:28	1
1,2,4-Trichlorobenzene	ND		250	19	ug/Kg		12/23/15 07:20	12/23/15 12:28	1
1,3-Dichlorobenzene	ND		250	25	ug/Kg		12/23/15 07:20	12/23/15 12:28	1
1,4-Dichlorobenzene	ND		250	26	ug/Kg		12/23/15 07:20	12/23/15 12:28	1
2-Butanone (MEK)	ND		250	54	ug/Kg		12/23/15 07:20	12/23/15 12:28	1
2-Hexanone	ND		250	28	ug/Kg		12/23/15 07:20	12/23/15 12:28	1
4-Methyl-2-pentanone (MIBK)	ND		250	30	ug/Kg		12/23/15 07:20	12/23/15 12:28	1
Acetone	ND	*	1000	250	ug/Kg		12/23/15 07:20	12/23/15 12:28	1
Benzene	ND		250	49	ug/Kg		12/23/15 07:20	12/23/15 12:28	1
Bromoform	ND		250	53	ug/Kg		12/23/15 07:20	12/23/15 12:28	1
Bromomethane	ND		250	79	ug/Kg		12/23/15 07:20	12/23/15 12:28	1
Carbon disulfide	ND		250	54	ug/Kg		12/23/15 07:20	12/23/15 12:28	1
Carbon tetrachloride	ND		250	54	ug/Kg		12/23/15 07:20	12/23/15 12:28	1
Chlorobenzene	ND		250	26	ug/Kg		12/23/15 07:20	12/23/15 12:28	1
Chlorodibromomethane	ND		250	32	ug/Kg		12/23/15 07:20	12/23/15 12:28	1
Chloroform	ND		250	50	ug/Kg		12/23/15 07:20	12/23/15 12:28	1
Chloromethane	ND		250	70	ug/Kg		12/23/15 07:20	12/23/15 12:28	1
Chloroethane	ND		250	37	ug/Kg		12/23/15 07:20	12/23/15 12:28	1
cis-1,2-Dichloroethene	ND		250	33	ug/Kg		12/23/15 07:20	12/23/15 12:28	1
cis-1,3-Dichloropropene	ND		250	36	ug/Kg		12/23/15 07:20	12/23/15 12:28	1
Dichlorobromomethane	ND		250	47	ug/Kg		12/23/15 07:20	12/23/15 12:28	1
Dichlorodifluoromethane	ND		250	32	ug/Kg		12/23/15 07:20	12/23/15 12:28	1
Ethylbenzene	ND		250	31	ug/Kg		12/23/15 07:20	12/23/15 12:28	1
1,2-Dibromoethane	ND		250	31	ug/Kg		12/23/15 07:20	12/23/15 12:28	1
Cyclohexane	ND		250	30	ug/Kg		12/23/15 07:20	12/23/15 12:28	1
Isopropylbenzene	ND		250	27	ug/Kg		12/23/15 07:20	12/23/15 12:28	1
Methyl acetate	110	J	1300	61	ug/Kg		12/23/15 07:20	12/23/15 12:28	1
Methyl tert-butyl ether	ND		250	51	ug/Kg		12/23/15 07:20	12/23/15 12:28	1
Methylcyclohexane	ND		250	28	ug/Kg		12/23/15 07:20	12/23/15 12:28	1
Methylene Chloride	ND		250	54	ug/Kg		12/23/15 07:20	12/23/15 12:28	1
Styrene	ND		250	32	ug/Kg		12/23/15 07:20	12/23/15 12:28	1
Tetrachloroethene	75	J	250	41	ug/Kg		12/23/15 07:20	12/23/15 12:28	1
Toluene	51	J	250	42	ug/Kg		12/23/15 07:20	12/23/15 12:28	1
trans-1,2-Dichloroethene	ND		250	38	ug/Kg		12/23/15 07:20	12/23/15 12:28	1
trans-1,3-Dichloropropene	ND		250	29	ug/Kg		12/23/15 07:20	12/23/15 12:28	1
Trichloroethene	57	J	250	40	ug/Kg		12/23/15 07:20	12/23/15 12:28	1
Trichlorofluoromethane	ND		250	56	ug/Kg		12/23/15 07:20	12/23/15 12:28	1
Vinyl chloride	ND		250	65	ug/Kg		12/23/15 07:20	12/23/15 12:28	1
Xylenes, Total	180	J	500	98	ug/Kg		12/23/15 07:20	12/23/15 12:28	1

TestAmerica Pittsburgh

Client Sample Results

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50868-1
SDG: LINCKLAEN, NY

Client Sample ID: CC-121615-BM-006A INTERVAL 1

Lab Sample ID: 180-50868-1

Date Collected: 12/16/15 11:30

Matrix: Solid

Date Received: 12/17/15 09:15

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		52 - 124	12/23/15 07:20	12/23/15 12:28	1
4-Bromofluorobenzene (Surr)	101		63 - 120	12/23/15 07:20	12/23/15 12:28	1
Dibromofluoromethane (Surr)	107		68 - 121	12/23/15 07:20	12/23/15 12:28	1
Toluene-d8 (Surr)	107		72 - 127	12/23/15 07:20	12/23/15 12:28	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		270	130	ug/Kg		12/24/15 13:20	12/30/15 02:46	10
PCB-1221	ND		270	200	ug/Kg		12/24/15 13:20	12/30/15 02:46	10
PCB-1232	ND		270	69	ug/Kg		12/24/15 13:20	12/30/15 02:46	10
PCB-1242	7400		270	100	ug/Kg		12/24/15 13:20	12/30/15 02:46	10
PCB-1248	ND		270	64	ug/Kg		12/24/15 13:20	12/30/15 02:46	10
PCB-1254	ND		270	100	ug/Kg		12/24/15 13:20	12/30/15 02:46	10
PCB-1260	ND		270	94	ug/Kg		12/24/15 13:20	12/30/15 02:46	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	107		45 - 135	12/24/15 13:20	12/30/15 02:46	10
Tetrachloro-m-xylene (Surr)	109		45 - 135	12/24/15 13:20	12/30/15 02:46	10
DCB Decachlorobiphenyl (Surr)	113		45 - 125	12/24/15 13:20	12/30/15 02:46	10
DCB Decachlorobiphenyl (Surr)	116		45 - 125	12/24/15 13:20	12/30/15 02:46	10

Method: Part Size Red - Particle Size Reduction Preparation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PSR sample generated	1.0				NONE			12/18/15 13:07	1

Client Sample ID: CC-121615-BM-006A INTERVAL 2

Lab Sample ID: 180-50868-2

Date Collected: 12/16/15 11:30

Matrix: Solid

Date Received: 12/17/15 09:15

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		250	51	ug/Kg		12/23/15 07:20	12/23/15 12:54	1
1,1,2,2-Tetrachloroethane	ND		250	47	ug/Kg		12/23/15 07:20	12/23/15 12:54	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		250	17	ug/Kg		12/23/15 07:20	12/23/15 12:54	1
1,1,2-Trichloroethane	ND		250	58	ug/Kg		12/23/15 07:20	12/23/15 12:54	1
1,1-Dichloroethane	ND		250	51	ug/Kg		12/23/15 07:20	12/23/15 12:54	1
1,1-Dichloroethene	ND		250	53	ug/Kg		12/23/15 07:20	12/23/15 12:54	1
1,2-Dibromo-3-Chloropropane	ND		250	18	ug/Kg		12/23/15 07:20	12/23/15 12:54	1
1,2-Dichlorobenzene	ND		250	34	ug/Kg		12/23/15 07:20	12/23/15 12:54	1
1,2-Dichloroethane	ND		250	48	ug/Kg		12/23/15 07:20	12/23/15 12:54	1
1,2-Dichloropropane	ND		250	64	ug/Kg		12/23/15 07:20	12/23/15 12:54	1
1,2,4-Trichlorobenzene	ND		250	19	ug/Kg		12/23/15 07:20	12/23/15 12:54	1
1,3-Dichlorobenzene	ND		250	25	ug/Kg		12/23/15 07:20	12/23/15 12:54	1
1,4-Dichlorobenzene	ND		250	26	ug/Kg		12/23/15 07:20	12/23/15 12:54	1
2-Butanone (MEK)	ND		250	54	ug/Kg		12/23/15 07:20	12/23/15 12:54	1
2-Hexanone	ND		250	28	ug/Kg		12/23/15 07:20	12/23/15 12:54	1
4-Methyl-2-pentanone (MIBK)	ND		250	30	ug/Kg		12/23/15 07:20	12/23/15 12:54	1
Acetone	ND *		1000	250	ug/Kg		12/23/15 07:20	12/23/15 12:54	1
Benzene	ND		250	49	ug/Kg		12/23/15 07:20	12/23/15 12:54	1
Bromoform	ND		250	53	ug/Kg		12/23/15 07:20	12/23/15 12:54	1
Bromomethane	ND		250	79	ug/Kg		12/23/15 07:20	12/23/15 12:54	1

TestAmerica Pittsburgh

Client Sample Results

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50868-1
SDG: LINCKLAEN, NY

Client Sample ID: CC-121615-BM-006A INTERVAL 2

Lab Sample ID: 180-50868-2

Date Collected: 12/16/15 11:30

Matrix: Solid

Date Received: 12/17/15 09:15

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		250	54	ug/Kg		12/23/15 07:20	12/23/15 12:54	1
Carbon tetrachloride	ND		250	54	ug/Kg		12/23/15 07:20	12/23/15 12:54	1
Chlorobenzene	ND		250	26	ug/Kg		12/23/15 07:20	12/23/15 12:54	1
Chlorodibromomethane	ND		250	32	ug/Kg		12/23/15 07:20	12/23/15 12:54	1
Chloroform	ND		250	50	ug/Kg		12/23/15 07:20	12/23/15 12:54	1
Chloromethane	ND		250	70	ug/Kg		12/23/15 07:20	12/23/15 12:54	1
Chloroethane	ND		250	37	ug/Kg		12/23/15 07:20	12/23/15 12:54	1
cis-1,2-Dichloroethene	ND		250	33	ug/Kg		12/23/15 07:20	12/23/15 12:54	1
cis-1,3-Dichloropropene	ND		250	36	ug/Kg		12/23/15 07:20	12/23/15 12:54	1
Dichlorobromomethane	ND		250	47	ug/Kg		12/23/15 07:20	12/23/15 12:54	1
Dichlorodifluoromethane	ND		250	32	ug/Kg		12/23/15 07:20	12/23/15 12:54	1
Ethylbenzene	ND		250	31	ug/Kg		12/23/15 07:20	12/23/15 12:54	1
1,2-Dibromoethane	ND		250	31	ug/Kg		12/23/15 07:20	12/23/15 12:54	1
Cyclohexane	ND		250	30	ug/Kg		12/23/15 07:20	12/23/15 12:54	1
Isopropylbenzene	ND		250	27	ug/Kg		12/23/15 07:20	12/23/15 12:54	1
Methyl acetate	ND		1200	61	ug/Kg		12/23/15 07:20	12/23/15 12:54	1
Methyl tert-butyl ether	ND		250	51	ug/Kg		12/23/15 07:20	12/23/15 12:54	1
Methylcyclohexane	ND		250	28	ug/Kg		12/23/15 07:20	12/23/15 12:54	1
Methylene Chloride	ND		250	54	ug/Kg		12/23/15 07:20	12/23/15 12:54	1
Styrene	ND		250	32	ug/Kg		12/23/15 07:20	12/23/15 12:54	1
Tetrachloroethene	ND		250	41	ug/Kg		12/23/15 07:20	12/23/15 12:54	1
Toluene	ND		250	42	ug/Kg		12/23/15 07:20	12/23/15 12:54	1
trans-1,2-Dichloroethene	ND		250	38	ug/Kg		12/23/15 07:20	12/23/15 12:54	1
trans-1,3-Dichloropropene	ND		250	29	ug/Kg		12/23/15 07:20	12/23/15 12:54	1
Trichloroethene	ND		250	40	ug/Kg		12/23/15 07:20	12/23/15 12:54	1
Trichlorofluoromethane	ND		250	56	ug/Kg		12/23/15 07:20	12/23/15 12:54	1
Vinyl chloride	ND		250	65	ug/Kg		12/23/15 07:20	12/23/15 12:54	1
Xylenes, Total	ND		500	98	ug/Kg		12/23/15 07:20	12/23/15 12:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	87		52 - 124	12/23/15 07:20	12/23/15 12:54	1
4-Bromofluorobenzene (Surr)	91		63 - 120	12/23/15 07:20	12/23/15 12:54	1
Dibromofluoromethane (Surr)	86		68 - 121	12/23/15 07:20	12/23/15 12:54	1
Toluene-d8 (Surr)	103		72 - 127	12/23/15 07:20	12/23/15 12:54	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		16	7.5	ug/Kg		12/24/15 13:20	12/30/15 03:05	1
PCB-1221	ND		16	12	ug/Kg		12/24/15 13:20	12/30/15 03:05	1
PCB-1232	ND		16	4.1	ug/Kg		12/24/15 13:20	12/30/15 03:05	1
PCB-1242	47		16	6.0	ug/Kg		12/24/15 13:20	12/30/15 03:05	1
PCB-1248	ND		16	3.8	ug/Kg		12/24/15 13:20	12/30/15 03:05	1
PCB-1254	ND		16	6.0	ug/Kg		12/24/15 13:20	12/30/15 03:05	1
PCB-1260	ND		16	5.6	ug/Kg		12/24/15 13:20	12/30/15 03:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	114		45 - 135	12/24/15 13:20	12/30/15 03:05	1
Tetrachloro-m-xylene (Surr)	122		45 - 135	12/24/15 13:20	12/30/15 03:05	1
DCB Decachlorobiphenyl (Surr)	144	X	45 - 125	12/24/15 13:20	12/30/15 03:05	1
DCB Decachlorobiphenyl (Surr)	138	X	45 - 125	12/24/15 13:20	12/30/15 03:05	1

TestAmerica Pittsburgh

Client Sample Results

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50868-1
SDG: LINCKLAEN, NY

Client Sample ID: CC-121615-BM-006A INTERVAL 2

Lab Sample ID: 180-50868-2

Date Collected: 12/16/15 11:30

Matrix: Solid

Date Received: 12/17/15 09:15

Method: Part Size Red - Particle Size Reduction Preparation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PSR sample generated	1.0				NONE			12/18/15 13:07	1

QC Sample Results

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50868-1
SDG: LINCKLAEN, NY

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 180-164513/1-A

Matrix: Solid

Analysis Batch: 164466

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 164513

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		250	51	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
1,1,2,2-Tetrachloroethane	ND		250	47	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		250	17	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
1,1,2-Trichloroethane	ND		250	58	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
1,1-Dichloroethane	ND		250	51	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
1,1-Dichloroethene	ND		250	53	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
1,2-Dibromo-3-Chloropropane	ND		250	18	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
1,2-Dichlorobenzene	ND		250	34	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
1,2-Dichloroethane	ND		250	48	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
1,2-Dichloropropane	ND		250	64	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
1,2,4-Trichlorobenzene	ND		250	19	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
1,3-Dichlorobenzene	ND		250	25	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
1,4-Dichlorobenzene	ND		250	26	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
2-Butanone (MEK)	ND		250	54	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
2-Hexanone	ND		250	28	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
4-Methyl-2-pentanone (MIBK)	ND		250	30	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Acetone	ND		1000	250	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Benzene	ND		250	49	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Bromoform	ND		250	53	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Bromomethane	ND		250	79	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Carbon disulfide	ND		250	54	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Carbon tetrachloride	ND		250	54	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Chlorobenzene	ND		250	26	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Chlorodibromomethane	ND		250	32	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Chloroform	ND		250	50	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Chloromethane	ND		250	70	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Chloroethane	ND		250	37	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
cis-1,2-Dichloroethene	ND		250	33	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
cis-1,3-Dichloropropene	ND		250	36	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Dichlorobromomethane	ND		250	47	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Dichlorodifluoromethane	ND		250	32	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Ethylbenzene	ND		250	31	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
1,2-Dibromoethane	ND		250	31	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Cyclohexane	ND		250	30	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Isopropylbenzene	ND		250	27	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Methyl acetate	ND		1300	61	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Methyl tert-butyl ether	ND		250	51	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Methylcyclohexane	ND		250	28	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Methylene Chloride	ND		250	54	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Styrene	ND		250	32	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Tetrachloroethene	ND		250	41	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Toluene	ND		250	42	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
trans-1,2-Dichloroethene	ND		250	38	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
trans-1,3-Dichloropropene	ND		250	29	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Trichloroethene	ND		250	40	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Trichlorofluoromethane	ND		250	56	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Vinyl chloride	ND		250	65	ug/Kg		12/23/15 07:22	12/23/15 11:37	1
Xylenes, Total	ND		500	98	ug/Kg		12/23/15 07:22	12/23/15 11:37	1

TestAmerica Pittsburgh

QC Sample Results

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50868-1
SDG: LINCKLAEN, NY

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	83		52 - 124	12/23/15 07:22	12/23/15 11:37	1
4-Bromofluorobenzene (Surr)	82		63 - 120	12/23/15 07:22	12/23/15 11:37	1
Dibromofluoromethane (Surr)	90		68 - 121	12/23/15 07:22	12/23/15 11:37	1
Toluene-d8 (Surr)	108		72 - 127	12/23/15 07:22	12/23/15 11:37	1

Lab Sample ID: LCS 180-164513/2-A
Matrix: Solid
Analysis Batch: 164466

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 164513

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	2000	1860		ug/Kg		93	67 - 126
1,1,2,2-Tetrachloroethane	2000	2490		ug/Kg		125	60 - 139
1,1,2-Trichloro-1,2,2-trifluoroethane	2000	2200		ug/Kg		110	55 - 130
1,1,2-Trichloroethane	2000	2050		ug/Kg		102	70 - 128
1,1-Dichloroethane	2000	1810		ug/Kg		90	66 - 124
1,1-Dichloroethene	2000	2390		ug/Kg		119	59 - 129
1,2-Dibromo-3-Chloropropane	2000	2310		ug/Kg		115	35 - 136
1,2-Dichlorobenzene	2000	2000		ug/Kg		100	71 - 124
1,2-Dichloroethane	2000	2140		ug/Kg		107	61 - 127
1,2-Dichloropropane	2000	2180		ug/Kg		109	72 - 122
1,2,4-Trichlorobenzene	2000	1900		ug/Kg		95	51 - 136
1,3-Dichlorobenzene	2000	1960		ug/Kg		98	75 - 118
1,4-Dichlorobenzene	2000	1980		ug/Kg		99	77 - 116
2-Butanone (MEK)	2000	2240		ug/Kg		112	35 - 149
2-Hexanone	2000	2830		ug/Kg		141	32 - 150
4-Methyl-2-pentanone (MIBK)	2000	2550		ug/Kg		128	44 - 148
Acetone	2000	3180 *		ug/Kg		159	20 - 150
Benzene	2000	1840		ug/Kg		92	77 - 120
Bromoform	2000	2350		ug/Kg		117	53 - 140
Bromomethane	2000	1870		ug/Kg		93	25 - 150
Carbon disulfide	2000	2380		ug/Kg		119	50 - 127
Carbon tetrachloride	2000	1870		ug/Kg		94	69 - 122
Chlorobenzene	2000	1940		ug/Kg		97	79 - 120
Chlorodibromomethane	2000	2330		ug/Kg		117	70 - 132
Chloroform	2000	1840		ug/Kg		92	72 - 120
Chloromethane	2000	1660		ug/Kg		83	44 - 131
Chloroethane	2000	1930		ug/Kg		97	22 - 150
cis-1,2-Dichloroethene	2000	1780		ug/Kg		89	80 - 118
cis-1,3-Dichloropropene	2000	1990		ug/Kg		99	73 - 120
Dichlorobromomethane	2000	2210		ug/Kg		110	70 - 125
Dichlorodifluoromethane	2000	1780		ug/Kg		89	25 - 150
Ethylbenzene	2000	1910		ug/Kg		95	78 - 125
1,2-Dibromoethane	2000	2120		ug/Kg		106	70 - 131
Cyclohexane	2000	1760		ug/Kg		88	64 - 130
Isopropylbenzene	2000	2100		ug/Kg		105	70 - 133
Methyl acetate	10000	11800		ug/Kg		118	27 - 142
Methyl tert-butyl ether	2000	2300		ug/Kg		115	48 - 132
Methylcyclohexane	2000	2130		ug/Kg		107	66 - 135
Methylene Chloride	2000	2270		ug/Kg		113	58 - 127
m-Xylene & p-Xylene	2000	1930		ug/Kg		97	75 - 126
o-Xylene	2000	1900		ug/Kg		95	83 - 127
Styrene	2000	1970		ug/Kg		99	83 - 129
Tetrachloroethene	2000	1850		ug/Kg		92	78 - 129

TestAmerica Pittsburgh

QC Sample Results

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50868-1
SDG: LINCKLAEN, NY

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 180-164513/2-A

Matrix: Solid

Analysis Batch: 164466

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 164513

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Toluene	2000	1780		ug/Kg		89	78 - 124
trans-1,2-Dichloroethene	2000	2090		ug/Kg		104	77 - 121
trans-1,3-Dichloropropene	2000	2240		ug/Kg		112	74 - 129
Trichloroethene	2000	1990		ug/Kg		99	76 - 119
Trichlorofluoromethane	2000	1720		ug/Kg		86	20 - 150
Vinyl chloride	2000	1820		ug/Kg		91	63 - 124
Xylenes, Total	4000	3830		ug/Kg		96	83 - 126

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	96		52 - 124
4-Bromofluorobenzene (Surr)	112		63 - 120
Dibromofluoromethane (Surr)	85		68 - 121
Toluene-d8 (Surr)	94		72 - 127

Lab Sample ID: LCSD 180-164513/3-A

Matrix: Solid

Analysis Batch: 164466

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 164513

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	2000	1860		ug/Kg		93	67 - 126	0	31
1,1,2,2-Tetrachloroethane	2000	2410		ug/Kg		121	60 - 139	3	24
1,1,2-Trichloro-1,2,2-trifluoroethane	2000	2230		ug/Kg		112	55 - 130	1	37
1,1,2-Trichloroethane	2000	2200		ug/Kg		110	70 - 128	7	22
1,1-Dichloroethane	2000	1750		ug/Kg		88	66 - 124	3	23
1,1-Dichloroethene	2000	2360		ug/Kg		118	59 - 129	1	25
1,2-Dibromo-3-Chloropropane	2000	2270		ug/Kg		114	35 - 136	2	40
1,2-Dichlorobenzene	2000	2040		ug/Kg		102	71 - 124	2	22
1,2-Dichloroethane	2000	2000		ug/Kg		100	61 - 127	7	23
1,2-Dichloropropane	2000	2120		ug/Kg		106	72 - 122	3	20
1,2,4-Trichlorobenzene	2000	1940		ug/Kg		97	51 - 136	2	40
1,3-Dichlorobenzene	2000	2040		ug/Kg		102	75 - 118	4	20
1,4-Dichlorobenzene	2000	2060		ug/Kg		103	77 - 116	4	20
2-Butanone (MEK)	2000	1910		ug/Kg		96	35 - 149	16	36
2-Hexanone	2000	2510		ug/Kg		125	32 - 150	12	32
4-Methyl-2-pentanone (MIBK)	2000	2460		ug/Kg		123	44 - 148	4	30
Acetone	2000	2620		ug/Kg		131	20 - 150	19	40
Benzene	2000	1890		ug/Kg		95	77 - 120	3	20
Bromoform	2000	2390		ug/Kg		119	53 - 140	2	23
Bromomethane	2000	1830		ug/Kg		92	25 - 150	2	40
Carbon disulfide	2000	2240		ug/Kg		112	50 - 127	6	23
Carbon tetrachloride	2000	1880		ug/Kg		94	69 - 122	0	22
Chlorobenzene	2000	1930		ug/Kg		97	79 - 120	0	20
Chlorodibromomethane	2000	2430		ug/Kg		121	70 - 132	4	20
Chloroform	2000	1790		ug/Kg		90	72 - 120	3	25
Chloromethane	2000	1630		ug/Kg		82	44 - 131	2	27
Chloroethane	2000	1760		ug/Kg		88	22 - 150	9	40
cis-1,2-Dichloroethene	2000	1810		ug/Kg		90	80 - 118	1	20

TestAmerica Pittsburgh

QC Sample Results

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50868-1
SDG: LINCKLAEN, NY

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 180-164513/3-A

Matrix: Solid

Analysis Batch: 164466

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 164513

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
cis-1,3-Dichloropropene	2000	2090		ug/Kg		104	73 - 120	5	20
Dichlorobromomethane	2000	2130		ug/Kg		106	70 - 125	4	21
Dichlorodifluoromethane	2000	1750		ug/Kg		88	25 - 150	2	34
Ethylbenzene	2000	2120		ug/Kg		106	78 - 125	11	21
1,2-Dibromoethane	2000	2310		ug/Kg		115	70 - 131	8	20
Cyclohexane	2000	1890		ug/Kg		95	64 - 130	7	21
Isopropylbenzene	2000	2040		ug/Kg		102	70 - 133	3	22
Methyl acetate	10000	10500		ug/Kg		105	27 - 142	12	40
Methyl tert-butyl ether	2000	1880		ug/Kg		94	48 - 132	20	36
Methylcyclohexane	2000	2040		ug/Kg		102	66 - 135	4	23
Methylene Chloride	2000	1840		ug/Kg		92	58 - 127	21	28
m-Xylene & p-Xylene	2000	2110		ug/Kg		105	75 - 126	9	21
o-Xylene	2000	2150		ug/Kg		107	83 - 127	12	20
Styrene	2000	2180		ug/Kg		109	83 - 129	10	20
Tetrachloroethene	2000	1920		ug/Kg		96	78 - 129	4	20
Toluene	2000	1840		ug/Kg		92	78 - 124	4	21
trans-1,2-Dichloroethene	2000	1710		ug/Kg		85	77 - 121	20	20
trans-1,3-Dichloropropene	2000	2400		ug/Kg		120	74 - 129	6	20
Trichloroethene	2000	1980		ug/Kg		99	76 - 119	0	21
Trichlorofluoromethane	2000	2320		ug/Kg		116	20 - 150	30	40
Vinyl chloride	2000	1790		ug/Kg		90	63 - 124	2	27
Xylenes, Total	4000	4260		ug/Kg		107	83 - 126	11	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		52 - 124
4-Bromofluorobenzene (Surr)	107		63 - 120
Dibromofluoromethane (Surr)	89		68 - 121
Toluene-d8 (Surr)	96		72 - 127

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 180-164650/1-A

Matrix: Solid

Analysis Batch: 164785

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 164650

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		17	7.6	ug/Kg		12/24/15 13:19	12/29/15 18:20	1
PCB-1221	ND		17	12	ug/Kg		12/24/15 13:19	12/29/15 18:20	1
PCB-1232	ND		17	4.2	ug/Kg		12/24/15 13:19	12/29/15 18:20	1
PCB-1242	ND		17	6.2	ug/Kg		12/24/15 13:19	12/29/15 18:20	1
PCB-1248	ND		17	3.9	ug/Kg		12/24/15 13:19	12/29/15 18:20	1
PCB-1254	ND		17	6.2	ug/Kg		12/24/15 13:19	12/29/15 18:20	1
PCB-1260	ND		17	5.7	ug/Kg		12/24/15 13:19	12/29/15 18:20	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	100		45 - 135	12/24/15 13:19	12/29/15 18:20	1
Tetrachloro-m-xylene (Surr)	97		45 - 135	12/24/15 13:19	12/29/15 18:20	1

TestAmerica Pittsburgh

QC Sample Results

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50868-1
SDG: LINCKLAEN, NY

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: MB 180-164650/1-A

Matrix: Solid

Analysis Batch: 164785

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 164650

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	95		45 - 125	12/24/15 13:19	12/29/15 18:20	1
DCB Decachlorobiphenyl (Surr)	93		45 - 125	12/24/15 13:19	12/29/15 18:20	1

Lab Sample ID: LCS 180-164650/2-A

Matrix: Solid

Analysis Batch: 164785

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 164650

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
PCB-1016	1330	1180		ug/Kg		88	55 - 135
PCB-1260	1330	1120		ug/Kg		84	50 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene (Surr)	109		45 - 135
Tetrachloro-m-xylene (Surr)	104		45 - 135
DCB Decachlorobiphenyl (Surr)	99		45 - 125
DCB Decachlorobiphenyl (Surr)	105		45 - 125

QC Association Summary

Client: GHD Services Inc.
Project/Site: 002077-60 Solvent Savers

TestAmerica Job ID: 180-50868-1
SDG: LINCKLAEN, NY

GC/MS VOA

Analysis Batch: 164466

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-50868-1	CC-121615-BM-006A INTERVAL 1	Total/NA	Solid	8260C	164513
180-50868-2	CC-121615-BM-006A INTERVAL 2	Total/NA	Solid	8260C	164513
LCS 180-164513/2-A	Lab Control Sample	Total/NA	Solid	8260C	164513
LCSD 180-164513/3-A	Lab Control Sample Dup	Total/NA	Solid	8260C	164513
MB 180-164513/1-A	Method Blank	Total/NA	Solid	8260C	164513

Prep Batch: 164513

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-50868-1	CC-121615-BM-006A INTERVAL 1	Total/NA	Solid	5030C	
180-50868-2	CC-121615-BM-006A INTERVAL 2	Total/NA	Solid	5030C	
LCS 180-164513/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCSD 180-164513/3-A	Lab Control Sample Dup	Total/NA	Solid	5030C	
MB 180-164513/1-A	Method Blank	Total/NA	Solid	5030C	

GC Semi VOA

Prep Batch: 164650

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-50868-1	CC-121615-BM-006A INTERVAL 1	Total/NA	Solid	3541	
180-50868-2	CC-121615-BM-006A INTERVAL 2	Total/NA	Solid	3541	
LCS 180-164650/2-A	Lab Control Sample	Total/NA	Solid	3541	
MB 180-164650/1-A	Method Blank	Total/NA	Solid	3541	

Analysis Batch: 164785

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-50868-1	CC-121615-BM-006A INTERVAL 1	Total/NA	Solid	8082A	164650
180-50868-2	CC-121615-BM-006A INTERVAL 2	Total/NA	Solid	8082A	164650
LCS 180-164650/2-A	Lab Control Sample	Total/NA	Solid	8082A	164650
MB 180-164650/1-A	Method Blank	Total/NA	Solid	8082A	164650

Organic Prep

Analysis Batch: 211548

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-50868-1	CC-121615-BM-006A INTERVAL 1	Total/NA	Solid	Part Size Red	
180-50868-2	CC-121615-BM-006A INTERVAL 2	Total/NA	Solid	Part Size Red	



COC NO.: 48877

PAGE 1 OF 1

(See Reverse Side for Instructions)

Address: _____

Phone: _____ Fax: _____

Project No/ Phase/Task Code: 062077-60				Laboratory Name: TEST AMERICA								Lab Location: PITTSBURGH, PA				SSOW ID:					
Project Name: SOLVENT SAVERS				Lab Contact:								Lab Quote No:				Cooler No: 253850					
Project Location: LINERLAEN, NY				SAMPLE TYPE		CONTAINER QUANTITY & PRESERVATION							ANALYSIS REQUESTED (See Back of GOC for Definitions)							Carrier: FEDEX	
Chemistry Contact: PAUL MCMAHON				Matrix Code (see back of COC)	Grab (g) or Comp (C)	Unpreserved	Hydrochloric Acid (HCl)	Nitric Acid (HNO ₃)	Sulfuric Acid (H ₂ SO ₄)	Sodium Hydroxide (NaOH)	Methanol/Water (Soil VOC)	EnCores 3x5-g, 1x25-g	Other:	Total Containers/Sample	PCB	VOC	PH	METALS	MS/MSD Request	Airbill No: 8682 1848 5565	
Sampler(s): BRYAN MALONE/JASON DAVENPORT																				Date Shipped: 12-16-15	
SAMPLE IDENTIFICATION <small>(Containers for each sample may be combined on one line)</small>		DATE <small>(mm/dd/yy)</small>	TIME <small>(hr:mm)</small>	COMMENTS/ SPECIAL INSTRUCTIONS:																	
1	PA-121615-BM-0006	12/16/15	11:15	PAINT	1									1	X	X					
2	CC-121615-BM-006A	↓	11:30	CC	1									1	X	X					
3	CC-121615-BM-006B		11:30	CC	1									1	X	X					
4	W-121615-BM-0001		13:00	WG	3	3	1							7	X	X	X	X			
5	W-121615-BM-0002		13:10	WG	2	3								5	X	X					
6	W-121615-BM-0003	↓	13:30	WG	3	3	1							7	X	X	X	X		HOLD	
7																					
8																					
9																					
10																					
11																					
12																					
13																					
14																					
15																					
TAT Required in business days (use separate COCs for different TATs):				Total Number of Containers: 22				Notes/ Special Requirements:													
<input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Days <input type="checkbox"/> 3 Days <input type="checkbox"/> 1 Week <input type="checkbox"/> 2 Week <input type="checkbox"/> Other				All Samples in Cooler must be on COC																	
RELINQUISHED BY		COMPANY		DATE		TIME		RECEIVED BY		COMPANY		DATE		TIME							
1. BRYAN MALONE		CRA (GHD)		12-16-15		18:30		1. [Signature]		TAG		12/17/15		9:15							
2.								2.													
3.								3.													

THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT—ALL FIELDS MUST BE COMPLETED ACCURATELY

Distribution: WHITE — Fully Executed Copy (CRA) YELLOW — Receiving Laboratory Copy PINK — Shipper GOLDENROD — Sampling Crew CRA Form: COC-10B (20110804)

Age Group	Number of People
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13

ORIGIN ID:SYRA (716) 609-0384
GHD SERVICES INC.

2055 NIAGARA FALLS BLVD STE 3

NIAGARA FALLS, NY 143045702
UNITED STATES US

SHIP DATE: 16DEC15
ACTWGT: 55.90 LB
CAD: 7POS1821
DIMS: 21x17x14 IN
BILL SENDER

TO **SAMOLING RECEIVING
TEST AMERICA
301 ALPHA DR**

PITTSBURGH PA 15238

(412) 983-7058

REF:

INVT
P01

DEPT:



Uncorrected temp
Thermometer ID

72.4°C

CF 0 Initials AB

PT-WI-SR-001 effective 7/26/13

**FedEx
Express**



5565

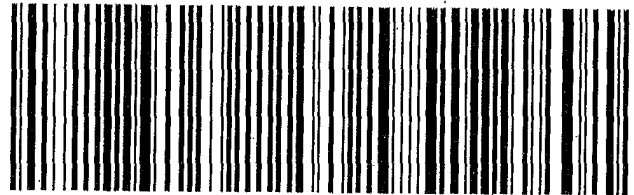
TRK# 8682 1848 5565
0215

**THU - 17 DEC 10:30A
PRIORITY OVERNIGHT**

NA AGCA

15238

PA-US PIT



180-50868 Waybill

Floor/Suite/Room

702

Suite/Room

30

4

Does this shipment contain dangerous goods?

One box must be checked.



No



Yes

As per attached
Shipper's Declaration



Yes

Shipper's Declaration
not required.



Dry Ice

Dry Ice, 9, UN 1845

x

kg

☐ Cargo Aircraft Only

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging.



7 Payment

Bill to:

Enter FedEx Acct. No. or Credit Card No. below.

Obtain Recip
Acct. No.



Sender

Acct. No. in Section
1 will be billed.



Recipient



Third Party



Credit Card



Cash/Check



Total Packages



Total Weight



Credit Card Auth.

Our liability is limited to \$100 unless you declare a higher value. See the current FedEx Service Guide for details.

8 Residential Delivery Signature Options

If you require a signature, check Direct or Indirect.



No Signature
Required

Package may be left
without obtaining a
signature for delivery.



Direct Signature

Someone at recipient's
address may sign for
delivery. Fee applies.



Indirect Signature

If no one is available at
recipient's address, someone
at a neighboring address may
sign for delivery. Fee applies.

519

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Align Open End of FedEx Pouch Here

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 180-50868-1
SDG Number: LINCKLAEN, NY

Login Number: 50868

List Number: 1

Creator: Kovitch, Christina M

List Source: TestAmerica Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Attachment B
NYSDEC Contained-in Determination/
CWM Disposal Approval

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Remedial Bureau A

625 Broadway, 12th Floor, Albany, NY 12233-7015

P: (518) 402-9625 | F: (518) 402-9627

www.dec.ny.gov

February 8, 2016

Mr. Ed Roberts, P. Eng. (eroberts@ghd.com)

GHD

651 Colby Drive

Waterloo, ON N2V 1C2

Re Request for Contained-In Determination
Monitoring Well Purge Water, Decontamination Water, and
Water from under the Concrete Pad Liner
Sampled on December 16, 2015
Solvent Savers Site, Lincklaen, New York (Site # HW709002)

Dear Mr. Robert:

We have completed our review of the water sampling data from 6 overpacked drums (Field Sample ID: W-121615-BM-0003 and W-121615-BM-0001) submitted with your February 1, 2016 request for a "contained in" determination for the referenced project.

Approximately 280 gallons of water (purged water, decon water and water collected from below the HDPE liner covering concrete pad) that has been generated during recent remedial action activities at the Solvent Savers Site. Concentrations detected for individual VOCs were all significantly less than their current "contained-in" groundwater action levels and Land Disposal Restriction concentrations. Most of the individual VOCs were not detected above the detection limit. No hazardous constituents exhibited a hazardous waste characteristic by exceeding their TCLP regulatory level.

Concentrations trichloroethene (TCE), tetrachloroethene (PCE) and PCBs were below their "contained-in" groundwater action levels and Land Disposal Restriction concentrations. Therefore, the water, currently stored in six (6) overpacked drums at the Site, does not have to be managed as hazardous waste and can be transported off-site to the CWM Chemical Services, LLC, Model City, NY, for proper off-site disposal.

Should you have any questions regarding the content of this letter, please do not hesitate to contact me at (518) 402-9622 or email me at henry.wilkie@dec.ny.gov.

Sincerely,



Henry Wilkie
Environmental Engineer 1
Remedial Section B

ecc: J. LaClair, NYSDEC
L.Wong, EPA (wong.lisa@epa.gov)
R. Sutch, de maximis, inc. (Rod@demaximis.com)
M. Tomka, GHD (mtonka@ghd.com)

CONFIRMATION LETTER

February 12, 2016

ED ROBERTS
GHD SERVICES INC.
2055 NIAGARA FALLS BLVD STE 3
NIAGARA FALLS, NY 14304-5702

Re: Confirmation Number 5659251

Attention: ED ROBERTS

We are pleased to confirm CWM's approval of your waste material as described below. The attached profile for the waste materials was prepared by CWM based upon information provided by you. It is important that no changes be made to the profile without CWM's consent. If the profile meets with your approval, please call 1-716-286-1550 to schedule shipment of your waste materials.

CWM Profile Number: 102556NY MDC

Approved Mgmt. Facility: CWM MODEL CITY FACILITY
or another CWM or CWM approved facility

Waste Name: NON HAZ WATER

Disposal Method: Wastewater Treatment at Model City.

Disposal Price:

- \$185.00 per 55 gal drum (no oil layer or oil sheen & up to 3% solids)
- \$225.00 per 85 gal overpack
- No additional landfill fees apply

Taxes:

- 8% Chenango County Sales Tax on the disposal, transportation & fuel surcharge unless a NYS Sales Tax Exemption Certificate is provided by GHD.

Transportation Price:

- \$1350.00 per dedicated box van plus fuel surcharge
- A fuel surcharge will apply based on the weekly national average diesel fuel price, currently 13%

Demurrage:

- \$85.00 demurrage per hour after the first free hour of loading time.

February 12, 2016

Re: Confirmation Number 5659251, CWMI Profile Number 102556NY MDC

Pricing Conditions:

- Miscellaneous Charges:
- Pallets= 4 x the drum price
- Leaking Bulk Loads/Drums= \$200.00 per load or drum
- Surcharge for drums without profile marked on the drum \$20/each.
- Discrepant drum charge \$3/drum per day after 14 days from notification.
- Drum resample fee - \$25/drum.

Profile Expiration Date: 2/10/17

Special Conditions:

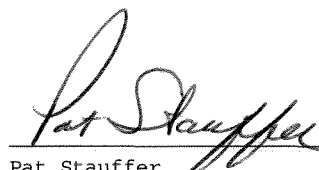
- Drums must contain < 3% (1") residue after pumping.
- Drums must not contain any complexed metals.
- Waste profile sheet numbers must appear on manifest and drums.
- No demurrage will be paid by CWM Chemical Services, Inc. for delays at Model City for on-site acceptance procedures when generator/customer arranges their own transportation.
- Drums must be RCRA empty after all free liquid is pumped off. The waste must be pumpable.
- Drummed waste must be marked with the profile number and bear only the appropriate labeling under RCRA and/or DOT provisions.
- CWM Chemical Services, L.L.C. (CWM) has all the necessary permits and licenses and is authorized for the management of the waste that has been characterized and identified by this profile.
- Must be in DOT specification packaging authorized for use with this waste.

Applicable state and local taxes are not included in these disposal prices. All wastes are priced as profiled, invoiced as actually received. Invoices shall be paid no later than thirty (30) days from the date of receipt. All terms are governed by the Agreement previously executed between our companies. The prices quoted above are subject to change by CWM upon thirty (30) days' prior written notice to you unless otherwise specifically provided or per the terms of our Agreement. If we have not previously concluded a Service Agreement with your company, one is enclosed for your convenience. Please sign and return it to us as soon as possible. Also, if 'Signature on File' does not appear on the signature line of the Waste Profile Sheet, please sign and return it before scheduling your material.

February 12, 2016

Re: Confirmation Number 5659251, CWMI Profile Number 102556NY MDC

If you have any questions or would like to make changes to the profile, please contact your representative. Thank you for this opportunity to be of service.



Pat Stauffer

ED ROBERTS

GHD SERVICES INC.

Chemical Waste Management, Inc

GENERATOR'S WASTE PROFILE SHEET

MDC 102556NY

() Check here if this is a Recertification

LOCATION OF ORIGINAL CWM MODEL CITY FACILITY

A/B WASTE GENERATOR AND CUSTOMER INFORMATION

1. Generator Name: SOLVENT SAVERS Generator USEPA ID: NYD986904191

2. Generator Address: UNION VALLEY RD Billing Address: GHP SERVICES INC.
() Same
2055 NIAGARA FALLS BLVD STE 3

LINCKLAEN NY 13052

3. Technical Contact/Phone: _____
NIAGARA FALLS NY 14304-5702

4. Alternate Billing Contact/Phone: _____

C. WASTE STREAM INFORMATION

1a Process Generating Waste: WELL PURGE WATER AND DECON WATER ALONG WITH COLLECTED STORMWATER BELOW HDPE LINER COVERING CONCRE

1b Waste Name: NON HAZ WATER

1c Color: CLEAR TO LIGHT BROWN

1d Strong Odor: () ; describe: _____

1e Physical State @ 70F: Solid () Liquid (X) Both () Gas () If Single Layer (X) Multilayer ()

1g Free liq. range: 97 to 100% Gravity: _____ to _____ Viscosity: _____ BTU/lb: _____ to _____

1h pH: Range 5.0 to 11.0 or Not applicable ()

1i Liquid Flash Point: < 73F () 73-99F () 100-139F () 140-199F () >= 200F () N.A. () Closed Cup (X) Open Cup ()
None (X)

2a Is this a USEPA hazardous waste (40 CFR Part 261)? Yes () No (X)

2a Identify ALL USEPA listed and characteristic waste code numbers (D,F,K,P,U): _____

State Waste Codes: _____

2b Do underlying hazardous constituents (UHCs) apply (40CFR268.48)? ()

2d Is the waste predominantly debris subject to the Alternate Debris Standards (40 CFR268.45)? ()

2e Is the waste predominantly soil subject to the Alternate Soil Treatment Standards (40 CFR268.49)? ()

2f Does the waste contain asbestos? () If yes, is waste Friable () Non-Friable () or Both ()

2g Waste contains benzene in concentrations _____ ppm. NESHAP? ()

2h Is waste remediation from a major source of Haz Air Pollutants (Site Remediation NESHAP, 40CFR 63 subpart GGGGG)? (N)

If yes, does the waste contain <500 ppmw VOHAPs at the point of determination? ()

2i Waste contains PCBs (< >) _____ ppm, regulated by 40 CFR 761? ()

Are PCBs regulated under SIRS Mega Rule (40 CFR 761.61(a))? ()

2j CHEMICAL COMPOSITION: List ALL constituents (incl. halogenated organics) present in any concentration and forward analysis

Constituents	Range	Unit Description
WATER	97 to 100	%
INERTS	to	
SUSPENDED SOLIDS	0 to 3	%
1,1,1-TRICHLOROETHANE	21 to 21	UG/L
CIS-1,2-DICHLOROETHENE	0 to 71	UG/L
CYCLOHEXANE	0 to 99	UG/L
TOTAL COMPOSITION (MUST EQUAL OR EXCEED 100%):	103.000000	

See attach2

2k Is the waste: Pyrophoric () Water-Reactive () Shock Sensitive () Oxidizer () Carcinogen () Infectious ()
Other _____

2l Is waste Group 1 wastewater or residual under Hazardous Organic NESHAP? ()

2m Does the waste contain radioactive material? (N) Regulated by NRC? () Is radioactive waste NORM? ()

2n Is the waste a CERCLA (40 CFR 300, Appendix B) or state mandated cleanup? (N)

3a Check ONE: This is a Wastewater Nonwastewater.

3e Physical Appearance: WATER

3f If waste subject to the land ban & meets treatment standards, check here: () & supply analytical results where applicable.

3g Tracking Number: 5659251

D. DOT Information and Shipping Volume

D1 Anticipated Annual Volume: 6 Units: 55 GALLON DRUM Shipping Frequency: ONE TIMED2 PACKAGING: Bulk Solid () Bulk Liquid () Drum (X) Type/Size: 55 GALLON DRUM Other _____

GENERATOR'S CERTIFICATION

I hereby certify that all information submitted in this and all attached documents contains true and accurate descriptions of this waste. Any sample submitted is representative as defined in 40 CFR 261 - Appendix I or by using an equivalent method. All relevant information regarding known or suspected hazards in the possession of the generator has been disclosed. I authorize CWM to obtain a sample from any waste shipment for purposes of recertification.

Signature on original profile 102556NY

Signature

ED ROBERTS

Name and Title

2/08/16

Date

Identify ALL Characteristic and Listed USEPA hazardous waste numbers that apply (as defined by 40 CFR 261). For each waste number, identify the subcategory (as applicable, check none, or write in the description from 40 CFR 268.41, 268.42, and 268.43).

REF #	A. US EPA HAZARDOUS WASTE CODE(S)	B. SUBCATEGORY Enter the subcategory description. If not applicable, simply check none	C. APPLICABLE TREATMENT STANDARDS			D. HOW MUST THE WASTE BE MANAGED? Enter letter from below
			PERFORMANCE- BASED: Check as applicable	SPECIFIED TECHNOLOGY; If applicable enter the 40 CFR 268.42 table 1 treatment code(s)		
		DESCRIPTION	NONE	268.41(a)	268.43(a)	268.42
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						

Management under the land disposal restrictions:

A. RESTRICTED WASTE REQUIRES TREATMENT

A.1 RESTRICTED WASTE REQUIRES TREATMENT TO ALTERNATE SOIL STANDARDS

B.1 RESTRICTED WASTE TREATED TO 268.40 STANDARDS

B.3 GOOD FAITH ANALYTICAL CERTIFICATION FOR INCINERATED ORGANICS

B.4 DECHARACTERIZED WASTE REQUIRES TREATMENT FOR UHCS

B.5 RESTRICTED WASTES TREATED TO ALTERNATE SOIL STANDARD

B.6 RESTRICTED WASTES TREATED TO ALTERNATE DEBRIS STANDARD

C. RESTRICTED WASTE SUBJECT TO A VARIANCE

D. RESTRICTED WASTE CAN BE LAND DISPOSED WITHOUT FURTHER TREATMENT

E. NOT CURRENTLY SUBJECT TO LAND DISPOSAL RESTRICTIONS

E. TRANSPORTATION INFORMATION

a. Is this a DOT Hazardous Material? Yes _ No Xb. Proper Shipping Name. : NON DOT REGULATED MATERIAL

and Additional Description if required: _____

c. DOT Regulations: _____ Hazard Class: _____ I.D. _____ Packing Group: _____
2nd Haz Cls : _____

c. CERCLA Reportable Quantity (RQ) and units (Lb, Kg): _____

e. Non-Bulk code _____ Bulk code _____

f. Special Provisions _____

g. Labels Required _____

F. SPECIAL HANDLING INFORMATION

_ Material Safety Data Sheets Attached

G. OTHER INFORMATION

H. CHEMICAL WASTE MANAGEMENT CERTIFICATION

Chemical Waste Management, Inc. has all the necessary permits and licenses for the waste that has been characterized and identified by this approved profile.

ATTACHMENT 2

CHEMICAL COMPOSITION: Additional constituents NOT included on page 1 of the Waste Profile
Constituents

Constituents	Range	Unit Description
ACETONE	0 to 530	UG/L
METHYLENE CHLORIDE	75 to 190	UG/L
TRICHLOROETHENE	14 to 19	UG/L
PCB	0 to 0.75	UG/L
ARSENIC	0 to 18	UG/L
CHROMIUM	0 to 40	UG/L
COPPER	0 to 40	UG/L
VANADIUM	0 to 250	UG/L
ZINC (NOT FUME OR DUST)	130 to 630	UG/L

Attachment C

Geomembrane Trial Seam Log

CHENANGO CONTRACTING, INC.

29 ARBUTUS RD, JOHNSON CITY, NY 13790

TEL. (607) 729-8500 FAX (607) 729-2415

GEOMEMBRANE TRIAL SEAM LOG

PROJECT NAME:

PROJECT NUMBER:

QC REP.:

MATERIAL:

Solvent Savers

	SMOOTH (ppi)		TEXTURED (ppi)	
	PEEL	SHEAR	PEEL	SHEAR
FUSION (min.)				
EXTRUSION (min.)				

[illegible]

Attachment D

Sealed Concrete Pad Maintenance Photo Log



1 – December 16, 2015: Collecting paint samples from Sample Location 6



2 – December 16, 2015: Vacuum testing HDPE liner repair at Sample Location 3



3 – December 16, 2015: Concrete core drilling at Sample Location 6



4 – December 16, 2015: Removal of bollards



5 – December 16, 2015: Removal of water beneath HDPE cover in sump



6 - December 16, 2015: Sample Location 1
Northwest quadrant of pad



7 - December 16, 2015: Sample Location 2
Center of pad



8 – December 16, 2015: Sample Location 3
Northeast quadrant of pad



9 - December 16, 2015: Sample Location 4
Southeast quadrant of pad



10 - December 16, 2015: Sample Location 5
Southwest quadrant of pad



11 - December 16, 2015: Sample Location 6
Sump base (see also additional vertical repair used to remove water below sump)



12 - December 16, 2015: Bollards removed



13 – December 16, 2015: Bollards removed, sump grate reinstalled



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EXECUTIVE NARRATIVE

Case No. : 2077-60_SOLV-SAVE

Site: Solvent Savers

Number of Samples: 5 (Building material), 2 (Water)

Analysis: VOA, PCB

SDG No.: 180-50813-1

Laboratory: TestAmerica Pittsburgh

Sampling dates: 12/15/2015

Validation SOP: HW-24 (Rev 4) and SW-846 Method
8260C, HW-37A (Rev 0) and
SW-846 Method 8082A

QAPP: Not available.

SUMMARY OF DEFINITIONS:

Critical: Results have an unacceptable level of uncertainty and should not be used for making decisions.
Data have been qualified "R" rejected.

Major: A level of uncertainty exists that may not meet the data quality objectives for the project. A bias is likely to be present in the results. Data has been qualified "J" estimated. "J+" and "J-" represent likely direction of the bias.

Minor: The level of uncertainty is acceptable. No significant bias in the data was observed.

Critical Findings:

None.

Major Findings:

VOA: All the associated samples have analytes that have been qualified "J", "J+" or "J-".

PCB: Samples PA-121515-BM-0001, PA-121515-BM-0002, PA-121515-BM-0003, PA-121515-BM-0004 and PA-121515-BM-0005 have analytes that have been qualified "J", "J+" or "J-".

Minor Findings:

None.

COMMENTS: None.

Reviewer Name(s): Raxa J. Shelley

Approver's Signature:

Date: 08/08/17

Name: Russell Arnone

Affiliation: USEPA/R2/HWSB/HWSS



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Data Qualifier Definitions (National Functional Guidelines)			
Qualifier Symbol	Explanation		
	INORGANICS	ORGANICS	CHLORINATED DIOXIN/FURAN
U	The analyte was analyzed for, but was not detected above the level of the reported quantitation limit.	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method	The analyte was analyzed for but not detected. The value preceding the "U" may represent the adjusted Contract Required Quantitation Limit (see DLM02.X, Exhibit D, Section 1.2 and Table 2), or the sample specific estimated detection limit (EDL, see Method 8290A, Section 11.9.5).
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL).	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to an issue with the quality of the data generated because certain QC criteria were not met, or the concentration of the analyte was below the adjusted CRQL).
J+	The result is an estimated quantity, but the result may be biased high.	The result is an estimated quantity, but the result may be biased high.	
J-	The result is an estimated quantity, but the result may be biased low.	The result is an estimated quantity, but the result may be biased low.	
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.	The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.	The analyte was not detected (see definition of "U" flag, above). The reported value should be considered approximate.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
N		The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification".	
NJ		The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	
C		This qualifier applies to pesticide and Aroclor results when the identification has been confirmed by Gas Chromatograph/Mass Spectrometer (GC/MS).	
X		This qualifier applies to pesticide and Aroclor results when GC/MS analysis was attempted but was unsuccessful.	



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DATA ASSESSMENT

ANALYSIS: VOA

The SOP HW-24 (Revision 4) September 2014, USEPA Region II for the evaluation of Volatile organic data generated through Gas Chromatography/Mass Spectrometry SW-846 Method 8260B and 8260C has been applied.

1. HOLDING TIME:

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Those analytes detected in the samples whose holding time has been exceeded will be qualified as estimated, "J". The non-detects (sample quantitation limits) will be flagged as estimated, "J", or unusable, "R", if the holding times are grossly exceeded. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

2. DEUTERATED MONITORING COMPOUNDS (DMC's)

All samples are spiked with DMC compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. If the measured DMC recovery concentrations were outside contract specifications, qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

3. MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD):

MS/MSD data are generated to determine the long-term precision and accuracy of the analytical method in various matrices. The MS/MSD data may be used in conjunction with other QC criteria for additional qualification of data. Qualifications were applied to the samples and analytes as shown below.

Not applicable.

4. BLANK CONTAMINATION:

Quality assurance (QA) blanks, i.e., method, trip, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Trip blanks measure cross-contamination of samples during shipment. Field and rinse blanks measure cross-contamination of samples during field operations. Depending on the amount of contamination present in the QA blanks, the analytes are qualified as non-detects, "U". Qualifications were applied to the samples and analytes as shown below.

A) Method blank contamination:



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No problems were found for this criterion.

B) Field or rinse blank contamination:

No problems were found for this criterion.

C) Trip blank contamination for VOA aqueous samples:

No problems were found for this criterion.

D) Storage Blank associated with VOA samples only:

Not applicable.

E) Tentatively Identified Compounds:

Tentatively Identified Compounds (TICs) for VOA organic fractions are not validated.

5. MASS SPECTROMETER TUNING:

Tuning and performance criteria are established to ensure adequate mass resolution, proper identification of compounds and to some degree, sufficient instrument sensitivity. These criteria are not sample specific. Instrument performance is determined using standard materials. Therefore, these criteria should be met in all circumstances. The tuning standard for volatile organics is (BFB) Bromofluorobenzene. If the mass calibration is in error, all associated data will be classified as unusable "R". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

6. CALIBRATION:

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration checks document that the instrument is giving satisfactory daily performance.

A) Response Factor GC/MS:

The response factor measures the instrument's response to specific chemical compounds. All analytes for initial and continuing calibration should meet the minimum RRF criteria as listed in Table 4 of SOP HW 24 (Rev 4). If RRF is less than minimum RRF as specified in Table 4 for all target analytes, use professional judgment and all detects in the sample will be qualified as "J" or "R". All non-detects for that compound will be rejected "R". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

B) Percent Relative Standard Deviation (%RSD) and Percent Difference (%D):

Percent RSD is calculated from the initial calibration and is used to indicate the stability of the specific compound response factor over increasing concentration. Percent D compares



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the response factor of the continuing calibration check to the mean response factor (RRF) from the initial calibration. Percent D is a measure of the instrument's daily performance.

Percent RSD must be < 20% for all target analytes. For the opening or closing CCV %D must be within the inclusive opening or closing maximum %D limits as listed in Table 5 of SOP HW 24 (Rev 4) for all Target compounds. A value outside of these limits indicates potential detection and quantitation errors. For these reasons, all positive results are flagged as estimated, "J" and Non-detects are flagged "UJ" for %D values outside criteria only. If %RSD exceeds QC criteria, detects may be qualified as "J" and use professional judgment to qualify non-detects. Qualifications were applied to the samples and analytes as shown below.

The following samples are associated with an opening or closing CCV percent difference (%D) outside criteria. Detected compounds are qualified J. Non-detected compounds are qualified UJ.

Acetone

Carbon disulfide

Methylene Chloride

Dichlorobromomethane

4-Methyl-2-pentanone

2-Hexanone

Chlorodibromomethane

Bromoform

1,2-Dibromo-3-chloropropane

RB-121515-BM-0001, TRIP BLANK, MB 180-164017/7, LCS 180-164017/4, LCSD 180-164017/5

Acetone

2-Hexanone

PA-121515-BM-0001, PA-121515-BM-0002, PA-121515-BM-0003, PA-121515-BM-0004, MB 180-164343/1-A, LCS 180-164343/2-A

1,1-Dichloroethene

Acetone

Toluene

2-Hexanone

1,2-Dibromo-3-chloropropane

PA-121515-BM-0005, MB 180-164513/1-A, LCS 180-164513/2-A, LCSD 180-164513/3-A

7. INTERNAL STANDARDS PERFORMANCE GC/MS:

Internal standards (IS) performance criteria ensure that the GC/MS sensitivity and response are stable during every experimental run. The internal standard area count must be in the range of 50% - 200 % of the associated continuing calibration internal standard area. The retention time of the internal standards must not vary more than 30 seconds from the associated continuing calibration standard. If the area count is greater than 200%, all positive results quantitated using that IS are qualified as estimated "J-", and non-detects are not qualified. If the area count is less than 50% of the associated standard, all positive results for compounds quantitated with that IS are qualified as estimated "J+" and all non-detects are qualified "R".

If an internal standard retention time varies by more than 30 seconds, the reviewer will use professional judgment to determine either partial or total rejection of the data for that sample fraction. Qualifications were applied to the samples and analytes as shown below.



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No problems were found for this criterion.

8. FIELD DUPLICATES:

Not applicable.

9. COMPOUND IDENTIFICATION:

Target compounds are identified on the GC/MS by using the analyte's relative retention time (RRT) and by comparison to the ion spectra obtained from known standards. For the results to be a positive hit, the sample peak must be within a window of 0.06 RRT units of the standard compound and have ion spectra which has a ratio of the primary and secondary m/z intensities within 20% of that in the standard compound. For the tentatively identified compounds (TIC) the ion spectra must match accurately. In the cases where there is not an adequate ion spectrum match, the laboratory may have provided false positive identifications. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

10. CONTRACT PROBLEMS NON-COMPLIANCE:

None.

11. FIELD DOCUMENTATION:

No problems were identified.

12. OTHER PROBLEMS:

The laboratory analyzed only opening CCV and did not analyzed closing CCV. However, the associated samples were analyzed within 12 hour clock.

LABORATORY CONTROL SAMPLE/LABORATORY CONTROL SAMPLE DUPLICATE (LCS/LCSD):

The following samples have LCS/LCSD compound recovery greater than the upper acceptance limit. Detected compounds are qualified J. Non-detected compounds are not qualified.

Chlorodibromomethane

Dichlorobromomethane

RB-121515-BM-0001, TRIP BLANK

Acetone

PA-121515-BM-0005

The relative percent difference (RPD) between the following LCS/LCSD recoveries is outside criteria. Detected compounds are qualified J. Non-detected compounds are not qualified.

Trichlorofluoromethane

RB-121515-BM-0001, TRIP BLANK

13. DILUTIONS, RE-EXTRACTIONS & REANALYSIS:



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Samples may be re-analyzed for dilution, re-extraction and for other QC reasons. In such cases, the best result values are used. See summary report and EDD for applicable samples and analytes.

ANALYSIS: PCB

The current SOP HW-37A (Revision 0) July 2015, USEPA Region II for the evaluation of PCB data generated through Statement of Work SOM02.2 and SW-846 Method 8082A has been applied.

1. HOLDING TIME :

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Those analytes detected in the samples whose holding time has been exceeded will be qualified as estimated, "J". Use professional judgment to qualify the non-detects (sample quantitation limits), if the holding times are grossly exceeded. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

2. SURROGATES:

All samples are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. If the measured surrogate recovery were outside Table 5 of the SOP HW-37A (Revision 0), qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

3. MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD):

MS/MSD data are generated to determine the long-term precision and accuracy of the analytical method in various matrices. The MS/MSD data may be used in conjunction with other QC criteria for additional qualification of data. Qualifications were applied to the samples and analytes as shown below.

Not applicable.

4. Laboratory Control Samples (LCS):

LCS data provides information on the accuracy of the analytical method and laboratory performance. If LCS recoveries fell outside of the acceptable limits, qualifications were applied to the associated samples and compounds as shown below.

No problems were found for this criterion.

5. BLANK CONTAMINATION:



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Quality assurance (QA) blanks, i.e., method, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Field and rinse blanks measure cross-contamination of samples during field operations. Depending on the concentration of the analyte in the blank, the analytes are qualified as non-detects U. Qualifications were applied to the samples and analytes as shown below.

A) Method blank contamination:

No problems were found for this criterion.

B) Field or rinse blank contamination:

No problems were found for this criterion.

6. CALIBRATION:

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration checks document that the instrument is giving satisfactory daily performance.

A) Percent Relative Standard Deviation (%RSD):

For the PCB fraction, if %RSD exceeds 20% for all analytes and the two surrogates, qualify all associated positive results "J" and use professional judgment to qualify non-detects. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

B) Percent Difference (%D):

For opening CCV, or closing CCV that is used as an opening CCV for the next 12-hour period, if %D exceeds 25% for analytes and the two surrogates, qualify all associated positive results "J" and non-detects "UJ".

For closing CCV, if %D exceeds 50% for all analytes and the two surrogates, qualify all associated positive results "J" and non-detects "UJ". Qualifications were applied to the samples and analytes as shown below.

The following samples are associated with the CCV other than AR1016/AR1260 that is not analyzed at correct frequency. Detected compounds are qualified J. Non-detected compounds are not qualified.

Aroclor-1242 PA-121515-BM-0001, PA-121515-BM-0002, PA-121515-BM-0003, PA-121515-BM-0004, PA-121515-BM-0005

7. FIELD DUPLICATES:

Not applicable.



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8. COMPOUND IDENTIFICATION:

A) PCB Fraction:

The retention times of reported compounds must fall within the calculated retention time windows for the two chromatographic columns and a GC/MS confirmation is required if the concentration exceeds 10ng/ml in the final sample extract. Qualifications were applied to the samples and analytes as shown below.

Percent Differences

0% - 25%

26% - 200%

101% - 200% (interference detected, either column)

> 50% (PCB value < CRQL, value raised to CRQL)

> 200%

Qualifier

No qualification

Professional Judgment

JN

U

R

The following samples were qualified for % difference on the two columns.

PA-121515-BM-0001, PA-121515-BM-0003

9. CONTRACT PROBLEMS NON-COMPLIANCE:

None.

10. FIELD DOCUMENTATION:

No problems were identified.

11. OTHER PROBLEMS:

None.

12. DILUTIONS, RE-EXTRACTIONS & RE-ANALYSIS:

Samples may be re-analyzed for dilution, re-extraction and for other QC reasons. In such cases, the best result values are used. See summary report and EDD for applicable samples and analytes.

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

RB

Lab Name: <u>TestAmerica Pittsburgh</u>	Job No.: <u>180-50813-1</u>
SDG No.: <u>LINCKLAEN NY</u>	
Client Sample ID: <u>RB-121515-BM-0001</u>	Lab Sample ID: <u>180-50813-1</u>
Matrix: <u>Water</u>	Lab File ID: <u>4121809.D</u>
Analysis Method: <u>8260C</u>	Date Collected: <u>12/15/2015 10:40</u>
Sample wt/vol: <u>5(mL)</u>	Date Analyzed: <u>12/18/2015 11:20</u>
Soil Aliquot Vol: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>DB-624</u> ID: <u>0.18 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>164017</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		5.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	ND		5.0	0.93
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.33
79-00-5	1,1,2-Trichloroethane	ND		5.0	1.2
75-34-3	1,1-Dichloroethane	ND		5.0	1.0
75-35-4	1,1-Dichloroethene	ND		5.0	1.1
96-12-8	1,2-Dibromo-3-Chloropropane	ND	J	5.0	0.35
95-50-1	1,2-Dichlorobenzene	ND		5.0	0.68
107-06-2	1,2-Dichloroethane	ND		5.0	0.96
78-87-5	1,2-Dichloropropane	ND		5.0	1.3
120-82-1	1,2,4-Trichlorobenzene	ND		5.0	0.38
541-73-1	1,3-Dichlorobenzene	ND		5.0	0.51
106-46-7	1,4-Dichlorobenzene	ND		5.0	0.53
78-93-3	2-Butanone (MEK)	ND		5.0	1.1
591-78-6	2-Hexanone	ND	J	5.0	0.57
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	J	5.0	0.59
67-64-1	Acetone	ND	J	20	5.0
71-43-2	Benzene	ND		5.0	0.99
75-25-2	Bromoform	ND	J	5.0	1.1
74-83-9	Bromomethane	ND		5.0	1.6
75-15-0	Carbon disulfide	ND	J	5.0	1.1
56-23-5	Carbon tetrachloride	ND		5.0	1.1
108-90-7	Chlorobenzene	ND		5.0	0.53
124-48-1	Chlorodibromomethane	ND	* J	5.0	0.65
67-66-3	Chloroform	ND		5.0	1.0
74-87-3	Chloromethane	ND		5.0	1.4
75-00-3	Chloroethane	ND		5.0	0.75
156-59-2	cis-1,2-Dichloroethene	ND		5.0	0.67
10061-01-5	cis-1,3-Dichloropropene	ND		5.0	0.73
75-27-4	Dichlorobromomethane	ND	* J	5.0	0.93
75-71-8	Dichlorodifluoromethane	ND		5.0	0.64
100-41-4	Ethylbenzene	ND		5.0	0.62
106-93-4	1,2-Dibromoethane	ND		5.0	0.61
110-82-7	Cyclohexane	ND		5.0	0.60
98-82-8	Isopropylbenzene	ND		5.0	0.53

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-50813-1
SDG No.: LINCKLAEN NY
Client Sample ID: RB-121515-BM-0001 Lab Sample ID: 180-50813-1
Matrix: Water Lab File ID: 4121809.D
Analysis Method: 8260C Date Collected: 12/15/2015 10:40
Sample wt/vol: 5(mL) Date Analyzed: 12/18/2015 11:20
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: DB-624 ID: 0.18 (mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 164017 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	ND		25	3.0
1634-04-4	Methyl tert-butyl ether	ND		5.0	1.0
108-87-2	Methylcyclohexane	ND		5.0	0.56
75-09-2	Methylene Chloride	ND	J	5.0	1.1
100-42-5	Styrene	ND		5.0	0.64
127-18-4	Tetrachloroethene	ND		5.0	0.82
108-88-3	Toluene	ND		5.0	0.85
156-60-5	trans-1,2-Dichloroethene	ND		5.0	0.75
10061-02-6	trans-1,3-Dichloropropene	ND		5.0	0.58
79-01-6	Trichloroethene	ND		5.0	0.80
75-69-4	Trichlorofluoromethane	ND	*	5.0	1.1
75-01-4	Vinyl chloride	ND		5.0	1.3
1330-20-7	Xylenes, Total	ND		10	1.7

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	92		62-123
460-00-4	4-Bromofluorobenzene (Surr)	86		75-120
1868-53-7	Dibromofluoromethane (Surr)	97		80-120
2037-26-5	Toluene-d8 (Surr)	114		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-50813-1
 SDG No.: LINCKLAEN NY
 Client Sample ID: PA-121515-BM-0001 Lab Sample ID: 180-50813-2
 Matrix: Solid Lab File ID: 4122224.D
 Analysis Method: 8260C Date Collected: 12/15/2015 12:00
 Sample wt/vol: 5.0051(g) Date Analyzed: 12/22/2015 18:25
 Soil Aliquot Vol: 0.1 (mL) Dilution Factor: 1
 Soil Extract Vol.: 5(mL) GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Medium
 Analysis Batch No.: 164339 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		250	51
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	47
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		250	17
79-00-5	1,1,2-Trichloroethane	ND		250	58
75-34-3	1,1-Dichloroethane	ND		250	51
75-35-4	1,1-Dichloroethene	ND		250	53
96-12-8	1,2-Dibromo-3-Chloropropane	ND		250	18
95-50-1	1,2-Dichlorobenzene	ND		250	34
107-06-2	1,2-Dichloroethane	ND		250	48
78-87-5	1,2-Dichloropropane	ND		250	64
120-82-1	1,2,4-Trichlorobenzene	ND		250	19
541-73-1	1,3-Dichlorobenzene	ND		250	25
106-46-7	1,4-Dichlorobenzene	ND		250	26
78-93-3	2-Butanone (MEK)	ND		250	54
591-78-6	2-Hexanone	ND	J	250	28
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	30
67-64-1	Acetone	ND	J	1000	250
71-43-2	Benzene	ND		250	49
75-25-2	Bromoform	ND		250	53
74-83-9	Bromomethane	ND		250	79
75-15-0	Carbon disulfide	ND		250	54
56-23-5	Carbon tetrachloride	ND		250	54
108-90-7	Chlorobenzene	ND		250	26
124-48-1	Chlorodibromomethane	ND		250	32
67-66-3	Chloroform	ND		250	50
74-87-3	Chloromethane	ND		250	69
75-00-3	Chloroethane	ND		250	37
156-59-2	cis-1,2-Dichloroethene	ND		250	33
10061-01-5	cis-1,3-Dichloropropene	ND		250	36
75-27-4	Dichlorobromomethane	ND		250	47
75-71-8	Dichlorodifluoromethane	ND		250	32
100-41-4	Ethylbenzene	ND		250	31
106-93-4	1,2-Dibromoethane	ND		250	31
110-82-7	Cyclohexane	ND		250	30
98-82-8	Isopropylbenzene	ND		250	27

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Pittsburgh</u>	Job No.: <u>180-50813-1</u>
SDG No.: <u>LINCKLAEN NY</u>	
Client Sample ID: <u>PA-121515-BM-0001</u>	Lab Sample ID: <u>180-50813-2</u>
Matrix: <u>Solid</u>	Lab File ID: <u>4122224.D</u>
Analysis Method: <u>8260C</u>	Date Collected: <u>12/15/2015 12:00</u>
Sample wt/vol: <u>5.0051(g)</u>	Date Analyzed: <u>12/22/2015 18:25</u>
Soil Aliquot Vol: <u>0.1 (mL)</u>	Dilution Factor: <u>1</u>
Soil Extract Vol.: <u>5 (mL)</u>	GC Column: <u>DB-624</u> ID: <u>0.18 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Medium</u>
Analysis Batch No.: <u>164339</u>	Units: <u>ug/Kg</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	ND		1200	61
1634-04-4	Methyl tert-butyl ether	ND		250	51
108-87-2	Methylcyclohexane	ND		250	28
75-09-2	Methylene Chloride	ND		250	54
100-42-5	Styrene	ND		250	32
127-18-4	Tetrachloroethene	ND		250	41
108-88-3	Toluene	ND		250	42
156-60-5	trans-1,2-Dichloroethene	ND		250	38
10061-02-6	trans-1,3-Dichloropropene	ND		250	29
79-01-6	Trichloroethene	ND		250	40
75-69-4	Trichlorofluoromethane	ND		250	56
75-01-4	Vinyl chloride	ND		250	64
1330-20-7	Xylenes, Total	ND		500	98

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	86		52-124
460-00-4	4-Bromofluorobenzene (Surr)	87		63-120
1868-53-7	Dibromofluoromethane (Surr)	89		68-121
2037-26-5	Toluene-d8 (Surr)	111		72-127

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Pittsburgh</u>	Job No.: <u>180-50813-1</u>
SDG No.: <u>LINCKLAEN NY</u>	
Client Sample ID: <u>PA-121515-BM-0002</u>	Lab Sample ID: <u>180-50813-3</u>
Matrix: <u>Solid</u>	Lab File ID: <u>4122225.D</u>
Analysis Method: <u>8260C</u>	Date Collected: <u>12/15/2015 13:15</u>
Sample wt/vol: <u>5.0000(g)</u>	Date Analyzed: <u>12/22/2015 18:51</u>
Soil Aliquot Vol: <u>0.1 (mL)</u>	Dilution Factor: <u>1</u>
Soil Extract Vol.: <u>5(mL)</u>	GC Column: <u>DB-624</u> ID: <u>0.18 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Medium</u>
Analysis Batch No.: <u>164339</u>	Units: <u>ug/Kg</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	430		250	51
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	47
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	55	J	250	17
79-00-5	1,1,2-Trichloroethane	ND		250	58
75-34-3	1,1-Dichloroethane	ND		250	51
75-35-4	1,1-Dichloroethene	ND		250	53
96-12-8	1,2-Dibromo-3-Chloropropane	ND		250	18
95-50-1	1,2-Dichlorobenzene	280		250	34
107-06-2	1,2-Dichloroethane	ND		250	48
78-87-5	1,2-Dichloropropane	ND		250	64
120-82-1	1,2,4-Trichlorobenzene	ND		250	19
541-73-1	1,3-Dichlorobenzene	ND		250	25
106-46-7	1,4-Dichlorobenzene	ND		250	26
78-93-3	2-Butanone (MEK)	ND		250	54
591-78-6	2-Hexanone	ND	J	250	28
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	30
67-64-1	Acetone	ND	J	1000	250
71-43-2	Benzene	ND		250	49
75-25-2	Bromoform	ND		250	53
74-83-9	Bromomethane	ND		250	79
75-15-0	Carbon disulfide	ND		250	54
56-23-5	Carbon tetrachloride	ND		250	54
108-90-7	Chlorobenzene	ND		250	26
124-48-1	Chlorodibromomethane	ND		250	32
67-66-3	Chloroform	ND		250	50
74-87-3	Chloromethane	ND		250	70
75-00-3	Chloroethane	ND		250	37
156-59-2	cis-1,2-Dichloroethene	ND		250	33
10061-01-5	cis-1,3-Dichloropropene	ND		250	36
75-27-4	Dichlorobromomethane	ND		250	47
75-71-8	Dichlorodifluoromethane	ND		250	32
100-41-4	Ethylbenzene	91	J	250	31
106-93-4	1,2-Dibromoethane	ND		250	31
110-82-7	Cyclohexane	ND		250	30
98-82-8	Isopropylbenzene	ND		250	27

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-50813-1
 SDG No.: LINCKLAEN NY
 Client Sample ID: PA-121515-BM-0002 Lab Sample ID: 180-50813-3
 Matrix: Solid Lab File ID: 4122225.D
 Analysis Method: 8260C Date Collected: 12/15/2015 13:15
 Sample wt/vol: 5.0000(g) Date Analyzed: 12/22/2015 18:51
 Soil Aliquot Vol: 0.1 (mL) Dilution Factor: 1
 Soil Extract Vol.: 5(mL) GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Medium
 Analysis Batch No.: 164339 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	170	J	1300	61
1634-04-4	Methyl tert-butyl ether	ND		250	51
108-87-2	Methylcyclohexane	ND		250	28
75-09-2	Methylene Chloride	ND		250	54
100-42-5	Styrene	ND		250	32
127-18-4	Tetrachloroethene	200	J	250	41
108-88-3	Toluene	370		250	42
156-60-5	trans-1,2-Dichloroethene	ND		250	38
10061-02-6	trans-1,3-Dichloropropene	ND		250	29
79-01-6	Trichloroethene	560		250	40
75-69-4	Trichlorofluoromethane	ND		250	56
75-01-4	Vinyl chloride	ND		250	65
1330-20-7	Xylenes, Total	520		500	98

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	84		52-124
460-00-4	4-Bromofluorobenzene (Surr)	95		63-120
1868-53-7	Dibromofluoromethane (Surr)	95		68-121
2037-26-5	Toluene-d8 (Surr)	113		72-127

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Pittsburgh</u>	Job No.: <u>180-50813-1</u>
SDG No.: <u>LINCKLAEN NY</u>	
Client Sample ID: <u>PA-121515-BM-0003</u>	Lab Sample ID: <u>180-50813-4</u>
Matrix: <u>Solid</u>	Lab File ID: <u>4122226.D</u>
Analysis Method: <u>8260C</u>	Date Collected: <u>12/15/2015 14:25</u>
Sample wt/vol: <u>5.0100(g)</u>	Date Analyzed: <u>12/22/2015 19:17</u>
Soil Aliquot Vol: <u>0.1 (mL)</u>	Dilution Factor: <u>1</u>
Soil Extract Vol.: <u>5(mL)</u>	GC Column: <u>DB-624</u> ID: <u>0.18 (mm)</u>
% Moisture: <u></u>	Level: (low/med) <u>Medium</u>
Analysis Batch No.: <u>164339</u>	Units: <u>ug/Kg</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		250	51
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	47
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		250	16
79-00-5	1,1,2-Trichloroethane	ND		250	58
75-34-3	1,1-Dichloroethane	ND		250	51
75-35-4	1,1-Dichloroethene	ND		250	53
96-12-8	1,2-Dibromo-3-Chloropropane	ND		250	18
95-50-1	1,2-Dichlorobenzene	47	J	250	34
107-06-2	1,2-Dichloroethane	ND		250	48
78-87-5	1,2-Dichloropropane	ND		250	64
120-82-1	1,2,4-Trichlorobenzene	ND		250	19
541-73-1	1,3-Dichlorobenzene	ND		250	25
106-46-7	1,4-Dichlorobenzene	ND		250	26
78-93-3	2-Butanone (MEK)	ND		250	54
591-78-6	2-Hexanone	ND	J	250	28
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	29
67-64-1	Acetone	ND	J	1000	250
71-43-2	Benzene	ND		250	49
75-25-2	Bromoform	ND		250	53
74-83-9	Bromomethane	ND		250	79
75-15-0	Carbon disulfide	ND		250	54
56-23-5	Carbon tetrachloride	ND		250	54
108-90-7	Chlorobenzene	ND		250	26
124-48-1	Chlorodibromomethane	ND		250	32
67-66-3	Chloroform	ND		250	50
74-87-3	Chloromethane	ND		250	69
75-00-3	Chloroethane	ND		250	37
156-59-2	cis-1,2-Dichloroethene	ND		250	33
10061-01-5	cis-1,3-Dichloropropene	ND		250	36
75-27-4	Dichlorobromomethane	ND		250	46
75-71-8	Dichlorodifluoromethane	ND		250	32
100-41-4	Ethylbenzene	ND		250	31
106-93-4	1,2-Dibromoethane	ND		250	31
110-82-7	Cyclohexane	ND		250	30
98-82-8	Isopropylbenzene	ND		250	26

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Pittsburgh</u>	Job No.: <u>180-50813-1</u>
SDG No.: <u>LINCKLAEN NY</u>	
Client Sample ID: <u>PA-121515-BM-0003</u>	Lab Sample ID: <u>180-50813-4</u>
Matrix: <u>Solid</u>	Lab File ID: <u>4122226.D</u>
Analysis Method: <u>8260C</u>	Date Collected: <u>12/15/2015 14:25</u>
Sample wt/vol: <u>5.0100(g)</u>	Date Analyzed: <u>12/22/2015 19:17</u>
Soil Aliquot Vol: <u>0.1 (mL)</u>	Dilution Factor: <u>1</u>
Soil Extract Vol.: <u>5 (mL)</u>	GC Column: <u>DB-624</u> ID: <u>0.18 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Medium</u>
Analysis Batch No.: <u>164339</u>	Units: <u>ug/Kg</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	ND		1200	61
1634-04-4	Methyl tert-butyl ether	ND		250	51
108-87-2	Methylcyclohexane	ND		250	28
75-09-2	Methylene Chloride	ND		250	54
100-42-5	Styrene	ND		250	32
127-18-4	Tetrachloroethene	ND		250	41
108-88-3	Toluene	45	J	250	42
156-60-5	trans-1,2-Dichloroethene	ND		250	38
10061-02-6	trans-1,3-Dichloropropene	ND		250	29
79-01-6	Trichloroethene	41	J	250	40
75-69-4	Trichlorofluoromethane	ND		250	56
75-01-4	Vinyl chloride	ND		250	64
1330-20-7	Xylenes, Total	ND		500	98

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	75		52-124
460-00-4	4-Bromofluorobenzene (Surr)	84		63-120
1868-53-7	Dibromofluoromethane (Surr)	84		68-121
2037-26-5	Toluene-d8 (Surr)	105		72-127

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-50813-1
 SDG No.: LINCKLAEN NY
 Client Sample ID: PA-121515-BM-0004 Lab Sample ID: 180-50813-5
 Matrix: Solid Lab File ID: 4122227.D
 Analysis Method: 8260C Date Collected: 12/15/2015 15:15
 Sample wt/vol: 5.0001(g) Date Analyzed: 12/22/2015 19:42
 Soil Aliquot Vol: 0.1 (mL) Dilution Factor: 1
 Soil Extract Vol.: 5(mL) GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Medium
 Analysis Batch No.: 164339 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	510		250	51
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	47
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	55	J	250	17
79-00-5	1,1,2-Trichloroethane	ND		250	58
75-34-3	1,1-Dichloroethane	ND		250	51
75-35-4	1,1-Dichloroethene	ND		250	53
96-12-8	1,2-Dibromo-3-Chloropropane	ND		250	18
95-50-1	1,2-Dichlorobenzene	310		250	34
107-06-2	1,2-Dichloroethane	ND		250	48
78-87-5	1,2-Dichloropropane	ND		250	64
120-82-1	1,2,4-Trichlorobenzene	ND		250	19
541-73-1	1,3-Dichlorobenzene	ND		250	25
106-46-7	1,4-Dichlorobenzene	ND		250	26
78-93-3	2-Butanone (MEK)	ND		250	54
591-78-6	2-Hexanone	ND	J	250	28
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	30
67-64-1	Acetone	ND	J	1000	250
71-43-2	Benzene	ND		250	49
75-25-2	Bromoform	ND		250	53
74-83-9	Bromomethane	ND		250	79
75-15-0	Carbon disulfide	ND		250	54
56-23-5	Carbon tetrachloride	ND		250	54
108-90-7	Chlorobenzene	ND		250	26
124-48-1	Chlorodibromomethane	ND		250	32
67-66-3	Chloroform	ND		250	50
74-87-3	Chloromethane	ND		250	70
75-00-3	Chloroethane	ND		250	37
156-59-2	cis-1,2-Dichloroethene	ND		250	33
10061-01-5	cis-1,3-Dichloropropene	ND		250	36
75-27-4	Dichlorobromomethane	ND		250	47
75-71-8	Dichlorodifluoromethane	ND		250	32
100-41-4	Ethylbenzene	74	J	250	31
106-93-4	1,2-Dibromoethane	ND		250	31
110-82-7	Cyclohexane	ND		250	30
98-82-8	Isopropylbenzene	ND		250	27

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-50813-1
 SDG No.: LINCKLAEN NY
 Client Sample ID: PA-121515-BM-0004 Lab Sample ID: 180-50813-5
 Matrix: Solid Lab File ID: 4122227.D
 Analysis Method: 8260C Date Collected: 12/15/2015 15:15
 Sample wt/vol: 5.0001(g) Date Analyzed: 12/22/2015 19:42
 Soil Aliquot Vol: 0.1 (mL) Dilution Factor: 1
 Soil Extract Vol.: 5(mL) GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Medium
 Analysis Batch No.: 164339 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	ND		1200	61
1634-04-4	Methyl tert-butyl ether	ND		250	51
108-87-2	Methylcyclohexane	ND		250	28
75-09-2	Methylene Chloride	ND		250	54
100-42-5	Styrene	ND		250	32
127-18-4	Tetrachloroethene	130	J	250	41
108-88-3	Toluene	320		250	42
156-60-5	trans-1,2-Dichloroethene	ND		250	38
10061-02-6	trans-1,3-Dichloropropene	ND		250	29
79-01-6	Trichloroethene	550		250	40
75-69-4	Trichlorofluoromethane	ND		250	56
75-01-4	Vinyl chloride	ND		250	65
1330-20-7	Xylenes, Total	460	J	500	98

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	89		52-124
460-00-4	4-Bromofluorobenzene (Surr)	97		63-120
1868-53-7	Dibromofluoromethane (Surr)	96		68-121
2037-26-5	Toluene-d8 (Surr)	102		72-127

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Pittsburgh</u>	Job No.: <u>180-50813-1</u>
SDG No.: <u>LINCKLAEN NY</u>	
Client Sample ID: <u>PA-121515-BM-0005</u>	Lab Sample ID: <u>180-50813-6</u>
Matrix: <u>Solid</u>	Lab File ID: <u>4122316.D</u>
Analysis Method: <u>8260C</u>	Date Collected: <u>12/15/2015 16:10</u>
Sample wt/vol: <u>5.0200(g)</u>	Date Analyzed: <u>12/23/2015 14:56</u>
Soil Aliquot Vol: <u>0.1 (mL)</u>	Dilution Factor: <u>1</u>
Soil Extract Vol.: <u>5(mL)</u>	GC Column: <u>DB-624</u> ID: <u>0.18 (mm)</u>
% Moisture: <u></u>	Level: (low/med) <u>Medium</u>
Analysis Batch No.: <u>164466</u>	Units: <u>ug/Kg</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		250	51
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	46
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		250	16
79-00-5	1,1,2-Trichloroethane	ND		250	58
75-34-3	1,1-Dichloroethane	ND		250	50
75-35-4	1,1-Dichloroethene	ND		250	53
96-12-8	1,2-Dibromo-3-Chloropropane	ND		250	18
95-50-1	1,2-Dichlorobenzene	ND		250	34
107-06-2	1,2-Dichloroethane	ND		250	48
78-87-5	1,2-Dichloropropane	ND		250	64
120-82-1	1,2,4-Trichlorobenzene	ND		250	19
541-73-1	1,3-Dichlorobenzene	ND		250	25
106-46-7	1,4-Dichlorobenzene	ND		250	26
78-93-3	2-Butanone (MEK)	ND		250	54
591-78-6	2-Hexanone	ND		250	28
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	29
67-64-1	Acetone	ND	*	1000	250
71-43-2	Benzene	ND		250	49
75-25-2	Bromoform	ND		250	53
74-83-9	Bromomethane	ND		250	78
75-15-0	Carbon disulfide	ND		250	53
56-23-5	Carbon tetrachloride	ND		250	54
108-90-7	Chlorobenzene	ND		250	26
124-48-1	Chlorodibromomethane	ND		250	32
67-66-3	Chloroform	ND		250	50
74-87-3	Chloromethane	ND		250	69
75-00-3	Chloroethane	ND		250	37
156-59-2	cis-1,2-Dichloroethene	ND		250	33
10061-01-5	cis-1,3-Dichloropropene	ND		250	36
75-27-4	Dichlorobromomethane	ND		250	46
75-71-8	Dichlorodifluoromethane	ND		250	32
100-41-4	Ethylbenzene	ND		250	31
106-93-4	1,2-Dibromoethane	ND		250	30
110-82-7	Cyclohexane	ND		250	30
98-82-8	Isopropylbenzene	ND		250	26

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-50813-1
SDG No.: LINCKLAEN NY
Client Sample ID: PA-121515-BM-0005 Lab Sample ID: 180-50813-6
Matrix: Solid Lab File ID: 4122316.D
Analysis Method: 8260C Date Collected: 12/15/2015 16:10
Sample wt/vol: 5.0200(g) Date Analyzed: 12/23/2015 14:56
Soil Aliquot Vol: 0.1 (mL) Dilution Factor: 1
Soil Extract Vol.: 5 (mL) GC Column: DB-624 ID: 0.18 (mm)
% Moisture: _____ Level: (low/med) Medium
Analysis Batch No.: 164466 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	ND		1200	61
1634-04-4	Methyl tert-butyl ether	ND		250	51
108-87-2	Methylcyclohexane	ND		250	28
75-09-2	Methylene Chloride	ND		250	54
100-42-5	Styrene	ND		250	32
127-18-4	Tetrachloroethene	ND		250	41
108-88-3	Toluene	ND	J	250	42
156-60-5	trans-1,2-Dichloroethene	ND		250	37
10061-02-6	trans-1,3-Dichloropropene	ND		250	29
79-01-6	Trichloroethene	ND		250	40
75-69-4	Trichlorofluoromethane	ND		250	56
75-01-4	Vinyl chloride	ND		250	64
1330-20-7	Xylenes, Total	ND		500	98

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	84		52-124
460-00-4	4-Bromofluorobenzene (Surr)	83		63-120
1868-53-7	Dibromofluoromethane (Surr)	86		68-121
2037-26-5	Toluene-d8 (Surr)	95		72-127

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

TB

Lab Name: TestAmerica Pittsburgh Job No.: 180-50813-1
SDG No.: LINCKLAEN NY
Client Sample ID: TRIP BLANK Lab Sample ID: 180-50813-7
Matrix: Water Lab File ID: 4121808.D
Analysis Method: 8260C Date Collected: 12/15/2015 10:40
Sample wt/vol: 5(mL) Date Analyzed: 12/18/2015 10:54
Soil Aliquot Vol: _____ Dilution Factor: 1
Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
% Moisture: _____ Level: (low/med) Low
Analysis Batch No.: 164017 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		5.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	ND		5.0	0.93
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.33
79-00-5	1,1,2-Trichloroethane	ND		5.0	1.2
75-34-3	1,1-Dichloroethane	ND		5.0	1.0
75-35-4	1,1-Dichloroethene	ND		5.0	1.1
96-12-8	1,2-Dibromo-3-Chloropropane	ND	J	5.0	0.35
95-50-1	1,2-Dichlorobenzene	ND		5.0	0.68
107-06-2	1,2-Dichloroethane	ND		5.0	0.96
78-87-5	1,2-Dichloropropane	ND		5.0	1.3
120-82-1	1,2,4-Trichlorobenzene	ND		5.0	0.38
541-73-1	1,3-Dichlorobenzene	ND		5.0	0.51
106-46-7	1,4-Dichlorobenzene	ND		5.0	0.53
78-93-3	2-Butanone (MEK)	ND		5.0	1.1
591-78-6	2-Hexanone	ND	J	5.0	0.57
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	J	5.0	0.59
67-64-1	Acetone	ND	J	20	5.0
71-43-2	Benzene	ND		5.0	0.99
75-25-2	Bromoform	ND	J	5.0	1.1
74-83-9	Bromomethane	ND	J	5.0	1.6
75-15-0	Carbon disulfide	ND	J	5.0	1.1
56-23-5	Carbon tetrachloride	ND		5.0	1.1
108-90-7	Chlorobenzene	ND		5.0	0.53
124-48-1	Chlorodibromomethane	ND	* J	5.0	0.65
67-66-3	Chloroform	ND		5.0	1.0
74-87-3	Chloromethane	ND		5.0	1.4
75-00-3	Chloroethane	ND		5.0	0.75
156-59-2	cis-1,2-Dichloroethene	ND		5.0	0.67
10061-01-5	cis-1,3-Dichloropropene	ND		5.0	0.73
75-27-4	Dichlorobromomethane	ND	* J	5.0	0.93
75-71-8	Dichlorodifluoromethane	ND		5.0	0.64
100-41-4	Ethylbenzene	ND		5.0	0.62
106-93-4	1,2-Dibromoethane	ND		5.0	0.61
110-82-7	Cyclohexane	ND		5.0	0.60
98-82-8	Isopropylbenzene	ND		5.0	0.53

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-50813-1
 SDG No.: LINCKLAEN NY
 Client Sample ID: TRIP BLANK Lab Sample ID: 180-50813-7
 Matrix: Water Lab File ID: 4121808.D
 Analysis Method: 8260C Date Collected: 12/15/2015 10:40
 Sample wt/vol: 5(mL) Date Analyzed: 12/18/2015 10:54
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 164017 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	ND		25	3.0
1634-04-4	Methyl tert-butyl ether	ND		5.0	1.0
108-87-2	Methylcyclohexane	ND		5.0	0.56
75-09-2	Methylene Chloride	ND	J	5.0	1.1
100-42-5	Styrene	ND		5.0	0.64
127-18-4	Tetrachloroethene	ND		5.0	0.82
108-88-3	Toluene	ND		5.0	0.85
156-60-5	trans-1,2-Dichloroethene	ND		5.0	0.75
10061-02-6	trans-1,3-Dichloropropene	ND		5.0	0.58
79-01-6	Trichloroethene	ND		5.0	0.80
75-69-4	Trichlorofluoromethane	ND	*	5.0	1.1
75-01-4	Vinyl chloride	ND		5.0	1.3
1330-20-7	Xylenes, Total	ND		10	1.7

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	93		62-123
460-00-4	4-Bromofluorobenzene (Surr)	86		75-120
1868-53-7	Dibromofluoromethane (Surr)	98		80-120
2037-26-5	Toluene-d8 (Surr)	109		80-120

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

RB

Lab Name: <u>TestAmerica Pittsburgh</u>	Job No.: <u>180-50813-1</u>
SDG No.: <u>LINCKLAEN NY</u>	
Client Sample ID: <u>RB-121515-BM-0001</u>	Lab Sample ID: <u>180-50813-1</u>
Matrix: <u>Water</u>	Lab File ID: <u>121815022.D</u>
Analysis Method: <u>8082A</u>	Date Collected: <u>12/15/2015 10:40</u>
Extraction Method: <u>3510C</u>	Date Extracted: <u>12/17/2015 15:00</u>
Sample wt/vol: <u>1060 (mL)</u>	Date Analyzed: <u>12/18/2015 14:05</u>
Con. Extract Vol.: <u>40.0 (mL)</u>	Dilution Factor: <u>1</u>
Injection Volume: <u>1 (uL)</u>	GC Column: <u>RTX-CLP1</u> ID: <u>0.53 (mm)</u>
% Moisture: _____	GPC Cleanup: (Y/N) <u>N</u>
Analysis Batch No.: <u>163995</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
12674-11-2	PCB-1016	ND		0.38	0.14
11104-28-2	PCB-1221	ND		0.38	0.22
11141-16-5	PCB-1232	ND		0.38	0.23
53469-21-9	PCB-1242	ND		0.38	0.13
12672-29-6	PCB-1248	ND		0.38	0.12
11097-69-1	PCB-1254	ND		0.38	0.17
11096-82-5	PCB-1260	ND		0.38	0.11

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene (Surr)	76		35-140
2051-24-3	DCB Decachlorobiphenyl (Surr)	83		35-140

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-50813-1
SDG No.: LINCKLAEN NY
Client Sample ID: PA-121515-BM-0001 Lab Sample ID: 180-50813-2
Matrix: Solid Lab File ID: S1228550.D
Analysis Method: 8082A Date Collected: 12/15/2015 12:00
Extraction Method: 3541 Date Extracted: 12/24/2015 13:19
Sample wt/vol: 4.9(g) Date Analyzed: 12/30/2015 00:54
Con. Extract Vol.: 20.0(mL) Dilution Factor: 200
Injection Volume: 1(uL) GC Column: RTX-CLP1 ID: 0.53(mm)
% Moisture: _____ GPC Cleanup: (Y/N) N
Analysis Batch No.: 164785 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
12674-11-2	PCB-1016	ND		10000	4700
11104-28-2	PCB-1221	ND		10000	7400
11141-16-5	PCB-1232	ND		10000	2600
12672-29-6	PCB-1248	ND		10000	2400
11097-69-1	PCB-1254	ND		10000	3800
11096-82-5	PCB-1260	ND		10000	3500

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene (Surr)	0	D X	45-135
2051-24-3	DCB Decachlorobiphenyl (Surr)	0	D X	45-125

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-50813-1
 SDG No.: LINCKLAEN NY
 Client Sample ID: PA-121515-BM-0001 Lab Sample ID: 180-50813-2
 Matrix: Solid Lab File ID: S1228550.D
 Analysis Method: 8082A Date Collected: 12/15/2015 12:00
 Extraction Method: 3541 Date Extracted: 12/24/2015 13:19
 Sample wt/vol: 4.9(g) Date Analyzed: 12/30/2015 00:54
 Con. Extract Vol.: 20.0(mL) Dilution Factor: 200
 Injection Volume: 1(uL) GC Column: RTX-CLP2 ID: 0.53(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 164785 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
53469-21-9	PCB-1242	660000	<u>+</u>	10000	3800

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene (Surr)	0	<u>D X</u>	45-135
2051-24-3	DCB Decachlorobiphenyl (Surr)	0	<u>D X</u>	45-125

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-50813-1
 SDG No.: LINCKLAEN NY
 Client Sample ID: PA-121515-BM-0002 Lab Sample ID: 180-50813-3
 Matrix: Solid Lab File ID: S1228551.D
 Analysis Method: 8082A Date Collected: 12/15/2015 13:15
 Extraction Method: 3541 Date Extracted: 12/24/2015 13:19
 Sample wt/vol: 12.3(g) Date Analyzed: 12/30/2015 01:12
 Con. Extract Vol.: 20.0(mL) Dilution Factor: 200
 Injection Volume: 1(uL) GC Column: RTX-CLP1 ID: 0.53(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 164785 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
12674-11-2	PCB-1016	ND		4100	1900
11104-28-2	PCB-1221	ND		4100	2900
11141-16-5	PCB-1232	ND		4100	1000
12672-29-6	PCB-1248	ND		4100	950
11097-69-1	PCB-1254	ND		4100	1500
11096-82-5	PCB-1260	ND		4100	1400

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene (Surr)	0	D X	45-135
2051-24-3	DCB Decachlorobiphenyl (Surr)	0	D X	45-125

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-50813-1
 SDG No.: LINCKLAEN NY
 Client Sample ID: PA-121515-BM-0002 Lab Sample ID: 180-50813-3
 Matrix: Solid Lab File ID: S1228551.D
 Analysis Method: 8082A Date Collected: 12/15/2015 13:15
 Extraction Method: 3541 Date Extracted: 12/24/2015 13:19
 Sample wt/vol: 12.3(g) Date Analyzed: 12/30/2015 01:12
 Con. Extract Vol.: 20.0(mL) Dilution Factor: 200
 Injection Volume: 1(uL) GC Column: RTX-CLP2 ID: 0.53(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 164785 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
53469-21-9	PCB-1242	320000	<u>I</u>	4100	1500

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene (Surr)	0	<u>D X</u>	45-135
2051-24-3	DCB Decachlorobiphenyl (Surr)	0	<u>D X</u>	45-125

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Pittsburgh</u>	Job No.: <u>180-50813-1</u>
SDG No.: <u>LINCKLAEN NY</u>	
Client Sample ID: <u>PA-121515-BM-0003</u>	Lab Sample ID: <u>180-50813-4</u>
Matrix: <u>Solid</u>	Lab File ID: <u>S1228552.D</u>
Analysis Method: <u>8082A</u>	Date Collected: <u>12/15/2015 14:25</u>
Extraction Method: <u>3541</u>	Date Extracted: <u>12/24/2015 13:19</u>
Sample wt/vol: <u>10(g)</u>	Date Analyzed: <u>12/30/2015 01:31</u>
Con. Extract Vol.: <u>20.0(mL)</u>	Dilution Factor: <u>200</u>
Injection Volume: <u>1(uL)</u>	GC Column: <u>RTX-CLP1</u> ID: <u>0.53 (mm)</u>
% Moisture: _____	GPC Cleanup: (Y/N) <u>N</u>
Analysis Batch No.: <u>164785</u>	Units: <u>ug/Kg</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
12674-11-2	PCB-1016	ND		5000	2300
11104-28-2	PCB-1221	ND		5000	3600
11141-16-5	PCB-1232	ND		5000	1300
12672-29-6	PCB-1248	ND		5000	1200
11097-69-1	PCB-1254	ND		5000	1800
11096-82-5	PCB-1260	ND		5000	1700

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene (Surr)	0	D X	45-135
2051-24-3	DCB Decachlorobiphenyl (Surr)	0	D X	45-125

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-50813-1
 SDG No.: LINCKLAEN NY
 Client Sample ID: PA-121515-BM-0003 Lab Sample ID: 180-50813-4
 Matrix: Solid Lab File ID: S1228552.D
 Analysis Method: 8082A Date Collected: 12/15/2015 14:25
 Extraction Method: 3541 Date Extracted: 12/24/2015 13:19
 Sample wt/vol: 10(g) Date Analyzed: 12/30/2015 01:31
 Con. Extract Vol.: 20.0(mL) Dilution Factor: 200
 Injection Volume: 1(uL) GC Column: RTX-CLP2 ID: 0.53(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 164785 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
53469-21-9	PCB-1242	360000	<u>J</u>	5000	1800

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene (Surr)	0	<u>D X</u>	45-135
2051-24-3	DCB Decachlorobiphenyl (Surr)	0	<u>D X</u>	45-125

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-50813-1
SDG No.: LINCKLAEN NY
Client Sample ID: PA-121515-BM-0004 Lab Sample ID: 180-50813-5
Matrix: Solid Lab File ID: S1228553.D
Analysis Method: 8082A Date Collected: 12/15/2015 15:15
Extraction Method: 3541 Date Extracted: 12/24/2015 13:19
Sample wt/vol: 10.5(g) Date Analyzed: 12/30/2015 01:50
Con. Extract Vol.: 20.0(mL) Dilution Factor: 200
Injection Volume: 1(uL) GC Column: RTX-CLP1 ID: 0.53(mm)
% Moisture: _____ GPC Cleanup: (Y/N) N
Analysis Batch No.: 164785 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
12674-11-2	PCB-1016	ND		4800	2200
11104-28-2	PCB-1221	ND		4800	3400
11141-16-5	PCB-1232	ND		4800	1200
12672-29-6	PCB-1248	ND		4800	1100
11097-69-1	PCB-1254	ND		4800	1800
11096-82-5	PCB-1260	ND		4800	1600

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene (Surr)	0	D X	45-135
2051-24-3	DCB Decachlorobiphenyl (Surr)	0	D X	45-125

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Pittsburgh</u>	Job No.: <u>180-50813-1</u>
SDG No.: <u>LINCKLAEN NY</u>	
Client Sample ID: <u>PA-121515-BM-0004</u>	Lab Sample ID: <u>180-50813-5</u>
Matrix: <u>Solid</u>	Lab File ID: <u>S1228553.D</u>
Analysis Method: <u>8082A</u>	Date Collected: <u>12/15/2015 15:15</u>
Extraction Method: <u>3541</u>	Date Extracted: <u>12/24/2015 13:19</u>
Sample wt/vol: <u>10.5(g)</u>	Date Analyzed: <u>12/30/2015 01:50</u>
Con. Extract Vol.: <u>20.0(mL)</u>	Dilution Factor: <u>200</u>
Injection Volume: <u>1(uL)</u>	GC Column: <u>RTX-CLP2</u> ID: <u>0.53(mm)</u>
% Moisture: _____	GPC Cleanup: (Y/N) <u>N</u>
Analysis Batch No.: <u>164785</u>	Units: <u>ug/Kg</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
53469-21-9	PCB-1242	400000	J	4800	1800

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene (Surr)	0	D X	45-135
2051-24-3	DCB Decachlorobiphenyl (Surr)	0	D X	45-125

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Pittsburgh</u>	Job No.: <u>180-50813-1</u>
SDG No.: <u>LINCKLAEN NY</u>	
Client Sample ID: <u>PA-121515-BM-0005</u>	Lab Sample ID: <u>180-50813-6</u>
Matrix: <u>Solid</u>	Lab File ID: <u>S1228554.D</u>
Analysis Method: <u>8082A</u>	Date Collected: <u>12/15/2015 16:10</u>
Extraction Method: <u>3541</u>	Date Extracted: <u>12/24/2015 13:20</u>
Sample wt/vol: <u>7.3(g)</u>	Date Analyzed: <u>12/30/2015 02:09</u>
Con. Extract Vol.: <u>20.0(mL)</u>	Dilution Factor: <u>50</u>
Injection Volume: <u>1(uL)</u>	GC Column: <u>RTX-CLP1</u> ID: <u>0.53(mm)</u>
% Moisture: _____	GPC Cleanup: (Y/N) <u>N</u>
Analysis Batch No.: <u>164785</u>	Units: <u>ug/Kg</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
12674-11-2	PCB-1016	ND		1700	790
11104-28-2	PCB-1221	ND		1700	1200
11141-16-5	PCB-1232	ND		1700	430
12672-29-6	PCB-1248	ND		1700	400
11097-69-1	PCB-1254	ND		1700	630
11096-82-5	PCB-1260	ND		1700	590

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene (Surr)	0	X D	45-135
2051-24-3	DCB Decachlorobiphenyl (Surr)	0	X D	45-125

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Pittsburgh</u>	Job No.: <u>180-50813-1</u>
SDG No.: <u>LINCKLAEN NY</u>	
Client Sample ID: <u>PA-121515-BM-0005</u>	Lab Sample ID: <u>180-50813-6</u>
Matrix: <u>Solid</u>	Lab File ID: <u>S1228554.D</u>
Analysis Method: <u>8082A</u>	Date Collected: <u>12/15/2015 16:10</u>
Extraction Method: <u>3541</u>	Date Extracted: <u>12/24/2015 13:20</u>
Sample wt/vol: <u>7.3(g)</u>	Date Analyzed: <u>12/30/2015 02:09</u>
Con. Extract Vol.: <u>20.0 (mL)</u>	Dilution Factor: <u>50</u>
Injection Volume: <u>1 (uL)</u>	GC Column: <u>RTX-CLP2</u> ID: <u>0.53 (mm)</u>
% Moisture: _____	GPC Cleanup: (Y/N) <u>N</u>
Analysis Batch No.: <u>164785</u>	Units: <u>ug/Kg</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
53469-21-9	PCB-1242	90000	J	1700	630

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene (Surr)	0	X D	45-135
2051-24-3	DCB Decachlorobiphenyl (Surr)	0	X D	45-125



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
DESA/HWSB/HWSS
2890, Woodbridge Avenue, Edison, NJ 08837

EXECUTIVE NARRATIVE

Case No. : 2077-60_SOLV-SAVE

Site: Solvent Savers

Number of Samples: 10 (Building material)

Analysis: VOA, PCB

SDG No.: 180-50806-1

Laboratory: TestAmerica Pittsburgh

Sampling dates: 12/15/2015

Validation SOP: HW-24 (Rev 4) and SW-846 Method
8260C, HW-37A (Rev 0) and
SW-846 Method 8082A

QAPP: Not available.

SUMMARY OF DEFINITIONS:

Critical: Results have an unacceptable level of uncertainty and should not be used for making decisions. Data have been qualified "R" rejected.

Major: A level of uncertainty exists that may not meet the data quality objectives for the project. A bias is likely to be present in the results. Data has been qualified "J" estimated. "J+" and "J-" represent likely direction of the bias.

Minor: The level of uncertainty is acceptable. No significant bias in the data was observed.

Critical Findings:

None.

Major Findings:

VOA, PCB: All the associated samples have analytes that have been qualified "J", "J+" or "J-".

Minor Findings:

None.

COMMENTS: None.

Reviewer Name(s): Raxa J. Shelley

Approver's Signature:

Date: 08/08/17

Name: Russell Arnone

Affiliation: USEPA/R2/HWSB/HWSS



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Data Qualifier Definitions (National Functional Guidelines)			
Qualifier Symbol	Explanation		
	INORGANICS	ORGANICS	CHLORINATED DIOXIN/FURAN
U	The analyte was analyzed for, but was not detected above the level of the reported quantitation limit.	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method	The analyte was analyzed for but not detected. The value preceding the "U" may represent the adjusted Contract Required Quantitation Limit (see DLM02.X, Exhibit D, Section 1.2 and Table 2), or the sample specific estimated detection limit (EDL, see Method 8290A, Section 11.9.5).
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL).	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to an issue with the quality of the data generated because certain QC criteria were not met, or the concentration of the analyte was below the adjusted CRQL).
J+	The result is an estimated quantity, but the result may be biased high.	The result is an estimated quantity, but the result may be biased high.	
J-	The result is an estimated quantity, but the result may be biased low.	The result is an estimated quantity, but the result may be biased low.	
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.	The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.	The analyte was not detected (see definition of "U" flag, above). The reported value should be considered approximate.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
N		The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification".	
NJ		The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	
C		This qualifier applies to pesticide and Aroclor results when the identification has been confirmed by Gas Chromatograph/Mass Spectrometer (GC/MS).	
X		This qualifier applies to pesticide and Aroclor results when GC/MS analysis was attempted but was unsuccessful.	



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DATA ASSESSMENT

ANALYSIS: VOA

The SOP HW-24 (Revision 4) September 2014, USEPA Region II for the evaluation of Volatile organic data generated through Gas Chromatography/Mass Spectrometry SW-846 Method 8260B and 8260C has been applied.

1. HOLDING TIME:

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Those analytes detected in the samples whose holding time has been exceeded will be qualified as estimated, "J". The non-detects (sample quantitation limits) will be flagged as estimated, "J", or unusable, "R", if the holding times are grossly exceeded. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

2. DEUTERATED MONITORING COMPOUNDS (DMC's)

All samples are spiked with DMC compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. If the measured DMC recovery concentrations were outside contract specifications, qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

3. MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD):

MS/MSD data are generated to determine the long-term precision and accuracy of the analytical method in various matrices. The MS/MSD data may be used in conjunction with other QC criteria for additional qualification of data. Qualifications were applied to the samples and analytes as shown below.

The relative percent difference (RPD) between the following matrix spike and matrix spike duplicate recoveries is outside criteria. Detected compounds are qualified J. Non-detected compounds are not qualified.

Toluene CC-121515-BM-002A-INTERVAL2, CC-121515-BM-002A-INTERVAL2MS, CC-121515-BM-002A-INTERVAL2MSD

The following matrix/matrix spike duplicate samples have percent recoveries that are greater than the upper acceptance limit. Detected compounds are qualified J. Non-detected compounds are not qualified.

1,1-Dichloroethene CC-121515-BM-002A-INTERVAL2, CC-121515-BM-002A-INTERVAL2MS, CC-121515-BM-002A-INTERVAL2MSD



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4. BLANK CONTAMINATION:

Quality assurance (QA) blanks, i.e., method, trip, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Trip blanks measure cross-contamination of samples during shipment. Field and rinse blanks measure cross-contamination of samples during field operations. Depending on the amount of contamination present in the QA blanks, the analytes are qualified as non-detects, "U". Qualifications were applied to the samples and analytes as shown below.

A) Method blank contamination:

No problems were found for this criterion.

B) Field or rinse blank contamination:

No problems were found for this criterion.

C) Trip blank contamination for VOA aqueous samples:

No problems were found for this criterion.

D) Storage Blank associated with VOA samples only:

Not applicable.

E) Tentatively Identified Compounds:

Tentatively Identified Compounds (TICs) for VOA organic fractions are not validated.

5. MASS SPECTROMETER TUNING:

Tuning and performance criteria are established to ensure adequate mass resolution, proper identification of compounds and to some degree, sufficient instrument sensitivity. These criteria are not sample specific. Instrument performance is determined using standard materials. Therefore, these criteria should be met in all circumstances. The tuning standard for volatile organics is (BFB) Bromofluorobenzene. If the mass calibration is in error, all associated data will be classified as unusable "R". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

6. CALIBRATION:

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration checks document that the instrument is giving satisfactory daily performance.

A) Response Factor GC/MS:



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The response factor measures the instrument's response to specific chemical compounds. All analytes for initial and continuing calibration should meet the minimum RRF criteria as listed in Table 4 of SOP HW 24 (Rev 4). If RRF is less than minimum RRF as specified in Table 4 for all target analytes, use professional judgment and all detects in the sample will be qualified as "J" or "R". All non-detects for that compound will be rejected "R". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

B) Percent Relative Standard Deviation (%RSD) and Percent Difference (%D):

Percent RSD is calculated from the initial calibration and is used to indicate the stability of the specific compound response factor over increasing concentration. Percent D compares the response factor of the continuing calibration check to the mean response factor (RRF) from the initial calibration. Percent D is a measure of the instrument's daily performance.

Percent RSD must be < 20% for all target analytes. For the opening or closing CCV %D must be within the inclusive opening or closing maximum %D limits as listed in Table 5 of SOP HW 24 (Rev 4) for all Target compounds. A value outside of these limits indicates potential detection and quantitation errors. For these reasons, all positive results are flagged as estimated, "J" and Non-detects are flagged "UJ" for %D values outside criteria only. If %RSD exceeds QC criteria, detects may be qualified as "J" and use professional judgment to qualify non-detects. Qualifications were applied to the samples and analytes as shown below.

The following samples are associated with an opening or closing CCV percent difference (%D) outside criteria. Detected compounds are qualified J. Non-detected compounds are qualified UJ.

Acetone

2-Hexanone

CC-121515-BM-001A-INTERVAL1, CC-121515-BM-001A-INTERVAL2, CC-121515-BM-002A-INTERVAL1, CC-121515-BM-002A-INTERVAL2, CC-121515-BM-003A-INTERVAL1, CC-121515-BM-003A-INTERVAL2, CC-121515-BM-004A-INTERVAL1, CC-121515-BM-004A-INTERVAL2, CC-121515-BM-005A-INTERVAL1, CC-121515-BM-005A-INTERVAL2, CC-121515-BM-002A-INTERVAL2MS, CC-121515-BM-002A-INTERVAL2MSD, MB 180-164343/1-A, LCS 180-164343/2-A

7. INTERNAL STANDARDS PERFORMANCE GC/MS:

Internal standards (IS) performance criteria ensure that the GC/MS sensitivity and response are stable during every experimental run. The internal standard area count must be in the range of 50% - 200 % of the associated continuing calibration internal standard area. The retention time of the internal standards must not vary more than 30 seconds from the associated continuing calibration standard. If the area count is greater than 200%, all positive results quantitated using that IS are qualified as estimated "J-", and non-detects are not qualified. If the area count is less than 50% of the associated standard, all positive results for compounds quantitated with that IS are qualified as estimated "J+" and all non-detects are qualified "R".

If an internal standard retention time varies by more than 30 seconds, the reviewer will use professional judgment to determine either partial or total rejection of the data for that sample fraction. Qualifications were applied to the samples and analytes as shown below.



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No problems were found for this criterion.

8. FIELD DUPLICATES:

Not applicable.

9. COMPOUND IDENTIFICATION:

Target compounds are identified on the GC/MS by using the analyte's relative retention time (RRT) and by comparison to the ion spectra obtained from known standards. For the results to be a positive hit, the sample peak must be within a window of 0.06 RRT units of the standard compound and have ion spectra which has a ratio of the primary and secondary m/z intensities within 20% of that in the standard compound. For the tentatively identified compounds (TIC) the ion spectra must match accurately. In the cases where there is not an adequate ion spectrum match, the laboratory may have provided false positive identifications. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

10. CONTRACT PROBLEMS NON-COMPLIANCE:

None.

11. FIELD DOCUMENTATION:

No problems were identified.

12. OTHER PROBLEMS:

The laboratory analyzed only opening CCV and did not analyzed closing CCV. However, the associated samples were analyzed within 12 hour clock.

LABORATORY CONTROL RECOVERY (LCS):

No problems were found for this criterion.

13. DILUTIONS, RE-EXTRACTIONS & REANALYSIS:

Samples may be re-analyzed for dilution, re-extraction and for other QC reasons. In such cases, the best result values are used. See summary report and EDD for applicable samples and analytes.

ANALYSIS: PCB

The current SOP HW-37A (Revision 0) July 2015, USEPA Region II for the evaluation of PCB data generated through Statement of Work SOM02.2 and SW-846 Method 8082A has been applied.

1. HOLDING TIME :



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The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Those analytes detected in the samples whose holding time has been exceeded will be qualified as estimated, "J". Use professional judgment to qualify the non-detects (sample quantitation limits), if the holding times are grossly exceeded. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

2. SURROGATES:

All samples are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. If the measured surrogate recovery were outside Table 5 of the SOP HW-37A (Revision 0), qualifications were applied to the samples and analytes as shown below.

The following samples have surrogate recoveries above the upper limit of the criteria window. Detected compounds are qualified J. Non-detected compounds are not qualified.

Decachlorobiphenyl CC-121515-BM-001A-INTERVAL2, CC-121515-BM-003A-INTERVAL1, CC-121515-BM-003A-INTERVAL2

Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260

Tetrachloro-m-xylene CC-121515-BM-003A-INTERVAL1

Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260

3. MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD):

MS/MSD data are generated to determine the long-term precision and accuracy of the analytical method in various matrices. The MS/MSD data may be used in conjunction with other QC criteria for additional qualification of data. Qualifications were applied to the samples and analytes as shown below.

Not applicable.

4. Laboratory Control Samples (LCS):

LCS data provides information on the accuracy of the analytical method and laboratory performance. If LCS recoveries fell outside of the acceptable limits, qualifications were applied to the associated samples and compounds as shown below.

No problems were found for this criterion.

5. BLANK CONTAMINATION:

Quality assurance (QA) blanks, i.e., method, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Field and rinse blanks measure cross-contamination of samples during field operations. Depending on the concentration of the analyte in the blank, the analytes are qualified as non-detects U. Qualifications were applied to the samples and analytes as shown below.



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A) Method blank contamination:

No problems were found for this criterion.

B) Field or rinse blank contamination:

No problems were found for this criterion.

6. CALIBRATION:

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration checks document that the instrument is giving satisfactory daily performance.

A) Percent Relative Standard Deviation (%RSD):

For the PCB fraction, if %RSD exceeds 20% for all analytes and the two surrogates, qualify all associated positive results "J" and use professional judgment to qualify non-detects. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

B) Percent Difference (%D):

For opening CCV, or closing CCV that is used as an opening CCV for the next 12-hour period, if %D exceeds 25% for analytes and the two surrogates, qualify all associated positive results "J" and non-detects "UJ".

For closing CCV, if %D exceeds 50% for all analytes and the two surrogates, qualify all associated positive results "J" and non-detects "UJ". Qualifications were applied to the samples and analytes as shown below.

The following samples are associated with the CCV other than AR1016/AR1260 that is not analyzed at correct frequency. Detected compounds are qualified J. Non-detected compounds are not qualified.

Aroclor-1242 CC-121515-BM-001A-INTERVAL1, CC-121515-BM-001A-INTERVAL2, CC-121515-BM-002A-INTERVAL1, CC-121515-BM-002A-INTERVAL2, CC-121515-BM-003A-INTERVAL1, CC-121515-BM-003A-INTERVAL2, CC-121515-BM-004A-INTERVAL1, CC-121515-BM-004A-INTERVAL2, CC-121515-BM-005A-INTERVAL1, CC-121515-BM-005A-INTERVAL2

7. FIELD DUPLICATES:

Not applicable.

8. COMPOUND IDENTIFICATION:

A) PCB Fraction:



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The retention times of reported compounds must fall within the calculated retention time windows for the two chromatographic columns and a GC/MS confirmation is required if the concentration exceeds 10ng/ml in the final sample extract. Qualifications were applied to the samples and analytes as shown below.

Percent Differences

0% - 25%

26% - 200%

101% - 200% (interference detected, either column)

> 50% (PCB value < CRQL, value raised to CRQL)

> 200%

Qualifier

No qualification

Professional Judgment

JN

U

R

The following samples were qualified for % difference on the two columns.

CC-121515-BM-001A-INTERVAL1, CC-121515-BM-002A-INTERVAL2, CC-121515-BM-004A-INTERVAL1, CC-121515-BM-004A-INTERVAL2, CC-121515-BM-005A-INTERVAL1

9. CONTRACT PROBLEMS NON-COMPLIANCE:

None.

10. FIELD DOCUMENTATION:

No problems were identified.

11. OTHER PROBLEMS:

None.

12. DILUTIONS, RE-EXTRACTIONS & RE-ANALYSIS:

Samples may be re-analyzed for dilution, re-extraction and for other QC reasons. In such cases, the best result values are used. See summary report and EDD for applicable samples and analytes.

FORM I

Job No.: 180-50806-1

Client Sample ID: CC-121515-BM-001A-INTERVA
L1

Lab Sample ID: 180-50806-1

Lab File ID: 4122218.D

Date Collected: 12/15/2015 12:40

Date Analyzed: 12/22/2015 15:51

Dilution Factor: 1

GC Column: DB-624 ID: 0.18 (mm)

Level: (low/med) Medium

Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		240	50
79-34-5	1,1,2,2-Tetrachloroethane	ND		240	46
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		240	16
79-00-5	1,1,2-Trichloroethane	ND		240	5
75-34-3	1,1-Dichloroethane	ND		240	49
75-35-4	1,1-Dichloroethene	ND		240	52
96-12-8	1,2-Dibromo-3-Chloropropane	ND		240	17
95-50-1	1,2-Dichlorobenzene	ND		240	33
107-06-2	1,2-Dichloroethane	ND		240	47
78-87-5	1,2-Dichloropropane	ND		240	62
120-82-1	1,2,4-Trichlorobenzene	ND		240	18
541-73-1	1,3-Dichlorobenzene	ND		240	25
106-46-7	1,4-Dichlorobenzene	ND		240	26
78-93-3	2-Butanone (MEK)	ND		240	53
591-78-6	2-Hexanone	ND	J	240	28
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		240	29
67-64-1	Acetone	ND	J	980	240
71-43-2	Benzene	ND		240	48
75-25-2	Bromoform	ND		240	52
74-83-9	Bromomethane	ND		240	77
75-15-0	Carbon disulfide	ND		240	52
56-23-5	Carbon tetrachloride	ND		240	53
108-90-7	Chlorobenzene	ND		240	26
124-48-1	Chlorodibromomethane	ND		240	32
67-66-3	Chloroform	ND		240	49
74-87-3	Chloromethane	ND		240	68
75-00-3	Chloroethane	ND		240	36
156-59-2	cis-1,2-Dichloroethene	ND		240	32
10061-01-5	cis-1,3-Dichloropropene	ND		240	35
75-27-4	Dichlorobromomethane	ND		240	45
75-71-8	Dichlorodifluoromethane	ND		240	31
100-41-4	Ethylbenzene	ND		240	30
106-93-4	1,2-Dibromoethane	ND		240	30
110-82-7	Cyclohexane	ND		240	29

Lab Name: <u>TestAmerica Pittsburgh</u>	Job No.: <u>180-50806-1</u>
SDG No.: <u>LINCKLAEN NY</u>	
Client Sample ID: <u>CC-121515-BM-001A-INTERVA</u> <u>L1</u>	Lab Sample ID: <u>180-50806-1</u>
Matrix: <u>Solid</u>	Lab File ID: <u>4122218.D</u>
Analysis Method: <u>8260C</u>	Date Collected: <u>12/15/2015 12:40</u>
Sample wt/vol: <u>5.1225(g)</u>	Date Analyzed: <u>12/22/2015 15:51</u>
Soil Aliquot Vol: <u>0.1 (mL)</u>	Dilution Factor: <u>1</u>
Soil Extract Vol.: <u>5(mL)</u>	GC Column: <u>DB-624</u> ID: <u>0.18(mm)</u>
% Moisture: _____	Level: (low/med) <u>Medium</u>
Analysis Batch No.: <u>164339</u>	Units: <u>ug/Kg</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
98-82-8	Isopropylbenzene	ND		240	26
79-20-9	Methyl acetate	ND		1200	60
1634-04-4	Methyl tert-butyl ether	ND		240	50
108-87-2	Methylcyclohexane	ND		240	27
75-09-2	Methylene Chloride	ND		240	53
100-42-5	Styrene	ND		240	31
127-18-4	Tetrachloroethene	ND		240	40
108-88-3	Toluene	ND		240	41
156-60-5	trans-1,2-Dichloroethene	ND		240	37
10061-02-6	trans-1,3-Dichloropropene	ND		240	28
79-01-6	Trichloroethene	100	J	240	39
75-69-4	Trichlorofluoromethane	ND		240	55
75-01-4	Vinyl chloride	ND		240	63
1330-20-7	Xylenes, Total	ND		490	96

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	79		52-124
460-00-4	4-Bromofluorobenzene (Surr)	84		63-120
1868-53-7	Dibromofluoromethane (Surr)	85		68-121
2037-26-5	Toluene-d8 (Surr)	107		72-127

FORM I

Lab Name: TestAmerica Pittsburgh Job No.: 180-50806-1

SDG No.: LINCKLAEN NY

Client Sample ID: CC-121515-BM-001A-INTERVA Lab Sample ID: 180-50806-2
L2

Matrix: Solid Lab File ID: 4122209.D

Analysis Method: 8260C Date Collected: 12/15/2015 12:40

Sample wt/vol: 5.0500(g) Date Analyzed: 12/22/2015 11:53

Soil Aliquot Vol: 0.1 (mL) Dilution Factor: 1

Soil Extract Vol.: 5(mL) GC Column: DB-624 ID: 0.18 (mm)

% Moisture: Level: (low/med) Medium

Analysis Batch No.: 164339 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		250	51
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	46
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		250	16
79-00-5	1,1,2-Trichloroethane	ND		250	5
75-34-3	1,1-Dichloroethane	ND		250	50
75-35-4	1,1-Dichloroethene	ND		250	53
96-12-8	1,2-Dibromo-3-Chloropropane	ND		250	17
95-50-1	1,2-Dichlorobenzene	ND		250	34
107-06-2	1,2-Dichloroethane	ND		250	47
78-87-5	1,2-Dichloropropane	ND		250	63
120-82-1	1,2,4-Trichlorobenzene	ND		250	19
541-73-1	1,3-Dichlorobenzene	ND		250	25
106-46-7	1,4-Dichlorobenzene	ND		250	26
78-93-3	2-Butanone (MEK)	ND		250	54
591-78-6	2-Hexanone	ND	J	250	28
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	29
67-64-1	Acetone	ND	J	990	250
71-43-2	Benzene	ND		250	49
75-25-2	Bromoform	ND		250	53
74-83-9	Bromomethane	ND		250	78
75-15-0	Carbon disulfide	ND		250	53
56-23-5	Carbon tetrachloride	ND		250	54
108-90-7	Chlorobenzene	ND		250	26
124-48-1	Chlorodibromomethane	ND		250	32
67-66-3	Chloroform	ND		250	50
74-87-3	Chloromethane	ND		250	69
75-00-3	Chloroethane	ND		250	37
156-59-2	cis-1,2-Dichloroethene	ND		250	33
10061-01-5	cis-1,3-Dichloropropene	ND		250	36
75-27-4	Dichlorobromomethane	ND		250	46
75-71-8	Dichlorodifluoromethane	ND		250	31
100-41-4	Ethylbenzene	ND		250	31
106-93-4	1,2-Dibromoethane	ND		250	30
110-82-7	Cyclohexane	ND		250	30

Lab Name: <u>TestAmerica Pittsburgh</u>	Job No.: <u>180-50806-1</u>
SDG No.: <u>LINCKLAEN NY</u>	
Client Sample ID: <u>CC-121515-BM-001A-INTERVA</u> <u>L2</u>	Lab Sample ID: <u>180-50806-2</u>
Matrix: <u>Solid</u>	Lab File ID: <u>4122209.D</u>
Analysis Method: <u>8260C</u>	Date Collected: <u>12/15/2015 12:40</u>
Sample wt/vol: <u>5.0500(g)</u>	Date Analyzed: <u>12/22/2015 11:53</u>
Soil Aliquot Vol: <u>0.1 (mL)</u>	Dilution Factor: <u>1</u>
Soil Extract Vol.: <u>5(mL)</u>	GC Column: <u>DB-624</u> ID: <u>0.18(mm)</u>
% Moisture: _____	Level: (low/med) <u>Medium</u>
Analysis Batch No.: <u>164339</u>	Units: <u>ug/Kg</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
98-82-8	Isopropylbenzene	ND		250	26
79-20-9	Methyl acetate	ND		1200	61
1634-04-4	Methyl tert-butyl ether	ND		250	51
108-87-2	Methylcyclohexane	ND		250	28
75-09-2	Methylene Chloride	ND		250	54
100-42-5	Styrene	ND		250	32
127-18-4	Tetrachloroethene	ND		250	41
108-88-3	Toluene	ND		250	42
156-60-5	trans-1,2-Dichloroethene	ND		250	37
10061-02-6	trans-1,3-Dichloropropene	ND		250	29
79-01-6	Trichloroethene	44	J	250	40
75-69-4	Trichlorofluoromethane	ND		250	55
75-01-4	Vinyl chloride	ND		250	64
1330-20-7	Xylenes, Total	ND		500	97

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	100		52-124
460-00-4	4-Bromofluorobenzene (Surr)	87		63-120
1868-53-7	Dibromofluoromethane (Surr)	95		68-121
2037-26-5	Toluene-d8 (Surr)	112		72-127

Lab Name: <u>TestAmerica Pittsburgh</u>	Job No.: <u>180-50806-1</u>
SDG No.: <u>LINCKLAEN NY</u>	
Client Sample ID: <u>CC-121515-BM-002A-INTERVA</u> <u>L1</u>	Lab Sample ID: <u>180-50806-3</u>
Matrix: <u>Solid</u>	Lab File ID: <u>4122210.D</u>
Analysis Method: <u>8260C</u>	Date Collected: <u>12/15/2015</u> 13:50
Sample wt/vol: <u>5.0005(g)</u>	Date Analyzed: <u>12/22/2015</u> 12:18
Soil Aliquot Vol: <u>0.1 (mL)</u>	Dilution Factor: <u>1</u>
Soil Extract Vol.: <u>5(mL)</u>	GC Column: <u>DB-624</u> ID: <u>0.18 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Medium</u>
Analysis Batch No.: <u>164339</u>	Units: <u>ug/Kg</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
98-82-8	Isopropylbenzene	ND		250	27
79-20-9	Methyl acetate	ND		1200	61
1634-04-4	Methyl tert-butyl ether	ND		250	51
108-87-2	Methylcyclohexane	ND		250	28
75-09-2	Methylene Chloride	74	J	250	54
100-42-5	Styrene	ND		250	32
127-18-4	Tetrachloroethene	54	J	250	41
108-88-3	Toluene	180	J	250	42
156-60-5	trans-1,2-Dichloroethene	ND		250	38
10061-02-6	trans-1,3-Dichloropropene	ND		250	29
79-01-6	Trichloroethene	440		250	40
75-69-4	Trichlorofluoromethane	ND		250	56
75-01-4	Vinyl chloride	ND		250	65
1330-20-7	Xylenes, Total	ND		500	98

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	86		52-124
460-00-4	4-Bromofluorobenzene (Surr)	84		63-120
1868-53-7	Dibromofluoromethane (Surr)	92		68-121
2037-26-5	Toluene-d8 (Surr)	106		72-127

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-50806-1
SDG No.: LINCKLAEN NY
Client Sample ID: CC-121515-BM-002A-INTERVA Lab Sample ID: 180-50806-4
L2
Matrix: Solid Lab File ID: 4122211.D
Analysis Method: 8260C Date Collected: 12/15/2015 13:50
Sample wt/vol: 5.0300(g) Date Analyzed: 12/22/2015 12:44
Soil Aliquot Vol: 0.1 (mL) Dilution Factor: 1
Soil Extract Vol.: 5(mL) GC Column: DB-624 ID: 0.18 (mm)
% Moisture: _____ Level: (low/med) Medium
Analysis Batch No.: 164339 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		250	51
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	46
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		250	16
79-00-5	1,1,2-Trichloroethane	ND		250	58
75-34-3	1,1-Dichloroethane	ND		250	50
75-35-4	1,1-Dichloroethene	ND	F1	250	53
96-12-8	1,2-Dibromo-3-Chloropropane	ND		250	18
95-50-1	1,2-Dichlorobenzene	ND		250	34
107-06-2	1,2-Dichloroethane	ND		250	48
78-87-5	1,2-Dichloropropane	ND		250	63
120-82-1	1,2,4-Trichlorobenzene	ND		250	19
541-73-1	1,3-Dichlorobenzene	ND		250	25
106-46-7	1,4-Dichlorobenzene	ND		250	26
78-93-3	2-Butanone (MEK)	ND		250	54
591-78-6	2-Hexanone	ND	J	250	28
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	29
67-64-1	Acetone	ND	J	990	250
71-43-2	Benzene	ND		250	49
75-25-2	Bromoform	ND		250	53
74-83-9	Bromomethane	ND		250	78
75-15-0	Carbon disulfide	ND		250	53
56-23-5	Carbon tetrachloride	ND		250	54
108-90-7	Chlorobenzene	ND		250	26
124-48-1	Chlorodibromomethane	ND		250	32
67-66-3	Chloroform	ND		250	50
74-87-3	Chloromethane	ND		250	69
75-00-3	Chloroethane	ND		250	37
156-59-2	cis-1,2-Dichloroethene	ND		250	33
10061-01-5	cis-1,3-Dichloropropene	ND		250	36
75-27-4	Dichlorobromomethane	ND		250	46
75-71-8	Dichlorodifluoromethane	ND		250	32
100-41-4	Ethylbenzene	ND		250	31
106-93-4	1,2-Dibromoethane	ND		250	30
110-82-7	Cyclohexane	ND		250	30

FORM I

Job No.: 180-50806-1

Client Sample ID: CC-121515-BM-002A-INTERVA Lab Sample ID: 180-50806-4
L2

Lab File ID: 4122211.D

Date Collected: 12/15/2015 13:50

Date Analyzed: 12/22/2015 12:44

Dilution Factor: 1

GC Column: DB-624 ID: 0.18 (mm)

Level: (low/med) Medium

Units: ug/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	102		52-124
460-00-4	4-Bromofluorobenzene (Surr)	102		63-120
1868-53-7	Dibromofluoromethane (Surr)	99		68-121
2037-26-5	Toluene-d8 (Surr)	104		72-127

Lab Name: <u>TestAmerica Pittsburgh</u>	Job No.: <u>180-50806-1</u>
SDG No.: <u>LINCKLAEN NY</u>	
Client Sample ID: <u>CC-121515-BM-003A-INTERVA</u> <u>L1</u>	Lab Sample ID: <u>180-50806-5</u>
Matrix: <u>Solid</u>	Lab File ID: <u>4122212.D</u>
Analysis Method: <u>8260C</u>	Date Collected: <u>12/15/2015 14:45</u>
Sample wt/vol: <u>5.0000(g)</u>	Date Analyzed: <u>12/22/2015 13:10</u>
Soil Aliquot Vol: <u>0.1 (mL)</u>	Dilution Factor: <u>1</u>
Soil Extract Vol.: <u>5(mL)</u>	GC Column: <u>DB-624</u> ID: <u>0.18 (mm)</u>
% Moisture: <u></u>	Level: (low/med) <u>Medium</u>
Analysis Batch No.: <u>164339</u>	Units: <u>ug/Kg</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	82	J	250	51
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	47
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		250	17
79-00-5	1,1,2-Trichloroethane	ND		250	58
75-34-3	1,1-Dichloroethane	ND		250	51
75-35-4	1,1-Dichloroethene	ND		250	53
96-12-8	1,2-Dibromo-3-Chloropropane	ND		250	18
95-50-1	1,2-Dichlorobenzene	37	J	250	34
107-06-2	1,2-Dichloroethane	ND		250	48
78-87-5	1,2-Dichloropropane	ND		250	64
120-82-1	1,2,4-Trichlorobenzene	ND		250	19
541-73-1	1,3-Dichlorobenzene	ND		250	25
106-46-7	1,4-Dichlorobenzene	ND		250	26
78-93-3	2-Butanone (MEK)	ND		250	54
591-78-6	2-Hexanone	ND	J	250	28
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	30
67-64-1	Acetone	ND	J	1000	250
71-43-2	Benzene	ND		250	49
75-25-2	Bromoform	ND		250	53
74-83-9	Bromomethane	ND		250	79
75-15-0	Carbon disulfide	ND		250	54
56-23-5	Carbon tetrachloride	ND		250	54
108-90-7	Chlorobenzene	ND		250	26
124-48-1	Chlorodibromomethane	ND		250	32
67-66-3	Chloroform	ND		250	50
74-87-3	Chloromethane	ND		250	70
75-00-3	Chloroethane	ND		250	37
156-59-2	cis-1,2-Dichloroethene	ND		250	33
10061-01-5	cis-1,3-Dichloropropene	ND		250	36
75-27-4	Dichlorobromomethane	ND		250	47
75-71-8	Dichlorodifluoromethane	ND		250	32
100-41-4	Ethylbenzene	ND		250	31
106-93-4	1,2-Dibromoethane	ND		250	31
110-82-7	Cyclohexane	ND		250	30

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-50806-1
 SDG No.: LINCKLAEN NY
 Client Sample ID: CC-121515-BM-003A-INTERVA Lab Sample ID: 180-50806-5
L1
 Matrix: Solid Lab File ID: 4122212.D
 Analysis Method: 8260C Date Collected: 12/15/2015 14:45
 Sample wt/vol: 5.0000(g) Date Analyzed: 12/22/2015 13:10
 Soil Aliquot Vol: 0.1 (mL) Dilution Factor: 1
 Soil Extract Vol.: 5(mL) GC Column: DB-624 ID: 0.18(mm)
 % Moisture: _____ Level: (low/med) Medium
 Analysis Batch No.: 164339 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
98-82-8	Isopropylbenzene	ND		250	27
79-20-9	Methyl acetate	2500		1300	61
1634-04-4	Methyl tert-butyl ether	ND		250	51
108-87-2	Methylcyclohexane	ND		250	28
75-09-2	Methylene Chloride	210	J	250	54
100-42-5	Styrene	ND		250	32
127-18-4	Tetrachloroethene	100	J	250	41
108-88-3	Toluene	290		250	42
156-60-5	trans-1,2-Dichloroethene	ND		250	38
10061-02-6	trans-1,3-Dichloropropene	ND		250	29
79-01-6	Trichloroethene	1000		250	40
75-69-4	Trichlorofluoromethane	ND		250	56
75-01-4	Vinyl chloride	ND		250	65
1330-20-7	Xylenes, Total	100	J	500	98

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	83		52-124
460-00-4	4-Bromofluorobenzene (Surr)	76		63-120
1868-53-7	Dibromofluoromethane (Surr)	91		68-121
2037-26-5	Toluene-d8 (Surr)	110		72-127

Lab Name: <u>TestAmerica Pittsburgh</u>	Job No.: <u>180-50806-1</u>
SDG No.: <u>LINCKLAEN NY</u>	
Client Sample ID: <u>CC-121515-BM-003A-INTERVA</u> <u>L2</u>	Lab Sample ID: <u>180-50806-6</u>
Matrix: <u>Solid</u>	Lab File ID: <u>4122222.D</u>
Analysis Method: <u>8260C</u>	Date Collected: <u>12/15/2015</u> 14:45
Sample wt/vol: <u>5.0047(g)</u>	Date Analyzed: <u>12/22/2015</u> 17:34
Soil Aliquot Vol: <u>0.1 (mL)</u>	Dilution Factor: <u>1</u>
Soil Extract Vol.: <u>5(mL)</u>	GC Column: <u>DB-624</u> ID: <u>0.18 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Medium</u>
Analysis Batch No.: <u>164339</u>	Units: <u>ug/Kg</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		250	51
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	47
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	18	J	250	17
79-00-5	1,1,2-Trichloroethane	ND		250	58
75-34-3	1,1-Dichloroethane	ND		250	51
75-35-4	1,1-Dichloroethene	ND		250	53
96-12-8	1,2-Dibromo-3-Chloropropane	ND		250	18
95-50-1	1,2-Dichlorobenzene	ND		250	34
107-06-2	1,2-Dichloroethane	ND		250	48
78-87-5	1,2-Dichloropropane	ND		250	64
120-82-1	1,2,4-Trichlorobenzene	ND		250	19
541-73-1	1,3-Dichlorobenzene	ND		250	25
106-46-7	1,4-Dichlorobenzene	ND		250	26
78-93-3	2-Butanone (MEK)	ND		250	54
591-78-6	2-Hexanone	ND	J	250	28
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	30
67-64-1	Acetone	ND	J	1000	250
71-43-2	Benzene	ND		250	49
75-25-2	Bromoform	ND		250	53
74-83-9	Bromomethane	ND		250	79
75-15-0	Carbon disulfide	ND		250	54
56-23-5	Carbon tetrachloride	ND		250	54
108-90-7	Chlorobenzene	ND		250	26
124-48-1	Chlorodibromomethane	ND		250	32
67-66-3	Chloroform	ND		250	50
74-87-3	Chloromethane	ND		250	69
75-00-3	Chloroethane	ND		250	37
156-59-2	cis-1,2-Dichloroethene	ND		250	33
10061-01-5	cis-1,3-Dichloropropene	ND		250	36
75-27-4	Dichlorobromomethane	ND		250	47
75-71-8	Dichlorodifluoromethane	ND		250	32
100-41-4	Ethylbenzene	ND		250	31
106-93-4	1,2-Dibromoethane	ND		250	31
110-82-7	Cyclohexane	ND		250	30

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-50806-1
SDG No.: LINCKLAEN NY
Client Sample ID: CC-121515-BM-003A-INTERVA Lab Sample ID: 180-50806-6
L2
Matrix: Solid Lab File ID: 4122222.D
Analysis Method: 8260C Date Collected: 12/15/2015 14:45
Sample wt/vol: 5.0047(g) Date Analyzed: 12/22/2015 17:34
Soil Aliquot Vol: 0.1 (mL) Dilution Factor: 1
Soil Extract Vol.: 5 (mL) GC Column: DB-624 ID: 0.18 (mm)
% Moisture: _____ Level: (low/med) Medium
Analysis Batch No.: 164339 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
98-82-8	Isopropylbenzene	ND		250	27
79-20-9	Methyl acetate	ND		1200	61
1634-04-4	Methyl tert-butyl ether	ND		250	51
108-87-2	Methylcyclohexane	ND		250	28
75-09-2	Methylene Chloride	ND		250	54
100-42-5	Styrene	ND		250	32
127-18-4	Tetrachloroethene	ND		250	41
108-88-3	Toluene	55	J	250	42
156-60-5	trans-1,2-Dichloroethene	ND		250	38
10061-02-6	trans-1,3-Dichloropropene	ND		250	29
79-01-6	Trichloroethene	220	J	250	40
75-69-4	Trichlorofluoromethane	ND		250	56
75-01-4	Vinyl chloride	ND		250	64
1330-20-7	Xylenes, Total	ND		500	98

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	80		52-124
460-00-4	4-Bromofluorobenzene (Surr)	87		63-120
1868-53-7	Dibromofluoromethane (Surr)	88		68-121
2037-26-5	Toluene-d8 (Surr)	93		72-127

FORM I

Job No.: 180-50806-1

Client Sample ID: CC-121515-BM-004A-INTERVA Lab Sample ID: 180-50806-7
L1

Lab File ID: 4122223.D

Date Collected: 12/15/2015 15:30

Date Analyzed: 12/22/2015 18:00

Dilution Factor: 1

GC Column: DB-624 ID: 0.18 (mm)

Level: (low/med) Medium

Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		250	51
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	47
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		250	17
79-00-5	1,1,2-Trichloroethane	ND		250	58
75-34-3	1,1-Dichloroethane	ND		250	51
75-35-4	1,1-Dichloroethene	ND		250	53
96-12-8	1,2-Dibromo-3-Chloropropane	ND		250	18
95-50-1	1,2-Dichlorobenzene	45	J	250	34
107-06-2	1,2-Dichloroethane	ND		250	48
78-87-5	1,2-Dichloropropane	ND		250	64
120-82-1	1,2,4-Trichlorobenzene	ND		250	19
541-73-1	1,3-Dichlorobenzene	ND		250	25
106-46-7	1,4-Dichlorobenzene	ND		250	26
78-93-3	2-Butanone (MEK)	ND		250	54
591-78-6	2-Hexanone	ND	J	250	28
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	30
67-64-1	Acetone	ND	J	1000	250
71-43-2	Benzene	ND		250	49
75-25-2	Bromoform	ND		250	53
74-83-9	Bromomethane	ND		250	79
75-15-0	Carbon disulfide	ND		250	54
56-23-5	Carbon tetrachloride	ND		250	54
108-90-7	Chlorobenzene	ND		250	26
124-48-1	Chlorodibromomethane	ND		250	32
67-66-3	Chloroform	ND		250	50
74-87-3	Chloromethane	ND		250	70
75-00-3	Chloroethane	ND		250	37
156-59-2	cis-1,2-Dichloroethene	ND		250	33
10061-01-5	cis-1,3-Dichloropropene	ND		250	36
75-27-4	Dichlorobromomethane	ND		250	47
75-71-8	Dichlorodifluoromethane	ND		250	32
100-41-4	Ethylbenzene	ND		250	31
106-93-4	1,2-Dibromoethane	ND		250	31
110-82-7	Cyclohexane	ND		250	30

Lab Name: <u>TestAmerica Pittsburgh</u>	Job No.: <u>180-50806-1</u>
SDG No.: <u>LINCKLAEN NY</u>	
Client Sample ID: <u>CC-121515-BM-004A-INTERVA</u> <u>L1</u>	Lab Sample ID: <u>180-50806-7</u>
Matrix: <u>Solid</u>	Lab File ID: <u>4122223.D</u>
Analysis Method: <u>8260C</u>	Date Collected: <u>12/15/2015 15:30</u>
Sample wt/vol: <u>5.0000(g)</u>	Date Analyzed: <u>12/22/2015 18:00</u>
Soil Aliquot Vol: <u>0.1 (mL)</u>	Dilution Factor: <u>1</u>
Soil Extract Vol.: <u>5(mL)</u>	GC Column: <u>DB-624</u> ID: <u>0.18 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Medium</u>
Analysis Batch No.: <u>164339</u>	Units: <u>ug/Kg</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
98-82-8	Isopropylbenzene	ND		250	27
79-20-9	Methyl acetate	ND		1300	61
1634-04-4	Methyl tert-butyl ether	ND		250	51
108-87-2	Methylcyclohexane	ND		250	28
75-09-2	Methylene Chloride	ND		250	54
100-42-5	Styrene	ND		250	32
127-18-4	Tetrachloroethene	59	J	250	41
108-88-3	Toluene	170	J	250	42
156-60-5	trans-1,2-Dichloroethene	ND		250	38
10061-02-6	trans-1,3-Dichloropropene	ND		250	29
79-01-6	Trichloroethene	630		250	40
75-69-4	Trichlorofluoromethane	ND		250	56
75-01-4	Vinyl chloride	ND		250	65
1330-20-7	Xylenes, Total	ND		500	98

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	79		52-124
1460-00-4	4-Bromofluorobenzene (Surr)	82		63-120
1868-53-7	Dibromofluoromethane (Surr)	83		68-121
2037-26-5	Toluene-d8 (Surr)	106		72-127

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-50806-1
 SDG No.: LINCKLAEN NY
 Client Sample ID: CC-121515-BM-004A-INTERVAL2 Lab Sample ID: 180-50806-8
 Matrix: Solid Lab File ID: 4122215.D
 Analysis Method: 8260C Date Collected: 12/15/2015 15:30
 Sample wt/vol: 5.0033(g) Date Analyzed: 12/22/2015 14:34
 Soil Aliquot Vol: 0.1 (mL) Dilution Factor: 1
 Soil Extract Vol.: 5(mL) GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Medium
 Analysis Batch No.: 164339 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		250	51
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	47
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		250	17
79-00-5	1,1,2-Trichloroethane	ND		250	58
75-34-3	1,1-Dichloroethane	ND		250	51
75-35-4	1,1-Dichloroethene	ND		250	53
96-12-8	1,2-Dibromo-3-Chloropropane	ND		250	18
95-50-1	1,2-Dichlorobenzene	ND		250	34
107-06-2	1,2-Dichloroethane	ND		250	48
78-87-5	1,2-Dichloropropane	ND		250	64
120-82-1	1,2,4-Trichlorobenzene	ND		250	19
541-73-1	1,3-Dichlorobenzene	ND		250	25
106-46-7	1,4-Dichlorobenzene	ND		250	26
78-93-3	2-Butanone (MEK)	ND		250	54
591-78-6	2-Hexanone	ND	J	250	28
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	30
67-64-1	Acetone	ND	J	1000	250
71-43-2	Benzene	ND		250	49
75-25-2	Bromoform	ND		250	53
74-83-9	Bromomethane	ND		250	79
75-15-0	Carbon disulfide	ND		250	54
56-23-5	Carbon tetrachloride	ND		250	54
108-90-7	Chlorobenzene	ND		250	26
124-48-1	Chlorodibromomethane	ND		250	32
67-66-3	Chloroform	ND		250	50
74-87-3	Chloromethane	ND		250	69
75-00-3	Chloroethane	ND		250	37
156-59-2	cis-1,2-Dichloroethene	ND		250	33
10061-01-5	cis-1,3-Dichloropropene	ND		250	36
75-27-4	Dichlorobromomethane	ND		250	47
75-71-8	Dichlorodifluoromethane	ND		250	32
100-41-4	Ethylbenzene	ND		250	31
106-93-4	1,2-Dibromoethane	ND		250	31
110-82-7	Cyclohexane	ND		250	30

Lab Name: <u>TestAmerica Pittsburgh</u>	Job No.: <u>180-50806-1</u>
SDG No.: <u>LINCKLAEN NY</u>	
Client Sample ID: <u>CC-121515-BM-004A-INTERVA</u> <u>L2</u>	Lab Sample ID: <u>180-50806-8</u>
Matrix: <u>Solid</u>	Lab File ID: <u>4122215.D</u>
Analysis Method: <u>8260C</u>	Date Collected: <u>12/15/2015 15:30</u>
Sample wt/vol: <u>5.0033(g)</u>	Date Analyzed: <u>12/22/2015 14:34</u>
Soil Aliquot Vol: <u>0.1 (mL)</u>	Dilution Factor: <u>1</u>
Soil Extract Vol.: <u>5(mL)</u>	GC Column: <u>DB-624</u> ID: <u>0.18(mm)</u>
% Moisture: _____	Level: (low/med) <u>Medium</u>
Analysis Batch No.: <u>164339</u>	Units: <u>ug/Kg</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
98-82-8	Isopropylbenzene	ND		250	27
79-20-9	Methyl acetate	ND		1200	61
1634-04-4	Methyl tert-butyl ether	ND		250	51
108-87-2	Methylcyclohexane	ND		250	28
75-09-2	Methylene Chloride	ND		250	54
100-42-5	Styrene	ND		250	32
127-18-4	Tetrachloroethene	53	J	250	41
108-88-3	Toluene	170	J	250	42
156-60-5	trans-1,2-Dichloroethene	ND		250	38
10061-02-6	trans-1,3-Dichloropropene	ND		250	29
79-01-6	Trichloroethene	400		250	40
75-69-4	Trichlorofluoromethane	ND		250	56
75-01-4	Vinyl chloride	ND		250	64
1330-20-7	Xylenes, Total	ND		500	98

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	114		52-124
460-00-4	4-Bromofluorobenzene (Surr)	105		63-120
1868-53-7	Dibromofluoromethane (Surr)	113		68-121
2037-26-5	Toluene-d8 (Surr)	117		72-127

FORM I

Job No.: 180-50806-1

Client Sample ID: CC-121515-BM-005A-INTERVA
L1

Lab Sample ID: 180-50806-9

Lab File ID: 4122216.D

Date Collected: 12/15/2015 16:25

Date Analyzed: 12/22/2015 14:59

Dilution Factor: 1

GC Column: DB-624 ID: 0.18 (mm)

Level: (low/med) Medium

Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		250	51
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	47
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		250	17
79-00-5	1,1,2-Trichloroethane	ND		250	58
75-34-3	1,1-Dichloroethane	ND		250	51
75-35-4	1,1-Dichloroethene	ND		250	53
96-12-8	1,2-Dibromo-3-Chloropropane	ND		250	18
95-50-1	1,2-Dichlorobenzene	ND		250	34
107-06-2	1,2-Dichloroethane	ND		250	48
78-87-5	1,2-Dichloropropane	ND		250	64
120-82-1	1,2,4-Trichlorobenzene	ND		250	19
541-73-1	1,3-Dichlorobenzene	ND		250	25
106-46-7	1,4-Dichlorobenzene	ND		250	26
78-93-3	2-Butanone (MEK)	ND		250	54
591-78-6	2-Hexanone	ND	J	250	28
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	30
67-64-1	Acetone	ND	H	1000	250
71-43-2	Benzene	ND		250	49
75-25-2	Bromoform	ND		250	53
74-83-9	Bromomethane	ND		250	79
75-15-0	Carbon disulfide	ND		250	54
56-23-5	Carbon tetrachloride	ND		250	54
108-90-7	Chlorobenzene	ND		250	26
124-48-1	Chlorodibromomethane	ND		250	32
67-66-3	Chloroform	ND		250	50
74-87-3	Chloromethane	ND		250	70
75-00-3	Chloroethane	ND		250	37
156-59-2	cis-1,2-Dichloroethene	ND		250	33
10061-01-5	cis-1,3-Dichloropropene	ND		250	36
75-27-4	Dichlorobromomethane	ND		250	47
75-71-8	Dichlorodifluoromethane	ND		250	32
100-41-4	Ethylbenzene	ND		250	31
106-93-4	1,2-Dibromoethane	ND		250	31
110-82-7	Cyclohexane	ND		250	30

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-50806-1
 SDG No.: LINCKLAEN NY
 Client Sample ID: CC-121515-BM-005A-INTERVA Lab Sample ID: 180-50806-9
L1
 Matrix: Solid Lab File ID: 4122216.D
 Analysis Method: 8260C Date Collected: 12/15/2015 16:25
 Sample wt/vol: 5.0000(g) Date Analyzed: 12/22/2015 14:59
 Soil Aliquot Vol: 0.1 (mL) Dilution Factor: 1
 Soil Extract Vol.: 5(mL) GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Medium
 Analysis Batch No.: 164339 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
98-82-8	Isopropylbenzene	ND		250	27
79-20-9	Methyl acetate	ND		1300	61
1634-04-4	Methyl tert-butyl ether	ND		250	51
108-87-2	Methylcyclohexane	ND		250	28
75-09-2	Methylene Chloride	ND		250	54
100-42-5	Styrene	ND		250	32
127-18-4	Tetrachloroethene	ND		250	41
108-88-3	Toluene	ND		250	42
156-60-5	trans-1,2-Dichloroethene	ND		250	38
10061-02-6	trans-1,3-Dichloropropene	ND		250	29
79-01-6	Trichloroethene	ND		250	40
75-69-4	Trichlorofluoromethane	ND		250	56
75-01-4	Vinyl chloride	ND		250	65
1330-20-7	Xylenes, Total	ND		500	98

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	104		52-124
460-00-4	4-Bromofluorobenzene (Surr)	82		63-120
1868-53-7	Dibromofluoromethane (Surr)	101		68-121
2037-26-5	Toluene-d8 (Surr)	106		72-127

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-50806-1
 SDG No.: LINCKLAEN NY
 Client Sample ID: CC-121515-BM-005A-INTERVAL2 Lab Sample ID: 180-50806-10
 Matrix: Solid Lab File ID: 4122217.D
 Analysis Method: 8260C Date Collected: 12/15/2015 16:25
 Sample wt/vol: 5.0000(g) Date Analyzed: 12/22/2015 15:25
 Soil Aliquot Vol: 0.1 (mL) Dilution Factor: 1
 Soil Extract Vol.: 5(mL) GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Medium
 Analysis Batch No.: 164339 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		250	51
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	47
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		250	17
79-00-5	1,1,2-Trichloroethane	ND		250	58
75-34-3	1,1-Dichloroethane	ND		250	51
75-35-4	1,1-Dichloroethene	ND		250	53
96-12-8	1,2-Dibromo-3-Chloropropane	ND		250	18
95-50-1	1,2-Dichlorobenzene	ND		250	34
107-06-2	1,2-Dichloroethane	ND		250	48
78-87-5	1,2-Dichloropropane	ND		250	64
120-82-1	1,2,4-Trichlorobenzene	ND		250	19
541-73-1	1,3-Dichlorobenzene	ND		250	25
106-46-7	1,4-Dichlorobenzene	ND		250	26
78-93-3	2-Butanone (MEK)	ND		250	54
591-78-6	2-Hexanone	ND		250	28
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	30
67-64-1	Acetone	ND		1000	250
71-43-2	Benzene	ND		250	49
75-25-2	Bromoform	ND		250	53
74-83-9	Bromomethane	ND		250	79
75-15-0	Carbon disulfide	ND		250	54
56-23-5	Carbon tetrachloride	ND		250	54
108-90-7	Chlorobenzene	ND		250	26
124-48-1	Chlorodibromomethane	ND		250	32
67-66-3	Chloroform	ND		250	50
74-87-3	Chloromethane	ND		250	70
75-00-3	Chloroethane	ND		250	37
156-59-2	cis-1,2-Dichloroethene	ND		250	33
10061-01-5	cis-1,3-Dichloropropene	ND		250	36
75-27-4	Dichlorobromomethane	ND		250	47
75-71-8	Dichlorodifluoromethane	ND		250	32
100-41-4	Ethylbenzene	ND		250	31
106-93-4	1,2-Dibromoethane	ND		250	31
110-82-7	Cyclohexane	ND		250	30

Lab Name: <u>TestAmerica Pittsburgh</u>	Job No.: <u>180-50806-1</u>
SDG No.: <u>LINCKLAEN NY</u>	
Client Sample ID: <u>CC-121515-BM-005A-INTERVA</u> <u>L2</u>	Lab Sample ID: <u>180-50806-10</u>
Matrix: <u>Solid</u>	Lab File ID: <u>4122217.D</u>
Analysis Method: <u>8260C</u>	Date Collected: <u>12/15/2015 16:25</u>
Sample wt/vol: <u>5.0000(g)</u>	Date Analyzed: <u>12/22/2015 15:25</u>
Soil Aliquot Vol: <u>0.1 (mL)</u>	Dilution Factor: <u>1</u>
Soil Extract Vol.: <u>5(mL)</u>	GC Column: <u>DB-624</u> ID: <u>0.18 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Medium</u>
Analysis Batch No.: <u>164339</u>	Units: <u>ug/Kg</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
98-82-8	Isopropylbenzene	ND		250	27
79-20-9	Methyl acetate	ND		1300	61
1634-04-4	Methyl tert-butyl ether	ND		250	51
108-87-2	Methylcyclohexane	ND		250	28
75-09-2	Methylene.Chloride	ND		250	54
100-42-5	Styrene	ND		250	32
127-18-4	Tetrachloroethene	ND		250	41
108-88-3	Toluene	ND		250	42
156-60-5	trans-1,2-Dichloroethene	ND		250	38
10061-02-6	trans-1,3-Dichloropropene	ND		250	29
79-01-6	Trichloroethene	ND		250	40
75-69-4	Trichlorofluoromethane	ND		250	56
75-01-4	Vinyl chloride	ND		250	65
1330-20-7	Xylenes, Total	ND		500	98

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	95		52-124
460-00-4	4-Bromofluorobenzene (Surr)	99		63-120
1868-53-7	Dibromofluoromethane (Surr)	88		68-121
2037-26-5	Toluene-d8 (Surr)	100		72-127

FORM I

Lab Name: TestAmerica Pittsburgh Job No.: 180-50806-1

SDG No.: LINCKLAEN NY

Client Sample ID: CC-121515-BM-001A-INTERVA Lab Sample ID: 180-50806-1

Matrix: Solid Lab File ID: S1228540.D

Analysis Method: 8082A . . . Date Collected: 12/15/2015 12:40

Extraction Method: 3541 Date Extracted: 12/24/2015 13:19

Sample wt/vol: 15.1(g) Date Analyzed: 12/29/2015 21:46

Con. Extract Vol.: 20.0(mL) Dilution Factor: 20

Injection Volume: 1 (uL) GC Column: RTX-CLP1 ID: 0.53 (mm)

% Moisture: GPC Cleanup: (Y/N) N

Analysis Batch No.: 164785 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
12674-11-2	PCB-1016	ND		330	150
11104-28-2	PCB-1221	ND		330	240
11141-16-5	PCB-1232	ND		330	83
12672-29-6	PCB-1248	ND		330	78
11097-69-1	PCB-1254	ND		330	120
11096-82-5	PCB-1260	ND		330	110

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene (Surr)	102		45-135
2051-24-3	DCB Decachlorobiphenyl (Surr)	119		45-125

FORM I

Lab Name: TestAmerica Pittsburgh

Job No.: 180-50806-1

SDG No.: LINCKLAEN NY

Client Sample ID: CC-121515-BM-001A-INTERVA
L1

Lab Sample ID: 180-50806-1

Matrix: Solid

Lab File ID: S1228540.D

Analysis Method: 8082A

Date Collected: 12/15/2015 12:40

Extraction Method: 3541

Date Extracted: 12/24/2015 13:19

Sample wt/vol: 15.1(g)

Date Analyzed: 12/29/2015 21:46

Con. Extract Vol.: 20.0 (mL)

Dilution Factor: 20

Injection Volume: 1 (uL)

GC Column: RTX-CLP2 ID: 0.53 (mm)

% Moisture:

GPC Cleanup: (Y/N) N

Analysis Batch No.: 164785

Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
53469-21-9	PCB-1242	13000	5	330	120

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene (Surr)	110		45-135
2051-24-3	DCB Decachlorobiphenyl (Surr)	119		45-125

FORM I

Lab Name: TestAmerica Pittsburgh

Job No.: 180-50806-1

SDG No.: LINCKLAEN NY

Client Sample ID: CC-121515-BM-001A-INTERVA
L2

Lab Sample ID: 180-50806-2

Matrix: Solid

Lab File ID: S1228541.D

Analysis Method: 8082A

Date Collected: 12/15/2015 12:40

Extraction Method: 3541

Date Extracted: 12/24/2015 13:19

Sample wt/vol: 15.7 (g)

Date Analyzed: 12/29/2015 22:05

Con. Extract Vol.: 20.0 (mL)

Dilution Factor: 1

Injection Volume: 1 (uL)

GC Column: RTX-CLP1 ID: 0.53 (mm)

% Moisture:

GPC Cleanup: (Y/N) N

Analysis Batch No.: 164785

Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
12674-11-2	PCB-1016	ND	J	16	7.3
11104-28-2	PCB-1221	ND		16	12
11141-16-5	PCB-1232	ND		16	4.0
12672-29-6	PCB-1248	ND		16	3.7
11097-69-1	PCB-1254	ND		16	5.9
11096-82-5	PCB-1260	ND		16	5.5

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene (Surr)	108		45-135
2051-24-3	DCB Decachlorobiphenyl (Surr)	139	X	45-125

FORM I

Lab Name: TestAmerica Pittsburgh

Job No.: 180-50806-1

SDG No.: LINCKLAEN NY

Client Sample ID: CC-121515-BM-001A-INTERVA
L2

Lab Sample ID: 180-50806-2

Matrix: Solid

Lab File ID: S1228541.D

Analysis Method: 8082A

Date Collected: 12/15/2015 12:40

Extraction Method: 3541

Date Extracted: 12/24/2015 13:19

Sample wt/vol: 15.7(g)

Date Analyzed: 12/29/2015 22:05

Con. Extract Vol.: 20.0 (mL)

Dilution Factor: 1

Injection Volume: 1 (uL)

GC Column: RTX-CLP2 ID: 0.53 (mm)

% Moisture:

GPC Cleanup: (Y/N) N

Analysis Batch No.: 164785

Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
53469-21-9	PCB-1242	44	7	16	5.9

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene (Surr)	116		45-135
2051-24-3	DCB Decachlorobiphenyl (Surr)	130	X	45-125

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-50806-1
 SDG No.: LINCKLAEN NY
 Client Sample ID: CC-121515-BM-002A-INTERVAL1 Lab Sample ID: 180-50806-3
 Matrix: Solid Lab File ID: S1228542.D
 Analysis Method: 8082A Date Collected: 12/15/2015 13:50
 Extraction Method: 3541 Date Extracted: 12/24/2015 13:19
 Sample wt/vol: 15.4(g) Date Analyzed: 12/29/2015 22:24
 Con. Extract Vol.: 20.0(mL) Dilution Factor: 5
 Injection Volume: 1(uL) GC Column: RTX-CLP1 ID: 0.53(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 164785 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
12674-11-2	PCB-1016	ND		81	37
11104-28-2	PCB-1221	ND		81	59
11141-16-5	PCB-1232	ND		81	20
12672-29-6	PCB-1248	ND		81	19
11097-69-1	PCB-1254	ND		81	30
11096-82-5	PCB-1260	ND		81	28

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene (Surr)	96		45-135
2051-24-3	DCB Decachlorobiphenyl (Surr)	111		45-125

FORM I

Lab Name: TestAmerica Pittsburgh

Job No.: 180-50806-1

SDG No.: LINCKLAEN NY

Client Sample ID: CC-121515-BM-002A-INTERVA
L1

Lab Sample ID: 180-50806-3

Matrix: Solid

Lab File ID: S1228542.D

Analysis Method: 8082A

Date Collected: 12/15/2015 13:50

Extraction Method: 3541

Date Extracted: 12/24/2015 13:19

Sample wt/vol: 15.4 (g)

Date Analyzed: 12/29/2015 22:24

Con. Extract Vol.: 20.0 (mL)

Dilution Factor: 5

Injection Volume: 1 (uL)

GC Column: RTX-CLP2 ID: 0.53 (mm)

% Moisture:

GPC Cleanup: (Y/N) N

Analysis Batch No.: 164785

Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
53469-21-9	PCB-1242	2400	T	81	30

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene (Surr)	98		45-135
2051-24-3	DCB Decachlorobiphenyl (Surr)	107		45-125

Lab Name: <u>TestAmerica Pittsburgh</u>	Job No.: <u>180-50806-1</u>
SDG No.: <u>LINCKLAEN NY</u>	
Client Sample ID: <u>CC-121515-BM-002A-INTERVA</u> <u>L2</u>	Lab Sample ID: <u>180-50806-4</u>
Matrix: <u>Solid</u>	Lab File ID: <u>S1228543.D</u>
Analysis Method: <u>8082A</u>	Date Collected: <u>12/15/2015 13:50</u>
Extraction Method: <u>3541</u>	Date Extracted: <u>12/24/2015 13:19</u>
Sample wt/vol: <u>15.1(g)</u>	Date Analyzed: <u>12/29/2015 22:42</u>
Con. Extract Vol.: <u>20.0(mL)</u>	Dilution Factor: <u>5</u>
Injection Volume: <u>1(uL)</u>	GC Column: <u>RTX-CLP1</u> ID: <u>0.53(mm)</u>
% Moisture: _____	GPC Cleanup: (Y/N) <u>N</u>
Analysis Batch No.: <u>164785</u>	Units: <u>ug/Kg</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
12674-11-2	PCB-1016	ND		83	38
11104-28-2	PCB-1221	ND		83	60
11141-16-5	PCB-1232	ND		83	21
12672-29-6	PCB-1248	ND		83	19
11097-69-1	PCB-1254	ND		83	31
11096-82-5	PCB-1260	ND		83	28

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene (Surr)	106		45-135
2051-24-3	DCB Decachlorobiphenyl (Surr)	122		45-125

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-50806-1
SDG No.: LINCKLAEN NY
Client Sample ID: CC-121515-BM-002A-INTERVA Lab Sample ID: 180-50806-4
L2
Matrix: Solid Lab File ID: S1228543.D
Analysis Method: 8082A Date Collected: 12/15/2015 13:50
Extraction Method: 3541 Date Extracted: 12/24/2015 13:19
Sample wt/vol: 15.1(g) Date Analyzed: 12/29/2015 22:42
Con. Extract Vol.: 20.0(mL) Dilution Factor: 5
Injection Volume: 1(uL) GC Column: RTX-CLP2 ID: 0.53(mm)
% Moisture: GPC Cleanup: (Y/N) N
Analysis Batch No.: 164785 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
53469-21-9	PCB-1242	3300	J	83	31

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene (Surr)	110		45-135
2051-24-3	DCB Decachlorobiphenyl (Surr)	121		45-125

FORM I

Lab Name: TestAmerica Pittsburgh Job No.: 180-50806-1

SDG No.: LINCKLAEN NY

Client Sample ID: CC-121515-BM-003A-INTERVA Lab Sample ID: 180-50806-5

Matrix: Solid Lab File ID: S1228544.D

Analysis Method: 8082A Date Collected: 12/15/2015 14:45

Extraction Method: 3541 Date Extracted: 12/24/2015 13:19

Sample wt/vol: 14.9(g) Date Analyzed: 12/29/2015 23:01

Con. Extract Vol.: 20.0 (mL) Dilution Factor: 1

Injection Volume: 1 (uL) GC Column: RTX-CLP1 ID: 0.53 (mm)

% Moisture: GPC Cleanup: (Y/N) N

Analysis Batch No.: 164785 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
12674-11-2	PCB-1016	ND	J ↓	17	7.7
11104-28-2	PCB-1221	ND		17	12
11141-16-5	PCB-1232	ND		17	4.2
12672-29-6	PCB-1248	ND		17	3.9
11097-69-1	PCB-1254	ND		17	6.2
11096-82-5	PCB-1260	ND		17	5.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene (Surr)	142	X	45-135
2051-24-3	DCB Decachlorobiphenyl (Surr)	180	X	45-125

Lab Name: <u>TestAmerica Pittsburgh</u>	Job No.: <u>180-50806-1</u>
SDG No.: <u>LINCKLAEN NY</u>	
Client Sample ID: <u>CC-121515-BM-003A-INTERVA</u> <u>L1</u>	Lab Sample ID: <u>180-50806-5</u>
Matrix: <u>Solid</u>	Lab File ID: <u>S1228544.D</u>
Analysis Method: <u>8082A</u>	Date Collected: <u>12/15/2015</u> 14:45
Extraction Method: <u>3541</u>	Date Extracted: <u>12/24/2015</u> 13:19
Sample wt/vol: <u>14.9(g)</u>	Date Analyzed: <u>12/29/2015</u> 23:01
Con. Extract Vol.: <u>20.0(mL)</u>	Dilution Factor: <u>1</u>
Injection Volume: <u>1(uL)</u>	GC Column: <u>RTX-CLP2</u> ID: <u>0.53(mm)</u>
% Moisture: _____	GPC Cleanup: (Y/N) <u>N</u>
Analysis Batch No.: <u>164785</u>	Units: <u>ug/Kg</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
53469-21-9	PCB-1242	23	+	17	6.2

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene (Surr)	141	X	45-135
2051-24-3	DCB Decachlorobiphenyl (Surr)	170	X	45-125

FORM I

Lab Name: TestAmerica Pittsburgh Job No.: 180-50806-1

SDG No.: LINCKLAEN NY

Client Sample ID: CC-121515-BM-003A-INTERVA Lab Sample ID: 180-50806-6
L2

Matrix: Solid Lab File ID: S1228545.D

Analysis Method: 8082A Date Collected: 12/15/2015. 14:45

Extraction Method: 3541 Date Extracted: 12/24/2015 13:19

Sample wt/vol: 15.1 (g) Date Analyzed: 12/29/2015 23:20

Con. Extract Vol.: 20.0 (mL) Dilution Factor: 1

Injection Volume: 1(uL) GC Column: RTX-CLP1 ID: 0.53 (mm)

% Moisture: GPC Cleanup: (Y/N) N

Analysis Batch No.: 164785 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
12674-11-2	PCB-1016	ND	J	17	7.6
11104-28-2	PCB-1221	ND		17	12
11141-16-5	PCB-1232	ND		17	4.2
12672-29-6	PCB-1248	ND		17	3.9
11097-69-1	PCB-1254	ND		17	6.1
11096-82-5	PCB-1260	ND		17	5.7

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene (Surr)	127		45-135
2051-24-3	DCB Decachlorobiphenyl (Surr)	158	X	45-125

FORM I

Lab Name: <u>TestAmerica Pittsburgh</u>	Job No.: <u>180-50806-1</u>
SDG No.: <u>LINCKLAEN NY</u>	
Client Sample ID: <u>CC-121515-BM-003A-INTERVA</u> <u>L2</u>	Lab Sample ID: <u>180-50806-6</u>
Matrix: <u>Solid</u>	Lab File ID: <u>S1228545.D</u>
Analysis Method: <u>8082A</u>	Date Collected: <u>12/15/2015 14:45</u>
Extraction Method: <u>3541</u>	Date Extracted: <u>12/24/2015 13:19</u>
Sample wt/vol: <u>15.1(g)</u>	Date Analyzed: <u>12/29/2015 23:20</u>
Con. Extract Vol.: <u>20.0 (mL)</u>	Dilution Factor: <u>1</u>
Injection Volume: <u>1 (uL)</u>	GC Column: <u>RTX-CLP2</u> ID: <u>0.53 (mm)</u>
% Moisture: _____	GPC Cleanup: (Y/N) <u>N</u>
Analysis Batch No.: <u>164785</u>	Units: <u>ug/Kg</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
53469-21-9	PCB-1242	40	7	17	6.1

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene (Surr)	132		45-135
2051-24-3	DCB Decachlorobiphenyl (Surr)	147	X	45-125

Lab Name: <u>TestAmerica Pittsburgh</u>	Job No.: <u>180-50806-1</u>
SDG No.: <u>LINCKLAEN NY</u>	
Client Sample ID: <u>CC-121515-BM-004A-INTERVA</u> <u>L1</u>	Lab Sample ID: <u>180-50806-7</u>
Matrix: <u>Solid</u>	Lab File ID: <u>S1228546.D</u>
Analysis Method: <u>8082A</u>	Date Collected: <u>12/15/2015</u> 15:30
Extraction Method: <u>3541</u>	Date Extracted: <u>12/24/2015</u> 13:19
Sample wt/vol: <u>15.4(g)</u>	Date Analyzed: <u>12/29/2015</u> 23:39
Con. Extract Vol.: <u>20.0(mL)</u>	Dilution Factor: <u>5</u>
Injection Volume: <u>1(uL)</u>	GC Column: <u>RTX-CLP1</u> ID: <u>0.53(mm)</u>
% Moisture: _____	GPC Cleanup: (Y/N) <u>N</u>
Analysis Batch No.: <u>164785</u>	Units: <u>ug/Kg</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
12674-11-2	PCB-1016	ND		81	37
11104-28-2	PCB-1221	ND		81	59
11141-16-5	PCB-1232	ND		81	20
12672-29-6	PCB-1248	ND		81	19
11097-69-1	PCB-1254	ND		81	30
11096-82-5	PCB-1260	ND		81	28

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene (Surr)	88		45-135
2051-24-3	DCB Decachlorobiphenyl (Surr)	100		45-125

Lab Name: <u>TestAmerica Pittsburgh</u>	Job No.: <u>180-50806-1</u>
SDG No.: <u>LINCKLAEN NY</u>	
Client Sample ID: <u>CC-121515-BM-004A-INTERVA</u> <u>L1</u>	Lab Sample ID: <u>180-50806-7</u>
Matrix: <u>Solid</u>	Lab File ID: <u>S1228546.D</u>
Analysis Method: <u>8082A</u>	Date Collected: <u>12/15/2015</u> 15:30
Extraction Method: <u>3541</u>	Date Extracted: <u>12/24/2015</u> 13:19
Sample wt/vol: <u>15.4(g)</u>	Date Analyzed: <u>12/29/2015</u> 23:39
Con. Extract Vol.: <u>20.0(mL)</u>	Dilution Factor: <u>5</u>
Injection Volume: <u>1(uL)</u>	GC Column: <u>RTX-CLP2</u> ID: <u>0.53(mm)</u>
% Moisture: _____	GPC Cleanup: (Y/N) <u>N</u>
Analysis Batch No.: <u>164785</u>	Units: <u>ug/Kg</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
53469-21-9	PCB-1242	2100	5	81	30

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene (Surr)	91		45-135
2051-24-3	DCB Decachlorobiphenyl (Surr)	98		45-125

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-50806-1
SDG No.: LINCKLAEN NY
Client Sample ID: CC-121515-BM-004A-INTERVA Lab Sample ID: 180-50806-8
L2
Matrix: Solid Lab File ID: S1228547.D
Analysis Method: 8082A Date Collected: 12/15/2015 15:30
Extraction Method: 3541 Date Extracted: 12/24/2015 13:19
Sample wt/vol: 15.1(g) Date Analyzed: 12/29/2015 23:58
Con. Extract Vol.: 20.0(mL) Dilution Factor: 1
Injection Volume: 1(uL) GC Column: RTX-CLP1 ID: 0.53(mm)
% Moisture: GPC Cleanup: (Y/N) N
Analysis Batch No.: 164785 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
12674-11-2	PCB-1016	ND		17	7.6
11104-28-2	PCB-1221	ND		17	12
11141-16-5	PCB-1232	ND		17	4.2
12672-29-6	PCB-1248	ND		17	3.9
11097-69-1	PCB-1254	ND		17	6.1
11096-82-5	PCB-1260	ND		17	5.7

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene (Surr)	109		45-135
2051-24-3	DCB Decachlorobiphenyl (Surr)	107		45-125

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
53469-21-9	PCB-1242	17	11 J-p	17	6.1

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FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-50806-1
SDG No.: LINCKLAEN NY
Client Sample ID: CC-121515-BM-005A-INTERVA Lab Sample ID: 180-50806-9
L1
Matrix: Solid Lab File ID: S1228548.D
Analysis Method: 8082A Date Collected: 12/15/2015 16:25
Extraction Method: 3541 Date Extracted: 12/24/2015 13:19
Sample wt/vol: 13(g) Date Analyzed: 12/30/2015 00:16
Con. Extract Vol.: 20.0(mL) Dilution Factor: 10
Injection Volume: 1(uL) GC Column: RTX-CLP1 ID: 0.53(mm)
% Moisture: _____ GPC Cleanup: (Y/N) N
Analysis Batch No.: 164785 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
12674-11-2	PCB-1016	ND		190	88
11104-28-2	PCB-1221	ND		190	140
11141-16-5	PCB-1232	ND		190	48
12672-29-6	PCB-1248	ND		190	45
11097-69-1	PCB-1254	ND		190	71
11096-82-5	PCB-1260	ND		190	66

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene (Surr)	77		45-135
2051-24-3	DCB Decachlorobiphenyl (Surr)	101		45-125

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-50806-1
SDG No.: LINCKLAEN NY
Client Sample ID: CC-121515-BM-005A-INTERVA Lab Sample ID: 180-50806-9
L1
Matrix: Solid Lab File ID: S1228548.D
Analysis Method: 8082A Date Collected: 12/15/2015 16:25
Extraction Method: 3541 Date Extracted: 12/24/2015 13:19
Sample wt/vol: 13(g) Date Analyzed: 12/30/2015 00:16
Con. Extract Vol.: 20.0(mL) Dilution Factor: 10
Injection Volume: 1(uL) GC Column: RTX-CLP2 ID: 0.53(mm)
% Moisture: GPC Cleanup: (Y/N) N
Analysis Batch No.: 164785 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
53469-21-9	PCB-1242	4300	J	190	71

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene (Surr)	82		45-135
2051-24-3	DCB Decachlorobiphenyl (Surr)	99		45-125

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-50806-1
 SDG No.: LINCKLAEN NY
 Client Sample ID: CC-121515-BM-005A-INTERVA Lab Sample ID: 180-50806-10
L2
 Matrix: Solid Lab File ID: S1228549.D
 Analysis Method: 8082A Date Collected: 12/15/2015 16:25
 Extraction Method: 3541 Date Extracted: 12/24/2015 13:19
 Sample wt/vol: 15(g) Date Analyzed: 12/30/2015 00:35
 Con. Extract Vol.: 20.0(mL) Dilution Factor: 5
 Injection Volume: 1(uL) GC Column: RTX-CLP1 ID: 0.53(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 164785 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
12674-11-2	PCB-1016	ND		83	38
11104-28-2	PCB-1221	ND		83	60
11141-16-5	PCB-1232	ND		83	21
12672-29-6	PCB-1248	ND		83	20
11097-69-1	PCB-1254	ND		83	31
11096-82-5	PCB-1260	ND		83	29

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene (Surr)	101		45-135
2051-24-3	DCB Decachlorobiphenyl (Surr)	117		45-125

FORM I

Lab Name: TestAmerica Pittsburgh

Job No.: 180-50806-1

SDG No.: LINCKLAEN NY

Client Sample ID: CC-121515-BM-005A-INTERVA
L2

Lab Sample ID: 180-50806-10

Matrix: Solid

Lab File ID: S1228549.D

Analysis Method: 8082A

Date Collected: 12/15/2015 16:25

Extraction Method: 3541

Date Extracted: 12/24/2015 13:19

Sample wt/vol: 15 (g)

Date Analyzed: 12/30/2015 00:35

Con. Extract Vol.: 20.0 (mL)

Dilution Factor: 5

Injection Volume: 1 (uL)

GC Column: RTX-CLP2 ID: 0.53 (mm)

% Moisture:

GPC Cleanup: (Y/N) N

Analysis Batch No.: 164785

Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
53469-21-9	PCB-1242	720	5	83	31

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene (Surr)	103		45-135
2051-24-3	DCB Decachlorobiphenyl (Surr)	117		45-125



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EXECUTIVE NARRATIVE

Case No. : 2077-60_SOLV-SAVE

Site: Solvent Savers

Number of Samples: 1 (Building material)

Analysis: VOA, PCB

SDG No.: 180-50861-1

Laboratory: TestAmerica Pittsburgh

Sampling dates: 12/16/2015

Validation SOP: HW-24 (Rev 4) and SW-846 Method
8260C, HW-37A (Rev 0) and
SW-846 Method 8082A

QAPP: Not available.

SUMMARY OF DEFINITIONS:

Critical: Results have an unacceptable level of uncertainty and should not be used for making decisions.
Data have been qualified "R" rejected.

Major: A level of uncertainty exists that may not meet the data quality objectives for the project. A bias is likely to be present in the results. Data has been qualified "J" estimated. "J+" and "J-" represent likely direction of the bias.

Minor: The level of uncertainty is acceptable. No significant bias in the data was observed.

Critical Findings:

None.

Major Findings:

VOA, PCB: Sample PA-121615-BM-0006 has analytes that have been qualified "J", "J+" or "J-".

Minor Findings:

None.

COMMENTS: None.

Reviewer Name(s): Raxa J. Shelley

Approver's Signature:

Date: 08/08/17

Name: Russell Arnone

Affiliation: USEPA/R2/HWSB/HWSS



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Data Qualifier Definitions (National Functional Guidelines)			
Qualifier Symbol	Explanation		
	INORGANICS	ORGANICS	CHLORINATED DIOXIN/FURAN
U	The analyte was analyzed for, but was not detected above the level of the reported quantitation limit.	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method	The analyte was analyzed for but not detected. The value preceding the "U" may represent the adjusted Contract Required Quantitation Limit (see DLM02.X, Exhibit D, Section 1.2 and Table 2), or the sample specific estimated detection limit (EDL, see Method 8290A, Section 11.9.5).
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL).	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to an issue with the quality of the data generated because certain QC criteria were not met, or the concentration of the analyte was below the adjusted CRQL).
J+	The result is an estimated quantity, but the result may be biased high.	The result is an estimated quantity, but the result may be biased high.	
J-	The result is an estimated quantity, but the result may be biased low.	The result is an estimated quantity, but the result may be biased low.	
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.	The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.	The analyte was not detected (see definition of "U" flag, above). The reported value should be considered approximate.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
N		The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification".	
NJ		The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	
C		This qualifier applies to pesticide and Aroclor results when the identification has been confirmed by Gas Chromatograph/Mass Spectrometer (GC/MS).	
X		This qualifier applies to pesticide and Aroclor results when GC/MS analysis was attempted but was unsuccessful.	



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DATA ASSESSMENT

ANALYSIS: VOA

The SOP HW-24 (Revision 4) September 2014, USEPA Region II for the evaluation of Volatile organic data generated through Gas Chromatography/Mass Spectrometry SW-846 Method 8260B and 8260C has been applied.

1. HOLDING TIME:

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Those analytes detected in the samples whose holding time has been exceeded will be qualified as estimated, "J". The non-detects (sample quantitation limits) will be flagged as estimated, "J", or unusable, "R", if the holding times are grossly exceeded. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

2. DEUTERATED MONITORING COMPOUNDS (DMC's)

All samples are spiked with DMC compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. If the measured DMC recovery concentrations were outside contract specifications, qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

3. MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD):

MS/MSD data are generated to determine the long-term precision and accuracy of the analytical method in various matrices. The MS/MSD data may be used in conjunction with other QC criteria for additional qualification of data. Qualifications were applied to the samples and analytes as shown below.

Not applicable.

4. BLANK CONTAMINATION:

Quality assurance (QA) blanks, i.e., method, trip, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Trip blanks measure cross-contamination of samples during shipment. Field and rinse blanks measure cross-contamination of samples during field operations. Depending on the amount of contamination present in the QA blanks, the analytes are qualified as non-detects, "U". Qualifications were applied to the samples and analytes as shown below.

A) Method blank contamination:



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No problems were found for this criterion.

B) Field or rinse blank contamination:

No problems were found for this criterion.

C) Trip blank contamination for VOA aqueous samples:

Not applicable.

D) Storage Blank associated with VOA samples only:

Not applicable.

E) Tentatively Identified Compounds:

Tentatively Identified Compounds (TICs) for VOA organic fractions are not validated.

5. MASS SPECTROMETER TUNING:

Tuning and performance criteria are established to ensure adequate mass resolution, proper identification of compounds and to some degree, sufficient instrument sensitivity. These criteria are not sample specific. Instrument performance is determined using standard materials. Therefore, these criteria should be met in all circumstances. The tuning standard for volatile organics is (BFB) Bromofluorobenzene. If the mass calibration is in error, all associated data will be classified as unusable "R". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

6. CALIBRATION:

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration checks document that the instrument is giving satisfactory daily performance.

A) Response Factor GC/MS:

The response factor measures the instrument's response to specific chemical compounds. All analytes for initial and continuing calibration should meet the minimum RRF criteria as listed in Table 4 of SOP HW 24 (Rev 4). If RRF is less than minimum RRF as specified in Table 4 for all target analytes, use professional judgment and all detects in the sample will be qualified as "J" or "R". All non-detects for that compound will be rejected "R". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

B) Percent Relative Standard Deviation (%RSD) and Percent Difference (%D):

Percent RSD is calculated from the initial calibration and is used to indicate the stability of the specific compound response factor over increasing concentration. Percent D compares



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the response factor of the continuing calibration check to the mean response factor (RRF) from the initial calibration. Percent D is a measure of the instrument's daily performance.

Percent RSD must be < 20% for all target analytes. For the opening or closing CCV %D must be within the inclusive opening or closing maximum %D limits as listed in Table 5 of SOP HW 24 (Rev 4) for all Target compounds. A value outside of these limits indicates potential detection and quantitation errors. For these reasons, all positive results are flagged as estimated, "J" and Non-detects are flagged "UJ" for %D values outside criteria only. If %RSD exceeds QC criteria, detects may be qualified as "J" and use professional judgment to qualify non-detects. Qualifications were applied to the samples and analytes as shown below.

The following samples are associated with an opening or closing CCV percent difference (%D) outside criteria. Detected compounds are qualified J. Non-detected compounds are qualified UJ.

1,1-Dichloroethene

Acetone

Toluene

2-Hexanone

1,2-Dibromo-3-chloropropane

PA-121615-BM-0006, MB 180-164513/1-A, LCS 180-164513/2-A, LCSD 180-164513/3-A

7. INTERNAL STANDARDS PERFORMANCE GC/MS:

Internal standards (IS) performance criteria ensure that the GC/MS sensitivity and response are stable during every experimental run. The internal standard area count must be in the range of 50% - 200 % of the associated continuing calibration internal standard area. The retention time of the internal standards must not vary more than 30 seconds from the associated continuing calibration standard. If the area count is greater than 200%, all positive results quantitated using that IS are qualified as estimated "J-", and non-detects are not qualified. If the area count is less than 50% of the associated standard, all positive results for compounds quantitated with that IS are qualified as estimated "J+" and all non-detects are qualified "R".

If an internal standard retention time varies by more than 30 seconds, the reviewer will use professional judgment to determine either partial or total rejection of the data for that sample fraction. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

8. FIELD DUPLICATES:

Not applicable.

9. COMPOUND IDENTIFICATION:

Target compounds are identified on the GC/MS by using the analyte's relative retention time (RRT) and by comparison to the ion spectra obtained from known standards. For the results to be a positive hit, the sample peak must be within a window of 0.06 RRT units of the standard compound and have ion spectra which has a ratio of the primary and secondary m/z intensities within 20% of that in the standard compound. For the tentatively identified compounds (TIC) the ion spectra must match accurately. In the cases where there is not an adequate ion spectrum match, the laboratory may have provided false positive identifications. Qualifications were applied to the samples and analytes as shown below.



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No problems were found for this criterion.

10. CONTRACT PROBLEMS NON-COMPLIANCE:

None.

11. FIELD DOCUMENTATION:

No problems were identified.

12. OTHER PROBLEMS:

The laboratory analyzed only opening CCV and did not analyzed closing CCV. However, the associated samples were analyzed within 12 hour clock.

LABORATORY CONTROL SAMPLE/LABORATORY CONTROL SAMPLE DUPLICATE (LCS/LCSD):

The following samples have LCS/LCSD compound recovery greater than the upper acceptance limit. Detected compounds are qualified J. Non-detected compounds are not qualified.

Acetone

PA-121615-BM-0006

13. DILUTIONS, RE-EXTRACTIONS & REANALYSIS:

Samples may be re-analyzed for dilution, re-extraction and for other QC reasons. In such cases, the best result values are used. See summary report and EDD for applicable samples and analytes.

ANALYSIS: PCB

The current SOP HW-37A (Revision 0) July 2015, USEPA Region II for the evaluation of PCB data generated through Statement of Work SOM02.2 and SW-846 Method 8082A has been applied.

1. HOLDING TIME :

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Those analytes detected in the samples whose holding time has been exceeded will be qualified as estimated, "J". Use professional judgment to qualify the non-detects (sample quantitation limits), if the holding times are grossly exceeded. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

2. SURROGATES:



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All samples are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. If the measured surrogate recovery were outside Table 5 of the SOP HW-37A (Revision 0), qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

3. MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD):

MS/MSD data are generated to determine the long-term precision and accuracy of the analytical method in various matrices. The MS/MSD data may be used in conjunction with other QC criteria for additional qualification of data. Qualifications were applied to the samples and analytes as shown below.

Not applicable.

4. Laboratory Control Samples (LCS):

LCS data provides information on the accuracy of the analytical method and laboratory performance. If LCS recoveries fell outside of the acceptable limits, qualifications were applied to the associated samples and compounds as shown below.

No problems were found for this criterion.

5. BLANK CONTAMINATION:

Quality assurance (QA) blanks, i.e., method, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Field and rinse blanks measure cross-contamination of samples during field operations. Depending on the concentration of the analyte in the blank, the analytes are qualified as non-detects U. Qualifications were applied to the samples and analytes as shown below.

A) Method blank contamination:

No problems were found for this criterion.

B) Field or rinse blank contamination:

No problems were found for this criterion.

6. CALIBRATION:

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration checks document that the instrument is giving satisfactory daily performance.

A) Percent Relative Standard Deviation (%RSD):



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For the PCB fraction, if %RSD exceeds 20% for all analytes and the two surrogates, qualify all associated positive results "J" and use professional judgment to qualify non-detects. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

B) Percent Difference (%D):

For opening CCV, or closing CCV that is used as an opening CCV for the next 12-hour period, if %D exceeds 25% for analytes and the two surrogates, qualify all associated positive results "J" and non-detects "UJ".

For closing CCV, if %D exceeds 50% for all analytes and the two surrogates, qualify all associated positive results "J" and non-detects "UJ". Qualifications were applied to the samples and analytes as shown below.

The following samples are associated with the CCV other than AR1016/AR1260 that is not analyzed at correct frequency. Detected compounds are qualified J. Non-detected compounds are not qualified.

Aroclor-1242 PA-121615-BM-0006

7. FIELD DUPLICATES:

Not applicable.

8. COMPOUND IDENTIFICATION:

A) PCB Fraction:

The retention times of reported compounds must fall within the calculated retention time windows for the two chromatographic columns and a GC/MS confirmation is required if the concentration exceeds 10ng/ml in the final sample extract. Qualifications were applied to the samples and analytes as shown below.

Percent Differences	Qualifier
0% - 25%	No qualification
26% - 200%	Professional Judgment
101% - 200% (interference detected, either column)	JN
> 50% (PCB value < CRQL, value raised to CRQL)	U
> 200%	R

The following samples were qualified for % difference on the two columns.

No problems were found for this criterion.

9. CONTRACT PROBLEMS NON-COMPLIANCE:

None.

10. FIELD DOCUMENTATION:



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No problems were identified.

11. OTHER PROBLEMS:

None.

12. DILUTIONS, RE-EXTRACTIONS & RE-ANALYSIS:

Samples may be re-analyzed for dilution, re-extraction and for other QC reasons. In such cases, the best result values are used. See summary report and EDD for applicable samples and analytes.

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Pittsburgh</u>	Job No.: <u>180-50861-1</u>
SDG No.: <u>LINCKLAEN, NY</u>	
Client Sample ID: <u>PA-121615-BM-0006</u>	Lab Sample ID: <u>180-50861-1</u>
Matrix: <u>Solid</u>	Lab File ID: <u>4122317.D</u>
Analysis Method: <u>8260C</u>	Date Collected: <u>12/16/2015 11:15</u>
Sample wt/vol: <u>5.0011(g)</u>	Date Analyzed: <u>12/23/2015 15:21</u>
Soil Aliquot Vol: <u>0.1 (mL)</u>	Dilution Factor: <u>1</u>
Soil Extract Vol.: <u>5(mL)</u>	GC Column: <u>DB-624</u> ID: <u>0.18 (mm)</u>
% Moisture: <u></u>	Level: (low/med) <u>Medium</u>
Analysis Batch No.: <u>164466</u>	Units: <u>ug/Kg</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	450		250	51
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	47
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	270		250	17
79-00-5	1,1,2-Trichloroethane	ND		250	58
75-34-3	1,1-Dichloroethane	ND		250	51
75-35-4	1,1-Dichloroethene	ND	J	250	53
96-12-8	1,2-Dibromo-3-Chloropropane	ND	J	250	18
95-50-1	1,2-Dichlorobenzene	720		250	34
107-06-2	1,2-Dichloroethane	ND		250	48
78-87-5	1,2-Dichloropropane	ND		250	64
120-82-1	1,2,4-Trichlorobenzene	ND		250	19
541-73-1	1,3-Dichlorobenzene	ND		250	25
106-46-7	1,4-Dichlorobenzene	33	J	250	26
78-93-3	2-Butanone (MEK)	ND		250	54
591-78-6	2-Hexanone	ND	J	250	28
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	J	250	30
67-64-1	Acetone	ND	J	1000	250
71-43-2	Benzene	ND		250	49
75-25-2	Bromoform	ND		250	53
74-83-9	Bromomethane	ND		250	79
75-15-0	Carbon disulfide	ND		250	54
56-23-5	Carbon tetrachloride	ND		250	54
108-90-7	Chlorobenzene	ND		250	26
124-48-1	Chlorodibromomethane	ND		250	32
67-66-3	Chloroform	ND		250	50
74-87-3	Chloromethane	ND		250	70
75-00-3	Chloroethane	ND		250	37
156-59-2	cis-1,2-Dichloroethene	ND		250	33
10061-01-5	cis-1,3-Dichloropropene	ND		250	36
75-27-4	Dichlorobromomethane	ND		250	47
75-71-8	Dichlorodifluoromethane	ND		250	32
100-41-4	Ethylbenzene	150	J	250	31
106-93-4	1,2-Dibromoethane	ND		250	31
110-82-7	Cyclohexane	ND		250	30
98-82-8	Isopropylbenzene	ND		250	27

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Pittsburgh</u>	Job No.: <u>180-50861-1</u>
SDG No.: <u>LINCKLAEN, NY</u>	
Client Sample ID: <u>PA-121615-BM-0006</u>	Lab Sample ID: <u>180-50861-1</u>
Matrix: <u>Solid</u>	Lab File ID: <u>4122317.D</u>
Analysis Method: <u>8260C</u>	Date Collected: <u>12/16/2015 11:15</u>
Sample wt/vol: <u>5.0011(g)</u>	Date Analyzed: <u>12/23/2015 15:21</u>
Soil Aliquot Vol: <u>0.1 (mL)</u>	Dilution Factor: <u>1</u>
Soil Extract Vol.: <u>5 (mL)</u>	GC Column: <u>DB-624</u> ID: <u>0.18 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Medium</u>
Analysis Batch No.: <u>164466</u>	Units: <u>ug/Kg</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	64	J	1200	61
1634-04-4	Methyl tert-butyl ether	ND		250	51
108-87-2	Methylcyclohexane	ND		250	28
75-09-2	Methylene Chloride	ND		250	54
100-42-5	Styrene	ND		250	32
127-18-4	Tetrachloroethene	470		250	41
108-88-3	Toluene	160	J J	250	42
156-60-5	trans-1,2-Dichloroethene	ND		250	38
10061-02-6	trans-1,3-Dichloropropene	ND		250	29
79-01-6	Trichloroethene	ND		250	40
75-69-4	Trichlorofluoromethane	ND		250	56
75-01-4	Vinyl chloride	ND		250	64
1330-20-7	Xylenes, Total	1000		500	98

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	77		52-124
460-00-4	4-Bromofluorobenzene (Surr)	85		63-120
1868-53-7	Dibromofluoromethane (Surr)	87		68-121
2037-26-5	Toluene-d8 (Surr)	107		72-127

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Pittsburgh</u>	Job No.: <u>180-50861-1</u>
SDG No.: <u>LINCKLAEN, NY</u>	
Client Sample ID: <u>PA-121615-BM-0006</u>	Lab Sample ID: <u>180-50861-1</u>
Matrix: <u>Solid</u>	Lab File ID: <u>S1228555.D</u>
Analysis Method: <u>8082A</u>	Date Collected: <u>12/16/2015 11:15</u>
Extraction Method: <u>3541</u>	Date Extracted: <u>12/24/2015 13:20</u>
Sample wt/vol: <u>8.3(g)</u>	Date Analyzed: <u>12/30/2015 02:27</u>
Con. Extract Vol.: <u>20.0 (mL)</u>	Dilution Factor: <u>50</u>
Injection Volume: <u>1 (uL)</u>	GC Column: <u>RTX-CLP1</u> ID: <u>0.53 (mm)</u>
% Moisture: _____	GPC Cleanup: (Y/N) <u>N</u>
Analysis Batch No.: <u>164785</u>	Units: <u>ug/Kg</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
12674-11-2	PCB-1016	ND		1500	690
11104-28-2	PCB-1221	ND		1500	1100
11141-16-5	PCB-1232	ND		1500	380
53469-21-9	PCB-1242	140000	J	1500	560
12672-29-6	PCB-1248	ND		1500	350
11097-69-1	PCB-1254	ND		1500	560
11096-82-5	PCB-1260	ND		1500	520

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene (Surr)	0	D X	45-135
2051-24-3	DCB Decachlorobiphenyl (Surr)	0	D X	45-125



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EXECUTIVE NARRATIVE

Case No. : 2077-60_SOLV-SAVE

Site: Solvent Savers

Number of Samples: 2 (Building material)

Analysis: VOA, PCB

SDG No.: 180-50868-1

Laboratory: TestAmerica Pittsburgh

Sampling dates: 12/16/2015

Validation SOP: HW-24 (Rev 4) and SW-846 Method
8260C, HW-37A (Rev 0) and
SW-846 Method 8082A

QAPP: Not available.

SUMMARY OF DEFINITIONS:

Critical: Results have an unacceptable level of uncertainty and should not be used for making decisions. Data have been qualified "R" rejected.

Major: A level of uncertainty exists that may not meet the data quality objectives for the project. A bias is likely to be present in the results. Data has been qualified "J" estimated. "J+" and "J-" represent likely direction of the bias.

Minor: The level of uncertainty is acceptable. No significant bias in the data was observed.

Critical Findings:

None.

Major Findings:

VOA, PCB: Samples CC-121615-BM-0006A INTERVAL1 and CC-121615-BM-0006A INTERVAL2 have analytes that have been qualified "J", "J+" or "J-".

Minor Findings:

None.

COMMENTS: None.

Reviewer Name(s): Raxa J. Shelley

Approver's Signature:

Date: 08/08/17

Name: Russell Arnone

Affiliation: USEPA/R2/HWSB/HWSS



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Data Qualifier Definitions (National Functional Guidelines)			
Qualifier Symbol	Explanation		
	INORGANICS	ORGANICS	CHLORINATED DIOXIN/FURAN
U	The analyte was analyzed for, but was not detected above the level of the reported quantitation limit.	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method	The analyte was analyzed for but not detected. The value preceding the "U" may represent the adjusted Contract Required Quantitation Limit (see DLM02.X, Exhibit D, Section 1.2 and Table 2), or the sample specific estimated detection limit (EDL, see Method 8290A, Section 11.9.5).
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL).	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to an issue with the quality of the data generated because certain QC criteria were not met, or the concentration of the analyte was below the adjusted CRQL).
J+	The result is an estimated quantity, but the result may be biased high.	The result is an estimated quantity, but the result may be biased high.	
J-	The result is an estimated quantity, but the result may be biased low.	The result is an estimated quantity, but the result may be biased low.	
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.	The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.	The analyte was not detected (see definition of "U" flag, above). The reported value should be considered approximate.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
N		The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification".	
NJ		The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	
C		This qualifier applies to pesticide and Aroclor results when the identification has been confirmed by Gas Chromatograph/Mass Spectrometer (GC/MS).	
X		This qualifier applies to pesticide and Aroclor results when GC/MS analysis was attempted but was unsuccessful.	



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DATA ASSESSMENT

ANALYSIS: VOA

The SOP HW-24 (Revision 4) September 2014, USEPA Region II for the evaluation of Volatile organic data generated through Gas Chromatography/Mass Spectrometry SW-846 Method 8260B and 8260C has been applied.

1. HOLDING TIME:

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Those analytes detected in the samples whose holding time has been exceeded will be qualified as estimated, "J". The non-detects (sample quantitation limits) will be flagged as estimated, "J", or unusable, "R", if the holding times are grossly exceeded. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

2. DEUTERATED MONITORING COMPOUNDS (DMC's)

All samples are spiked with DMC compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. If the measured DMC recovery concentrations were outside contract specifications, qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

3. MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD):

MS/MSD data are generated to determine the long-term precision and accuracy of the analytical method in various matrices. The MS/MSD data may be used in conjunction with other QC criteria for additional qualification of data. Qualifications were applied to the samples and analytes as shown below.

Not applicable.

4. BLANK CONTAMINATION:

Quality assurance (QA) blanks, i.e., method, trip, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Trip blanks measure cross-contamination of samples during shipment. Field and rinse blanks measure cross-contamination of samples during field operations. Depending on the amount of contamination present in the QA blanks, the analytes are qualified as non-detects, "U". Qualifications were applied to the samples and analytes as shown below.

A) Method blank contamination:



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No problems were found for this criterion.

B) Field or rinse blank contamination:

No problems were found for this criterion.

C) Trip blank contamination for VOA aqueous samples:

Not applicable.

D) Storage Blank associated with VOA samples only:

Not applicable.

E) Tentatively Identified Compounds:

Tentatively Identified Compounds (TICs) for VOA organic fractions are not validated.

5. MASS SPECTROMETER TUNING:

Tuning and performance criteria are established to ensure adequate mass resolution, proper identification of compounds and to some degree, sufficient instrument sensitivity. These criteria are not sample specific. Instrument performance is determined using standard materials. Therefore, these criteria should be met in all circumstances. The tuning standard for volatile organics is (BFB) Bromofluorobenzene. If the mass calibration is in error, all associated data will be classified as unusable "R". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

6. CALIBRATION:

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration checks document that the instrument is giving satisfactory daily performance.

A) Response Factor GC/MS:

The response factor measures the instrument's response to specific chemical compounds. All analytes for initial and continuing calibration should meet the minimum RRF criteria as listed in Table 4 of SOP HW 24 (Rev 4). If RRF is less than minimum RRF as specified in Table 4 for all target analytes, use professional judgment and all detects in the sample will be qualified as "J" or "R". All non-detects for that compound will be rejected "R". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

B) Percent Relative Standard Deviation (%RSD) and Percent Difference (%D):

Percent RSD is calculated from the initial calibration and is used to indicate the stability of the specific compound response factor over increasing concentration. Percent D compares



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the response factor of the continuing calibration check to the mean response factor (RRF) from the initial calibration. Percent D is a measure of the instrument's daily performance.

Percent RSD must be < 20% for all target analytes. For the opening or closing CCV %D must be within the inclusive opening or closing maximum %D limits as listed in Table 5 of SOP HW 24 (Rev 4) for all Target compounds. A value outside of these limits indicates potential detection and quantitation errors. For these reasons, all positive results are flagged as estimated, "J" and Non-detects are flagged "UJ" for %D values outside criteria only. If %RSD exceeds QC criteria, detects may be qualified as "J" and use professional judgment to qualify non-detects. Qualifications were applied to the samples and analytes as shown below.

The following samples are associated with an opening or closing CCV percent difference (%D) outside criteria. Detected compounds are qualified J. Non-detected compounds are qualified UJ.

1,1-Dichloroethene

Acetone

Toluene

2-Hexanone

1,2-Dibromo-3-chloropropane

CC-121615-BM-0006A INTERVAL1, CC-121615-BM-0006A INTERVAL2, MB 180-164513/1-A, LCS 180-164513/2-A, LCSD 180-164513/3-A

7. INTERNAL STANDARDS PERFORMANCE GC/MS:

Internal standards (IS) performance criteria ensure that the GC/MS sensitivity and response are stable during every experimental run. The internal standard area count must be in the range of 50% - 200 % of the associated continuing calibration internal standard area. The retention time of the internal standards must not vary more than 30 seconds from the associated continuing calibration standard. If the area count is greater than 200%, all positive results quantitated using that IS are qualified as estimated "J-", and non-detects are not qualified. If the area count is less than 50% of the associated standard, all positive results for compounds quantitated with that IS are qualified as estimated "J+" and all non-detects are qualified "R".

If an internal standard retention time varies by more than 30 seconds, the reviewer will use professional judgment to determine either partial or total rejection of the data for that sample fraction. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

8. FIELD DUPLICATES:

Not applicable.

9. COMPOUND IDENTIFICATION:

Target compounds are identified on the GC/MS by using the analyte's relative retention time (RRT) and by comparison to the ion spectra obtained from known standards. For the results to be a positive hit, the sample peak must be within a window of 0.06 RRT units of the standard compound and have ion spectra which has a ratio of the primary and secondary m/z intensities within 20% of that in the standard compound. For the tentatively identified compounds (TIC) the ion spectra must match accurately. In the cases where there is not an



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adequate ion spectrum match, the laboratory may have provided false positive identifications. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

10. CONTRACT PROBLEMS NON-COMPLIANCE:

None.

11. FIELD DOCUMENTATION:

No problems were identified.

12. OTHER PROBLEMS:

The laboratory analyzed only opening CCV and did not analyzed closing CCV. However, the associated samples were analyzed within 12 hour clock.

LABORATORY CONTROL SAMPLE/LABORATORY CONTROL SAMPLE DUPLICATE (LCS/LCSD):

The following samples have LCS/LCSD compound recovery greater than the upper acceptance limit. Detected compounds are qualified J. Non-detected compounds are not qualified.

Acetone

CC-121615-BM-0006A INTERVAL1, CC-121615-BM-0006A INTERVAL2

13. DILUTIONS, RE-EXTRACTIONS & REANALYSIS:

Samples may be re-analyzed for dilution, re-extraction and for other QC reasons. In such cases, the best result values are used. See summary report and EDD for applicable samples and analytes.

ANALYSIS: PCB

The current SOP HW-37A (Revision 0) July 2015, USEPA Region II for the evaluation of PCB data generated through Statement of Work SOM02.2 and SW-846 Method 8082A has been applied.

1. HOLDING TIME:

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Those analytes detected in the samples whose holding time has been exceeded will be qualified as estimated, "J". Use professional judgment to qualify the non-detects (sample quantitation limits), if the holding times are grossly exceeded. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.



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2. SURROGATES:

All samples are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. If the measured surrogate recovery were outside Table 5 of the SOP HW-37A (Revision 0), qualifications were applied to the samples and analytes as shown below.

The following samples have surrogate recoveries above the upper limit of the criteria window. Detected compounds are qualified J. Non-detected compounds are not qualified.

Decachlorobiphenyl CC-121615-BM-006A INTERVAL2

Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260

3. MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD):

MS/MSD data are generated to determine the long-term precision and accuracy of the analytical method in various matrices. The MS/MSD data may be used in conjunction with other QC criteria for additional qualification of data. Qualifications were applied to the samples and analytes as shown below.

Not applicable.

4. Laboratory Control Samples (LCS):

LCS data provides information on the accuracy of the analytical method and laboratory performance. If LCS recoveries fell outside of the acceptable limits, qualifications were applied to the associated samples and compounds as shown below.

No problems were found for this criterion.

5. BLANK CONTAMINATION:

Quality assurance (QA) blanks, i.e., method, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Field and rinse blanks measure cross-contamination of samples during field operations. Depending on the concentration of the analyte in the blank, the analytes are qualified as non-detects U. Qualifications were applied to the samples and analytes as shown below.

A) Method blank contamination:

No problems were found for this criterion.

B) Field or rinse blank contamination:

No problems were found for this criterion.

6. CALIBRATION:

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an



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experimental sequence. The continuing calibration checks document that the instrument is giving satisfactory daily performance.

A) Percent Relative Standard Deviation (%RSD):

For the PCB fraction, if %RSD exceeds 20% for all analytes and the two surrogates, qualify all associated positive results "J" and use professional judgment to qualify non-detects. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

B) Percent Difference (%D):

For opening CCV, or closing CCV that is used as an opening CCV for the next 12-hour period, if %D exceeds 25% for analytes and the two surrogates, qualify all associated positive results "J" and non-detects "UJ".

For closing CCV, if %D exceeds 50% for all analytes and the two surrogates, qualify all associated positive results "J" and non-detects "UJ". Qualifications were applied to the samples and analytes as shown below.

The following samples are associated with the CCV other than AR1016/AR1260 that is not analyzed at correct frequency. Detected compounds are qualified J. Non-detected compounds are not qualified.

Aroclor-1242 CC-121615-BM-0006A INTERVAL1, CC-121615-BM-0006A INTERVAL2

7. FIELD DUPLICATES:

Not applicable.

8. COMPOUND IDENTIFICATION:

A) PCB Fraction:

The retention times of reported compounds must fall within the calculated retention time windows for the two chromatographic columns and a GC/MS confirmation is required if the concentration exceeds 10ng/ml in the final sample extract. Qualifications were applied to the samples and analytes as shown below.

Percent Differences

0% - 25%
26% - 200%
101% - 200% (interference detected, either column)
> 50% (PCB value < CRQL, value raised to CRQL)
> 200%

Qualifier

No qualification
Professional Judgment
JN
U
R

The following samples were qualified for % difference on the two columns.

No problems were found for this criterion.

9. CONTRACT PROBLEMS NON-COMPLIANCE:



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None.

10. FIELD DOCUMENTATION:

No problems were identified.

11. OTHER PROBLEMS:

None.

12. DILUTIONS, RE-EXTRACTIONS & RE-ANALYSIS:

Samples may be re-analyzed for dilution, re-extraction and for other QC reasons. In such cases, the best result values are used. See summary report and EDD for applicable samples and analytes.

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Pittsburgh</u>	Job No.: <u>180-50868-1</u>
SDG No.: <u>LINCKLAEN, NY</u>	
Client Sample ID: <u>CC-121615-BM-006A</u> <u>INTERVAL 1</u>	Lab Sample ID: <u>180-50868-1</u>
Matrix: <u>Solid</u>	Lab File ID: <u>4122311.D</u>
Analysis Method: <u>8260C</u>	Date Collected: <u>12/16/2015 11:30</u>
Sample wt/vol: <u>5.0000(g)</u>	Date Analyzed: <u>12/23/2015 12:28</u>
Soil Aliquot Vol: <u>0.1 (mL)</u>	Dilution Factor: <u>1</u>
Soil Extract Vol.: <u>5(mL)</u>	GC Column: <u>DB-624</u> ID: <u>0.18 (mm)</u>
% Moisture: <u></u>	Level: (low/med) <u>Medium</u>
Analysis Batch No.: <u>164466</u>	Units: <u>ug/Kg</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	56	J	250	51
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	47
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	26	J	250	17
79-00-5	1,1,2-Trichloroethane	ND		250	58
75-34-3	1,1-Dichloroethane	ND		250	51
75-35-4	1,1-Dichloroethene	ND	J	250	53
96-12-8	1,2-Dibromo-3-Chloropropane	ND	J	250	18
95-50-1	1,2-Dichlorobenzene	150	J	250	34
107-06-2	1,2-Dichloroethane	ND		250	48
78-87-5	1,2-Dichloropropane	ND		250	64
120-82-1	1,2,4-Trichlorobenzene	ND		250	19
541-73-1	1,3-Dichlorobenzene	ND		250	25
106-46-7	1,4-Dichlorobenzene	ND		250	26
78-93-3	2-Butanone (MEK)	ND		250	54
591-78-6	2-Hexanone	ND	J	250	28
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	30
67-64-1	Acetone	ND	* J	1000	250
71-43-2	Benzene	ND		250	49
75-25-2	Bromoform	ND		250	53
74-83-9	Bromomethane	ND		250	79
75-15-0	Carbon disulfide	ND		250	54
56-23-5	Carbon tetrachloride	ND		250	54
108-90-7	Chlorobenzene	ND		250	26
124-48-1	Chlorodibromomethane	ND		250	32
67-66-3	Chloroform	ND		250	50
74-87-3	Chloromethane	ND		250	70
75-00-3	Chloroethane	ND		250	37
156-59-2	cis-1,2-Dichloroethene	ND		250	33
10061-01-5	cis-1,3-Dichloropropene	ND		250	36
75-27-4	Dichlorobromomethane	ND		250	47
75-71-8	Dichlorodifluoromethane	ND		250	32
100-41-4	Ethylbenzene	ND		250	31
106-93-4	1,2-Dibromoethane	ND		250	31
110-82-7	Cyclohexane	ND		250	30

FORM I

Job No.: 180-50868-1

Client Sample ID: CC-121615-BM-006A
INTERVAL 1

Lab Sample ID: 180-50868-1

Lab File ID: 4122311.D

Date Collected: 12/16/2015 11:30

Date Analyzed: 12/23/2015 12:28

Dilution Factor: 1

GC Column: DB-624 ID: 0.18 (mm)

Level: (low/med) Medium

Units: ug/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	100		52-124
460-00-4	4-Bromofluorobenzene (Surr)	101		63-120
1868-53-7	Dibromofluoromethane (Surr)	107		68-121
2037-26-5	Toluene-d8 (Surr)	107		72-127

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Pittsburgh</u>	Job No.: <u>180-50868-1</u>
SDG No.: <u>LINCKLAEN, NY</u>	
Client Sample ID: <u>CC-121615-BM-006A</u> <u>INTERVAL 2</u>	Lab Sample ID: <u>180-50868-2</u>
Matrix: <u>Solid</u>	Lab File ID: <u>4122312.D</u>
Analysis Method: <u>8260C</u>	Date Collected: <u>12/16/2015 11:30</u>
Sample wt/vol: <u>5.0004(g)</u>	Date Analyzed: <u>12/23/2015 12:54</u>
Soil Aliquot Vol: <u>0.1 (mL)</u>	Dilution Factor: <u>1</u>
Soil Extract Vol.: <u>5(mL)</u>	GC Column: <u>DB-624</u> ID: <u>0.18 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Medium</u>
Analysis Batch No.: <u>164466</u>	Units: <u>ug/Kg</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		250	51
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	47
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		250	17
79-00-5	1,1,2-Trichloroethane	ND		250	58
75-34-3	1,1-Dichloroethane	ND		250	51
75-35-4	1,1-Dichloroethene	ND	J	250	53
96-12-8	1,2-Dibromo-3-Chloropropane	ND	J	250	18
95-50-1	1,2-Dichlorobenzene	ND		250	34
107-06-2	1,2-Dichloroethane	ND		250	48
78-87-5	1,2-Dichloropropane	ND		250	64
120-82-1	1,2,4-Trichlorobenzene	ND		250	19
541-73-1	1,3-Dichlorobenzene	ND		250	25
106-46-7	1,4-Dichlorobenzene	ND		250	26
78-93-3	2-Butanone (MEK)	ND		250	54
591-78-6	2-Hexanone	ND	J	250	28
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	30
67-64-1	Acetone	ND	* J	1000	250
71-43-2	Benzene	ND		250	49
75-25-2	Bromoform	ND		250	53
74-83-9	Bromomethane	ND		250	79
75-15-0	Carbon disulfide	ND		250	54
56-23-5	Carbon tetrachloride	ND		250	54
108-90-7	Chlorobenzene	ND		250	26
124-48-1	Chlorodibromomethane	ND		250	32
67-66-3	Chloroform	ND		250	50
74-87-3	Chloromethane	ND		250	70
75-00-3	Chloroethane	ND		250	37
156-59-2	cis-1,2-Dichloroethene	ND		250	33
10061-01-5	cis-1,3-Dichloropropene	ND		250	36
75-27-4	Dichlorobromomethane	ND		250	47
75-71-8	Dichlorodifluoromethane	ND		250	32
100-41-4	Ethylbenzene	ND		250	31
106-93-4	1,2-Dibromoethane	ND		250	31
110-82-7	Cyclohexane	ND		250	30

FORM I

Job No.: 180-50868-1

Lab Sample ID: 180-50868-2

Lab File ID: 4122312.D

Date Collected: 12/16/2015 11:30

Date Analyzed: 12/23/2015 12:54

Dilution Factor: 1

GC Column: DB-624 ID: 0.18 (mm)

Level: (low/med) Medium

Units: ug/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	87		52-124
460-00-4	4-Bromofluorobenzene (Surr)	91		63-120
1868-53-7	Dibromofluoromethane (Surr)	86		68-121
2037-26-5	Toluene-d8 (Surr)	103		72-127

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Pittsburgh</u>	Job No.: <u>180-50868-1</u>
SDG No.: <u>LINCKLAEN, NY</u>	
Client Sample ID: <u>CC-121615-BM-006A</u> INTERVAL 1	Lab Sample ID: <u>180-50868-1</u>
Matrix: <u>Solid</u>	Lab File ID: <u>S1228556.D</u>
Analysis Method: <u>8082A</u>	Date Collected: <u>12/16/2015 11:30</u>
Extraction Method: <u>3541</u>	Date Extracted: <u>12/24/2015 13:20</u>
Sample wt/vol: <u>9.1(g)</u>	Date Analyzed: <u>12/30/2015 02:46</u>
Con. Extract Vol.: <u>20.0(mL)</u>	Dilution Factor: <u>10</u>
Injection Volume: <u>1(uL)</u>	GC Column: <u>RTX-CLP1</u> ID: <u>0.53(mm)</u>
% Moisture: _____	GPC Cleanup: (Y/N) <u>N</u>
Analysis Batch No.: <u>164785</u>	Units: <u>ug/Kg</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
12674-11-2	PCB-1016	ND		270	130
11104-28-2	PCB-1221	ND		270	200
11141-16-5	PCB-1232	ND		270	69
53469-21-9	PCB-1242	7400	J	270	100
12672-29-6	PCB-1248	ND		270	64
11097-69-1	PCB-1254	ND		270	100
11096-82-5	PCB-1260	ND		270	94

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene (Surr)	107		45-135
2051-24-3	DCB Decachlorobiphenyl (Surr)	113		45-125

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Pittsburgh</u>	Job No.: <u>180-50868-1</u>
SDG No.: <u>LINCKLAEN, NY</u>	
Client Sample ID: <u>CC-121615-BM-006A</u> <u>INTERVAL 2</u>	Lab Sample ID: <u>180-50868-2</u>
Matrix: <u>Solid</u>	Lab File ID: <u>S1228557.D</u>
Analysis Method: <u>8082A</u>	Date Collected: <u>12/16/2015 11:30</u>
Extraction Method: <u>3541</u>	Date Extracted: <u>12/24/2015 13:20</u>
Sample wt/vol: <u>15.3(g)</u>	Date Analyzed: <u>12/30/2015 03:05</u>
Con. Extract Vol.: <u>20.0(mL)</u>	Dilution Factor: <u>1</u>
Injection Volume: <u>1(uL)</u>	GC Column: <u>RTX-CLP1</u> ID: <u>0.53(mm)</u>
% Moisture: _____	GPC Cleanup: (Y/N) <u>N</u>
Analysis Batch No.: <u>164785</u>	Units: <u>ug/Kg</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
12674-11-2	PCB-1016	ND		16	7.5
11104-28-2	PCB-1221	ND		16	12
11141-16-5	PCB-1232	ND		16	4.1
53469-21-9	PCB-1242	47	J	16	6.0
12672-29-6	PCB-1248	ND		16	3.8
11097-69-1	PCB-1254	ND		16	6.0
11096-82-5	PCB-1260	ND		16	5.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene (Surr)	114		45-135
2051-24-3	DCB Decachlorobiphenyl (Surr)	144	X	45-125

**May and July 2017 Concrete Pad Above HDPE Liner EPA Water Sample
Data Summary Report**

May and July 2017 Water Above Concrete Pad HDPE Cover
Sample Contaminants of Concern Data Summary
Solvent Savers Site

CAS No.	Parameter	BD938 SW-2077-051617-DT-0052 5/16/2017 ug/L		BD959 SW-2077-071717-IM-001 7/17/2017 ug/L	
		Results	Qualifier	Results	Qualifier
12674-11-2	PCB Aroclor-1016	0.022	J	0.029	J
000-00-0	Total Aroclors	0.022	J	0.029	J
127-18-4	Tetrachloroethene	0.5	U	0.5	UJ
79-01-6	Trichloroethene	0.5	U	0.5	UJ
71-55-6	1,1,1-Trichloroethane	0.5	U	0.5	UJ
79-00-5	1,1,2-Trichloroethane	0.5	U	0.5	UJ
540-59-0	1,2-Dichloroethene	0.5*	U*	0.5*	UJ*
108-88-3	Toluene	0.14	J	0.5	UJ
1330-20-7	Xylene (Total)	0.5**	U**	0.5**	UJ**

Notes

J The identification of the analyte is acceptable; the reported value is an estimate.

U The analyte was not detected at or above the Reporting Limit.

*

This compound were analyzed by the laboratory as cis-1,2-Dichlorethene and trans-1,2-dichloroethene both which had a detection limit of 0.5 ug/l and were reported as non-detect.

**

This compound were analyzed by the laboratory as m, p-Xylene and o-xylene both which had detection limits of 0.5 ug/l and were reported as non-detect.



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EXECUTIVE NARRATIVE

Case No.: 46964

Site: Solvent Savers

Number of Samples: 10 waters

Analysis: Trace VOA, SVOA, ARO

SDG No.: BC755

Laboratory: Shealy Environmental Services

Sampling dates: 05/10 - 16/2017

Validation SOP: HW-34A (Rev 1), HW-35A (Rev 1), HW-37A (Rev 0)

QAPP:

Contractor: Henninson, Durham and Richardson

Contractor Document #: 14119565

SUMMARY OF DEFINITIONS:

Critical: Results have an unacceptable level of uncertainty and should not be used for making decisions. Data have been qualified "R" rejected.

Major: A level of uncertainty exists that may not meet the data quality objectives for the project. A bias is likely to be present in the results. Data has been qualified "J" estimated. "J+" and "J-" represent likely direction of the bias.

Minor: The level of uncertainty is acceptable. No significant bias in the data was observed.

Critical Findings:

None.

Major Findings:

SVOA: Samples BC755, BC760, BD936 have analytes that have been qualified "J", "J+" or "J-".

Minor Findings:

None.

COMMENTS:

For Semi-volatile method, only 1,4-Dioxane was validated and reported in this SDG.

TVOA: cis-1,2-Dichloroethene, Benzene, 1,1,1-Trichloroethane, Vinyl chloride, 1,1-Dichloroethene and Trichloroethene concentrations exceeded the project action levels in sample BC758.

Reviewer Name(s): Steffanie Tobin

Approver's Signature:

Date: 6/23/2017

Name: Narendra Kumar

Affiliation: USEPA/R2/HWSB/HWSS



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Data Qualifier Definitions (National Functional Guidelines)			
Qualifier Symbol	Explanation		
	INORGANICS	ORGANICS	CHLORINATED DIOXIN/FURAN
U	The analyte was analyzed for, but was not detected above the level of the reported quantitation limit.	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method	The analyte was analyzed for but not detected. The value preceding the "U" may represent the adjusted Contract Required Quantitation Limit (see DLM02.X, Exhibit D, Section 1.2 and Table 2), or the sample specific estimated detection limit (EDL, see Method 8290A, Section 11.9.5).
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL).	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to an issue with the quality of the data generated because certain QC criteria were not met, or the concentration of the analyte was below the adjusted CRQL).
J+	The result is an estimated quantity, but the result may be biased high.	The result is an estimated quantity, but the result may be biased high.	
J-	The result is an estimated quantity, but the result may be biased low.	The result is an estimated quantity, but the result may be biased low.	
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.	The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.	The analyte was not detected (see definition of "U" flag, above). The reported value should be considered approximate.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
N		The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification".	
NJ		The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	
C		This qualifier applies to pesticide and Aroclor results when the identification has been confirmed by Gas Chromatograph/Mass Spectrometer (GC/MS).	
X		This qualifier applies to pesticide and Aroclor results when GC/MS analysis was attempted but was unsuccessful.	



DATA ASSESSMENT

ANALYSIS: Trace VOA

The current SOP HW-34A (Rev 1) September 2016, USEPA Region II for the evaluation of Trace Volatile organic data generated through Statement of Work SOM02.4 has been applied. Data have been reviewed according to TDF specifications, the National Functional Guidelines Report and the CCS Semi-Automated Screening Results Report. Tentatively Identified Compounds (TICs) for TVOA organic fraction is not validated.

1. HOLDING TIME:

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Those analytes detected in the samples whose holding time has been exceeded will be qualified as estimated, "J". The non-detects (sample quantitation limits) will be flagged as unusable, "R". Use professional judgment to qualify detects and non-detects for aqueous sample whose temperature is above 6 degree or below 2 degree C. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

2. DEUTERATED MONITORING COMPOUNDS (DMC's)

All samples are spiked with DMC compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. If the measured DMC recovery limits were outside Table 6 of the SOP HW 34A (Rev 1), qualifications were applied as per Table 7 of the SOP HW 34A (Rev 1) to all the samples and analytes as shown below.

No problems were found for this criterion.

3. MATRIX SPIKE/ MATRIX SPIKE RECOVERY:

MS/MSD data is generated to determine the long-term precision and accuracy of the analytical method in various matrices. The MS/MSD data may be used in conjunction with other QC criteria for additional qualification of data.

Not applicable.

4. BLANK CONTAMINATION:

Quality assurance (QA) blanks, i.e., method, trip, field, or rinse blanks are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Trip blanks measure cross-contamination of samples during shipment. Field and rinse blanks measure cross-contamination of samples during field operations. Depending on



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the amount of contamination present in the QA blanks, the analytes are qualified as per Table 5 of SOP HW-34A (Rev 1).

A) Method blank contamination:

No qualification required due to method blank contamination.

B) Field or rinse blank contamination:

Not applicable.

C) Trip blank contamination: BC756, BC759, BD933, BD937

No problems were found for this criterion.

D) Storage Blank associated with VOA samples only:

No qualification required due to storage blank contamination.

E) Tentatively Identified Compounds:

Tentatively Identified Compounds (TICs) for TVOA organic fraction are not validated.

5. MASS SPECTROMETER TUNING:

Tuning and performance criteria are established to ensure adequate mass resolution, proper identification of compounds and to some degree, sufficient instrument sensitivity. These criteria are not sample specific. Instrument performance is determined using standard materials. Therefore, these criteria should be met in all circumstances. The tuning standard for volatile organics is (BFB) Bromofluorobenzene. If the mass calibration is in error, all associated data will be classified as unusable "R". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

6. CALIBRATION:

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration checks document that the instrument is giving satisfactory daily performance.

A) Response Factor GC/MS:

The response factor measures the instrument's response to specific chemical compounds. All analytes for initial and continuing calibration should meet the minimum RRF criteria as listed in Table 2 of SOP HW 34A (Rev 1). If RRF is less than minimum RRF specified in Table 2 for all target analytes, use professional judgment and all detects in the



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sample will be qualified as "J+" or "R". All non-detects for that compound will be rejected "R". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

B) Percent Relative Standard Deviation (%RSD) and Percent Difference (%D):

Percent RSD is calculated from the initial calibration and is used to indicate the stability of the specific compound response factor over increasing concentration. Percent D compares the response factor of the continuing calibration check to the mean response factor (RRF) from the initial calibration.

Percent RSD must be less than maximum %RSD in Table 2 of SOP HW 34A (Rev 1) for all target analytes. For the opening or closing CCV %D must be within the inclusive opening or closing maximum %D limits as listed in Table 2 of SOP HW 34A (Rev 1) for all Target compounds. A value outside of these limits indicates potential detection and quantitation errors. For these reasons, all positive results are flagged as estimated, "J" and Non-detects are flagged "UJ" for %D values outside criteria only. If %RSD exceeds QC criteria, detects may be qualified as "J" and use professional judgment to qualify non-detects. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

7. INTERNAL STANDARDS PERFORMANCE GC/MS:

Internal standards (IS) performance criteria ensure that the GC/MS sensitivity and response are stable during every experimental run. The internal standard area count must be in the range as specified in Table 9 of SOP HW 34A (Rev 1) of the associated continuing calibration internal standard area. The retention time of the internal standards must be within the range as specified in Table 9 of SOP HW 34A (Rev 1). If the area count is greater than, all positive results quantitated using that IS are qualified as estimated "J-", and non-detects are not qualified. If the area count is less than the associated standard, all positive results for compounds quantitated with that IS are qualified as estimated "J+" and all non-detects are qualified "R".

If an internal standard retention time were not met as specified in Table 9 of SOP HW 34A (Rev 1), the reviewer will use professional judgment to determine either partial or total rejection of the data for that sample fraction. Qualifications were applied to the samples and analytes as shown below. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

8. FIELD DUPLICATES:

Not applicable.

9. COMPOUND IDENTIFICATION:



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Target compounds are identified on the GC/MS by using the analyte's relative retention time (RRT) and by comparison to the ion spectra obtained from known standards. For the results to be a positive hit, the sample peak must be within a window of 0.06 RRT units of the standard compound and have ion spectra which has a ratio of the primary and secondary m/z intensities within 20% of that in the standard compound. For the tentatively identified compounds (TIC) the ion spectra must match accurately. In the cases where there is not an adequate ion spectrum match, the laboratory may have provided false positive identifications. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

10. CONTRACT PROBLEMS NON-COMPLIANCE:

None.

11. FIELD DOCUMENTATION:

No problems were identified.

12. OTHER PROBLEMS:

None.

13. DILUTIONS, RE-EXTRACTIONS & REANALYSIS:

Samples may be re-analyzed for dilution, re-extraction and for other QC reasons. In such cases, the best result values are used. See summary report and EDD for applicable samples and analytes.

ANALYSIS: SVOA

The current SOP HW-35A (Rev 1) September 2016, USEPA Region II for the evaluation of Semi-Volatile organic data generated through Statement of Work SOM02.4 has been applied. Data have been reviewed according to TDF specifications, the National Functional Guidelines Report and the CCS Semi-Automated Screening Results Report. Tentatively Identified Compounds (TICs) for BNA organic fraction is not validated.

1. HOLDING TIME:

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Those analytes detected in the samples whose holding time has been exceeded, qualifications will be applied as per SOP HW-35A (Rev 1).

No problems were found for this criterion.



2. DEUTERATED MONITORING COMPOUNDS (DMCs)

All samples are spiked with DMC compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. If the measured DMC recovery limits were outside Table 6 of SOP HW-35A (Revision 1), qualifications were applied as per Table 7 of SOP HW-35A (Revision 1) to all the samples and analytes as shown below.

The following samples have DMC/surrogate percent recoveries less than the primary minimum criteria. Detects are qualified as estimated J-. Non-detects are qualified as estimated UJ.

1,4-Dioxane-d₈: BC755, BC760, BD936, SBLK37
1,4-Dioxane

3. MATRIX SPIKE/MATRIX SPIKE DUPLICATES (MS/MSD):

MS/MSD data are generated to determine the long-term precision and accuracy of the analytical method in various matrices. The MS/MSD data may be used in conjunction with other QC criteria for additional qualification of data. Qualifications were applied to the samples and analytes as shown below.

Not applicable.

4. BLANK CONTAMINATION:

Quality assurance (QA) blanks, i.e., method, trip, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Trip blanks measure cross-contamination of samples during shipment. Field and rinse blanks measure cross-contamination of samples during field operations. Depending on the amount of contamination present in the QA blanks, the analytes are qualified as per Table 5 of SOP HW-35A (Rev 1).

A) Method blank contamination:

No problems were found for this criterion.

B) Field or rinse blank contamination:

Not applicable.

C) Tentatively Identified Compounds:

Tentatively Identified Compounds (TICs) for SVOA organic fraction are not validated.

5. MASS SPECTROMETER TUNING:



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Tuning and performance criteria are established to ensure adequate mass resolution, proper identification of compounds and to some degree, sufficient instrument sensitivity. These criteria are not sample specific. Instrument performance is determined using standard materials. Therefore, these criteria should be met in all circumstances. The tuning standard for Semi-volatiles is Decafluorotriphenyl-phosphine (DFTPP). If the mass calibration is in error, all associated data will be classified as unusable "R".

No problems were found for this criterion.

6. CALIBRATION:

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration checks document that the instrument is giving satisfactory daily performance.

A) Response Factor GC/MS:

The response factor measures the instrument's response to specific chemical compounds. All analytes for initial and continuing calibration should meet the minimum RRF criteria as listed in Table 2 of SOP HW 35A (Rev 1). If RRF is less than minimum RRF as specified in Table 2 for all target analytes, use professional judgment and all detects in the sample will be qualified as "J+" or "R". All non-detects for that compound will be rejected "R". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

B) Percent Relative Standard Deviation (%RSD) and Percent Difference (%D):

Percent RSD is calculated from the initial calibration and is used to indicate the stability of the specific compound response factor over increasing concentration. Percent D compares the response factor of the continuing calibration check to the mean response factor (RRF) from the initial calibration. Percent D is a measure of the instrument's daily performance.

Percent RSD must be less than maximum %RSD in Table 2 of SOP HW 35A (Rev 1) for all target analytes. For the opening or closing CCV %D must be within the inclusive opening or closing maximum %D limits as listed in Table 2 of SOP HW 35A (Rev 1) for all Target compounds. A value outside of these limits indicates potential detection and quantitation errors. For these reasons, all positive results are flagged as estimated, "J" and Non-detects are flagged "UJ" for %D values outside criteria only. If %RSD exceeds QC criteria, detects may be qualified as "J" and use professional judgment to qualify non-detects. Qualifications were applied to the samples and analytes as shown below.

The following analytes in the sample shown were qualified for %RSD and %D:

No problems were found for this criterion.



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7. INTERNAL STANDARDS PERFORMANCE GC/MS:

Internal standards (IS) performance criteria ensure that the GC/MS sensitivity and response are stable during every experimental run. The internal standard area count must be in the range as specified in Table 10 of SOP HW 35A (Rev 1) of the associated continuing calibration internal standard area. The retention time of the internal standards must be within the range as specified in Table 10 of SOP HW 35A (Rev 1). If the area count is greater than, all positive results quantitated using that IS are qualified as estimated "J-", and non-detects are not qualified. If the area count is less than the associated standard, all positive results for compounds quantitated with that IS are qualified as estimated "J+" and all non-detects are qualified "R".

If an internal standard retention time were not met as specified in Table 10 of SOP HW 35A (Rev 1), the reviewer will use professional judgment to determine either partial or total rejection of the data for that sample fraction. Qualifications were applied to the samples and analytes as shown below. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

8. FIELD DUPLICATES:

Not applicable.

9. COMPOUND IDENTIFICATION:

TCL compounds are identified on the GC/MS by using the analyte's relative retention time (RRT) and by comparison to the ion spectra obtained from known standards. For the results to be a positive hit, the sample peak must be within 0.06 RRT units of the standard compound and have ion spectra which have a ratio of the primary and secondary m/e intensities within 20% of that in the standard compound. For the tentatively identified compounds (TIC) the ion spectra must match accurately. In the cases where there is not an adequate ion spectrum match, the laboratory may have provided false positive identifications. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

10. CONTRACT PROBLEMS NON-COMPLIANCE:

None.

11. FIELD DOCUMENTATION:

No problems were identified.

12. OTHER PROBLEMS:

None.



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13. **DILUTIONS, RE-EXTRACTIONS and REANALYSIS:**

Samples may be re-analyzed for dilution, re-extraction and for other QC reasons. In such cases, the best result values are used. See summary report and EDD for applicable samples and analytes.

ANALYSIS: ARO – MA 2756.0

The current SOP HW-37A (Rev 0) June 2015, USEPA Region II for the evaluation of PCB data generated through Statement of Work SOM02.4 has been applied. Data have been reviewed according to TDF specifications, the National Functional Guidelines Report and the CCS Semi-Automated Screening Results Report.

1. **HOLDING TIME :**

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Those analytes detected in the samples whose holding time has been exceeded will be qualified as estimated, "J". Use professional judgment to qualify the non-detects (sample quantitation limits), if the holding times are grossly exceeded. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

2. **SURROGATES:**

All samples are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. If the measured surrogate recovery were outside Table 5 of the SOP HW-37A (Revision 0), qualifications were applied to the samples and analytes as shown below.

The following samples have DMC/surrogate recoveries greater than the primary maximum criteria. Detects are qualified as estimated J+. Non-detects are not qualified.

Decachlorobiphenyl: BC755, BC760, ALCS81

Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1262, Aroclor-1268, Total Aroclors

3. **MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD):**

MS/MSD data are generated to determine the long-term precision and accuracy of the analytical method in various matrices. The MS/MSD data may be used in conjunction with other QC criteria for additional qualification of data. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.



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4. Laboratory Control Samples (LCS):

LCS data provides information on the accuracy of the analytical method and laboratory performance. If LCS recoveries fell outside of the acceptable limits, qualifications were applied to the associated samples and compounds as shown below.

No problems were found for this criterion.

5. BLANK CONTAMINATION:

Quality assurance (QA) blanks, i.e., method, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Field and rinse blanks measure cross-contamination of samples during field operations. Depending on the concentration of the analyte in the blank, the analytes are qualified as non-detects U. Qualifications were applied to the samples and analytes as shown below.

A) Method blank contamination:

No problems were found for this criterion.

B) Field or rinse blank contamination:

Not applicable.

6. CALIBRATION:

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration checks document that the instrument is giving satisfactory daily performance.

A) Percent Relative Standard Deviation (%RSD):

For the PCB fraction, if %RSD exceeds 20% for all analytes and the two surrogates, qualify all associated positive results "J" and use professional judgment to qualify non-detects. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

B) Percent Difference (%D):

For opening CCV, or closing CCV that is used as an opening CCV for the next 12-hour period, if %D exceeds 25% for analytes and the two surrogates, qualify all associated positive results "J" and non-detects "UJ".



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For closing CCV, if %D exceeds 50% for all analytes and the two surrogates, qualify all associated positive results "J" and non-detects "UJ". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

7. **FIELD DUPLICATES:**

Not applicable.

8. **COMPOUND IDENTIFICATION:**

The retention times of reported compounds must fall within the calculated retention time windows for the two chromatographic columns and a GC/MS confirmation is required if the concentration exceeds 10ng/ml in the final sample extract. Qualifications were applied to the samples and analytes as shown below.

Percent Differences

0% - 25%

26% - 200%

101% - 200% (interference detected, either column)

> 50% (PCB value < CRQL, value raised to CRQL)

> 200%

Qualifier

No qualification

Professional Judgment

JN

U

R

No problems were found for this criterion.

9. **CONTRACT PROBLEMS NON-COMPLIANCE:**

None.

10. **FIELD DOCUMENTATION:**

No problems were identified.

11. **OTHER PROBLEMS:**

According to raw data, it seems like the laboratory inadvertently added 10X surrogate amount to the samples of Prep Batch 42343 (ABLK43, ALCS43, BD936, BD938). The surrogate recoveries on Form 2C-OR - ARO were calculated based on 10X surrogate amount for the samples in Prep Batch 42343 even though the extraction log indicated only 0.5 ml of surrogate were added during extraction. No sample results are qualified for this discrepancy.

12. **DILUTIONS, RE-EXTRACTIONS & RE-ANALYSIS:**

Samples may be re-analyzed for dilution, re-extraction and for other QC reasons. In such cases, the best result values are used. See summary report and EDD for applicable samples and analytes.

Sample Summary Report

Case: 46964

Contract: EPW14035

SDG: BC755

Lab Code: EQ1

Sample Number: BD938

Method: Aroclors

Matrix: Water

MA Number: 2756.0

Sample Location: SW-2077-051617-DT-0052

pH: 2

Sample Date: 05/16/2017

Sample Time: 13:30:00

% Moisture:

% Solids: 0.0

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aroclor-1016	Target	0.022	J	ug/L	0.022	J	1.0	YES	S3VEM
Aroclor-1221	Target	0.050	U	ug/L	0.050	U	1.0	YES	S3VEM
Aroclor-1232	Target	0.050	U	ug/L	0.050	U	1.0	YES	S3VEM
Aroclor-1242	Target	0.050	U	ug/L	0.050	U	1.0	YES	S3VEM
Aroclor-1248	Target	0.050	U	ug/L	0.050	U	1.0	YES	S3VEM
Aroclor-1254	Target	0.050	U	ug/L	0.050	U	1.0	YES	S3VEM
Aroclor-1260	Target	0.050	U	ug/L	0.050	U	1.0	YES	S3VEM
Aroclor-1262	Target	0.050	U	ug/L	0.050	U	1.0	YES	S3VEM
Aroclor-1268	Target	0.050	U	ug/L	0.050	U	1.0	YES	S3VEM
Total Aroclors	Target	0.022		ug/L	0.022	J	1.0	YES	S3VEM

Sample Summary Report

Case: 46964

Contract: EPW14035

SDG: BC755

Lab Code: EQ1

Sample Number: BD938

Method: Trace Volatiles

Matrix: Water

MA Number:

Sample Location: SW-2077-051617-DT-0052

pH: 2

Sample Date: 05/16/2017

Sample Time: 13:30:00

% Moisture:

% Solids: 0.0

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Dichlorodifluoromethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Chloromethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Vinyl chloride	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Bromomethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Chloroethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Trichlorofluoromethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,1-Dichloroethene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,1,2-Trichloro-1,2,2-Trifluoroethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Acetone	Target	5.0	U	ug/L	5.0	U	1.0	YES	S3VEM
Carbon disulfide	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Methyl acetate	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Methylene chloride	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
trans-1,2-Dichloroethene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Methyl tert-butyl ether	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,1-Dichloroethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
cis-1,2-Dichloroethene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
2-Butanone	Target	5.0	U	ug/L	5.0	U	1.0	YES	S3VEM
Bromochloromethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Chloroform	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,1,1-Trichloroethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Cyclohexane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Carbon tetrachloride	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Benzene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,2-Dichloroethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Trichloroethene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Methylcyclohexane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,2-Dichloropropane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Bromodichloromethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
cis-1,3-Dichloropropene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
4-Methyl-2-pentanone	Target	5.0	U	ug/L	5.0	U	1.0	YES	S3VEM
Toluene	Target	0.14	J	ug/L	0.14	J	1.0	YES	S3VEM
trans-1,3-Dichloropropene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,1,2-Trichloroethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Tetrachloroethene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
2-Hexanone	Target	5.0	U	ug/L	5.0	U	1.0	YES	S3VEM
Dibromochloromethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,2-Dibromoethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Chlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Ethylbenzene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
o-Xylene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
m, p-Xylene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Styrene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Bromoform	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Isopropylbenzene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,1,2,2-Tetrachloroethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,3-Dichlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,4-Dichlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,2-Dichlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,2-Dibromo-3-chloropropane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,2,4-Trichlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,2,3-Trichlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM



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EXECUTIVE NARRATIVE

Case No. : 47052

Site: Solvent Savers

Number of Samples: 2 (Water)

Analysis: TVOA, PCB

SDG No.: BD959

Laboratory: Shealy Environmental Services, Inc

Sampling dates: 07/17/2017

Validation SOP: HW-34A (Rev 1), HW-37A (Rev 0)

QAPP:

Contractor: Henningson, Durham, and Richardson, Inc

Reference: DCN: 147 119565

SUMMARY OF DEFINITIONS:

Critical: Results have an unacceptable level of uncertainty and should not be used for making decisions. Data have been qualified "R" rejected.

Major: A level of uncertainty exists that may not meet the data quality objectives for the project. A bias is likely to be present in the results. Data has been qualified "J" estimated. "J+" and "J-" represent likely direction of the bias.

Minor: The level of uncertainty is acceptable. No significant bias in the data was observed.

Critical Findings:

None.

Major Findings:

VOA: Samples BD960 and BD959 have analytes that have been qualified "J", "J+" or "J-".

Minor Findings:

None.

COMMENTS: None.

Reviewer Name(s): Jennifer Elliott / Dorina Christina Alliu

Approver's Signature:

Date: 08/22/17

Name: Russell Arnone

Affiliation: USEPA/R2/HWSB/HWSS



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Data Qualifier Definitions (National Functional Guidelines)			
Qualifier Symbol	Explanation		
	INORGANICS	ORGANICS	CHLORINATED DIOXIN/FURAN
U	The analyte was analyzed for, but was not detected above the level of the reported quantitation limit.	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method	The analyte was analyzed for but not detected. The value preceding the "U" may represent the adjusted Contract Required Quantitation Limit (see DLM02.X, Exhibit D, Section 1.2 and Table 2), or the sample specific estimated detection limit (EDL, see Method 8290A, Section 11.9.5).
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL).	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to an issue with the quality of the data generated because certain QC criteria were not met, or the concentration of the analyte was below the adjusted CRQL).
J+	The result is an estimated quantity, but the result may be biased high.	The result is an estimated quantity, but the result may be biased high.	
J-	The result is an estimated quantity, but the result may be biased low.	The result is an estimated quantity, but the result may be biased low.	
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.	The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.	The analyte was not detected (see definition of "U" flag, above). The reported value should be considered approximate.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
N		The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification".	
NJ		The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	
C		This qualifier applies to pesticide and Aroclor results when the identification has been confirmed by Gas Chromatograph/Mass Spectrometer (GC/MS).	
X		This qualifier applies to pesticide and Aroclor results when GC/MS analysis was attempted but was unsuccessful.	



DATA ASSESSMENT

ANALYSIS: TVOA

The current SOP HW-34A (Revision 1) September 2016, USEPA Region II for the evaluation of Trace Volatile organic data generated through Statement of Work SOM02.2, and any future editorial revisions of SOM02.2 has been applied. Data have been reviewed according to TDF specifications, the National Functional Guidelines Report and the CCS Semi-Automated Screening Results Report. Tentatively Identified Compounds (TICs) for TVOA organic fraction is not validated.

1. HOLDING TIME:

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Those analytes detected in the samples whose holding time has been exceeded will be qualified as estimated, "J". The non-detects (sample quantitation limits) will be flagged as unusable, "R". Use professional judgment to qualify detects and non-detects for aqueous sample whose temperature is above 6 degree or below 2degree C. Qualifications were applied to the samples and analytes as shown below.

The following trace-volatile samples have the cooler temperature exceeds 6°C (7.4°C). Detected compounds are qualified J. Non-detected compounds are qualified UJ.

BD960, BD959

2. DEUTERATED MONITORING COMPOUNDS (DMC's)

All samples are spiked with DMC compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. If the measured DMC recovery limits were outside Table 6 of the SOP HW 34A (Rev 1), qualifications were applied as per Table 7 of the SOP HW 34A (Rev 1) to all the samples and analytes as shown below.

The following samples have DMC/surrogate percent recoveries greater than the primary maximum criteria. Detects are qualified as estimated J+. Non-detects are not qualified.

Vinyl Chloride-d3 BD960

Vinyl Chloride

Chloroethane-d5 BD960

Dichlorodifluoromethane, Chloromethane, Bromomethane, Chloroethane, Carbon disulfide.

Chloroform-d BD959

1,1-Dichloroethane, Bromochloromethane, Chloroform, Dibromochloromethane, Bromoform

1,2-Dichloroethane-d4 BD959

Trichlorofluoromethane, 1,1,2-Trichloro-1,2,2-trifluoroethane, Methyl acetate, Methylene chloride, Methyl-tert-butyl ether, 1,1,1-Trichloroethane, Carbon tetrachloride, 1,2-Dibromoethane, 1,2-



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Dichloroethane

3. MATRIX SPIKE/ MATRIX SPIKE RECOVERY:

MS/MSD data is generated to determine the long-term precision and accuracy of the analytical method in various matrices. The MS/MSD data may be used in conjunction with other QC criteria for additional qualification of data.

Not applicable.

4. BLANK CONTAMINATION:

Quality assurance (QA) blanks, i.e., method, trip, field, or rinse blanks are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Trip blanks measure cross-contamination of samples during shipment. Field and rinse blanks measure cross-contamination of samples during field operations. Depending on the amount of contamination present in the QA blanks, the analytes are qualified as per Table 5 of SOP HW-34A (Rev 1).

A) Method blank contamination:

No problems were found for this criterion.

B) Field or rinse blank contamination:

Not applicable

C) Trip blank contamination:

Not applicable.

D) Storage Blank associated with TVOA samples only:

No qualification was applied due to storage blank.

E) Tentatively Identified Compounds:

Tentatively Identified Compounds (TICs) for TVOA organic fraction are not validated.

5. MASS SPECTROMETER TUNING:

Tuning and performance criteria are established to ensure adequate mass resolution, proper identification of compounds and to some degree, sufficient instrument sensitivity. These criteria are not sample specific. Instrument performance is determined using standard materials. Therefore, these criteria should be met in all circumstances. The tuning standard for volatile organics is (BFB) Bromofluorobenzene. If the mass calibration is in error, all associated data will be classified as unusable "R". Qualifications were applied to the samples and analytes as shown below.



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No problems were found for this criterion.

6. CALIBRATION:

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration checks document that the instrument is giving satisfactory daily performance.

A) Response Factor GC/MS:

The response factor measures the instrument's response to specific chemical compounds. All analytes for initial and continuing calibration should meet the minimum RRF criteria as listed in Table 2 of SOP HW 34A (Rev 1). If RRF is less than minimum RRF specified in Table 2 for all target analytes, use professional judgment and all detects in the sample will be qualified as "J+" or "R". All non-detects for that compound will be rejected "R". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

B) Percent Relative Standard Deviation (%RSD) and Percent Difference (%D):

Percent RSD is calculated from the initial calibration and is used to indicate the stability of the specific compound response factor over increasing concentration. Percent D compares the response factor of the continuing calibration check to the mean response factor (RRF) from the initial calibration.

Percent RSD must be less than maximum %RSD in Table 2 of SOP HW 34A (Rev 1) for all target analytes. For the opening or closing CCV %D must be within the inclusive opening or closing maximum %D limits as listed in Table 2 of SOP HW 34A (Rev 1) for all Target compounds. A value outside of these limits indicates potential detection and quantitation errors. For these reasons, all positive results are flagged as estimated, "J" and Non-detects are flagged "UJ" for %D values outside criteria only. If %RSD exceeds QC criteria, detects may be qualified as "J" and use professional judgment to qualify non-detects. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

7. INTERNAL STANDARDS PERFORMANCE GC/MS:

Internal standards (IS) performance criteria ensure that the GC/MS sensitivity and response are stable during every experimental run. The internal standard area count must be in the range as specified in Table 9 of SOP HW 34A (Rev 1) of the associated continuing calibration internal standard area. The retention time of the internal standards must be within the range as specified in Table 9 of SOP HW 34A (Rev 1). If the area count is greater than, all positive results quantitated using that IS are qualified as estimated "J-", and non-detects are not qualified. If the area count is less than the associated standard, all positive



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results for compounds quantitated with that IS are qualified as estimated "J+" and all non-detects are qualified "R".

If an internal standard retention time were not met as specified in Table 9 of SOP HW 34A (Rev 1), the reviewer will use professional judgment to determine either partial or total rejection of the data for that sample fraction. Qualifications were applied to the samples and analytes as shown below. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

8. FIELD DUPLICATES:

Not applicable.

9. COMPOUND IDENTIFICATION:

Target compounds are identified on the GC/MS by using the analyte's relative retention time (RRT) and by comparison to the ion spectra obtained from known standards. For the results to be a positive hit, the sample peak must be within a window of 0.06 RRT units of the standard compound and have ion spectra which has a ratio of the primary and secondary m/z intensities within 20% of that in the standard compound. For the tentatively identified compounds (TIC) the ion spectra must match accurately. In the cases where there is not an adequate ion spectrum match, the laboratory may have provided false positive identifications. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

10. CONTRACT PROBLEMS NON-COMPLIANCE:

None.

11. FIELD DOCUMENTATION:

No problems were identified.

12. OTHER PROBLEMS:

None.

13. DILUTIONS, RE-EXTRACTIONS & REANALYSIS:

Samples may be re-analyzed for dilution, re-extraction and for other QC reasons. In such cases, the best result values are used. See summary report and EDD for applicable samples and analytes.



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ANALYSIS: PCB (MA # 2756.0)

The current SOP HW-37A (Revision 0) July 2015, USEPA Region II for the evaluation of PCB data generated through Statement of Work SOM02.2 has been applied. Data have been reviewed according to TDF specifications, the National Functional Guidelines Report and the CCS Semi-Automated Screening Results Report.

1. HOLDING TIME :

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Those analytes detected in the samples whose holding time has been exceeded will be qualified as estimated, "J". Use professional judgment to qualify the non-detects (sample quantitation limits), if the holding times are grossly exceeded. Qualifications were applied to the samples and analytes as shown below.

The following trace-volatile samples have the cooler temperature exceeds 6°C (7.4°C). Detected compounds are qualified J. Non-detected compounds are qualified UJ.

BD959

2. SURROGATES:

All samples are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. If the measured surrogate recovery were outside Table 5 of the SOP HW-37A (Revision 0), qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

3. MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD):

MS/MSD data are generated to determine the long-term precision and accuracy of the analytical method in various matrices. The MS/MSD data may be used in conjunction with other QC criteria for additional qualification of data. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

4. Laboratory Control Samples (LCS):

LCS data provides information on the accuracy of the analytical method and laboratory performance. If LCS recoveries fell outside of the acceptable limits, qualifications were applied to the associated samples and compounds as shown below.

No problems were found for this criterion.

5. BLANK CONTAMINATION:



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Quality assurance (QA) blanks, i.e., method, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Field and rinse blanks measure cross-contamination of samples during field operations. Depending on the concentration of the analyte in the blank, the analytes are qualified as non-detects U. Qualifications were applied to the samples and analytes as shown below.

A) Method blank contamination:

No problems were found for this criterion.

B) Field or rinse blank contamination:

Not applicable.

6. CALIBRATION:

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration checks document that the instrument is giving satisfactory daily performance.

A) Percent Relative Standard Deviation (%RSD):

For the PCB fraction, if %RSD exceeds 20% for all analytes and the two surrogates, qualify all associated positive results "J" and use professional judgment to qualify non-detects. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

B) Percent Difference (%D):

For opening CCV, or closing CCV that is used as an opening CCV for the next 12-hour period, if %D exceeds 25% for analytes and the two surrogates, qualify all associated positive results "J" and non-detects "UJ".

For closing CCV, if %D exceeds 50% for all analytes and the two surrogates, qualify all associated positive results "J" and non-detects "UJ". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

7. FIELD DUPLICATES:

Not applicable.

8. COMPOUND IDENTIFICATION:

A) PCB Fraction:

The retention times of reported compounds must fall within the calculated retention time windows for the two chromatographic columns and a GC/MS confirmation is required if the concentration exceeds 10ng/ml in the final sample extract. Qualifications were applied to the samples and analytes as shown below.

Percent Differences	Qualifier
0% - 25%	No qualification
26% - 200%	Professional Judgment
101% - 200% (interference detected, either column)	JN
> 50% (pesticide value < CRQL, value raised to CRQL)	U
> 200%	R

The following samples were qualified for % difference on the two columns.

No problems were found for this criterion.

9. CONTRACT PROBLEMS NON-COMPLIANCE:

None.

10. FIELD DOCUMENTATION:

No problems were identified.

11. OTHER PROBLEMS:

None.

12. DILUTIONS, RE-EXTRACTIONS & RE-ANALYSIS:

Samples may be re-analyzed for dilution, re-extraction and for other QC reasons. In such cases, the best result values are used. See summary report and EDD for applicable samples and analytes.

Sample Summary Report

Case: 47052

Contract: EPW14035

SDG: BD959

Lab Code: EQI

Sample Number: ABLK72	Method: Aroclors	Matrix: Water	MA Number: 2756.0
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture:		% Solids: 0.0	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aroclor-1016	Spike	0.050	U	ug/L	0.050	U	1.0	YES	S3VEM
Aroclor-1221	Target	0.050	U	ug/L	0.050	U	1.0	YES	S3VEM
Aroclor-1232	Target	0.050	U	ug/L	0.050	U	1.0	YES	S3VEM
Aroclor-1242	Target	0.050	U	ug/L	0.050	U	1.0	YES	S3VEM
Aroclor-1248	Target	0.050	U	ug/L	0.050	U	1.0	YES	S3VEM
Aroclor-1254	Target	0.050	U	ug/L	0.050	U	1.0	YES	S3VEM
Aroclor-1260	Spike	0.050	U	ug/L	0.050	U	1.0	YES	S3VEM
Aroclor-1262	Target	0.050	U	ug/L	0.050	U	1.0	YES	S3VEM
Aroclor-1268	Target	0.050	U	ug/L	0.050	U	1.0	YES	S3VEM
Total Aroclors	Target	0.050	U	ug/L	0.050	U	1.0	YES	S3VEM

Sample Summary Report

Case: 47052

Contract: EPW14035

SDG: BD959

Lab Code: EQI

Sample Number: ALCS72 Method: Aroclors Matrix: Water MA Number: 2756.0
Sample Location: pH: Sample Date: Sample Time:
% Moisture: % Solids: 0.0

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aroclor-1016	Spike	0.041	J	ug/L	0.041	J	1.0	YES	S3VEM
Aroclor-1221	Target	0.050	U	ug/L	0.050	U	1.0	YES	S3VEM
Aroclor-1232	Target	0.050	U	ug/L	0.050	U	1.0	YES	S3VEM
Aroclor-1242	Target	0.050	U	ug/L	0.050	U	1.0	YES	S3VEM
Aroclor-1248	Target	0.050	U	ug/L	0.050	U	1.0	YES	S3VEM
Aroclor-1254	Target	0.050	U	ug/L	0.050	U	1.0	YES	S3VEM
Aroclor-1260	Spike	0.042	J	ug/L	0.042	J	1.0	YES	S3VEM
Aroclor-1262	Target	0.050	U	ug/L	0.050	U	1.0	YES	S3VEM
Aroclor-1268	Target	0.050	U	ug/L	0.050	U	1.0	YES	S3VEM
Total Aroclors	Target	0.082		ug/L	0.082		1.0	YES	S3VEM

Sample Summary Report

Case: 47052

Contract: EPW14035

SDG: BD959

Lab Code: EQI

Sample Number: BD959

Method: Aroclors

Matrix: Water

MA Number: 2756.0

Sample Location: SW-2077-071717-IM-001

pH: 2

Sample Date: 07/17/2017

Sample Time: 09:45:00

% Moisture:

% Solids: 0.0

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aroclor-1016	Target	0.029	J	ug/L	0.029	J	1.0	YES	S3VEM
Aroclor-1221	Target	0.050	UJ	ug/L	0.050	U	1.0	YES	S3VEM
Aroclor-1232	Target	0.050	UJ	ug/L	0.050	U	1.0	YES	S3VEM
Aroclor-1242	Target	0.050	UJ	ug/L	0.050	U	1.0	YES	S3VEM
Aroclor-1248	Target	0.050	UJ	ug/L	0.050	U	1.0	YES	S3VEM
Aroclor-1254	Target	0.050	UJ	ug/L	0.050	U	1.0	YES	S3VEM
Aroclor-1260	Target	0.050	UJ	ug/L	0.050	U	1.0	YES	S3VEM
Aroclor-1262	Target	0.050	UJ	ug/L	0.050	U	1.0	YES	S3VEM
Aroclor-1268	Target	0.050	UJ	ug/L	0.050	U	1.0	YES	S3VEM
Total Aroclors	Target	0.029	J	ug/L	0.029	J	1.0	YES	S3VEM

Sample Summary Report

Case: 47052

Contract: EPW14035

SDG: BD959

Lab Code: EQI

Sample Number: BD959

Method: Trace Volatiles

Matrix: Water

MA Number:

Sample Location: SW-2077-071717-IM-001

pH: 2

Sample Date: 07/17/2017

Sample Time: 09:45:00

% Moisture:

% Solids: 0.0

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Dichlorodifluoromethane	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
Chloromethane	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
Vinyl chloride	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
Bromomethane	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
Chloroethane	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
Trichlorofluoromethane	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
1,1-Dichloroethene	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
1,1,2-Trichloro-1,2,2-Trifluoroethane	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
Acetone	Target	6.2	J	ug/L	6.2		1.0	YES	S3VEM
Carbon disulfide	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
Methyl acetate	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
Methylene chloride	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
trans-1,2-Dichloroethene	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
Methyl tert-butyl ether	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
1,1-Dichloroethane	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
cis-1,2-Dichloroethene	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
2-Butanone	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S3VEM
Bromochloromethane	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
Chloroform	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
1,1,1-Trichloroethane	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
Cyclohexane	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
Carbon tetrachloride	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
Benzene	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
1,2-Dichloroethane	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
Trichloroethene	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
Methylcyclohexane	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
1,2-Dichloropropane	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
Bromodichloromethane	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
cis-1,3-Dichloropropene	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
4-Methyl-2-pentanone	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S3VEM
Toluene	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
trans-1,3-Dichloropropene	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
1,1,2-Trichloroethane	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
Tetrachloroethene	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
2-Hexanone	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S3VEM
Dibromochloromethane	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
1,2-Dibromoethane	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
Chlorobenzene	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
Ethylbenzene	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
o-Xylene	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
m, p-Xylene	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
Styrene	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
Bromoform	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
Isopropylbenzene	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
1,1,2,2-Tetrachloroethane	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
1,3-Dichlorobenzene	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
1,4-Dichlorobenzene	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
1,2-Dichlorobenzene	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
1,2-Dibromo-3-chloropropane	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
1,2,4-Trichlorobenzene	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
1,2,3-Trichlorobenzene	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM

Sample Summary Report

Case: 47052

Contract: EPW14035

SDG: BD959

Lab Code: EQI

Sample Number: BD959MS

Method: Aroclors

Matrix: Water

MA Number: 2756.0

Sample Location:

pH: 2

Sample Date: 07/17/2017

Sample Time: 09:45:00

% Moisture:

% Solids: 0.0

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aroclor-1016	Spike	0.35	J	ug/L	0.35		1.0	YES	S3VEM
Aroclor-1221	Target	0.050	UJ	ug/L	0.050	U	1.0	YES	S3VEM
Aroclor-1232	Target	0.050	UJ	ug/L	0.050	U	1.0	YES	S3VEM
Aroclor-1242	Target	0.050	J	ug/L	0.050	U	1.0	YES	S3VEM
Aroclor-1248	Target	0.050	UJ	ug/L	0.050	U	1.0	YES	S3VEM
Aroclor-1254	Target	0.050	UJ	ug/L	0.050	U	1.0	YES	S3VEM
Aroclor-1260	Spike	0.34	J	ug/L	0.34		1.0	YES	S3VEM
Aroclor-1262	Target	0.050	UJ	ug/L	0.050	U	1.0	YES	S3VEM
Aroclor-1268	Target	0.050	UJ	ug/L	0.050	U	1.0	YES	S3VEM
Total Aroclors	Target	0.71		ug/L	0.71		1.0	YES	S3VEM

Sample Summary Report

Case: 47052

Contract: EPW14035

SDG: BD959

Lab Code: EQI

Sample Number: BD959MSD

Method: Aroclors

Matrix: Water

MA Number: 2756.0

Sample Location:

pH: 2

Sample Date: 07/17/2017

Sample Time: 09:45:00

% Moisture:

% Solids: 0.0

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aroclor-1016	Spike	0.36	J	ug/L	0.36		1.0	YES	S3VEM
Aroclor-1221	Target	0.050	UJ	ug/L	0.050	U	1.0	YES	S3VEM
Aroclor-1232	Target	0.050	UJ	ug/L	0.050	U	1.0	YES	S3VEM
Aroclor-1242	Target	0.050	UJ	ug/L	0.050	U	1.0	YES	S3VEM
Aroclor-1248	Target	0.050	UJ	ug/L	0.050	U	1.0	YES	S3VEM
Aroclor-1254	Target	0.050	UJ	ug/L	0.050	U	1.0	YES	S3VEM
Aroclor-1260	Spike	0.36	J	ug/L	0.36		1.0	YES	S3VEM
Aroclor-1262	Target	0.050	UJ	ug/L	0.050	U	1.0	YES	S3VEM
Aroclor-1268	Target	0.050	UJ	ug/L	0.050	U	1.0	YES	S3VEM
Total Aroclors	Target	0.75		ug/L	0.75		1.0	YES	S3VEM

Sample Summary Report

Case: 47052

Contract: EPW14035

SDG: BD959

Lab Code: EQI

Sample Number: BD960

Method: Trace Volatiles

Matrix: Water

MA Number:

Sample Location: SS-TB-HDR-R5-071717

pH: 2

Sample Date: 07/17/2017

Sample Time: 09:45:00

% Moisture:

% Solids: 0.0

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Dichlorodifluoromethane	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
Chloromethane	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
Vinyl chloride	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
Bromomethane	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
Chloroethane	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
Trichlorofluoromethane	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
1,1-Dichloroethene	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
1,1,2-Trichloro-1,2,2-Trifluoroethane	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
Acetone	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S3VEM
Carbon disulfide	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
Methyl acetate	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
Methylene chloride	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
trans-1,2-Dichloroethene	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
Methyl tert-butyl ether	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
1,1-Dichloroethane	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
cis-1,2-Dichloroethene	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
2-Butanone	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S3VEM
Bromochloromethane	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
Chloroform	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
1,1,1-Trichloroethane	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
Cyclohexane	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
Carbon tetrachloride	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
Benzene	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
1,2-Dichloroethane	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
Trichloroethene	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
Methylcyclohexane	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
1,2-Dichloropropane	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
Bromodichloromethane	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
cis-1,3-Dichloropropene	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
4-Methyl-2-pentanone	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S3VEM
Toluene	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
trans-1,3-Dichloropropene	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
1,1,2-Trichloroethane	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
Tetrachloroethene	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
2-Hexanone	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S3VEM
Dibromochloromethane	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
1,2-Dibromoethane	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
Chlorobenzene	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
Ethylbenzene	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
o-Xylene	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
m, p-Xylene	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
Styrene	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
Bromoform	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
Isopropylbenzene	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
1,1,2,2-Tetrachloroethane	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
1,3-Dichlorobenzene	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
1,4-Dichlorobenzene	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
1,2-Dichlorobenzene	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
1,2-Dibromo-3-chloropropane	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
1,2,4-Trichlorobenzene	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM
1,2,3-Trichlorobenzene	Target	0.50	UJ	ug/L	0.50	U	1.0	YES	S3VEM

Sample Summary Report

Case: 47052

Contract: EPW14035

SDG: BD959

Lab Code: EQI

Sample Number: VBLKBT	Method: Trace Volatiles	Matrix: Water	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture:		% Solids: 0.0	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Dichlorodifluoromethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Chloromethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Vinyl chloride	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Bromomethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Chloroethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Trichlorofluoromethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,1-Dichloroethene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,1,2-Trichloro-1,2,2-Trifluoroethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Acetone	Target	5.0	U	ug/L	5.0	U	1.0	YES	S3VEM
Carbon disulfide	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Methyl acetate	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Methylene chloride	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
trans-1,2-Dichloroethene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Methyl tert-butyl ether	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,1-Dichloroethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
cis-1,2-Dichloroethene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
2-Butanone	Target	5.0	U	ug/L	5.0	U	1.0	YES	S3VEM
Bromochloromethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Chloroform	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,1,1-Trichloroethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Cyclohexane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Carbon tetrachloride	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Benzene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,2-Dichloroethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Trichloroethene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Methylcyclohexane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,2-Dichloropropane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Bromodichloromethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
cis-1,3-Dichloropropene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
4-Methyl-2-pentanone	Target	5.0	U	ug/L	5.0	U	1.0	YES	S3VEM
Toluene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
trans-1,3-Dichloropropene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,1,2-Trichloroethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Tetrachloroethene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
2-Hexanone	Target	5.0	U	ug/L	5.0	U	1.0	YES	S3VEM
Dibromochloromethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,2-Dibromoethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Chlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Ethylbenzene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
o-Xylene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
m, p-Xylene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Styrene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Bromoform	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Isopropylbenzene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,1,2,2-Tetrachloroethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,3-Dichlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,4-Dichlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,2-Dichlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,2-Dibromo-3-chloropropane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,2,4-Trichlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,2,3-Trichlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM

Sample Summary Report

Case: 47052

Contract: EPW14035

SDG: BD959

Lab Code: EQI

Sample Number: VBLKDM	Method: Trace Volatiles	Matrix: Water	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture:		% Solids: 0.0	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Dichlorodifluoromethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Chloromethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Vinyl chloride	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Bromomethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Chloroethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Trichlorofluoromethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,1-Dichloroethene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,1,2-Trichloro-1,2,2-Trifluoroethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Acetone	Target	5.0	U	ug/L	5.0	U	1.0	YES	S3VEM
Carbon disulfide	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Methyl acetate	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Methylene chloride	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
trans-1,2-Dichloroethene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Methyl tert-butyl ether	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,1-Dichloroethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
cis-1,2-Dichloroethene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
2-Butanone	Target	5.0	U	ug/L	5.0	U	1.0	YES	S3VEM
Bromochloromethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Chloroform	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,1,1-Trichloroethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Cyclohexane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Carbon tetrachloride	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Benzene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,2-Dichloroethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Trichloroethene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Methylcyclohexane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,2-Dichloropropane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Bromodichloromethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
cis-1,3-Dichloropropene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
4-Methyl-2-pentanone	Target	5.0	U	ug/L	5.0	U	1.0	YES	S3VEM
Toluene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
trans-1,3-Dichloropropene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,1,2-Trichloroethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Tetrachloroethene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
2-Hexanone	Target	5.0	U	ug/L	5.0	U	1.0	YES	S3VEM
Dibromochloromethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,2-Dibromoethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Chlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Ethylbenzene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
o-Xylene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
m, p-Xylene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Styrene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Bromoform	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Isopropylbenzene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,1,2,2-Tetrachloroethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,3-Dichlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,4-Dichlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,2-Dichlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,2-Dibromo-3-chloropropane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,2,4-Trichlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,2,3-Trichlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM

Sample Summary Report

Case: 47052

Contract: EPW14035

SDG: BD959

Lab Code: EQI

Sample Number: VHBLK01	Method: Trace Volatiles	Matrix: Water	MA Number:
Sample Location:	pH: 2	Sample Date:	Sample Time:
% Moisture:		% Solids: 0.0	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Dichlorodifluoromethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Chloromethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Vinyl chloride	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Bromomethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Chloroethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Trichlorofluoromethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,1-Dichloroethene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,1,2-Trichloro-1,2,2-Trifluoroethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Acetone	Target	5.0	U	ug/L	5.0	U	1.0	YES	S3VEM
Carbon disulfide	Target	0.26	J	ug/L	0.26	J	1.0	YES	S3VEM
Methyl acetate	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Methylene chloride	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
trans-1,2-Dichloroethene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Methyl tert-butyl ether	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,1-Dichloroethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
cis-1,2-Dichloroethene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
2-Butanone	Target	5.0	U	ug/L	5.0	U	1.0	YES	S3VEM
Bromochloromethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Chloroform	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,1,1-Trichloroethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Cyclohexane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Carbon tetrachloride	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Benzene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,2-Dichloroethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Trichloroethene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Methylcyclohexane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,2-Dichloropropane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Bromodichloromethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
cis-1,3-Dichloropropene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
4-Methyl-2-pentanone	Target	5.0	U	ug/L	5.0	U	1.0	YES	S3VEM
Toluene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
trans-1,3-Dichloropropene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,1,2-Trichloroethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Tetrachloroethene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
2-Hexanone	Target	5.0	U	ug/L	5.0	U	1.0	YES	S3VEM
Dibromochloromethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,2-Dibromoethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Chlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Ethylbenzene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
o-Xylene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
m, p-Xylene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Styrene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Bromoform	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
Isopropylbenzene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,1,2,2-Tetrachloroethane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,3-Dichlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,4-Dichlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,2-Dichlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,2-Dibromo-3-chloropropane	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,2,4-Trichlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM
1,2,3-Trichlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	YES	S3VEM

Sample Summary Report

Case: 47052

Contract: EPW14035

SDG: BD959

Lab Code: EQI

ATTACHMENT B

Site-specific

Outdoor Worker Equation Inputs for Soil

1

Variable	Value
TR (target cancer risk) unitless	1.0E-6
THQ (target hazard quotient) unitless	1
AT _{ow} (averaging time - outdoor worker)	365
EF _{ow} (exposure frequency - outdoor worker) day/yr	52
ED _{ow} (exposure duration - outdoor worker) yr	25
ET _{ow} (exposure time - outdoor worker) hr	8
LT (lifetime) yr	70
BW _{ow} (body weight - outdoor worker)	80
IR _{ow} (soil ingestion rate - outdoor worker) mg/day	100
SA _{ow} (surface area - outdoor worker) cm ² /day	3527
AF _{ow} (skin adherence factor - outdoor worker) mg/cm ²	0.12
City _{DEC} (Climate Zone) Selection	Default
A _e (acres)	.5
Q/C _{wm} (inverse of the ratio of the geometric mean air concentration to the emission flu	93.77
PEF (particulate emission factor) m ³ /kg	1359344438
A (PEF Dispersion Constant)	16.2302
B (PEF Dispersion Constant)	18.7762
C (PEF Dispersion Constant)	216.108
V (fraction of vegetative cover) unitless	0.5
U _m (mean annual wind speed) m/s	4.69
U _t (equivalent threshold value)	11.32
F(x) (function dependant on U _m /U _t) unitless	0.194
City _{VE} (Climate Zone) Selection	Default
A _e (acres)	.5
Q/C _{un} (inverse of the ratio of the geometric mean air concentration to the emission flu	68.18
foc (fraction organic carbon in soil) g/g	0.006
p _b (dry soil bulk density) g/cm ³	1.5
p _s (soil particle density) g/cm ³	2.65
n (total soil porosity) L _{nona} /L _{enil}	0.43396
Theta _a (air-filled soil porosity) L _{air} /L _{enil}	0.28396
Theta _w (water-filled soil porosity) L _{water} /L _{enil}	0.15
T (exposure interval) s	819936000
A (VF Dispersion Constant)	11.911

Variable	Value
B (VF Dispersion Constant)	18.4385
C (VF Dispersion Constant)	209.7845
City _{VF mass-limiting} (Climate Zone) Selection	Default
VF _{ml} (volitization factor - mass-limit) m ³ /kg	.
Q/C _{unt} (inverse of the ratio of the geometric mean air concentration to the emission fl	68.18
A _e (acres)	.5
T (exposure interval) yr	26
d _e (depth of source) m	.
p _b (dry soil bulk density) g/cm ³	1.5
A (VF Dispersion Constant - Mass Limit)	11.911
B (VF Dispersion Constant - Mass Limit)	18.4385
C (VF Dispersion Constant - Mass Limit)	209.7845

Site-specific

Outdoor Worker Screening Levels (RSL) for Soil

Key: I = IRIS; P = PPRTV; D = DWSHA; O = OPP; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF (mg/kg-day) ⁻¹	SFO Ref	Inhalation Unit Risk (ug/m ³) ⁻¹	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m ³)	Chronic RfC Ref	GIABS	ABS	RBA
Aroclor 1254	11097-69-1	No	Yes	2.00E+00	U	5.71E-04	U	2.00E-05	U	-		1	0.14	1

Chemical	Volatilization Factor (m ³ /kg)	Henry's Law Constant (unitless)	Soil Saturation Concentration (mg/kg)	S (mg/L)	K _{oc} (cm ³ /g)	Particulate Emission Factor (m ³ /kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)
Aroclor 1254	8.44E+05	1.16E-02	-	4.30E-02	1.31E+05	1.36E+09	7.86E+00	1.33E+01	8.71E+01	4.67E+00

Chemical	Ingestion SL THQ=1 (mg/kg)	Dermal SL THQ=1 (mg/kg)	Inhalation SL THQ=1 (mg/kg)	Noncarcinogenic SL THI=1 (mg/kg)	Screening Level (mg/kg)
Aroclor 1254	1.12E+02	1.90E+02	-	7.05E+01	4.67E+00 ca*

Site-specific

Outdoor Worker Equation Inputs for Soil

1

Variable	Value
TR (target cancer risk) unitless	1.0E-6
THQ (target hazard quotient) unitless	1
AT _{ow} (averaging time - outdoor worker)	365
EF _{ow} (exposure frequency - outdoor worker) day/yr	52
ED _{ow} (exposure duration - outdoor worker) yr	25
ET _{ow} (exposure time - outdoor worker) hr	8
LT (lifetime) yr	70
BW _{ow} (body weight - outdoor worker)	80
IR _{ow} (soil ingestion rate - outdoor worker) mg/day	100
SA _{ow} (surface area - outdoor worker) cm ² /day	3527
AF _{ow} (skin adherence factor - outdoor worker) mg/cm ²	0.12
City _{DEC} (Climate Zone) Selection	Default
A _e (acres)	.5
Q/C _{wm} (inverse of the ratio of the geometric mean air concentration to the emission flu	93.77
PEF (particulate emission factor) m ³ /kg	1359344438
A (PEF Dispersion Constant)	16.2302
B (PEF Dispersion Constant)	18.7762
C (PEF Dispersion Constant)	216.108
V (fraction of vegetative cover) unitless	0.5
U _m (mean annual wind speed) m/s	4.69
U _t (equivalent threshold value)	11.32
F(x) (function dependant on U _m /U _t) unitless	0.194
City _{VE} (Climate Zone) Selection	Default
A _e (acres)	.5
Q/C _{un} (inverse of the ratio of the geometric mean air concentration to the emission flu	68.18
foc (fraction organic carbon in soil) g/g	0.006
p _b (dry soil bulk density) g/cm ³	1.5
p _s (soil particle density) g/cm ³	2.65
n (total soil porosity) L _{nona} /L _{enil}	0.43396
Theta _a (air-filled soil porosity) L _{air} /L _{enil}	0.28396
Theta _w (water-filled soil porosity) L _{water} /L _{enil}	0.15
T (exposure interval) s	819936000
A (VF Dispersion Constant)	11.911

Variable	Value
B (VF Dispersion Constant)	18.4385
C (VF Dispersion Constant)	209.7845
City _{VF mass-limiting} (Climate Zone) Selection	Default
VF _{ml} (volitization factor - mass-limit) m ³ /kg	.
Q/C _{unt} (inverse of the ratio of the geometric mean air concentration to the emission fl	68.18
A _e (acres)	.5
T (exposure interval) yr	26
d _e (depth of source) m	.
p _b (dry soil bulk density) g/cm ³	1.5
A (VF Dispersion Constant - Mass Limit)	11.911
B (VF Dispersion Constant - Mass Limit)	18.4385
C (VF Dispersion Constant - Mass Limit)	209.7845

Site-specific

Outdoor Worker Screening Levels (RSL) for Soil

Key: I = IRIS; P = PPRTV; D = DWSHA; O = OPP; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF (mg/kg-day) ⁻¹	SFO Ref	Inhalation Unit Risk (ug/m ³) ⁻¹	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m ³)	Chronic RfC Ref
Dichlorobenzene, 1,2-	95-50-1	No	Yes	-		-		9.00E-02	IR	2.00E-01	HE
Ethylbenzene	100-41-4	No	Yes	1.10E-02	C	2.50E-06	C	1.00E-01	IR	1.00E+00	IR
Methyl Acetate	79-20-9	No	Yes	-		-		1.00E+00	SC	-	
Tetrachloroethylene	127-18-4	No	Yes	2.10E-03	I	2.60E-07	I	6.00E-03	IR	4.00E-02	IR
Toluene	108-88-3	No	Yes	-		-		8.00E-02	IR	5.00E+00	IR
Trichloroethane, 1,1,1-	71-55-6	No	Yes	-		-		2.00E+00	IR	5.00E+00	IR
Trichloroethylene	79-01-6	Yes	Yes	4.60E-02	I	4.10E-06	I	5.00E-04	IR	2.00E-03	IR
Xylenes	1330-20-7	No	Yes	-		-		2.00E-01	IR	1.00E-01	IR

Site-specific

Outdoor Worker Screening Levels (RSL) for Soil

Key: I = IRIS; P = PPRTV; D = DWSHA; O = OPP; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Chemical	GIABS	ABS	RBA	Volatilization Factor (m ³ /kg)	Henry's Law Constant (unitless)	Soil Saturation Concentration (mg/kg)	S (mg/L)	K _{oc} (cm ³ /g)	Particulate Emission Factor (m ³ /kg)	Ingestion SL TR=1.0E-6 (mg/kg)
Dichlorobenzene, 1,2-	1	-	1	1.17E+04	7.85E-02	3.76E+02	1.56E+02	3.83E+02	1.36E+09	-
Ethylbenzene	1	-	1	5.67E+03	3.22E-01	4.80E+02	1.69E+02	4.46E+02	1.36E+09	1.43E+03
Methyl Acetate	1	-	1	8.12E+03	4.70E-03	2.90E+04	2.43E+05	3.06E+00	1.36E+09	-
Tetrachloroethylene	1	-	1	2.35E+03	7.24E-01	1.66E+02	2.06E+02	9.49E+01	1.36E+09	7.49E+03
Toluene	1	-	1	4.29E+03	2.71E-01	8.18E+02	5.26E+02	2.34E+02	1.36E+09	-
Trichloroethane, 1,1,1-	1	-	1	1.65E+03	7.03E-01	6.40E+02	1.29E+03	4.39E+01	1.36E+09	-
Trichloroethylene	1	-	1	2.21E+03	4.03E-01	6.92E+02	1.28E+03	6.07E+01	1.36E+09	3.42E+02
Xylenes	1	-	1	5.74E+03	2.71E-01	2.60E+02	1.06E+02	3.83E+02	1.36E+09	-

Site-specific

Outdoor Worker Screening Levels (RSL) for Soil

Key: I = IRIS; P = PPRTV; D = DWSHA; O = OPP; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Chemical	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL THQ=1 (mg/kg)	Dermal SL THQ=1 (mg/kg)	Inhalation SL THQ=1 (mg/kg)	Noncarcinogenic SL THI=1 (mg/kg)	Screening Level (mg/kg)
Dichlorobenzene, 1,2-	-	-	-	5.05E+05	-	4.92E+04	4.48E+04	4.48E+04 sat
Ethylbenzene	-	1.34E+02	1.22E+02	5.62E+05	-	1.19E+05	9.84E+04	1.22E+02 ca
Methyl Acetate	-	-	-	5.62E+06	-	-	5.62E+06	5.62E+06 sat
Tetrachloroethylene	-	5.32E+02	4.97E+02	3.37E+04	-	1.98E+03	1.87E+03	4.97E+02 sat
Toluene	-	-	-	4.49E+05	-	4.51E+05	2.25E+05	2.25E+05 sat
Trichloroethane, 1,1,1-	-	-	-	1.12E+07	-	1.74E+05	1.71E+05	1.71E+05 sat
Trichloroethylene	-	3.18E+01	2.91E+01	2.81E+03	-	9.30E+01	9.00E+01	2.91E+01 ca**
Xylenes	-	-	-	1.12E+06	-	1.21E+04	1.20E+04	1.20E+04 sat

ATTACHMENT C

Site-specific

Recreator Equation Inputs for Soil

1

Variable	Value
TR (target cancer risk) unitless	1.0E-6
THQ (target hazard quotient) unitless	1
SA _{rec-c} (skin surface area - child) cm ² /day	0
SA _{rec-a} (skin surface area - adult) cm ² /day	6032
SA ₀₋₂ (skin surface area - mutagenic) cm ² /day	0
SA ₂₋₆ (skin surface area - mutagenic) cm ² /day	0
SA ₆₋₁₆ (skin surface area - mutagenic) cm ² /day	6032
SA ₁₆₋₃₀ (skin surface area - mutagenic) cm ² /day	0
LT (lifetime - recreator) year	70
IFS _{rec-artl} (age-adjusted soil ingestion factor) mg/kg	800
DFS _{rec-artl} (age-adjusted soil dermal factor) mg/kg	3377.92
IFSM _{rec-artl} (mutagenic age-adjusted soil ingestion factor) mg/kg	2400
DFSM _{rec-artl} (mutagenic age-adjusted soil dermal factor) mg/kg	10133.76
EF ₀₋₂ (exposure frequency) day/year	0
EF ₂₋₆ (exposure frequency) day/year	0
EF ₆₋₁₆ (exposure frequency) day/year	52
EF ₁₆₋₃₀ (exposure frequency) day/year	0
EF _{rec-c} (exposure frequency - child) day/year	0
EF _{rec-a} (exposure frequency - adult) day/year	52
EF _{rec} (exposure frequency - recreator) day/year	52
IRS ₀₋₂ (soil intake rate) mg/day	0
IRS ₂₋₆ (soil intake rate) mg/day	0
IRS ₆₋₁₆ (soil intake rate) mg/day	100
IRS ₁₆₋₃₀ (soil intake rate) mg/day	0
IRS _{rec-c} (soil intake rate - child) mg/day	0
IRS _{rec-a} (soil intake rate - adult) mg/day	100
ED ₀₋₂ (exposure duration) year	0
ED ₂₋₆ (exposure duration) year	0
ED ₆₋₁₆ (exposure duration) year	8
ED ₁₆₋₃₀ (exposure duration) year	0
ED _{rec-c} (exposure duration - child) year	0
ED _{rec-a} (exposure duration - adult) year	8
ED _{rec} (exposure duration - recreator) year	8

Site-specific

Recreator Equation Inputs for Soil

2

Variable	Value
ET_{n-2} (exposure time) hr/day	0
ET_{2-6} (exposure time) hr/day	0
ET_{6-16} (exposure time) hr/day	4
ET_{16-30} (exposure time) hr/day	0
ET_{rec-c} (exposure time - child) hr/day	0
ET_{rec-a} (exposure time - adult) hr/day	4
ET_{rec} (exposure time - recreator) hr/day	4
BW_{n-2} (body weight) kg	0
BW_{2-6} (body weight) kg	10
BW_{6-16} (body weight) kg	52
BW_{16-30} (body weight) kg	0
BW_{rec-c} (body weight - child) kg	0
BW_{rec-a} (body weight - adult) kg	52
AF_{0-2} (skin adherence factor) mg/cm ²	0
AF_{2-6} (skin adherence factor) mg/cm ²	0
AF_{6-16} (skin adherence factor) mg/cm ²	0.07
AF_{16-30} (skin adherence factor) mg/cm ²	0
AF_{rec-c} (skin adherence factor - child) mg/cm ²	0
AF_{rec-a} (skin adherence factor - adult) mg/cm ²	0.07
City _{PEF} (Climate Zone) Selection	Default
A_c (acres)	.5
Q/C_{air} (inverse of the ratio of the geometric mean air concentration to the emission flu	93.77
PEF (particulate emission factor) m ³ /kg	1359344438
A (PEF Dispersion Constant)	16.2302
B (PEF Dispersion Constant)	18.7762
C (PEF Dispersion Constant)	216.108
V (fraction of vegetative cover) unitless	0.5
U_m (mean annual wind speed) m/s	4.69
U_t (equivalent threshold value)	11.32
F(x) (function dependant on U_m/U_t) unitless	0.194
City _{VE} (Climate Zone) Selection	Default
A_c (acres)	.5
Q/C_{vol} (inverse of the ratio of the geometric mean air concentration to the emission flu	68.18

Site-specific

Recreator Equation Inputs for Soil

3

Variable	Value
foc (fraction organic carbon in soil) g/g	0.006
p_b (dry soil bulk density) g/cm ³	1.5
p_s (soil particle density) g/cm ³	2.65
n (total soil porosity) L_{pore}/L_{enil}	0.43396
Theta _a (air-filled soil porosity) L_{air}/L_{enil}	0.28396
Theta _w (water-filled soil porosity) L_{water}/L_{enil}	0.15
T (exposure interval) s	819936000
A (VF Dispersion Constant)	11.911
B (VF Dispersion Constant)	18.4385
C (VF Dispersion Constant)	209.7845
City _{VF mass-limiting} (Climate Zone) Selection	Default
VF _{ml} (volitization factor - mass-limit) m ³ /kg	.
Q/C _{unl} (inverse of the ratio of the geometric mean air concentration to the emission fl	68.18
A _e (acres)	.5
T (exposure interval) yr	26
d _e (depth of source) m	.
p_b (dry soil bulk density) g/cm ³	1.5
A (VF Dispersion Constant - Mass Limit)	11.911
B (VF Dispersion Constant - Mass Limit)	18.4385
C (VF Dispersion Constant - Mass Limit)	209.7845

Site-specific

Recreator Screening Levels (RSL) for Soil

Key: I = IRIS; P = PPRTV; D = DWSHA; O = OPP; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF (mg/kg-day) ⁻¹	SFO Ref	Inhalation Unit Risk (ug/m ³) ⁻¹	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m ³)	Chronic RfC Ref	GIABS	ABS	RBA	Volatilization Factor (m ³ /kg)
Aroclor 1254	11097-69-1	No	Yes	2.00E+00	S	5.71E-04	S	2.00E-05	IR	-		1	0.14	1	8.43E+05

Chemical	Henry's Law Constant (unitless)	S (mg/L)	K _{oc} (cm ³ /g)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m ³ /kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL Child THQ=1 (mg/kg)	Dermal SL Child THQ=1 (mg/kg)	Inhalation SL Child THQ=1 (mg/kg)
Aroclor 1254	1.16E-02	4.30E-02	1.31E+05	-	1.36E+09	1.60E+01	2.70E+01	5.43E+02	9.85E+00	-	-	-

Chemical	Noncarcinogenic SL Child THI=1 (mg/kg)	Ingestion SL Adult THQ=1 (mg/kg)	Dermal SL Adult THQ=1 (mg/kg)	Inhalation SL Adult THQ=1 (mg/kg)	Noncarcinogenic SL Adult THI=1 (mg/kg)	Screening Level (mg/kg)
Aroclor 1254	-	7.30E+01	1.23E+02	-	4.59E+01	9.85E+00 ca**

Site-specific

Recreator Equation Inputs for Soil

1

Variable	Value
TR (target cancer risk) unitless	1.0E-6
THQ (target hazard quotient) unitless	1
SA _{rec-c} (skin surface area - child) cm ² /day	0
SA _{rec-a} (skin surface area - adult) cm ² /day	6032
SA ₀₋₂ (skin surface area - mutagenic) cm ² /day	2373
SA ₂₋₆ (skin surface area - mutagenic) cm ² /day	2373
SA ₆₋₁₆ (skin surface area - mutagenic) cm ² /day	6032
SA ₁₆₋₃₀ (skin surface area - mutagenic) cm ² /day	6032
LT (lifetime - recreator) year	70
IFS _{rec-artl} (age-adjusted soil ingestion factor) mg/kg	800
DFS _{rec-artl} (age-adjusted soil dermal factor) mg/kg	3377.92
IFSM _{rec-artl} (mutagenic age-adjusted soil ingestion factor) mg/kg	2400
DFSM _{rec-artl} (mutagenic age-adjusted soil dermal factor) mg/kg	10133.76
EF ₀₋₂ (exposure frequency) day/year	0
EF ₂₋₆ (exposure frequency) day/year	0
EF ₆₋₁₆ (exposure frequency) day/year	52
EF ₁₆₋₃₀ (exposure frequency) day/year	0
EF _{rec-c} (exposure frequency - child) day/year	0
EF _{rec-a} (exposure frequency - adult) day/year	52
EF _{rec} (exposure frequency - recreator) day/year	52
IRS ₀₋₂ (soil intake rate) mg/day	0
IRS ₂₋₆ (soil intake rate) mg/day	0
IRS ₆₋₁₆ (soil intake rate) mg/day	100
IRS ₁₆₋₃₀ (soil intake rate) mg/day	100
IRS _{rec-c} (soil intake rate - child) mg/day	0
IRS _{rec-a} (soil intake rate - adult) mg/day	100
ED ₀₋₂ (exposure duration) year	0
ED ₂₋₆ (exposure duration) year	0
ED ₆₋₁₆ (exposure duration) year	8
ED ₁₆₋₃₀ (exposure duration) year	0
ED _{rec-c} (exposure duration - child) year	0
ED _{rec-a} (exposure duration - adult) year	8
ED _{rec} (exposure duration - recreator) year	8

Site-specific

Recreator Equation Inputs for Soil

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Variable	Value
ET_{n-2} (exposure time) hr/day	0
ET_{2-6} (exposure time) hr/day	0
ET_{6-16} (exposure time) hr/day	4
ET_{16-20} (exposure time) hr/day	0
ET_{rec-c} (exposure time - child) hr/day	0
ET_{rec-a} (exposure time - adult) hr/day	4
ET_{rec} (exposure time - recreator) hr/day	4
BW_{n-2} (body weight) kg	0
BW_{2-6} (body weight) kg	0
BW_{6-16} (body weight) kg	52
BW_{16-20} (body weight) kg	0
BW_{rec-c} (body weight - child) kg	0
BW_{rec-a} (body weight - adult) kg	52
AF_{0-2} (skin adherence factor) mg/cm ²	0
AF_{2-6} (skin adherence factor) mg/cm ²	0
AF_{6-16} (skin adherence factor) mg/cm ²	0.07
AF_{16-20} (skin adherence factor) mg/cm ²	0.07
AF_{rec-c} (skin adherence factor - child) mg/cm ²	0
AF_{rec-a} (skin adherence factor - adult) mg/cm ²	0.07
City _{PEF} (Climate Zone) Selection	Default
A_c (acres)	.5
Q/C_{air} (inverse of the ratio of the geometric mean air concentration to the emission flu	93.77
PEF (particulate emission factor) m ³ /kg	1359344438
A (PEF Dispersion Constant)	16.2302
B (PEF Dispersion Constant)	18.7762
C (PEF Dispersion Constant)	216.108
V (fraction of vegetative cover) unitless	0.5
U_m (mean annual wind speed) m/s	4.69
U_t (equivalent threshold value)	11.32
F(x) (function dependant on U_m/U_t) unitless	0.194
City _{VE} (Climate Zone) Selection	Default
A_c (acres)	.5
Q/C_{vol} (inverse of the ratio of the geometric mean air concentration to the emission flu	68.18

Site-specific

Recreator Equation Inputs for Soil

3

Variable	Value
foc (fraction organic carbon in soil) g/g	0.006
p_b (dry soil bulk density) g/cm ³	1.5
p_s (soil particle density) g/cm ³	2.65
n (total soil porosity) L_{pore}/L_{enil}	0.43396
Theta _a (air-filled soil porosity) L_{air}/L_{enil}	0.28396
Theta _w (water-filled soil porosity) L_{water}/L_{enil}	0.15
T (exposure interval) s	819936000
A (VF Dispersion Constant)	11.911
B (VF Dispersion Constant)	18.4385
C (VF Dispersion Constant)	209.7845
City _{VF mass-limiting} (Climate Zone) Selection	Default
VF _{ml} (volitization factor - mass-limit) m ³ /kg	.
Q/C _{unl} (inverse of the ratio of the geometric mean air concentration to the emission fl	68.18
A _e (acres)	.5
T (exposure interval) yr	26
d _e (depth of source) m	.
p_b (dry soil bulk density) g/cm ³	1.5
A (VF Dispersion Constant - Mass Limit)	11.911
B (VF Dispersion Constant - Mass Limit)	18.4385
C (VF Dispersion Constant - Mass Limit)	209.7845

Site-specific

Recreator Screening Levels (RSL) for Soil

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Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF (mg/kg-day) ⁻¹	SFO Ref	Inhalation Unit Risk (ug/m ³) ⁻¹	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m ³)	Chronic RfC Ref	GIABS	ABS	RBA
Dichlorobenzene, 1,2-	95-50-1	No	Yes	-		-		9.00E-02	IR	2.00E-01	HE	1	-	1
Methyl Acetate	79-20-9	No	Yes	-		-		1.00E+00	SC	-		1	-	1
Methylene Chloride	75-09-2	Yes	Yes	2.00E-03	I	1.00E-08	I	6.00E-03	IR	6.00E-01	IR	1	-	1
Tetrachloroethylene	127-18-4	No	Yes	2.10E-03	I	2.60E-07	I	6.00E-03	IR	4.00E-02	IR	1	-	1
Toluene	108-88-3	No	Yes	-		-		8.00E-02	IR	5.00E+00	IR	1	-	1
Trichloroethane, 1,1,1-	71-55-6	No	Yes	-		-		2.00E+00	IR	5.00E+00	IR	1	-	1
Trichloroethylene	79-01-6	Yes	Yes	4.60E-02	I	4.10E-06	I	5.00E-04	IR	2.00E-03	IR	1	-	1
Xylenes	1330-20-7	No	Yes	-		-		2.00E-01	IR	1.00E-01	IR	1	-	1

Site-specific

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Chemical	Volatilization Factor (m ³ /kg)	Henry's Law Constant (unitless)	S (mg/L)	K _{oc} (cm ³ /g)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m ³ /kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL Child THQ=1 (mg/kg)
Dichlorobenzene, 1,2-	1.17E+04	7.85E-02	1.56E+02	3.83E+02	3.76E+02	1.36E+09	-	-	-	-	-
Methyl Acetate	8.12E+03	4.70E-03	2.43E+05	3.06E+00	2.90E+04	1.36E+09	-	-	-	-	-
Methylene Chloride	2.19E+03	1.33E-01	1.30E+04	2.17E+01	3.32E+03	1.36E+09	5.32E+03	-	2.69E+04	4.44E+03	-
Tetrachloroethylene	2.35E+03	7.24E-01	2.06E+02	9.49E+01	1.66E+02	1.36E+09	1.52E+04	-	3.33E+03	2.73E+03	-
Toluene	4.29E+03	2.71E-01	5.26E+02	2.34E+02	8.18E+02	1.36E+09	-	-	-	-	-
Trichloroethane, 1,1,1-	1.65E+03	7.03E-01	1.29E+03	4.39E+01	6.40E+02	1.36E+09	-	-	-	-	-
Trichloroethylene	2.21E+03	4.03E-01	1.28E+03	6.07E+01	6.92E+02	1.36E+09	4.92E+02	-	1.33E+02	1.05E+02	-
Xylenes	5.74E+03	2.71E-01	1.06E+02	3.83E+02	2.60E+02	1.36E+09	-	-	-	-	-

Site-specific

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Chemical	Dermal SL Child THQ=1 (mg/kg)	Inhalation SL Child THQ=1 (mg/kg)	Noncarcinogenic SL Child THI=1 (mg/kg)	Ingestion SL Adult THQ=1 (mg/kg)	Dermal SL Adult THQ=1 (mg/kg)	Inhalation SL Adult THQ=1 (mg/kg)	Noncarcinogenic SL Adult THI=1 (mg/kg)	Screening Level (mg/kg)
Dichlorobenzene, 1,2-	-	-	-	3.29E+05	-	9.84E+04	7.57E+04	7.57E+04 sat
Methyl Acetate	-	-	-	3.65E+06	-	-	3.65E+06	3.65E+06 sat
Methylene Chloride	-	-	-	2.19E+04	-	5.54E+04	1.57E+04	4.44E+03 sat
Tetrachloroethylene	-	-	-	2.19E+04	-	3.96E+03	3.35E+03	2.73E+03 sat
Toluene	-	-	-	2.92E+05	-	9.03E+05	2.21E+05	2.21E+05 sat
Trichloroethane, 1,1,1-	-	-	-	7.30E+06	-	3.47E+05	3.31E+05	3.31E+05 sat
Trichloroethylene	-	-	-	1.83E+03	-	1.86E+02	1.69E+02	1.05E+02 ca**
Xylenes	-	-	-	7.30E+05	-	2.42E+04	2.34E+04	2.34E+04 sat